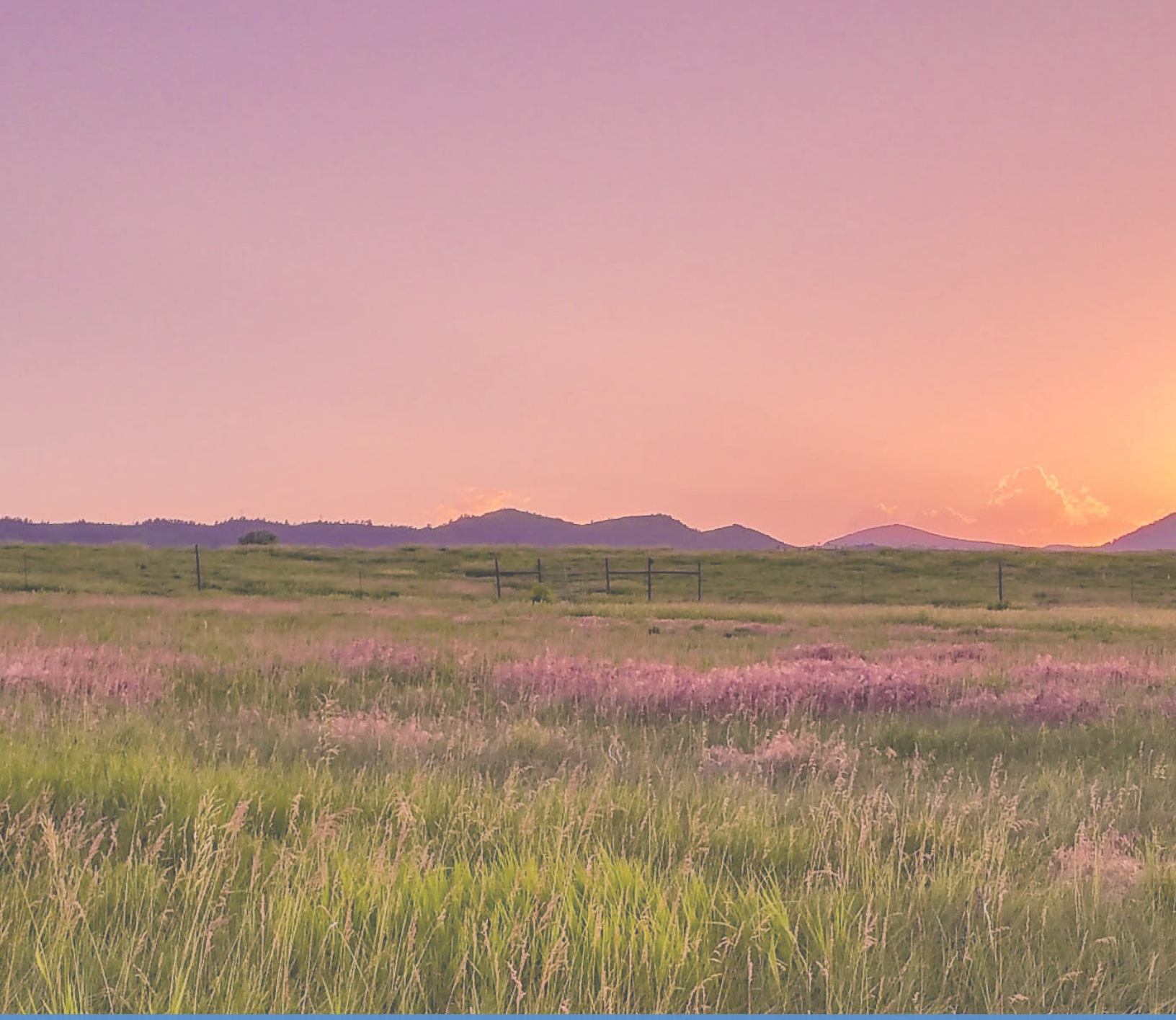


COLORADO

CHILD FATALITY PREVENTION SYSTEM

2019 Annual Legislative Report

COLORADO
Department of Public Health & Environment

TITLE:	COLORADO CHILD FATALITY PREVENTION SYSTEM, 2019 ANNUAL LEGISLATIVE REPORT
SUBMITTED BY:	THE MEMBERS OF THE COLORADO CHILD FATALITY PREVENTION SYSTEM STATE REVIEW TEAM
SUBJECT:	THIS REPORT IDENTIFIES SPECIFIC POLICY RECOMMENDATIONS TO PREVENT CHILD DEATHS IN COLORADO AND PROVIDES AN OVERVIEW OF PROGRAMMATIC ACCOMPLISHMENTS FOR STATE FISCAL YEAR 2018-19, AS REQUIRED IN STATUTE.
STATUTE:	CHILD FATALITY PREVENTION ACT; ARTICLE 20.5 SECTIONS 401-409 OF TITLE 25 OF THE COLORADO REVISED STATUTES
DATE:	JULY 1, 2019

TABLE OF CONTENTS

ACKNOWLEDGMENTS

This report is the culmination of countless hours of work across the state. Thank you to all members and partners of the Child Fatality Prevention System who volunteer their time and efforts to reviewing cases and entering data, developing and implementing prevention recommendations and reducing child deaths in Colorado. For more information on the Child Fatality Prevention System (CFPS), visit the CFPS website www.cochildfatalityprevention.com.

This report can be found online at www.cochildfatalityprevention.com/p/reports.html.

It is with deepest sympathy and respect that we dedicate this report to the memory of those children and families represented within these pages.

EXECUTIVE SUMMARY

The Child Fatality Prevention Act (Article 20.5 of Title 25, Colorado Revised Statutes) established the Child Fatality Prevention System (CFPS), a statewide, multidisciplinary, multi-agency effort to prevent child deaths. Although not codified in Colorado Revised Statutes (C.R.S.) until 2005, CFPS has been conducting retrospective reviews of child deaths in Colorado since 1989. CFPS applies a public health approach to prevent child deaths by aggregating data from individual child deaths, describing trends and patterns of the deaths and recommending prevention strategies.

Leading causes of death:

- Suicide.
- Motor vehicle crashes.
- Sudden unexpected infant death.
- Child maltreatment.
- Firearm.

As mandated in statute, this report identifies specific policy recommendations to reduce child deaths in Colorado and provides an overview of programmatic accomplishments for state Fiscal Year 2018-19. The data in this report come from comprehensive, statutorily-mandated reviews of deaths among those under 18 years of age occurring in Colorado between 2013 and 2017. Local child fatality prevention review teams conduct individual, case-specific reviews of child fatalities meeting the statutory criteria. Reviewable child deaths result from one or more of the following causes: undetermined causes, unintentional injury, violence, motor vehicle and other transportation-related, child maltreatment, sudden unexpected infant death (SUID) and suicide. During Fiscal Year 2018-19, local teams completed reviews of deaths that occurred in 2017.

CFPS 2013-2017 Data Highlights:*

- The total number of childhood deaths from all causes remained stable from 2013 to 2017.
- CFPS reviewed more deaths in 2017 (n=266), largely due to increases in the number of youth suicide (n=72) and motor vehicles deaths (n=59) compared to previous years.
- The youth suicide rate nearly doubled from 2013 to 2017 (6.9 compared to 12.1).
- Based on combined data for 2013-2017, statistically significant disparities exist for all of the leading causes of death that CFPS reviews:
  - Overall, male infants, children and youth are more likely to die than females (20.1 compared to 12.0).
  - Infants, children and youth residing in a frontier county are nearly twice as likely to die as those living in an urban county (29.8 compared to 15.5).
  - Youth suicides are more common among non-Hispanic white youth than Hispanic youth (10.8 compared to 6.4).
  - Hispanic infants, children and youth are more likely to die in passenger vehicle crashes than non-Hispanic whites (3.0 compared to 1.8).
  - Sudden unexpected infant death (SUID) are three times as common among black infants as white infants (188.9 compared to 59.7).
  - Black infants and children are more than four times as likely to experience child maltreatment (abuse and neglect) than white infants and children (10.7 compared to 2.6).
  - Black children and youth are nearly thirteen times more likely to die by firearm homicide than white children and youth (3.2 compared to 0.2).
- Social factors such as where families live, how much money or education they have and how they are treated because of their racial or ethnic backgrounds contribute to these deaths.

*All rates expressed per 100,000 population or live births.

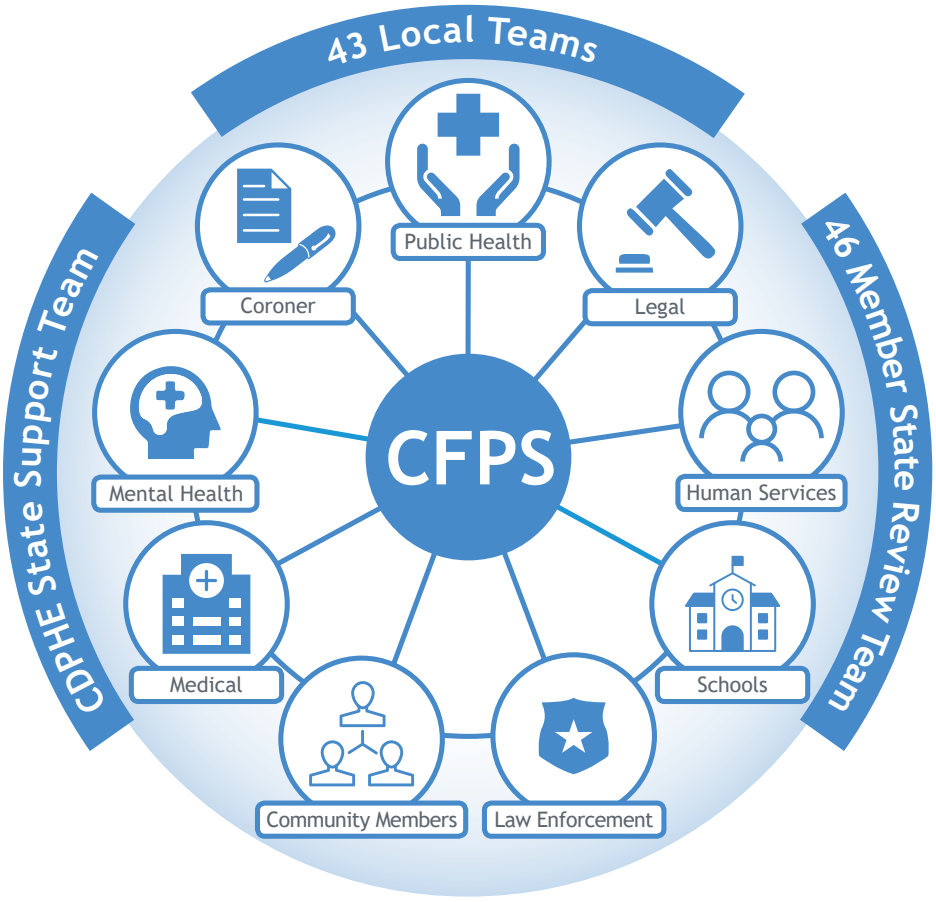
CFPS RECOMMENDATIONS TO PREVENT CHILD FATALITIES

Based on 2013-2017 child fatality data, CFPS system members recommend implementing the following evidence-based strategies to reduce child fatalities in Colorado. These recommendations reflect the expertise of CFPS system members based on their review of child fatality data. These are CFPS recommendations and do not reflect the official position of any CFPS member organization.

 Behavioral Health Promotion	Support policies to improve behavioral health care in Colorado, such as: 1. Increasing telehealth services, especially in rural areas. 2. Increasing diversity of the behavioral health care workforce. 3. Integrating behavioral health into primary care.
 Quality, Affordable Housing	Support policies that expand access to quality, affordable and stable housing across Colorado.
 Quality, Affordable Child Care	Support policies that ensure access to quality, affordable child care, especially for infants and young children.
 Evidence-Based Home Visitation	Support policies that expand access to community-based home visiting programs for all families with infants and young children.
 Graduated Driver License Law	Strengthen Colorado's graduated driver licensing law to better align with best practice by: 1. Increasing the minimum age for a learner's permit from age 15 to 16 and the minimum age for an intermediate (restricted) license from age 16 to 17. 2. Expanding the restricted hours for intermediate drivers from between 12 a.m. and 5 a.m. to between 10 p.m. and 5 a.m.
 Primary Seat Belt Law	Establish a statutory requirement that allows for primary enforcement of Colorado's adult seat belt law, making it possible to stop a driver and issue a citation if anyone (the driver and all passengers, regardless of seating position) in the vehicle is not properly restrained.
 Paid Leave for Families	Support policies that ensure paid leave for families.
 Fund Research on Firearm Deaths	Fund firearm research to understand contributing factors for firearm injury and violence, including risk and protective factors, social determinants of observed racial inequities and effective prevention strategies to prevent future firearm deaths.
 Delayed School Start (after 8:30 a.m.)	Encourage Colorado's school districts to delay school start times (after 8:30am).

The goal of the Child Fatality Prevention System is to promote the health of infants, children and youth and their families by increasing economic stability, creating positive social norms and meaningful connections, and increasing access to behavioral health to prevent child deaths. Figure 1 shows the wide variety of partners from different disciplines and agencies and the structure of CFPS: 43 local child fatality prevention review teams (local teams), the 46-member State Review Team and the Colorado Department of Public Health and Environment (CDPHE) State Support Team. Child fatality review teams and their partners implement and evaluate the identified strategies at the state and local levels with the goal of preventing similar deaths.

Figure 1. CFPS Infographic of Structure and Partners



In addition to the prevention recommendations outlined in this report, CFPS made the following recommendations to strengthen child fatality data quality. This would improve how investigative agencies examine child deaths. It would also improve data tracking and analysis:

- Encourage and incentivize law enforcement agencies and coroner offices to use the Suicide Death Scene Investigation Form when investigating suicide deaths.
- Encourage and incentivize law enforcement agencies and coroner offices to use the Sudden Unexplained Infant Death Investigation Reporting Form (SUIDIRF) during infant death scene investigations.
- Improve CFPS data quality by providing technical assistance to local teams on best practices for firearm fatality reviews.
- Improve quality of CFPS substance use data by supplementing CFPS data with other data sources.

SUMMARY OF 2013-2017 CFPS FINDINGS

CFPS uses death certificates provided by the Vital Statistics Program within the Center for Health and Environmental Data at CDPHE to identify deaths among those under age 18 in Colorado. The CFPS review process includes deaths of Colorado residents occurring in Colorado, as well as deaths of out-of-state residents who died in Colorado or were transported to a Colorado hospital and died. CFPS does not review deaths of Colorado residents that occur outside of Colorado. These criteria are different from other reports of child fatality data and many other Colorado government data sources. As a result, the data presented in this report may not match other statistics reported at both the state and national levels. This report provides an overview of state-level data and cause-specific data from CFPS. Additional CFPS data is available on an interactive data dashboard at: www.cochildfatalityprevention.com/p/reports.html.

Of the 3,020 deaths in Colorado from 2013 through 2017, 1,093 met the statutory criteria for CFPS child fatality review and received a thorough case review during the 2013 through 2018 calendar years. Figure 2 demonstrates the number of deaths in Colorado among those under age 18 from 2013 through 2017, as well as the number of deaths CFPS reviewed during this time period. Child deaths during this five-year period ranged from 586 in 2014 to 617 in 2013 and averaged 604 deaths per year. On average, 219 deaths per year met CFPS criteria and received a full review. In 2013, 198 deaths met the CFPS criteria for review, while 266 deaths met the criteria in 2017. The overall number of deaths among infants, children and youth remained stable throughout the five-year period; however, the proportion of those deaths reviewed by CFPS increased in 2016 and 2017. The overall crude rate of death for deaths reviewed by CFPS for the period was 16.1 per 100,000 Colorado residents, ranging from 14.9 per 100,000 in 2013 to 18.9 per 100,000 population in 2017. While the upward trend in the rate across the period was not statistically significant, CFPS is monitoring this trend closely.

Figure 2. Total number of child deaths and child deaths reviewed by CFPS occurring among those under age 18 in Colorado by year, 2013-2017

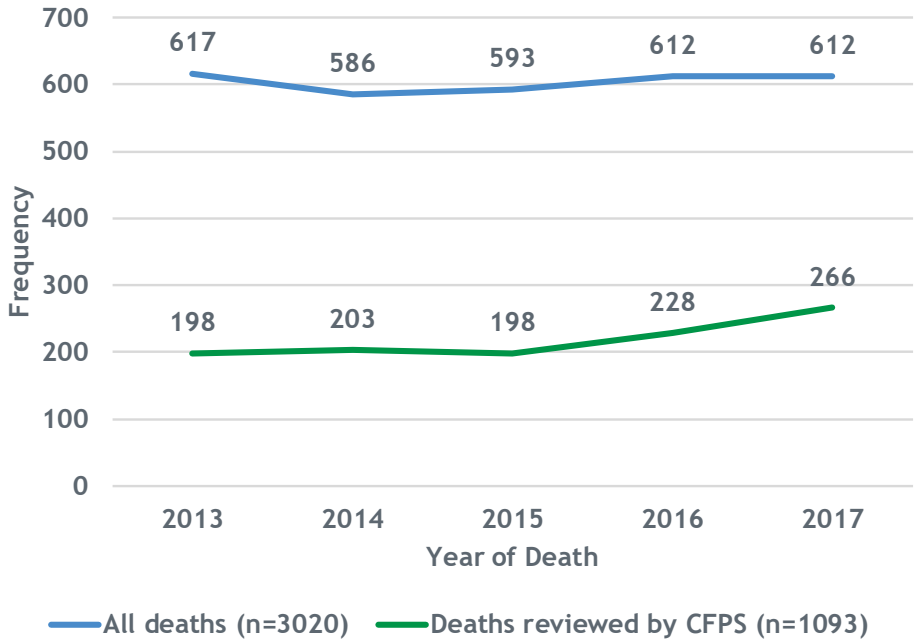


Table 1 shows the leading causes of death among children and youth under age 18 reviewed by CFPS for the years 2013-2017 by age group. Suicide was the most frequent cause of death over the five-year period (n=261), followed by motor vehicle and other transportation-related deaths (n=237), consisting primarily of passenger vehicle deaths (n=160) and pedestrian deaths (n=38). Youth suicide significantly increased across the period, while motor vehicle and other transportation-related deaths trended upwards in recent years. CFPS will monitor these trends in coming years. Other leading causes of death included sudden unexpected infant death (SUID) (n=228); child maltreatment deaths (n=223); firearm deaths (n=168); unintentional drowning deaths (n=61); homicide deaths not due to child maltreatment (n=43); and unintentional overdose or poisoning (n=33) deaths.

Table 1. Leading causes of death occurring among those under age 18 in Colorado and reviewed by CFPS by age group, 2013-2017*

	n	Percent
All (n = 1093)		
Suicide	261	23.9
Motor vehicle and other transportation-related	237	21.7
Sudden unexpected infant death	228	20.9
Child maltreatment	223	20.4
Firearm	168	15.4
Age < 1 (n = 299)		
Sudden unexpected infant death	228	76.2
Child maltreatment	90	30.1
Unintentional drowning	6	2.0
Motor vehicle and other transportation-related	6	2.0
Other	8	2.7
Ages 1 - 4 (n = 149)		
Child Maltreatment	62	41.6
Unintentional drowning	25	16.8
Motor vehicle and other transportation-related	24	16.1
Asphyxia	12	8.1
Fire	10	6.7
Ages 5 - 9 (n = 88)		
Motor vehicle and other transportation-related	43	48.9
Child maltreatment	30	34.1
Unintentional drowning	12	13.6
Firearm	7	8.0
Fall or Crush	5	5.7
Ages 10 - 14 (n = 173)		
Suicide	84	48.6
Motor vehicle and other transportation-related	48	27.8
Child maltreatment	21	12.1
Firearm	38	22.0
Homicide	7	4.0
Ages 15 - 17 (n = 384)		
Suicide	177	46.1
Motor vehicle and other transportation-related	116	30.2
Firearm	116	30.2
Homicide	32	8.3
Unintentional poisoning	26	6.8

Data source: Child Fatality Prevention System, Colorado Department of Public Health and Environment.

*Cause of death categories are not mutually exclusive. Totals may sum beyond 100%.

CONCLUSION

Over the past five years, the system has submitted 30 child fatality prevention recommendations and made significant progress towards successfully implementing those recommendations using and developing statewide partnerships and resources. This report reflects the culmination of the collective expertise of system partners across Colorado. The structure of the Colorado Child Fatality Prevention System ensures coordination at the state and local level and provides an opportunity to advance prevention strategies and systems improvements. Changes in policy and enforcement of laws are effective prevention strategies for many types of child deaths. Colorado policymakers can reduce child deaths by supporting and adopting the recommendations outlined in this report.

INTRODUCTION

A PUBLIC HEALTH APPROACH TO CHILD FATALITY PREVENTION

The Child Fatality Prevention Act (Article 20.5 of Title 25, Colorado Revised Statutes) established the Child Fatality Prevention System (CFPS), a statewide, multidisciplinary, multi-agency effort to prevent child deaths. The Colorado CFPS is housed at the Colorado Department of Public Health and Environment (CDPHE) in the Violence and Injury Prevention - Mental Health Promotion (VIP-MHP) Branch of the Prevention Services Division. The system is based on a public health approach to child fatality prevention (Figure 1). CFPS identifies areas for improvement through individual case-specific reviews of child deaths. These reviews highlight specific risk and protective factors that state and community partners can mitigate or enhance through best practices and evidence-based interventions to prevent child deaths. As mandated in statute, this report identifies specific policy recommendations to reduce child deaths in Colorado and provides an overview of programmatic accomplishments for state Fiscal Year 2018-19.

Figure 1. A public health approach to child fatality prevention

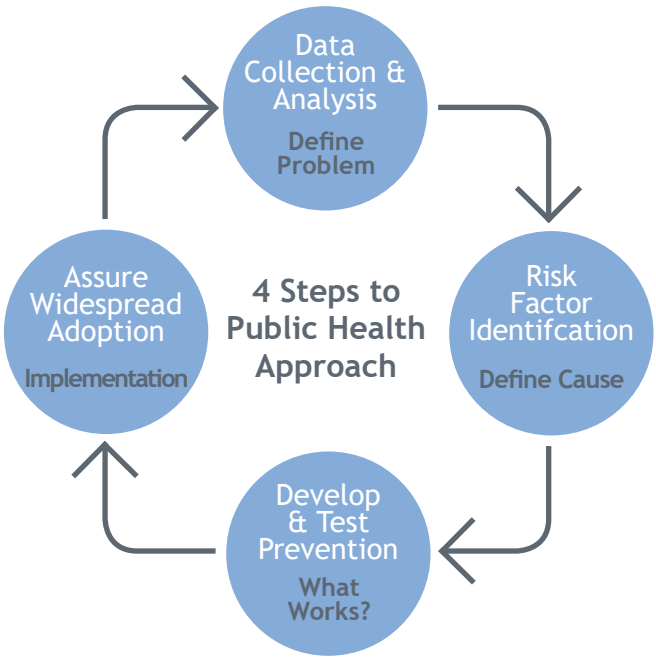


Figure 2. CFPS Infographic of Structure and Partners

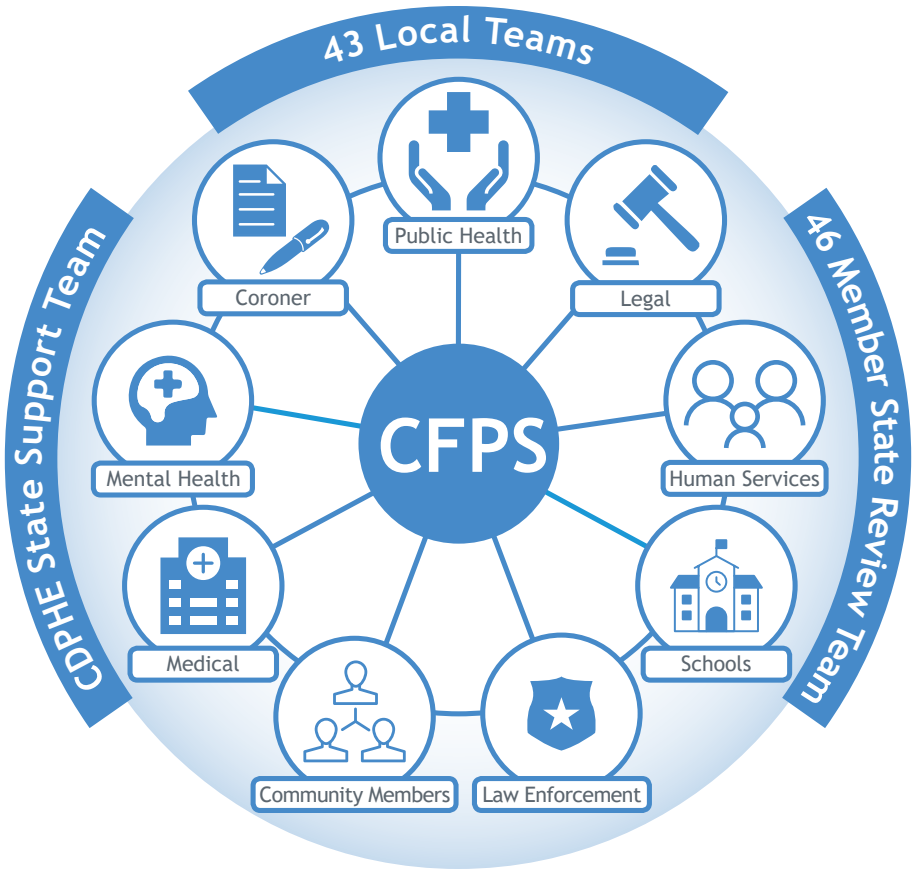


Figure 2 shows the wide variety of partners from different disciplines and agencies and the structure of CFPS. Local child fatality prevention review teams (local teams) are responsible for conducting individual, case-specific reviews of fatalities of children from 0-17 years of age occurring in the coroner jurisdiction of the local team. County or district public health agencies coordinate 43 multidisciplinary local teams, representing every county in Colorado. CFPS State Support Team assigns cases to local teams and provides training and technical assistance, including how to conduct case reviews and evidence-based child fatality prevention strategies.

The CFPS State Review Team reviews aggregated data and local team recommendations to identify state-level recommendations to prevent child deaths in Colorado, including policy recommendations. The variety of disciplines involved and the depth of expertise provided by the CFPS State Review Team and local teams results in a comprehensive review process, allowing for a broad analysis of both contributory and preventive factors of child deaths and the development and implementation of evidence-based prevention strategies.

A list of current CFPS State Review Team members is included in Appendix A.

CFPS DATA OVERVIEW

The data presented within this report come from comprehensive, statutorily-mandated reviews of deaths among those under age 18 occurring in Colorado between 2013 and 2017. Local teams are responsible for conducting individual, case-specific reviews of deaths of children meeting the statutory criteria. Reviewable child deaths result from one or more of the following causes: undetermined causes, unintentional injury, violence, motor vehicle and other transportation-related causes, child maltreatment, sudden unexpected infant death (SUID) and suicide. During the Fiscal Year 2018-19, local teams reviewed deaths that occurred in 2017.

Leading causes of death:

- Suicide.
- Motor vehicle crashes.
- Sudden unexpected infant death.
- Child maltreatment.
- Firearm.

The CFPS review process includes deaths of Colorado residents occurring in Colorado, as well as deaths of out-of-state residents who died in Colorado or were transported to a Colorado hospital and died. CFPS does not review deaths of Colorado residents that occur outside Colorado. These criteria are different from other reports of child fatality data and many other Colorado government data sources. As a result, the data presented in this report may not match other statistics reported at both the state and national levels. This report provides an overview of the state-level data from CFPS as well as topic-specific sections on the following causes of death: youth suicide, motor vehicle and other transport-related deaths, SUID, child maltreatment deaths, firearm deaths, drowning deaths and overdose deaths. Additional CFPS data is available on an interactive data dashboard at: www.cochildfatalityprevention.com/p/reports.html.

STRUCTURAL INEQUITY

CDPHE acknowledges that generations-long social, economic and environmental inequities result in adverse health outcomes. They affect communities differently and have a greater influence on health outcomes than either individual choices or one's ability to access health care. Reducing health disparities through policies, practices and organizational systems can help improve opportunities for all Coloradans.[1]

Some families lose infants, children and youth to the types of deaths reviewed by CFPS not as the result of the actions or behaviors of those who died, or their parents or caregivers. Social factors such as where they live, how much money or education they have and how they are treated because of their racial or ethnic backgrounds can also contribute to a child's death.[2] In the United States, most residents grew up and continue to live in racially and economically segregated neighborhoods, which can lead to marginalization.[3,4] This marginalization of groups into segregated neighborhoods further impacts access to high-quality education,[5] employment opportunities,[6] healthy foods[7] and health care.[8] Combined, the economic injustices associated with residential, educational and occupational segregation have lasting health impacts that include adverse birth outcomes, infant mortality,[9] high rates of homicide and gun violence[10] and increased motor vehicle deaths.[11]

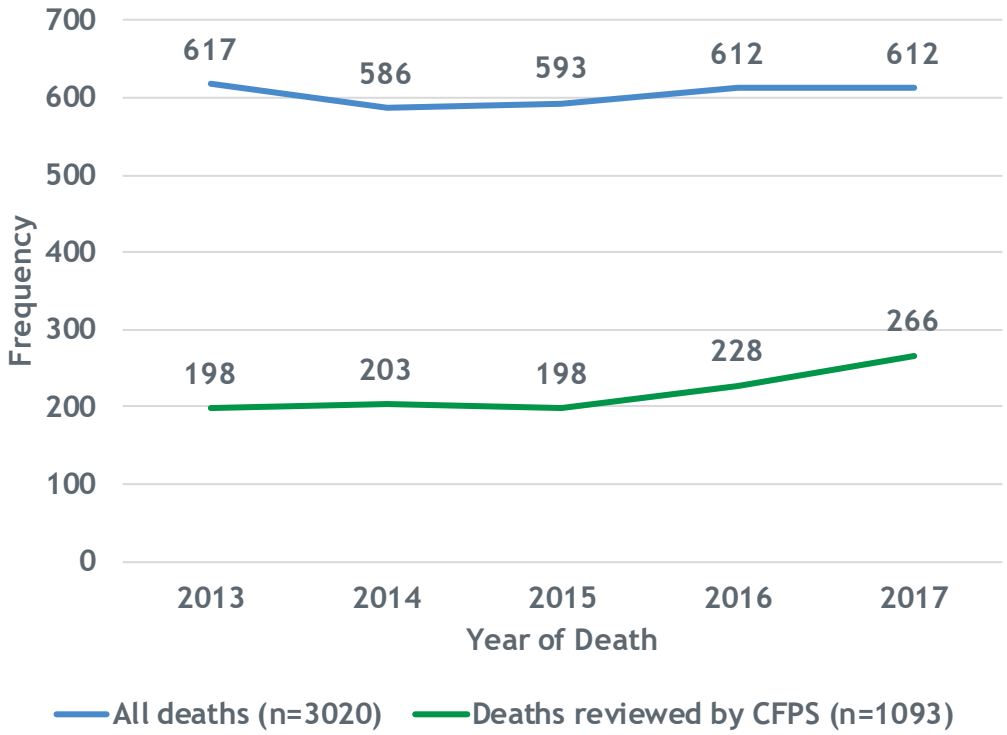
A note about terminology: While "Latinx" is becoming the preferred way to identify people of Latin descent, this report uses "Hispanic" throughout the data section to reflect how CFPS data is collected and to align with terminology used in cited literature and research.[12]

When interpreting the data, it is critical not to lose sight of these systemic, avoidable and unjust factors. These factors perpetuate the inequities that we observe in child deaths across populations in Colorado. Research is making progress in understanding how race and ethnicity, economic status, sexual orientation and gender identity correlate with health. It is critical that data systems like CFPS identify and understand the life-long inequities that persist across groups in order to eradicate them.

SUMMARY OF 2013-2017 CHILD FATALITY REVIEW FINDINGS

CFPS uses death certificates provided by the Vital Statistics Program in the Center for Health and Environmental Data at CDPHE to identify deaths among those under age 18 in Colorado. Of the 3,020 deaths from 2013 through 2017, 1,093 met the statutory criteria for CFPS child fatality review and received a thorough case review during the 2013 through 2018 calendar years. Figure 3 demonstrates the number of deaths in Colorado among those under age 18 from 2013 through 2017 and the number of deaths CFPS reviewed during this time period. Child deaths during this five-year period ranged from 586 in 2014 to 617 in 2013 and averaged 604 deaths per year. On average, 219 deaths per year met CFPS criteria and received a full review. In 2013, 198 deaths met the CFPS criteria for review, while 266 deaths met the criteria in 2017. The overall number of deaths among infants, children and youth remained stable throughout the five-year period; however, the proportion of those deaths reviewed by CFPS increased in 2016 and 2017. The overall crude rate of death for deaths reviewed by CFPS for the period was 16.1 per 100,000 Colorado residents, ranging from 14.9 per 100,000 in 2013 to 18.9 per 100,000 population in 2017. While the upward trend in the rate across the period was not statistically significant, CFPS is monitoring this trend closely.

Figure 3. Total number of child deaths and child deaths reviewed by CFPS occurring among those under age 18 in Colorado by year, 2013-2017



One major difference between deaths not reviewed by CFPS and those meeting the statutory criteria for CFPS review is the manner of death determined by coroners and medical examiners. The Colorado death certificate has five manners of death: natural, accident, suicide, homicide and undetermined. Manner of death is a classification made by a coroner, typically following a review of circumstances surrounding the death and a thorough investigation. CFPS reviews approximately one of every three deaths. Those that CFPS does not review are most often deaths of natural manner due to a natural disease process. These natural deaths get a cursory review by CFPS to determine if there is a need to initiate a full review.

Figure 4. All deaths and all deaths reviewed by CFPS occurring among those under age 18 in Colorado by manner of death, 2013-2017

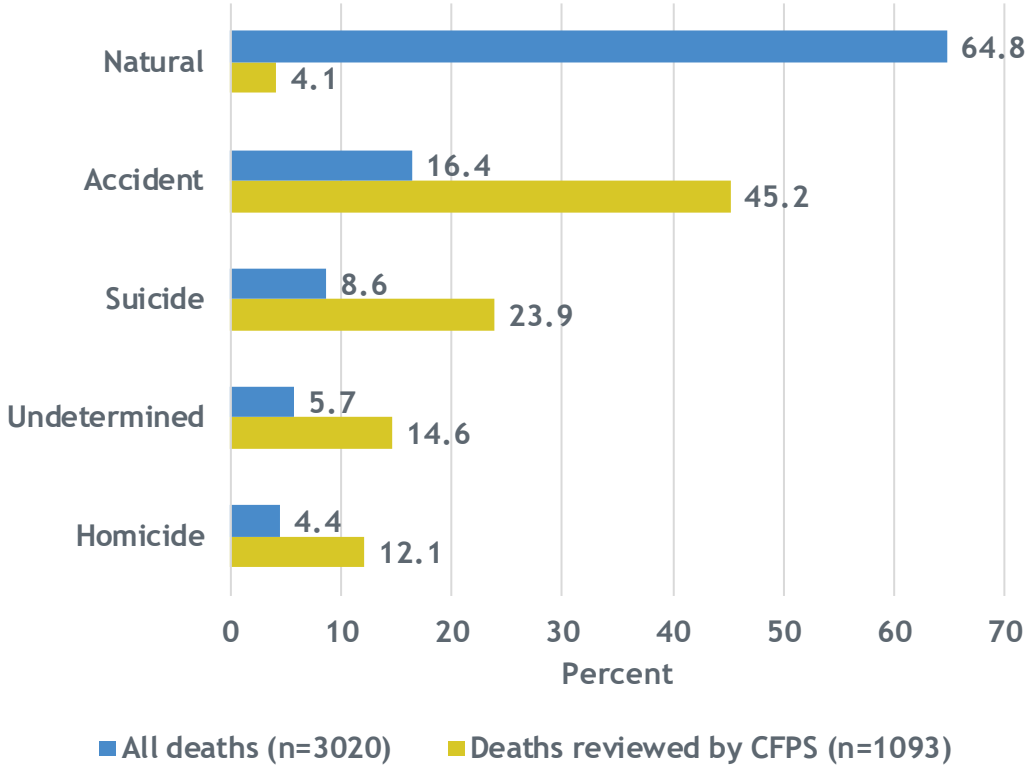


Figure 4 demonstrates that the majority of all deaths were determined to be natural (64.8 percent, n=1,958), accident (16.4 percent, n=494), suicide (8.6 percent, n=261), undetermined (5.7 percent, n=172) and homicide (4.4 percent, n=132). By contrast, for deaths reviewed by CFPS the most frequent manners of death were accident (45.2 percent, n=494), suicide (23.9, n=261), undetermined (14.6 percent, n=159), homicide (12.1 percent, n=132) and natural (4.1 percent, n=45).

Table 1. Leading causes of death occurring among those under age 18 in Colorado, 2013-2017 (n=3020)

	n	Percent
Perinatal conditions	846	28.0
Congenital malformations	506	16.8
Suicide	261	8.6
Motor vehicle	231	7.7
Sudden unexpected infant death	216	7.2
Malignant neoplasms	137	4.5
Nervous system diseases	103	3.4

Data source: Vital Statistics Program, Colorado Department of Public Health and Environment.
Prepared by the Child Fatality Prevention System.

Colorado coroners also determine cause of death, which is a specific injury or disease that resulted in the death (i.e., drowning, poisoning or a motor vehicle crash). Table 1 displays the leading causes of death occurring among those under age 18 in Colorado for the years 2013-2017. These leading causes of death included perinatal conditions (28.0 percent, n=846), congenital malformations (16.8 percent, n=506) and youth suicide (8.6 percent, n=261).

For CFPS data analysis purposes, coroners may assign a death to one or more of the major cause of death categories when child maltreatment is indicated. For example, in the case of a youth known to be experiencing a mental health crisis who subsequently dies by suicide, the death may be coded as a death by suicide, a firearm death (depending on the means). This death may also be counted as a child maltreatment death, if the professional opinion of the team identified child neglect where access to lethal means were not restricted.

Figure 5. Leading causes of death for deaths occurring among those under age 18 in Colorado and reviewed by CFPS, 2013-2017 (n=1093)

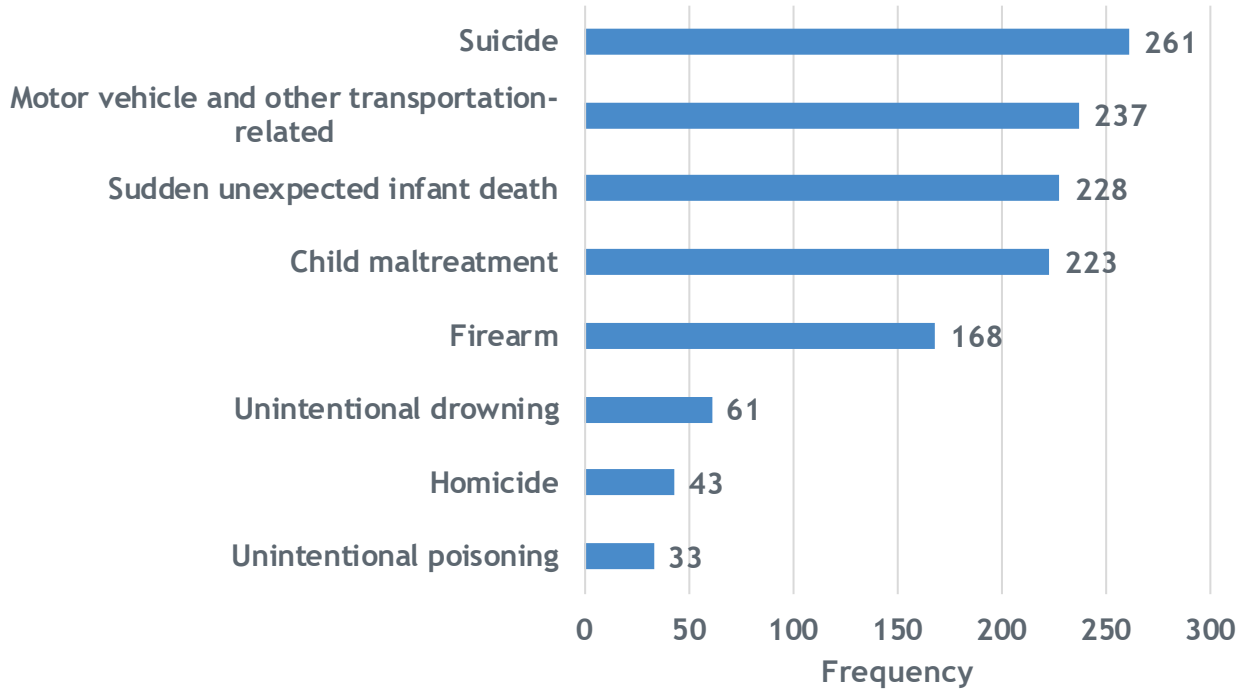
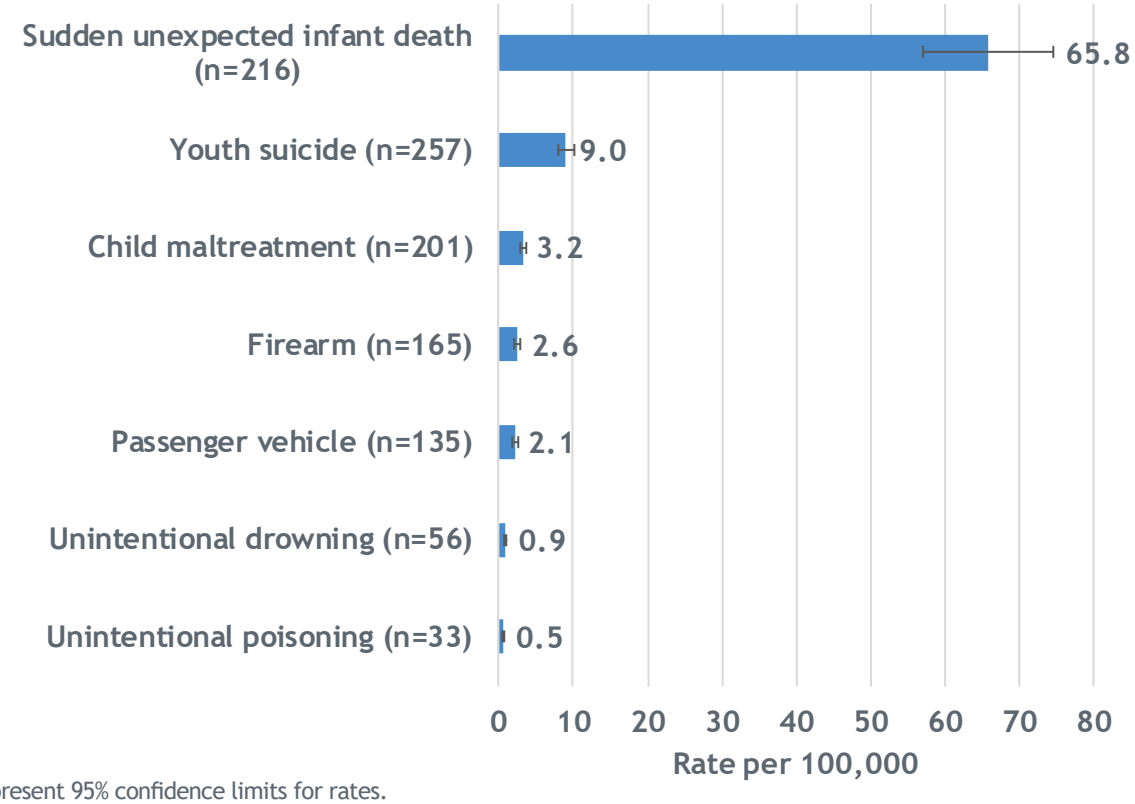


Figure 5 shows the leading causes of death among children and youth under age 18 reviewed by CFPS for the years 2013-2017. Among these, the most frequent cause of death over the five-year period was youth suicide (n=261), followed by motor vehicle and other transportation-related deaths (n=237), consisting primarily of passenger vehicle deaths (n=160) and pedestrian deaths (n=38). Other leading causes of death included sudden unexpected infant death (SUID) (n=228), child maltreatment (n=223), firearm (n=168), unintentional drowning (n=61), homicide not due to child maltreatment (n=43), and unintentional overdose or poisoning (n=33) deaths.

Figure 6. Crude rates of death for child fatalities occurring in Colorado among Colorado residents under age 18 and reviewed by CFPS, 2013-2017



*Error bars represent 95% confidence limits for rates.

Figure 6 demonstrates the crude rates of death among Colorado residents for the leading causes of death identified by CFPS from 2013-2017. The highest rate of death was SUID, at 65.8 deaths per 100,000 live births in Colorado. This rate was more than seven times the rate of any other cause of death reviewed by CFPS. Suicide among youth ages 10-17 was the second highest rate at 9.0 deaths per 100,000 population, followed by child maltreatment at 3.2 per 100,000 population. These rates varied by age group, where the rate of child maltreatment among infants under age 1 (25.3 per 100,000 population, n=84) exceeds the rate of suicide among those ages 15-17 (16.7 per 100,000 population, n=174). Both represent the age categories with the highest rates for these causes of death.

Figure 7. Leading causes of death occurring among those under age 18 in Colorado and reviewed by CFPS by year, 2013-2017 (n=1093)

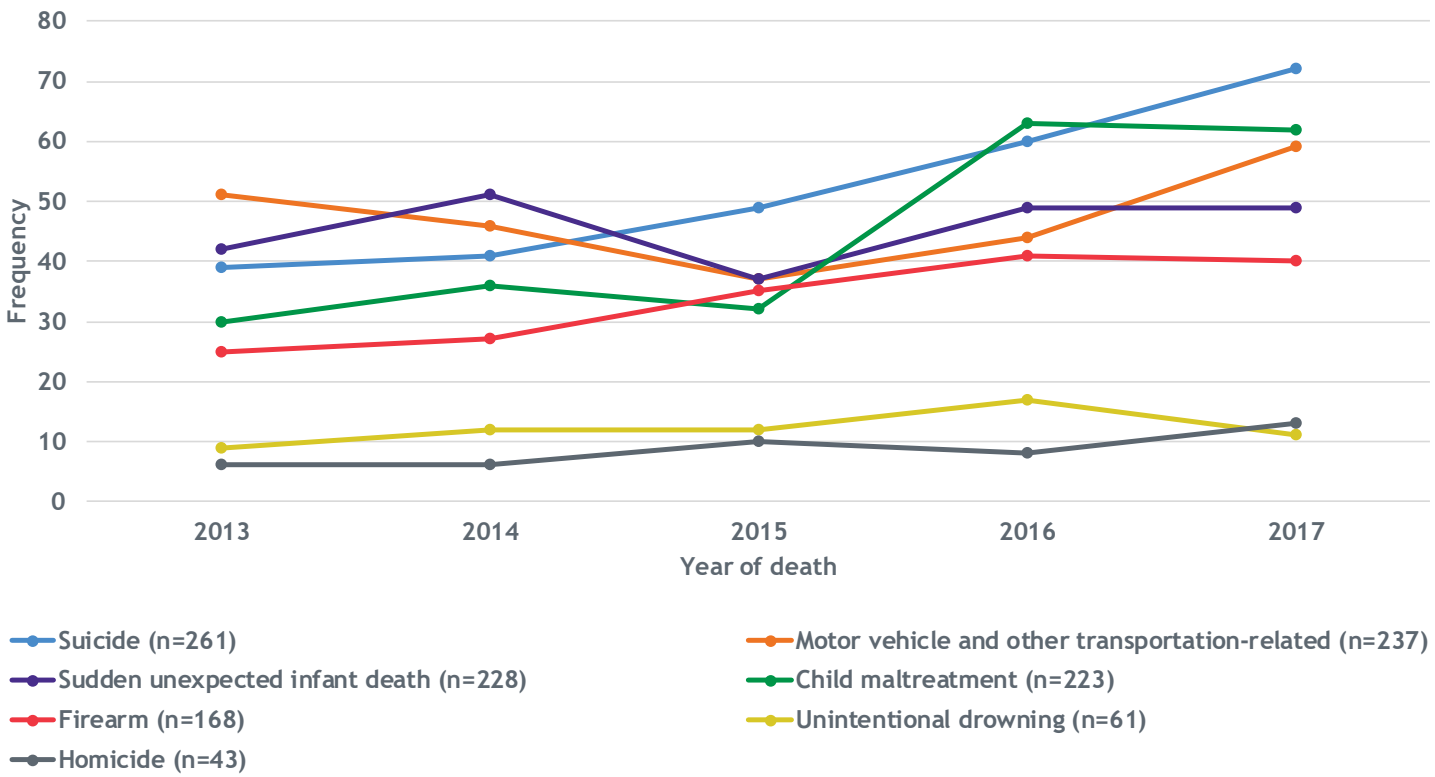


Figure 7 shows the leading causes of death by year of death. Youth suicide significantly increased across the period. Although the increase was not significant, motor vehicle and other transportation-related deaths trended upwards in recent years. CFPS will monitor these trends in coming years.

Table 2 displays the leading causes of death from 2013-2017 for deaths reviewed by CFPS occurring among those under age 18 in Colorado by age group. The leading causes for infants under age 1 (n=299) included SUID (76.2 percent, n=228), child maltreatment (30.1 percent, n=90) and unintentional drowning (2.0 percent, n=6). Among children ages 1-4 (n=149), the leading causes of death were child maltreatment (41.6 percent, n=62), unintentional drowning (16.8 percent, n=25) and motor vehicle or other transportation-related deaths (16.1 percent, n=24). Children ages 5-9 had the fewest deaths of any age category (n=88), with motor vehicle or other transportation-related deaths as the leading cause of death (48.9 percent, n=43), followed by child maltreatment (34.1 percent, n=30) and unintentional drowning (13.6 percent, n=12). For youth ages 10-14 (n=173), the leading causes of death included suicide (48.6 percent, n=84), motor vehicle or other transportation-related deaths (27.8 percent, n=48) and child maltreatment (12.1 percent, n=21). Finally, there were 384 deaths among youth ages 15-17. Leading causes for this age group included suicide (46.1 percent, n=177), motor vehicle or other transportation-related deaths (30.2 percent, n=116) and homicide (8.3 percent, n=32).

Table 2. Leading causes of death occurring among those under age 18 in Colorado and reviewed by CFPS by age group, 2013-2017*

	n	Percent
All (n = 1093)		
Suicide	261	23.9
Motor vehicle and other transportation-related	237	21.7
Sudden unexpected infant death	228	20.9
Child maltreatment	223	20.4
Firearm	168	15.4
Age < 1 (n = 299)		
Sudden unexpected infant death	228	76.2
Child maltreatment	90	30.1
Unintentional drowning	6	2.0
Motor vehicle and other transportation-related	6	2.0
Other	8	2.7
Ages 1 - 4 (n = 149)		
Child Maltreatment	62	41.6
Unintentional drowning	25	16.8
Motor vehicle and other transportation-related	24	16.1
Asphyxia	12	8.1
Fire	10	6.7
Ages 5 - 9 (n = 88)		
Motor vehicle and other transportation-related	43	48.9
Child maltreatment	30	34.1
Unintentional drowning	12	13.6
Firearm	7	8.0
Fall or Crush	5	5.7
Ages 10 - 14 (n = 173)		
Suicide	84	48.6
Motor vehicle and other transportation-related	48	27.8
Child maltreatment	21	12.1
Firearm	38	22.0
Homicide	7	4.0
Ages 15 - 17 (n = 384)		
Suicide	177	46.1
Motor vehicle and other transportation-related	116	30.2
Firearm	116	30.2
Homicide	32	8.3
Unintentional poisoning	26	6.8

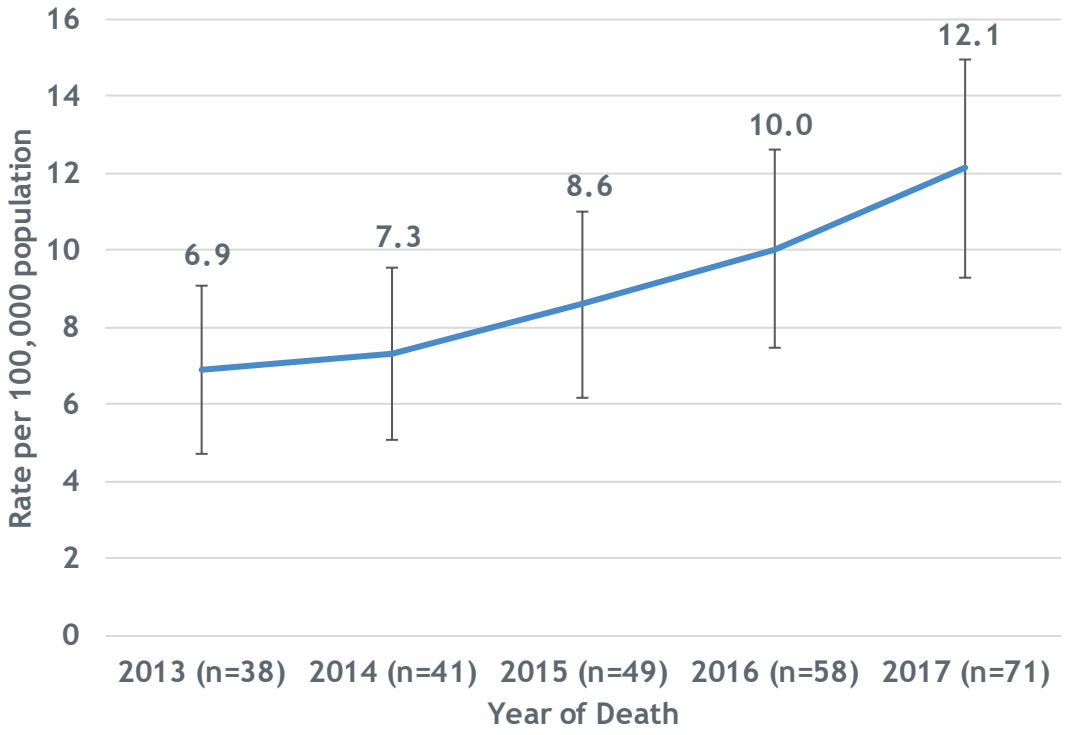
Data source: Child Fatality Prevention System, Colorado Department of Public Health and Environment.

*Cause of death categories are not mutually exclusive. Totals may sum beyond 100%.

OVERVIEW OF YOUTH SUICIDE DEATHS

Suicide is the leading cause of death among youth ages 10-17 in Colorado. In total, 261 youth died by suicide in Colorado from 2013-2017. The number of youth suicide deaths increased steadily from 39 in 2013 to 72 in 2017, an 84.6 percent change for the period. Figure 8 shows that the rate of youth suicide among Colorado residents also increased from 2013-2017 and that this increase was statistically significant. Colorado's age-specific rate of youth suicide among 10-17 year olds (9.0 per 100,000 population) was two-fold higher than the national youth suicide rate for 10-17 year olds (4.4 per 100,000 population) over the same time period.[13]

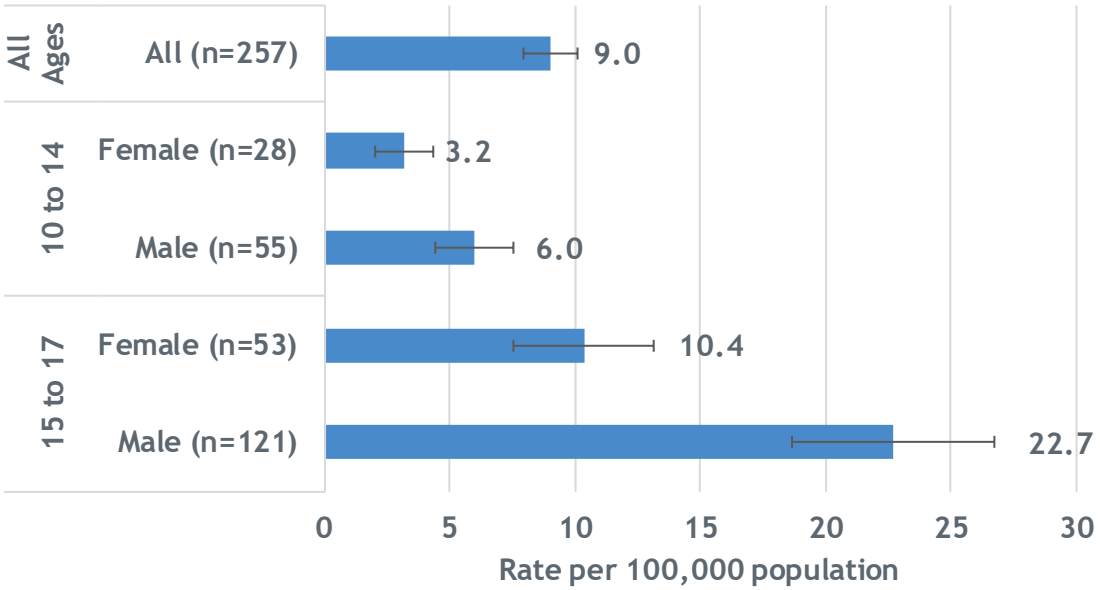
Figure 8. Crude rate of deaths by suicide occurring in Colorado among Colorado residents ages 10-17 by year, 2013-2017 (n=257)



*Error bars represent 95% confidence limits for rates.

Males account for the majority of suicides among youth ages 10-17 in Colorado, representing 68.2 percent (n=178) of all suicides. This may be explained in part by the fact that females are more likely to use less lethal means (i.e. poisoning) in a suicide attempt compared to males who often use highly lethal means (i.e. firearms).[14] Figure 9 demonstrates that for those ages 10-14 and 15-17, males are at greater risk of death by suicide and this difference was statistically significant across both age groups. The risk of death by suicide increases with age for both males and females. Males ages 15-17 experienced more than double the rate of death by suicide as their same-aged female peers and represented the category with the highest rate.

Figure 9. Age-specific rates of deaths by suicide occurring in Colorado among Colorado residents ages 10-17 by age and sex, 2013-2017



*Error bars represent 95% confidence limits for rates.

RACIAL AND ETHNIC INEQUITIES

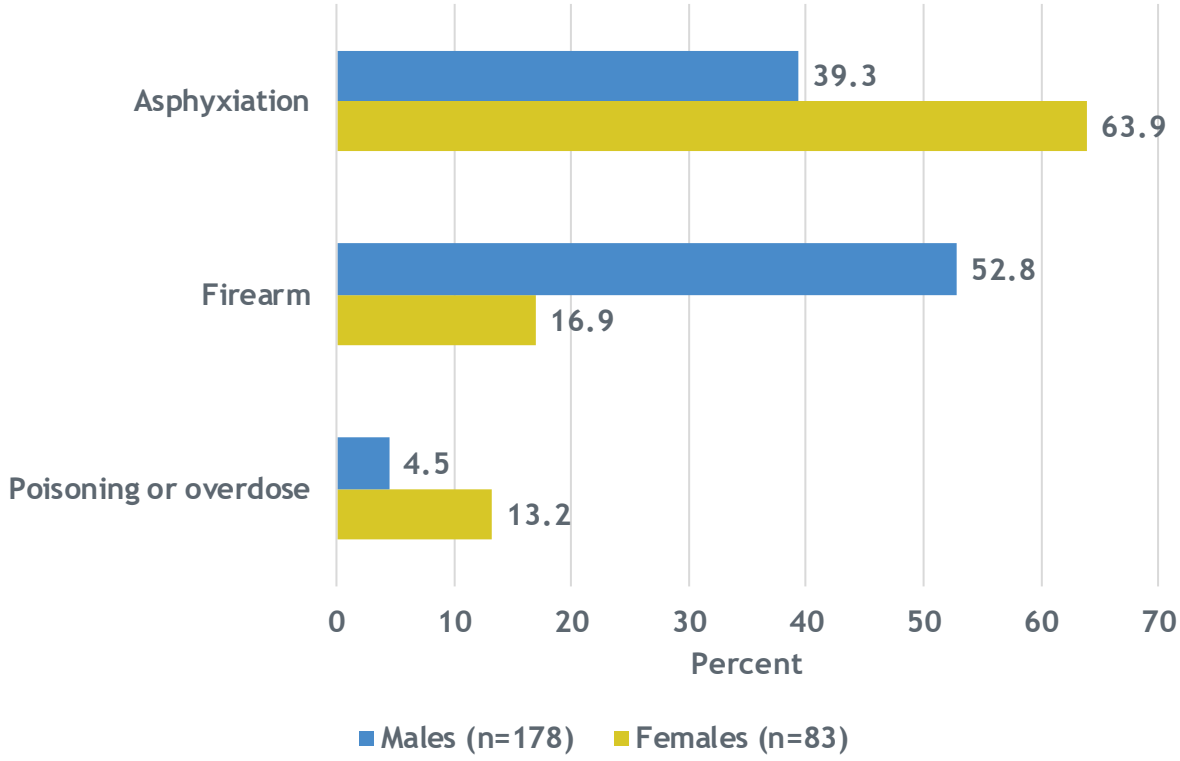
The majority of youth who died by suicide were non-Hispanic white (69.4 percent, n=181) and 22.6 percent (n=59) were of Hispanic origin. When comparing youth suicide rates by race and ethnicity, the rate for non-Hispanic white youth (10.8 per 100,000 population) was significantly higher than for Hispanic youth (6.4 per 100,000 population). This is consistent with national trends from 2013-2017, where the suicide death rate is lower among Hispanic youth (7.0 per 100,000 population) as compared to non-Hispanic youth (10.3 per 100,000 population).[15,16]

In contrast, Hispanic youth have consistently higher rates of suicidal ideation, plans and behavior when compared to their non-Hispanic counterparts.[17] When further examined by sex, Hispanic female youth represent the highest rate of suicide attempts, compared to male and female youth across all other racial and ethnic groups.[18] Current empirical research is unable to explain the differences in these trends with certainty. However, research has shown that Hispanic youth have several factors in their lives which can protect them from the suicide. These factors include familialism, which is described as strong feelings of commitment, connection, loyalty and obligation to family members.[19] Significant protective factors for suicide, such as familialism, that policymakers should bolster across all racial and ethnic populations include: access to effective mental health and substance abuse services; positive social norms; connections to individuals, family, community, and school; and good problem-solving and coping skills.[20]

SUICIDE MEANS

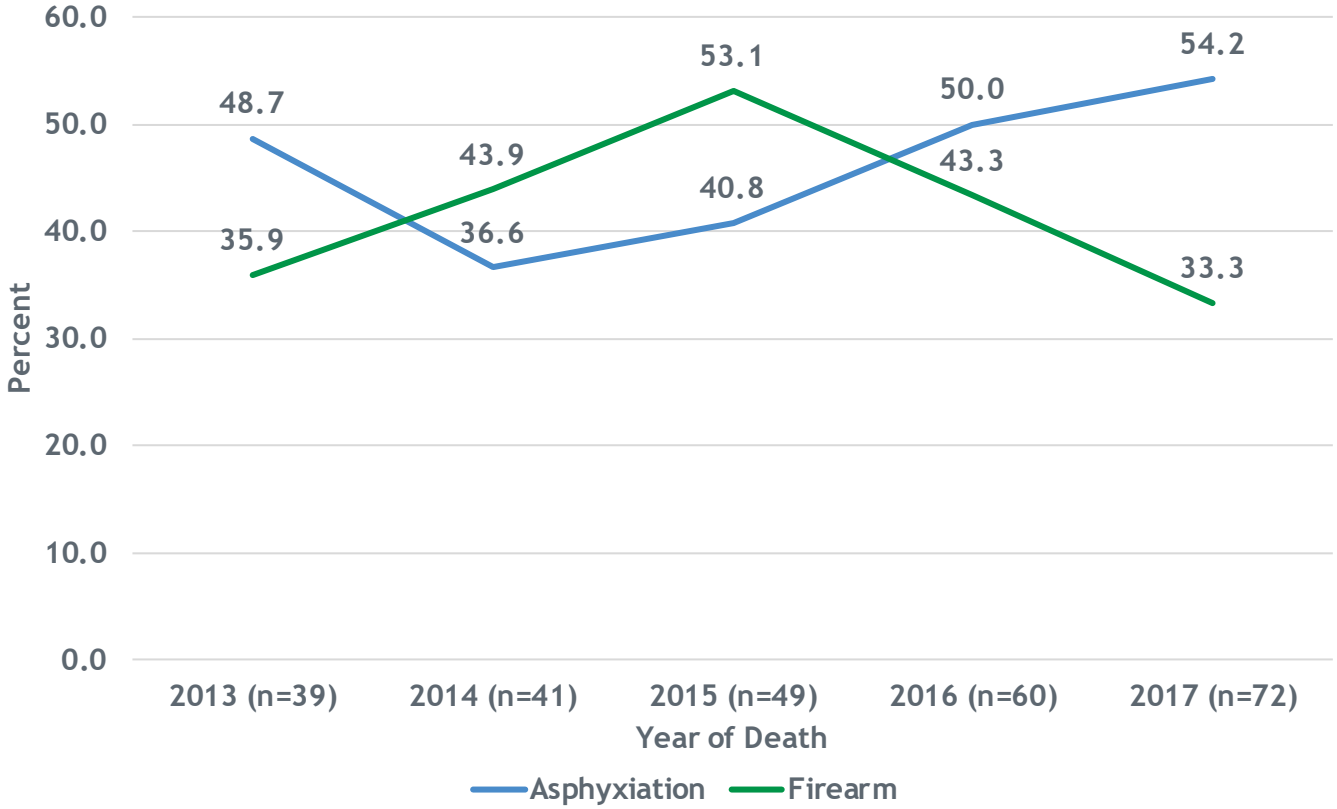
Among youth ages 10-17 who died by suicide in Colorado, asphyxia (hanging) remained the most common cause of death, followed by firearm deaths and drug overdoses. CFPS identified 123 asphyxia (47.1 percent), 108 firearm suicides (41.4 percent) and 19 drug overdose or poisoning suicides (7.3 percent). Among males, firearm suicides (52.8 percent, n=94) were most common, followed by asphyxia (39.3 percent, n=70) and drug overdose or poisoning suicides (4.5 percent, n=8) (Figure 10). Among females, asphyxia was the most common means of suicide (63.9 percent, n=53), followed by firearm (16.9 percent, n=14) and drug overdose or poisoning suicides (13.2 percent, n=11).

Figure 10. Proportion of deaths by suicide occurring in Colorado among youth ages 10-17 by means and sex, 2013-2017 (n=261)



Asphyxiation was the most common means of suicide among Colorado youth and the proportion of asphyxia suicide deaths increased. In 2014, 36.6 percent (n=15) of youth suicide deaths involved asphyxiation compared to 54.2 percent (n=39) in 2017 (Figure 11). The proportion of youth suicide deaths involving a firearm increased between 2013 and 2015, but then decreased to 33.3 (n=24) percent in 2017. CFPS will monitor these trends in coming years, especially given that the national rate of asphyxiation suicide deaths in the 10-17 age group significantly increased from 2013 to 2017 as well.[21,22]

Figure 11. Percentage of deaths by suicide occurring in Colorado among youth ages 10-17 by means and year, 2013-2017 (n=261)



FIREARM SUICIDES

Between 2013-2017, 41.4 percent (n=108) of all suicide deaths occurring among youth in Colorado were by firearm. Among all firearm suicides, 87.0 percent (n=94) occurred among males. Additionally, 52.8 percent (n=57) of firearms used in youth suicide deaths were owned by a biological parent (data not shown), and 62.0 percent (n=67) of owners of firearms used in youth suicide deaths in Colorado were male.

CFPS also collects information on the storage of these weapons. Current best practice for safe firearm storage includes storing the firearm locked and unloaded, and storing ammunition locked and in a separate location from the firearm.[23] From 2013-2017, only 18.5 percent (n=20) of firearms used in suicide deaths among youth ages 10-17 were known to be stored locked and only 22.2 percent (n=24) were known to be stored unloaded.

In 27.8 percent (n=30) of cases, the information on if the firearm was stored locked was missing or unknown. In 50.9 percent (n=55) of cases, the information on if the firearm was stored loaded was missing or unknown. The cause for the high numbers of unknown and missing information is not clear, but may be due to lack of guidance on the importance of this information. Death scene investigators and child fatality review team members may not be asking about firearm storage. This report includes a data quality improvement recommendation to provide technical assistance to local teams on best practices for firearm death reviews.

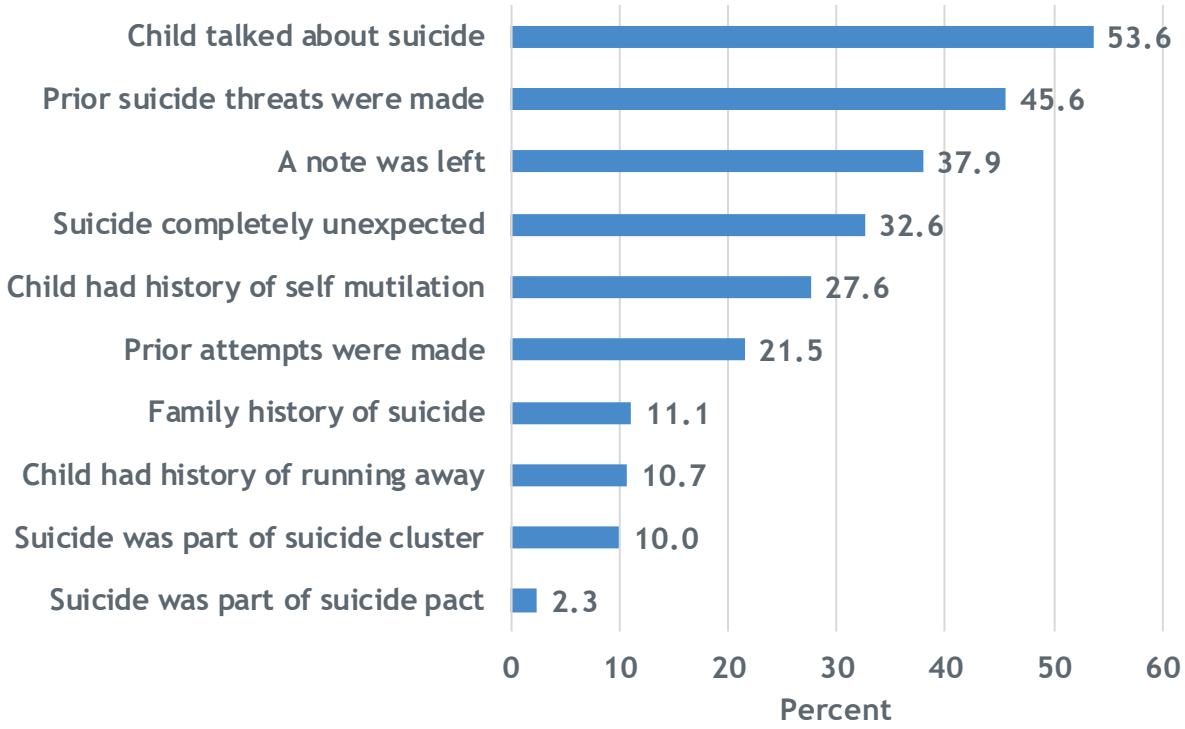
SUICIDE CIRCUMSTANCES

The CFPS review teams collect circumstance information, including details of youth history of suicide-related behavior and personal crises. This data showed that those who died by suicide most commonly talked about suicide (53.6 percent, n=140), made prior suicidal threats (45.6 percent, n=119) or left a suicide note (37.9 percent, n=99) prior to dying (Figure 12).

CFPS case reports indicated the suicide was completely unexpected in 32.6 percent (n=85) of cases. However, the National Center for Fatality Review and Prevention (NCFRP) recently revised this question in Version 5 of the case reporting system, the data tool that CFPS uses. This revision ensures that review teams can only indicate the suicide was completely unexpected if they do not select other options, like those listed above. In the past, suicide deaths could be designated as "completely unexpected" even if the review team also indicated that the child or youth had previously considering suicide.

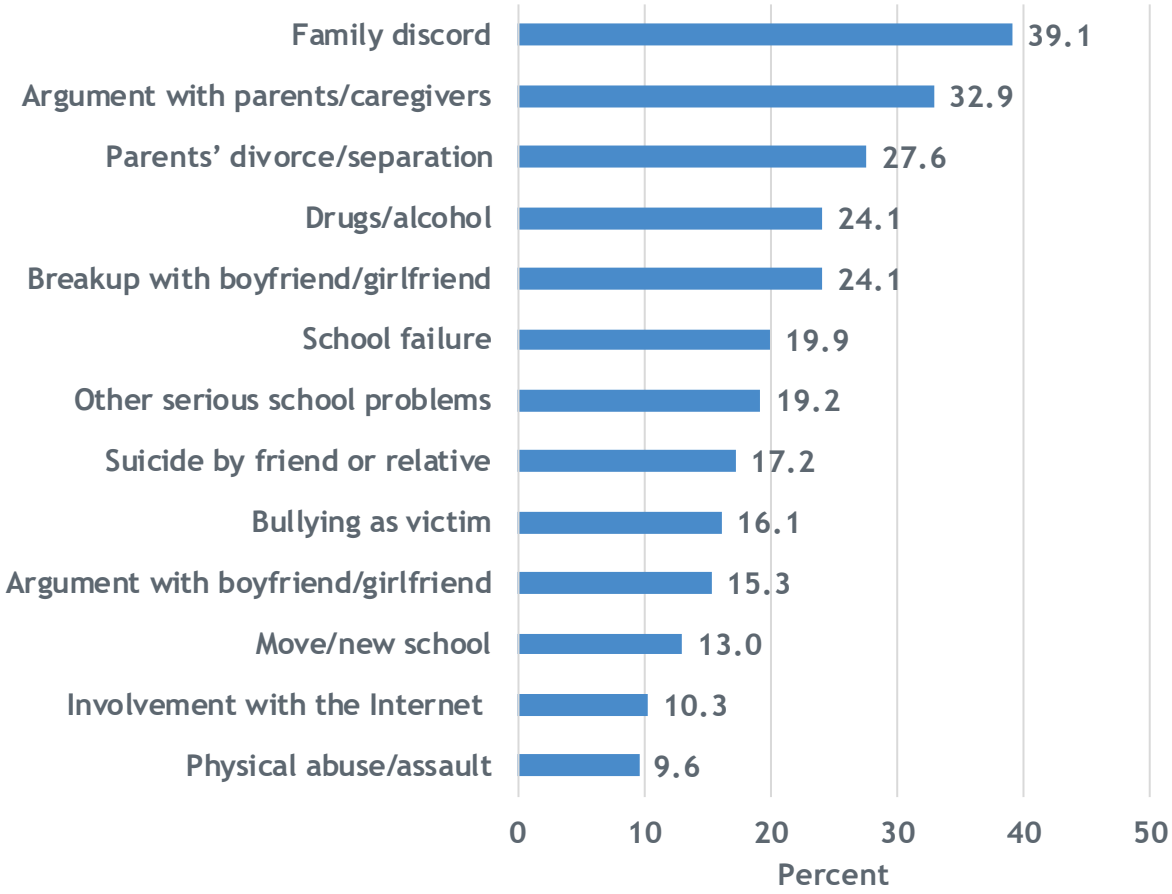
CFPS often has missing and unknown data for variables related to suicide circumstances, in part because death scene investigators typically collect limited information about a youth's mental health history and access to lethal means. In an effort to improve the case review process and conduct quality case-specific reviews, this report includes a recommendation to encourage and incentivize law enforcement agencies and coroner offices to use the Suicide Death Scene Investigation Form (www.colorado.gov/cdphe/suicide-investigation-form) to ensure law enforcement officers and coroner investigators consistently collect circumstance data when investigating a suspected suicide death.

Figure 12. Selected circumstances for deaths by suicide occurring in Colorado among youth ages 10-17, 2013-2017 (n=261)



CFPS also collects information on acute or cumulative personal crises that may have contributed to these deaths. From 2013-2017, the most common personal crisis identified for youth suicide deaths was family discord (39.1 percent, n=102), followed by arguments with parents/caregivers (32.9 percent, n=86), parents' divorce or separation (27.6 percent, n=72) and drug or alcohol use (24.1 percent, n=63) (Figure 13).

Figure 13. Selected acute or cumulative personal crises preceding death for deaths by suicide occurring in Colorado among youth ages 10-17, 2013-2017 (n=261)



Child maltreatment includes physical, sexual, and emotional abuse, as well as neglect. Experiences of child maltreatment have a large impact on health throughout the lifespan[24] and are associated with youth suicide.[25] CFPS collects data about if any child or youth had a history of child maltreatment prior to their death. This data includes a referral or substantiation from child protective services or documentation on the autopsy report, law enforcement report or medical records.

Nearly 32 percent (n=82) of youth ages 10-17 who died by suicide experienced child maltreatment as a victim. Among those with a known child maltreatment history, 20.4 percent (n=37) experienced emotional abuse, 18.2 percent (n=33) experienced physical abuse and 16.6 percent (n=30) experienced neglect (data not shown). Information on history of child maltreatment was missing or unknown for 30.7 percent (n=80) of deaths by suicide among Colorado youth. Among Colorado youth who died by suicide, 49.8 percent (n=130) had received prior mental health services, 30.7 percent (n=80) were receiving mental health services at the time of their death and 21.2 percent (n=55) were on medications for mental illness. Of the youth who died by suicide, 9.2 percent (n=24) had issues preventing them from receiving mental health services (data not shown). Review teams most commonly identified issues related to youth choosing not to access or continue care. Research suggests this may be related to stigma about receiving mental health care and norms related to seeking help.[26]

OVERVIEW OF MOTOR VEHICLE AND OTHER TRANSPORTATION-RELATED DEATHS

From 2013 through 2017, there were 237 motor vehicle and other transportation-related deaths among infants, children and youth ages 0-17 in Colorado. Motor vehicle and other transportation-related deaths include deaths of drivers and passengers of motor vehicles; bicyclists and pedestrians struck by a motor vehicle; and motorcycle, airplane, all-terrain vehicle (ATV) and farm equipment crashes or events. Figure 14 displays the total number of motor vehicle and other transportation-related deaths occurring from 2013-2017. The number of deaths ranged from 37 in 2015 to 59 in 2017 and averaged about 48 per year for the five-year period.

Figure 14. Motor vehicle and other transportation-related deaths occurring among those under age 18 in Colorado by year, 2013-2017 (n=237)

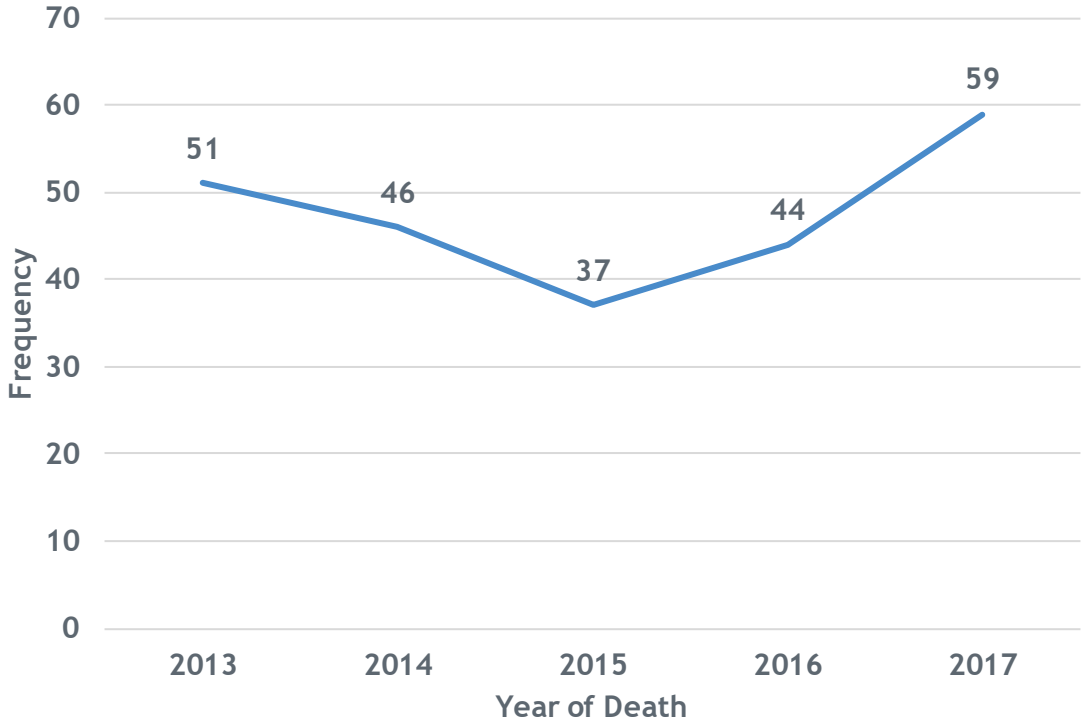
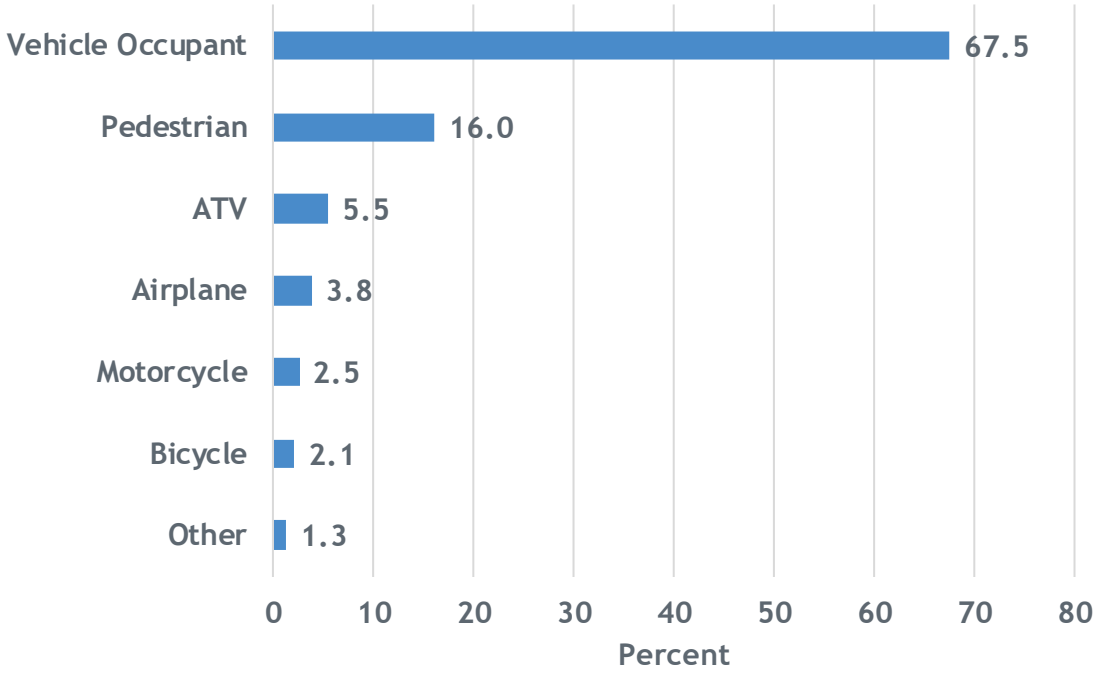


Figure 15 demonstrates that 67.5 percent (n=160) of children or youth who died in motor vehicle and other transportation-related deaths were occupants of passenger vehicles, 16.0 percent (n=38) were pedestrians and 5.5 percent (n=13) were involved in ATV crashes.

Figure 15. Motor vehicle and other transportation-related deaths occurring among those under age 18 in Colorado by leading types, 2013-2017 (n=237)

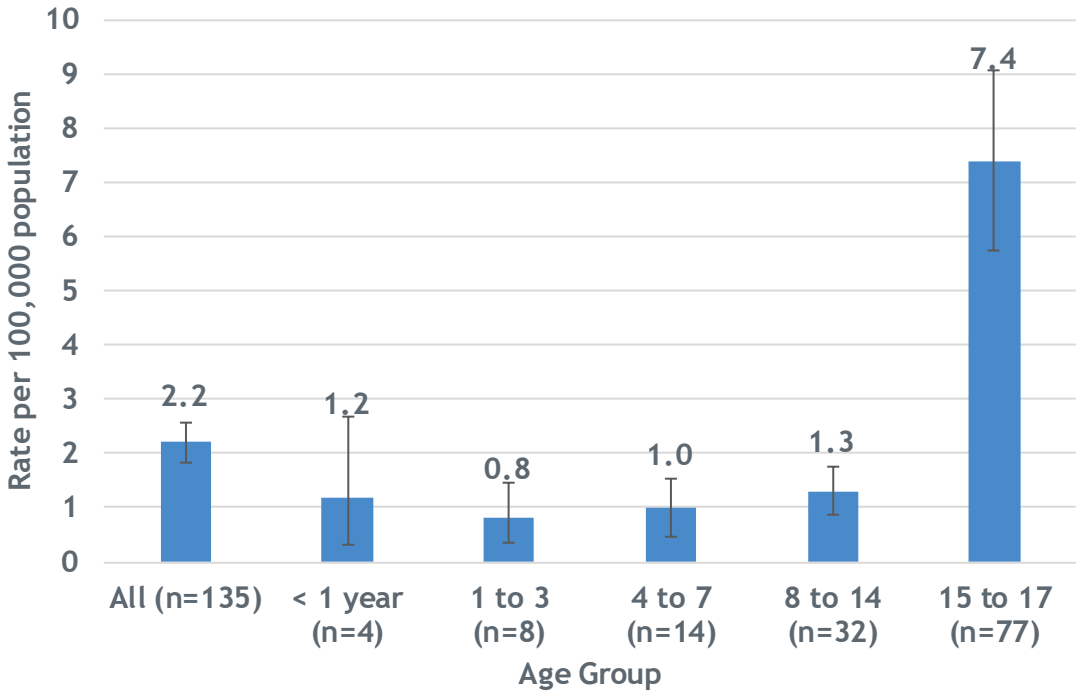


PASSENGER VEHICLE DEATHS

From 2013-2017, 160 infants, children and youth died in Colorado as a result of passenger vehicle crashes. Of the 160 deaths, 80.0 percent (n=128) occurred among those ages 8-17. Males represented 59.4 percent (n=95) of all deaths.

Figure 16 displays the age-specific rates of passenger vehicle deaths among Colorado residents. The age-specific rate of passenger vehicle deaths was highest among those ages 15-17 at 7.4 deaths per 100,000 population. This is significantly higher than for all other age groups. While males (2.5 per 100,000 population) have a higher rate than females (1.8 per 100,000 population) in all age groups, this difference was not statistically significant (data not shown).

Figure 16. Age-specific rates of passenger vehicle deaths occurring in Colorado among Colorado residents under age 18 by age group, 2013-2017 (n=135)



*Error bars represent 95% confidence limits for rates.

RACIAL AND ETHNIC INEQUITIES

Colorado observed a significant inequity in the rate of passenger vehicle deaths by race and ethnicity. The rate for Hispanic infants, children and youth (3.0 per 100,000 population) was significantly higher than non-Hispanic white (1.8 per 100,000 population) for the period.

This significant inequity expands when examined by both ethnicity and sex, where Hispanic males die in passenger vehicle crashes at a rate of 3.8 per 100,000 population, compared to 1.8 per 100,000 non-Hispanic white males. This is consistent with both historical and current national trends in which Hispanic male youth are disproportionately represented among motor vehicle crash injury and death statistics.[27]

This inequity is one of the most considerable anomalies of the Latino Epidemiological Paradox, in which Hispanic people tend to have similar or better health outcomes than non-Hispanic whites, despite disproportionately experiencing factors such as poverty, low education and low access to care.[28] Given this anomaly, it is crucial to consider why this inequity exists and persists among those who die as a driver or passenger in a vehicle.

In 1956, the Federal Aid Highway Act allocated billions of dollars to interstate highway construction, delivering the safest and most modern mode of interstate and local travel at the time. It also provided employment opportunities for people out of work.[29] Many have since argued the legislation was hastily planned and implemented, and the government built the roads primarily for the convenience of non-Hispanic white commuters.[30,31] The government built these massive highways through or near racially and ethnically segregated, urban communities. This resulted in disinvestment in neighborhood infrastructure, lower property values, increased poverty, inadequate access to high-quality education, and more dangerous environments for living, driving and walking.[32]

Data from the American Community Survey from 2013-2017 shows that 19.3 percent of Hispanic Coloradans live below the poverty level, compared to 8.5 percent of non-Hispanic white Coloradans.[33] This structural injustice may contribute to deadly motor vehicle crash inequity. For instance, research suggests that even though motor vehicle deaths have decreased nationally, the decreases have largely benefited more affluent and well-educated communities. These are communities where people are more likely to own vehicles with higher crash test ratings and advanced safety features.[34]

Additionally, differences in child restraint use (seat belts and booster and car seats) may contribute to inequities. Racial and ethnic minority populations are less likely than the general population to use proper safety restraints.[35] Among the Hispanic infants, children and youth who died in passenger vehicle crashes in Colorado during this period, 68.7 percent (n=46) were improperly restrained, compared to 50.6 percent (n=40) of non-Hispanic whites. This is consistent with state and national trends in which Hispanic infants, children and youth had a significantly higher proportion of unrestrained deaths compared with non-Hispanic white children.[36,37]

Although most caregivers are aware of the need to use proper safety restraints for children, research suggests that Hispanic caregivers may be less likely to use safety restraints in certain situations. Such situations include being on a short drive or in a rush, having an inadequate number of restraints, and if someone was holding the infant or child.[38] Based on this data, child safety restraint education and distribution programs should focus on minority communities.

Physical and built environmental factors also perpetuate inequities in these deaths. For example, investments in road safety engineering are less likely to occur in segregated and low-income communities.[39] Persisting social and systemic inequities increase the likelihood that those living in racially segregated neighborhoods without infrastructure investment will continue to experience these disparate impacts. These impact will cost communities friends, loved ones and neighbors.

PASSENGER VEHICLE DEATH CAUSES

For 148 of the 160 infants, children and youth who died in passenger vehicle crashes, review teams determined a driver was responsible for causing the crash. In these instances, CFPS was able to collect data on the causes of the crash. This data comes from the law enforcement officer or the motor vehicle crash report. Recklessness (51.4 percent, n=76), speeding over the limit (51.4 percent, n=76) and driver inexperience (35.1 percent, n=52) were the most frequently reported causes of deadly crashes. Additional causes include vehicle rollover (29.7 percent, n=44), drug or alcohol use (28.4 percent, n=42) and distracted driving (19.6 percent, n=29). These causes are not mutually exclusive. Investigators can determine more than one cause as contributing to a crash.

RESTRAINT USE

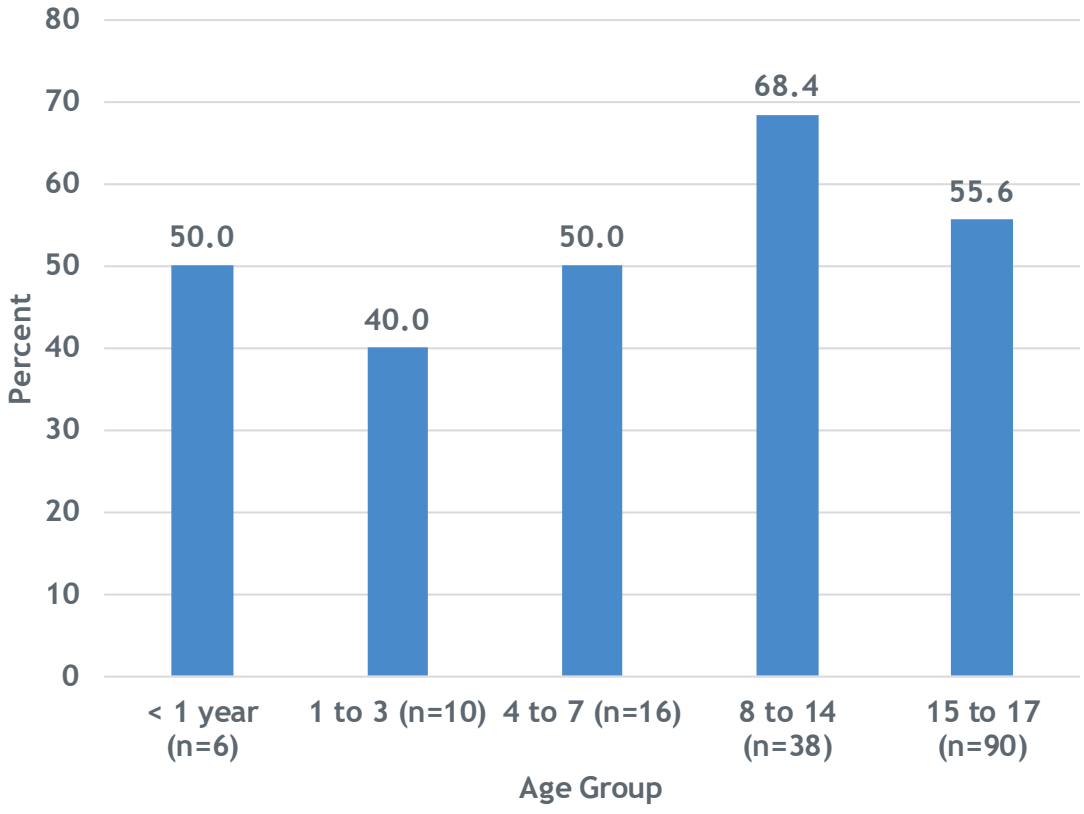
Increasing safety belt and restraint use is the single most effective way to save lives and reduce injuries due to crashes on Colorado roadways. Studies demonstrate that seat belts reduce serious injuries and death in crashes by about 50 percent.[40] Colorado's child passenger safety law requires:

- Children to be in a rear-facing car seat until age 1;
- Children ages 1-3 to be secured in a rear or forward-facing car seat, depending upon their height and weight;
- Children ages 4-7 to be secured in a forward-facing car seat or booster seat, depending upon their height and weight;
- Children ages 8-16 to correctly use a booster seat, or lap and shoulder seat belt.

Of the 160 infants, children and youth who died in Colorado in passenger vehicle crashes from 2013- 2017, 41.3 percent (n=66) were in an age-appropriate restraint, meaning that there was a car seat, booster seat or seat belt present in the vehicle (depending on their age), regardless of if it was being used correctly or incorrectly. Of those, 78.8 percent were properly restrained, meaning that the age-appropriate restraint was present and being used correctly. A total of 32.5 percent (n=52) of all infants, children and youth who died in passenger vehicle crashes were properly restrained, 56.9 percent (n=91) were improperly restrained, and restraint information was missing or unknown for 10.6 percent (n=17).

Figure 17 displays the proportion of infants, children and youth who died improperly restrained by age group. The highest proportions of improperly restrained children and youth in passenger vehicle crashes were 8-14 years old (68.4 percent, n=26) and 15-17 years old (55.6 percent, n=50). Since Colorado law requires all children and young people to be properly restrained, there is a need for increased education, policies and other systems changes to increase seat belt use among those ages 8-17.

Figure 17. Proportion of passenger vehicle deaths occurring among those under age 18 in Colorado where an age-appropriate restraint was not used correctly by age group, 2013-2017 (n=160)

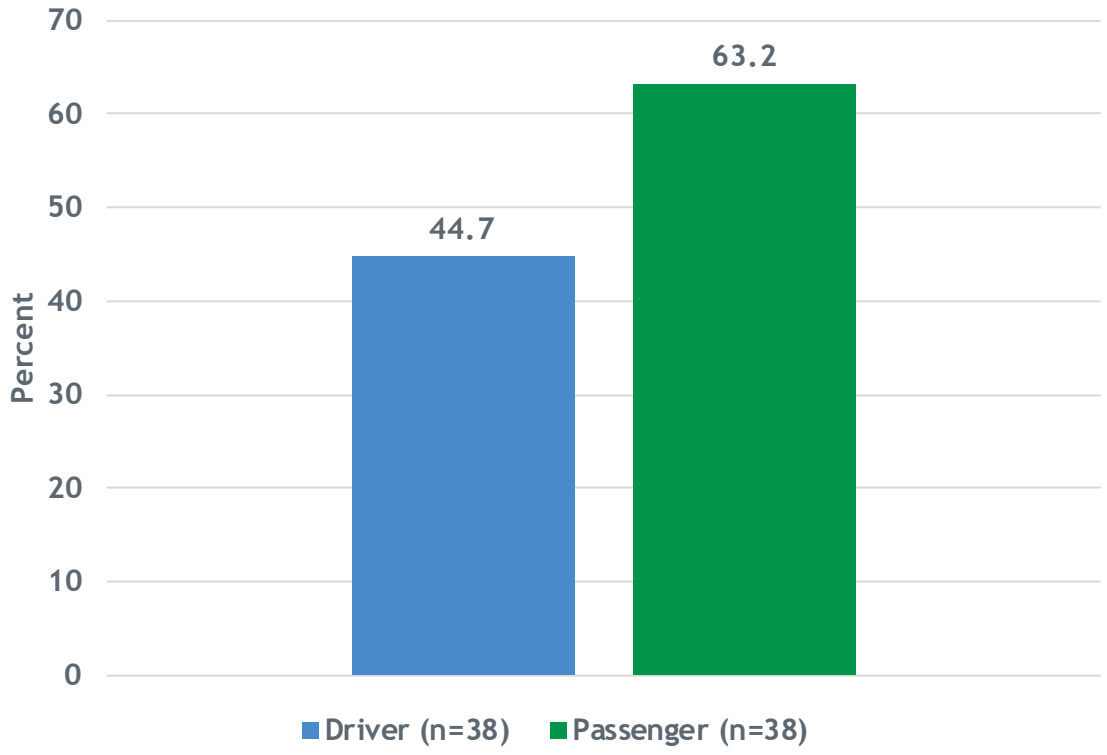


YOUNG DRIVERS

From 2013-2017 there were 76 infants, children or youth who died in passenger vehicle crashes involving 79 young drivers 18 years of age and under. Those who died were most often the passenger of a young driver (50.0 percent, n=38) or the young driver themselves (50.0 percent, n=38). Seventy-two of the 79 young drivers (91.1 percent) in these deadly crashes were responsible for causing the crash. Speeding over the limit (63.9 percent, n=46), recklessness (61.1 percent, n=44), and inexperience (59.7 percent, n=43) were the leading circumstances in crashes where the youth was at-fault. Of these crashes drug or alcohol impairment was a circumstance contributing to the crash in 36.1 percent (n=26) of the cases.

Figure 18 demonstrates the proportion of young drivers or passengers of young drivers who died and were improperly restrained (not wearing a seat belt or wearing it incorrectly): 44.7 percent (n=17) of young drivers who died were improperly restrained, 63.2 percent (n=24) of their passengers who died were improperly restrained. Nearly all of these passengers were ages 15-17.

Figure 18. Proportion of fatal passenger vehicle deaths involving young drivers (those under age 18) in Colorado who were improperly restrained by position, 2013-2017 (n=76)



OVERVIEW OF SUID

Sudden unexpected infant death (SUID) describes deaths of infants under age 1 that occur suddenly and unexpectedly, whether explained or unexplained.[41] SUID includes sudden infant death syndrome (SIDS), accidental suffocation and strangulation in bed (ASSB) and death occurring in infants due to undetermined causes.

Definition of Common Terms Included Under SUID:

- Accidental suffocation and strangulation in bed (ASSB): ASSB is assigned to infant deaths when terms related to asphyxiation, strangulation or suffocation are reported on the death certificate along with sleep terms such as bed or crib.[42] ASSB includes suffocation by (1) soft bedding, pillow or waterbed mattress, (2) overlaying or rolling on top of or against infant while sleeping, or (3) wedging and entrapment of an infant between two objects such as a mattress and wall, bed frame or furniture. ASSB also includes strangulation by asphyxiation, such as when an infant's head and neck become caught between crib railings.[43]
- Sleep-related infant death: A death that occurs during an observed or unobserved sleep period.[44]
- Sudden infant death syndrome (SIDS): SIDS is assigned to infant deaths that cannot be explained after a thorough case investigation, including a death scene investigation, autopsy and review of the clinical history.[45] SIDS is sometimes known as "crib death" or "cot death."
- Undetermined causes: An undetermined cause is assigned to infant deaths when the cause of death is unknown. This may occur when the requirements for a SIDS classification are not met, such as having not conducted a death scene investigation or autopsy.[46]

From 2013-2017, CFPS identified and reviewed 228 SUID. This represents 12.4 percent of all infant deaths (under age 1) in Colorado for the period. The annual crude rate of SUID occurring in Colorado among residents remained stable over this period (Table 3). Consistent with national trends, the majority of SUID occurred among those under five months of age.[47]

Table 3. Crude rate of sudden unexpected infant death (SUID) occurring in Colorado among Colorado residents by year, 2013-2017

				95% Confidence Interval	
Year of Death	n	Live Births	Rate*	Lower Limit	Upper Limit
2013-2017	216	328,389	65.8	57.0	74.5
2013	40	65,004	61.5	42.5	80.6
2014	51	65,817	77.5	56.2	98.7
2015	35	66,567	52.6	35.2	70.0
2016	47	66,613	70.6	50.4	90.7
2017	43	64,388	66.8	46.8	86.7

*Per 100,000 live births among residents in Colorado, 2013-2017.
Data sources: Colorado Child Fatality Preventions System and Vital Statistics Program, Colorado Department of Public Health and Environment.

SUID RISK AND PROTECTIVE FACTORS

In 2011, the American Academy of Pediatrics (AAP) developed recommendations for a safe infant sleeping environment to help reduce the risk of SUID. Recommendations include on the back sleep positioning, using a firm sleep surface, room-sharing without bed-sharing, and avoiding soft bedding and overheating.[48] With a quickly expanding body of SUID prevention research, the AAP expanded upon these recommendations in 2016.[49] The 2016 A-level recommendations, listed below, were used for this report.

Although the availability of sleep environment data varies by investigation, Table 4 indicates that none of the 228 infants who died between 2013 and 2017 were sleeping in a space that met all of the AAP's Level A Recommendations for a safe infant sleeping environment.

AMERICAN ACADEMY OF PEDIATRICS LEVEL A RECOMMENDATIONS:

- Back to sleep for every sleep.
- Use a firm sleep surface.
- Room-sharing (to age 6 months) with the infant on a separate sleep surface (to 1 year).
- Keep soft objects and loose bedding away from the infant's sleep area.
- Pregnant women should seek and obtain regular prenatal care.
- Avoid smoke exposure during pregnancy and after birth.
- Avoid alcohol and illicit drug use during pregnancy and after birth.
- Breastfeeding.
- Consider offering a pacifier at nap time and bedtime.
- Avoid overheating.
- Caregivers should immunize infants in accordance with AAP and CDC recommendations.
- Do not use home cardiorespiratory monitors as a strategy for reducing the risk of SIDS.
- Health care providers, staff in newborn nurseries and NICUs, and child care providers should endorse and model the SIDS risk-reduction recommendations from birth.
- Media and manufacturers should follow safe sleep guidelines in their messaging and advertising.
- Continue the "Safe to Sleep" campaign, focusing on ways to reduce the risk of all sleep-related infant deaths, including SIDS, suffocation, and other unintentional deaths. Pediatricians and other primary care providers should actively participate in this campaign.

Table 4. Adherence to American Academy of Pediatrics 2016 Safe Infant Sleeping Environment Recommendations for SUID occurring in Colorado, 2013-2017.**

American Academy of Pedicatrics 2016 Recommendation	Satisfied recommendation		Did not satisfy recommendation		Missing or unknown	
	n	Percent	n	Percent	n	Percent
All AAP recommendations satisfied	0	0.0	228	100.0	0	0.0
Infant and sleep environment recommendations						
Back to sleep for every sleep	123	53.9	53	23.3	40	17.5
Use a firm sleep surface	49	21.5	166	72.8	*	*
Room-sharing without bed-sharing is recommended	45	19.7	160	70.2	12	5.3
Keep soft objects and loose bedding out of the sleep environment	45	19.7	171	75.0	12	5.3
Consider offering a pacifier at nap time and bedtime	19	8.3	158	69.3	40	17.5
Caregiver-related recommendations						
Pregnant women should receive regular prenatal care (9 or more visits)	109	47.8	82	35.9	37	16.2
Breastfeeding is recommended	176	77.2	28	12.3	24	10.5
Avoid smoke exposure during pregnancy and after birth	77	33.8	91	39.9	60	26.3
Avoid alcohol or illicit drug use during pregnancy and after birth	128	56.1	67	29.4	33	14.5

*Data points with fewer than 3 observations are suppressed.
**Task force on Sudden Infant Death Syndrome (2016). *Pediatrics* 138(5).
Data source: Child Fatality Prevention System, Colorado Department of Public Health and Environment.

RACIAL AND ETHNIC INEQUITIES

Colorado observed a significant inequity in the rate of SUID by race and ethnicity. The rate of SUID among non-Hispanic black infants was 3.2 times higher (188.9 per 100,000 live births) than for non-Hispanic white infants (59.7 per 100,000 live births). This is consistent with national data (data not shown).[50]

This inequity also exists for other leading causes of infant mortality, such as congenital malformations.[51] Researchers believe that factors that may contribute to these racial differences include low educational attainment, low income, inadequate prenatal care access and utilization, and paternal involvement in child-rearing.[52] However, studies examining these individual-level factors have failed to fully explain the racial differences in infant mortality.[53] Instead, research highlights the role that social determinants and contextual factors, particularly community and environmental inequities, play in infant mortality prevention.[54]

Black women have historically been disproportionately exposed to neighborhood poverty, a well-established risk factor for infant mortality. This factor is completely independent of individual measures of socioeconomic status.[55] Data from the American Community Survey from 2013-2017 shows that 19.9 percent of black Coloradans live below the poverty level, compared to 8.5 percent of non-Hispanic white Coloradans.[56]

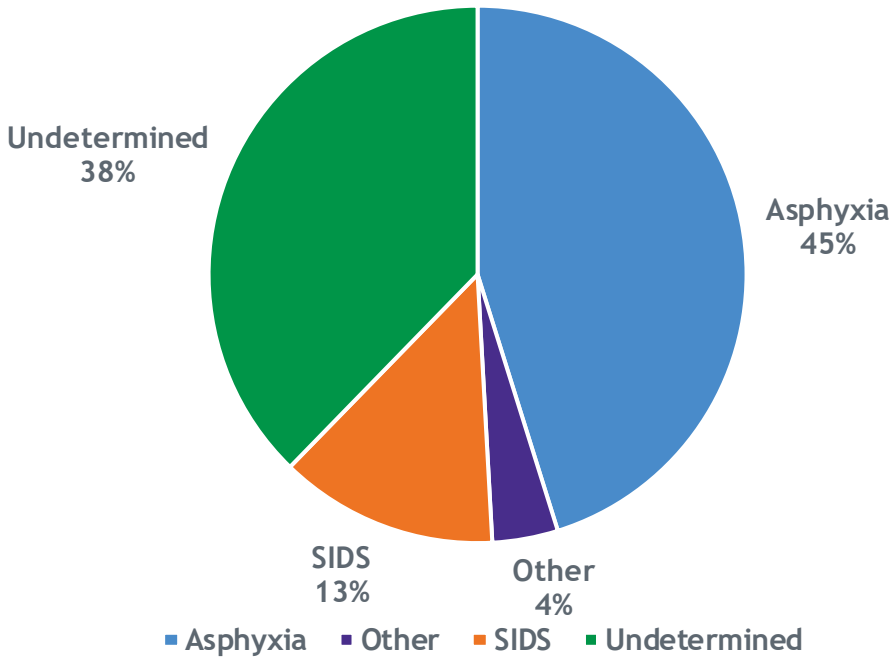
In addition to neighborhood poverty, racial residential segregation can determine infant mortality. It is largely driven by discriminatory federal, state and local policies, such as redlining, that create unjust geographic divisions among racial and ethnic groups.[57,58] As previously discussed in this report (see Structural Equity on page 9) racial segregation leads to neighborhood disadvantage. It concentrates neighborhood poverty, increases exposure to environmental stressors such as air pollutants, creates barriers to and fewer opportunities for a healthy lifestyle, limits access to health services and increases housing and food insecurity. The Colorado Behavioral Risk Factor Surveillance System (BRFSS) shows that 36.2 percent of black Coloradans are food insecure, compared to 19.2 percent of non-Hispanic white Coloradans.[59] Such community inequities are associated with increased infant mortality among black populations.[60,61]

Differences in the prevalence of on-the-back sleep positioning and other sleep environment factors across racial and ethnic populations may also contribute to inequities. The Pregnancy Risk Assessment Monitoring System (PRAMS) tracks several aspects of infant sleep position and environments among families in Colorado. From 2016-2017, 86.7 percent of mothers in Colorado reported that they most often lay their infants down to sleep on their backs, with 88.6 percent of non-Hispanic white mothers and 82.6 percent of black mothers reporting on-the-back placement for sleeping. The regular use of a safe sleep location is more common among non-Hispanic white families. From 2016 to 2017, 88.1 percent of mothers in Colorado reported usually placing their infant to sleep in a crib, bassinet or portable play yard in the last two weeks, with 91.3 percent of non-Hispanic white mothers and 77.2 percent of black mothers using these sleep locations.[62] The use of soft bedding is also more common among black families in Colorado, which is consistent with national trends.[63,64]

SUID INVESTIGATIVE CIRCUMSTANCES

Figure 19 demonstrates the proportion of SUID occurring in Colorado by mechanism of death. Among the 228 SUID identified from 2013-2017, 45.2 percent (n=103) were attributed to asphyxia. This category includes ASSB, overlays and wedging. Of the remaining mechanisms, 37.7 percent (n=86) were attributed to undetermined causes and 13.2 percent (n=30) fell under the criteria for SIDS. The rate of SIDS has been decreasing since the early 1990s nationally and in Colorado, while the rates of SUID attributed to undetermined causes and ASSB have increased.[65] These changes are driven by improvements in investigations, a more thorough understanding of case definitions and collecting more detailed information about safe sleep circumstances.

Figure 19. SUID occurring in Colorado by cause category, 2013-2017 (n=228)

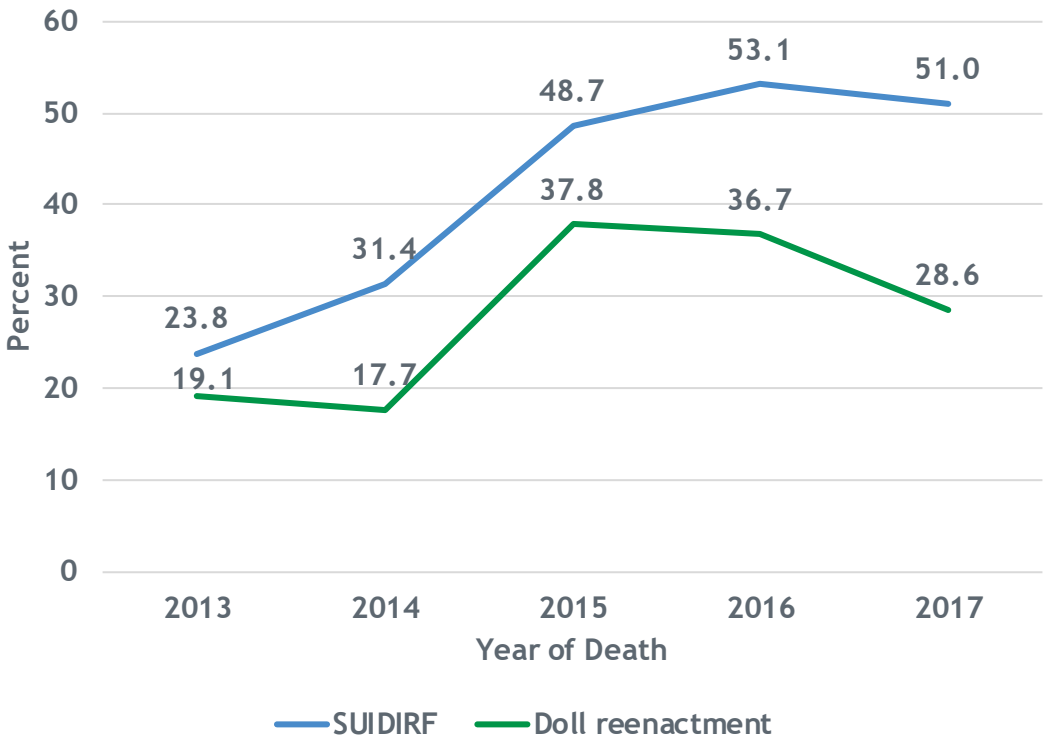


CFPS has limited ability to determine the circumstances related to infant deaths when death scene investigators do not conduct a full investigation. Infant death scene investigations are critical to a comprehensive understanding of the circumstances and factors contributing to unexplained infant deaths. In 1996, the CDC developed the Sudden Unexplained Infant Death Investigation Reporting Form (SUIDIRF) (www.cdc.gov/sids/SUIDRF.htm) to aid in the investigation and understanding of SUID.[66]

From 2013 to 2017, 93.9 percent (n=214) of all SUID in Colorado had a death scene investigation. The SUIDIRF was used in 41.7 percent (n=95) of the investigations and 27.6 percent (n=63) of investigations included a scene reenactment with a doll. Figure 20 demonstrates an increasing use of the SUIDIRF and doll reenactments as part of death scene investigations for SUID in Colorado. This suggests that scene investigators have an increased awareness of the importance of these tools in understanding the circumstances of these deaths.

This report includes a recommendation to encourage and incentivize law enforcement agencies and coroner offices to use the SUIDIRF during infant death scene investigations. This will ensure that law enforcement officers and coroner investigators consistently collect circumstance data when investigating a suspected SUID.

Figure 20. Proportion of SUID occurring in Colorado by selected investigative methods and year, 2013-2017 (n=228)



OVERVIEW OF CHILD MALTREATMENT DEATHS

Although Colorado's Children's Code (C.R.S. 19-1-103 (1)) and legal definitions of child abuse and child neglect serve as guidance for the system, local teams make determinations of child maltreatment (abuse or neglect) based on available information from the case reviews and their professional judgments. These multidisciplinary review teams include representatives from departments of human services. The determination is the subjective opinion of the local teams and does not trigger any prosecution or have any legal ramifications. As such, deaths classified as child maltreatment by local teams will not be the same as official counts of child abuse or child neglect deaths reported by the Colorado Department of Human Services (CDHS). Some of these deaths do not meet the criteria for review by the CDHS Child Fatality Review Team (CFRT). CFRT only reviews deaths of children with previous involvement with county departments of human services within the last three years.

What is the CDHS CFRT?

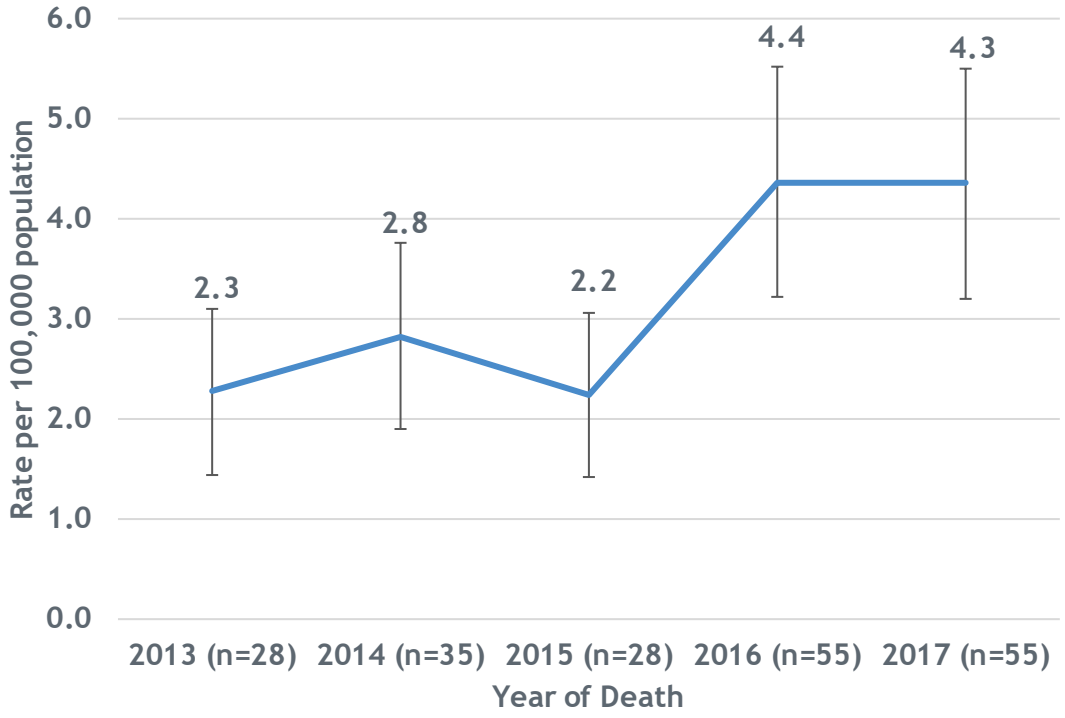
- The CDHS CFRT reviews incidents of fatal, near fatal or egregious abuse or neglect determined to be a result of child maltreatment when the child or family had previous involvement with the child welfare system within the last three years. CFRT reviews the incident and identifies factors that may have led to it. CFRT also assess the sufficiency and quality of services state and local agencies provide to families and their prior involvement with the child welfare system. As a result of identified strengths, as well as systemic gaps and/or deficiencies, CFRT puts forth policy and practice recommendations that may help prevent future incidents of fatal, near fatal or egregious abuse or neglect. These recommendations could also strengthen the systems that deliver services to children and families.

For the purpose of a public health-focused child fatality review process, child maltreatment is defined as an act or failure to act on the part of a parent or caregiver regardless of intent. From 2013-2017, there were 223 deaths where child maltreatment caused and/or contributed to the circumstances of death among children and youth ages 0-17 in Colorado.

Figure 21 displays the rates of child maltreatment deaths, as defined by CFPS, among Colorado residents under 18 by year. The crude rate of child maltreatment deaths from 2013-2017 was 3.2 per 100,000 population. The rate of 4.3 per 100,000 population in 2017 was statistically significantly different from the rate of 2.3 per 100,000 population observed in 2013.

Child maltreatment and its identification according to the previously provided definition allows CFPS review teams great latitude when determining whether child maltreatment contributed to the events leading to death. Some of the increase in the rate of child maltreatment deaths over the last several years may be attributed to improved technical assistance and guidance provided to local teams around identifying child abuse and neglect.

Figure 21. Crude rate of child maltreatment deaths occurring in Colorado among Colorado residents under age 18, 2013-2017 (n=201)

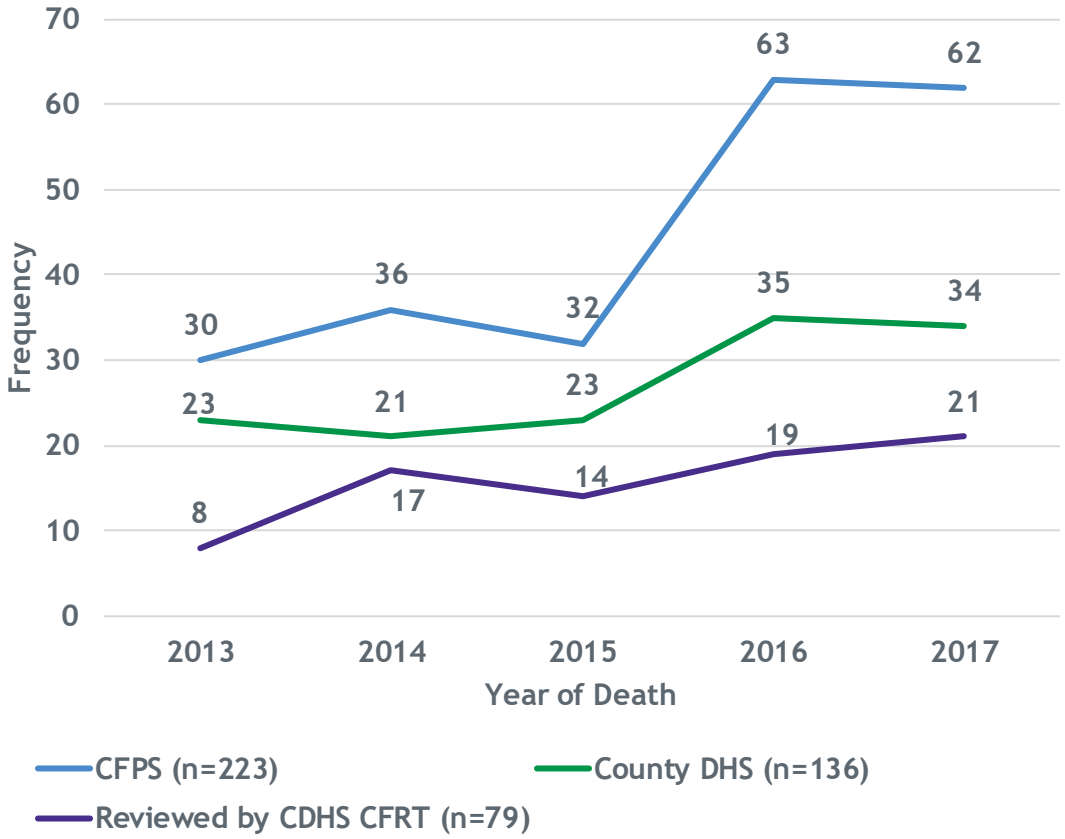


*Error bars represent 95% confidence limits for rates.

Prior to 2014, the CFPS State Review Team identified all child maltreatment deaths substantiated by county departments of human or social services as child maltreatment deaths. When local teams began reviewing child deaths in 2014; however, they did not always identify cases that were substantiated by county departments of human services as child maltreatment. These observations suggested that CDPHE should provide more technical assistance and training to local teams about CFPS's role in identifying when child maltreatment contributed to the deaths. The data presented here include all deaths substantiated by county departments of human services. The data also include additional deaths not substantiated by county departments of human services but ruled as child maltreatment by CFPS review teams.

Although CFPS review teams and county departments of human services define child abuse and neglect differently, county departments of human services substantiated 61.0 percent (n=136) of the 223 deaths CFPS identified as due to child maltreatment from 2013-2017. Additionally, 35.4 percent (n=79) of these deaths met the statutory criteria for CDHS Child Fatality Review Team review (Figure 22). CFPS review teams alone identified the remaining 39.0 percent (n=87) as child maltreatment deaths. These 87 deaths were either not reported to county departments of human services or the incident did not meet the statutory definition of child maltreatment that guides the work of CDHS.

Figure 22. Deaths occuring among those under age 18 in Colorado ruled child maltreatment by CFPS, substantiated by county departments, or reviewed by CDHS CFRT by year, 2013-2017



DEMOGRAPHICS OF CHILD MALTREATMENT DEATHS

Of the 223 child maltreatment deaths CFPS identified from 2013-2017, 68.2 percent (n=152) occurred among children under age 5 and 56.1 percent (n=125) were male. Table 5 displays the rates of child maltreatment deaths CFPS identified by age group. The highest rates of child maltreatment deaths were among children under age 5. The age-specific rate of child maltreatment deaths for children under age 1 was 25.3 per 100,000 population, almost eight times the rate for all ages and nearly 20 times the rate for those ages 5-9. For children ages 1-4, the rate of child maltreatment deaths was 4.1 per 100,000 population, 1.3 times the rate for all ages and more than three times the rate for children ages 5-9. The incidence of child maltreatment deaths among males was 3.5 per 100,000 population, a rate 1.2 times greater than that among females (2.9 per 100,000 population).

Table 5. Age-specific rate of child maltreatment deaths occurring in Colorado among Colorado residents under age 18 by age group, 2013-2017.*

				95% Confidence Interval	
Age Group	n**	Population	Rate***	Lower Limit	Upper Limit
All Ages	201	6,262,004	3.2	2.8	3.7
< 1 year	84	332,027	25.3	19.9	30.7
1 through 4	55	1,329,681	4.1	3.0	5.2
5 through 9	23	1,753,976	1.3	0.8	1.8
10 through 14	20	1,802,674	1.1	0.6	1.6
15 through 17	19	1,043,645	1.8	1.0	2.6

*As defined by the Colorado Child Fatality Prevention System.
**Rates with fewer than 20 observations may be unstable.
***Per 100,000 Colorado residents.
Data source: Colorado Child Fatality Prevention System, Colorado State Demography Office

RACIAL AND ETHNIC INEQUITIES

There is significant inequity in the rate of child maltreatment deaths by race and ethnicity in Colorado. The rate of child maltreatment deaths among non-Hispanic black infants, children and youth was 4.1 times higher (10.7 per 100,000 population) than for non-Hispanic whites (2.6 per 100,000 population). The rate of child maltreatment deaths among Hispanic infants, children and youth was 1.2 times higher (3.1 per 100,000 population) than for non-Hispanic whites, although this difference was not statistically significant.

Traditionally, individual-level factors of caregivers have been shown to contribute to the racial differences in deadly child maltreatment, including low educational attainment, low income, inadequate employment, intimate partner violence and history of abuse as a child.[67] However, studies examining these individual-level factors have failed to fully explain the racial differences. Instead, research highlights the role that social determinants and contextual factors, particularly community and environmental inequities, play in child maltreatment prevention.[68]

As previously discussed in this report (see Structural Equity on page 9), racialized residential segregation can lead to the racial and ethnic inequities in various child fatalities including child maltreatment deaths. These inequities are is largely driven by discriminatory federal, state and local policies, such as redlining, that create unjust geographic divisions among racial and ethnic groups.[69] In the United States, Hispanic families are significantly more likely to reside in segregated neighborhoods with higher rates of social isolation and lack of access to resources.[70,71] Similarly, black families are likely to live in communities that are highly segregated with limited access to basic needs assistance, mental health and substance abuse treatment, and opportunity for employment.[72] Data show 19.9 percent of the black and 19.3 percent of the Hispanic Coloradoans live below the poverty level, compared to 8.5 percent of non-Hispanic white Coloradans.[73,74] This structural injustice which many black and Hispanic families unjustly experience may partly explain the inequities around child maltreatment deaths.

A significant amount of research has documented that racial and ethnic minority populations are overrepresented in the child welfare system, compared with the general population. Studies have consistently found that black infants, children and youth are more likely to be the subject of child maltreatment reports and substantiations than non-Hispanic whites.[75] Possible explanations for this have included 1) disparate needs of children and families of color, particularly due to higher rates of poverty, 2) racial bias and discrimination by caseworkers, mandatory reporters and the general public and 3) lack of resources for families of color in the child welfare system and other similar factors.[76] Studies have found no relationship between race and incidents of child maltreatment after controlling for poverty.[77] Instead, child abuse and neglect is strongly associated with poverty and other measures of economic well-being.[78]

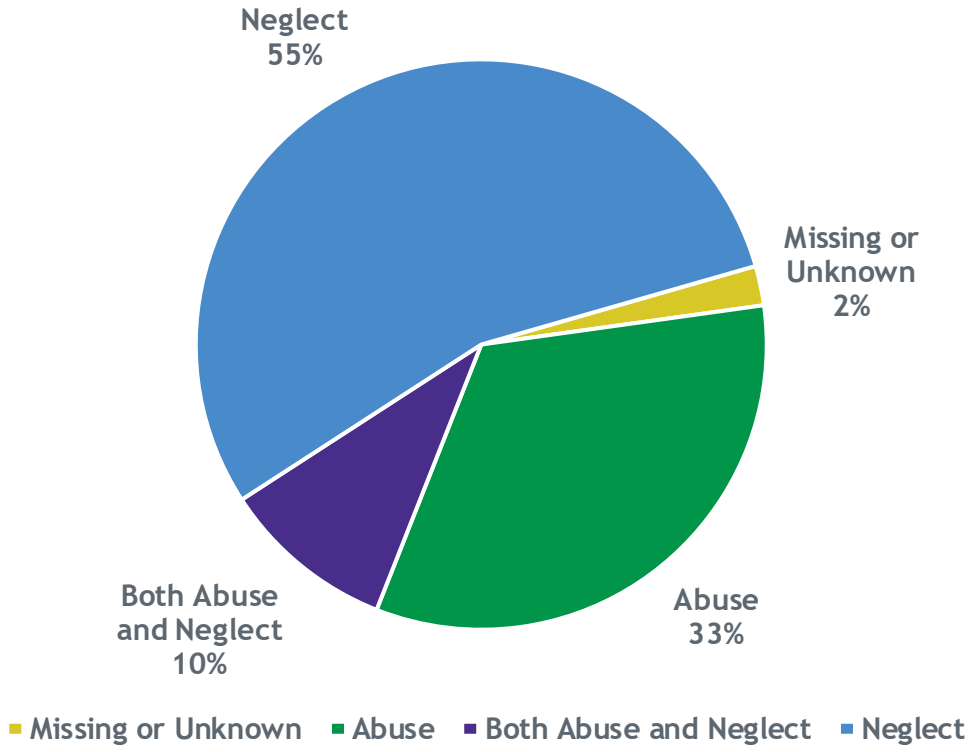
Families of color inequitably and disproportionately experience poverty in the United States, manifesting the higher prevalence of abuse and neglect compared to non-Hispanic white families. Experiencing poverty may also amplify exposure to the social service system (e.g. financial or housing assistance) and increase exposure to mandatory reporters, an idea referred to as visibility or exposure bias.[79] This research urges an emphasis on social factors such as poverty, rather than a focus on bias within the child welfare system.

While we have made progress in understanding the overrepresentation of children and youth of color within the child welfare system,[80,81,82] it remains critical to identify, understand, and eradicate the life-long inequities that persist across racial and ethnic groups that contribute to child maltreatment.[83]

CHILD MALTREATMENT TYPES AND CIRCUMSTANCES

Of the 223 child maltreatment deaths between 2013 and 2017, neglect caused or contributed to 54.7 percent (n=122) of the deaths, abuse caused or contributed to 33.2 percent (n=74), and both abuse and neglect caused or contributed to 9.9 percent (n=22). There was too little information available for five (2.2 percent) of the deaths, due to ongoing investigation or litigation. Because of this, teams were unable to determine whether abuse, neglect or abuse and neglect caused or contributed to the death (Figure 23).

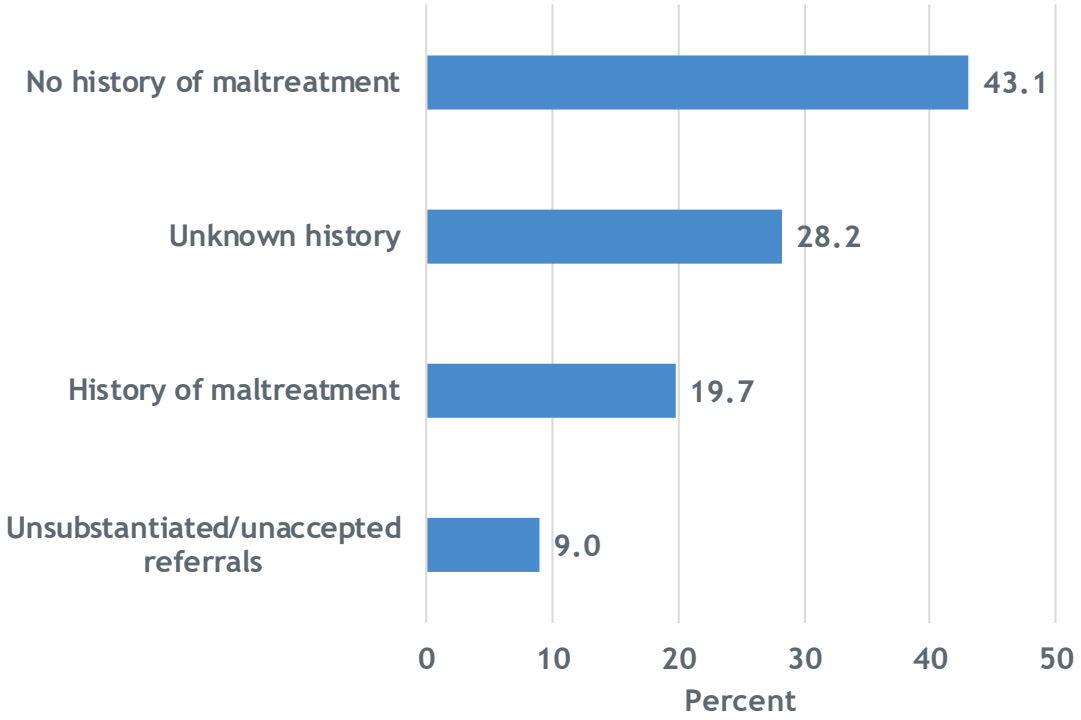
Figure 23. Deaths occurring among those under age 18 in Colorado ruled child maltreatment by CFPS by type, 2013-2017 (n=223)



Among deaths classified as involving abuse (those classified as abuse or abuse and neglect, n=95), all involved physical abuse, including 48.4 percent (n=46) where abusive head trauma occurred and 42.1 percent (n=40) where other abusive injuries (such as beating, kicking, gunshot injuries, and stabbing) occurred. Among deaths classified as involving neglect (those classified as neglect or abuse and neglect, n=144), 62.5 percent (n=90) involved a failure to protect the child from hazards. The next most common categories were failure to provide medical treatment (12.5 percent, n=18) and failure to provide supervision (10.4 percent, n=15) (data not shown).

Figure 24 displays information on the history of child maltreatment for infants, children and youth who died. Approximately 19.7 percent (n=44) of the children who died had a CDHS-substantiated history of child maltreatment, 9.0 percent (n=20) had unsubstantiated or unaccepted referral(s) and 43.1 percent (n=96) had no known previous history of maltreatment. Information on history of child maltreatment was missing or unknown for 28.2 percent (n=63) of the cases reviewed by CFPS.

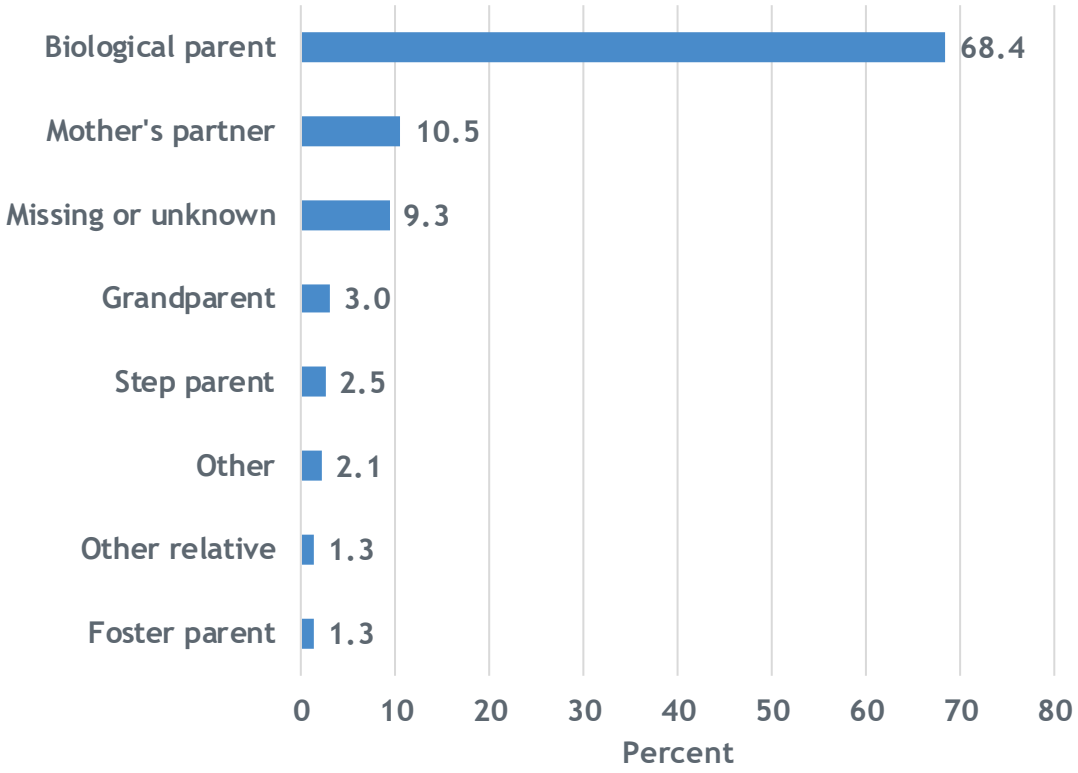
Figure 24. Decedent's history of maltreatment for child maltreatment deaths occurring among those under age 18 in Colorado, 2013-2017 (n=223)



PERPETRATORS OF CHILD MALTREATMENT

The CFPS review process can identify up to two perpetrators for each child maltreatment death reviewed (i.e. one perpetrator may have caused the death and another perpetrator may have substantially contributed to the death). From 2013-2017, 237 total perpetrators caused or contributed to 223 child maltreatment deaths. As shown in Figure 25, biological parents were most often the perpetrators of child abuse or neglect (68.4 percent, n=162) followed by the mother's partner (10.5 percent, n=25). When stratified by maltreatment type (abuse or neglect), the proportion of biological parents identified as perpetrators is higher for deaths involving neglect (78.6 percent, n=129), while the proportion where the mother's partner is identified is higher for deaths involving abuse (21.1 percent, n=24).

Figure 25. Perpetrators of child maltreatment deaths occurring among those under age 18 in Colorado by type, 2013-2017 (n=237)



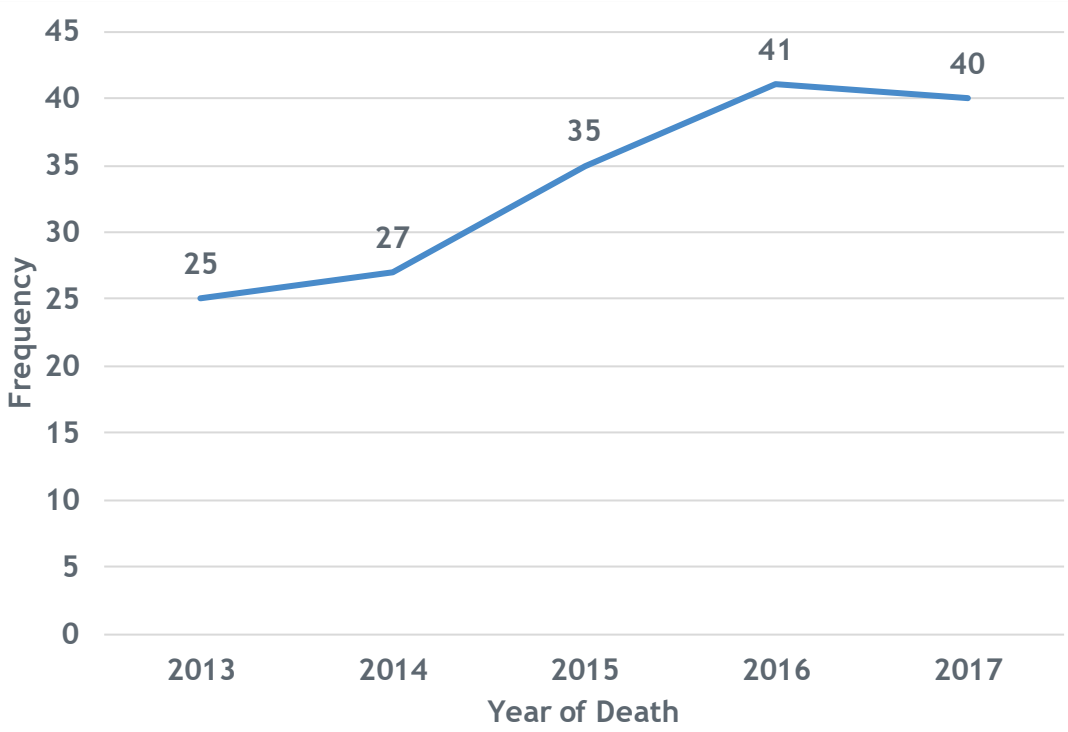
People who behave violently are more likely to continue being violent and commit additional forms of violence.[84] Among perpetrators of child maltreatment deaths in Colorado, 16.0 percent (n=38) had a known, previous history of child maltreatment as a perpetrator, 9.3 percent (n=22) had an unsubstantiated or unaccepted referral(s) and 31.2 percent (n=74) had no previous history of child maltreatment as a perpetrator. However, this information was missing or unknown for 43.5 percent (n=103) of the perpetrators.

Additionally, adults who have a history of either perpetrating or surviving intimate partner violence are at higher risk of perpetrating child maltreatment.[85,86] Among perpetrators of child maltreatment deaths in Colorado between 2013 and 2017, 27.4 percent (n=65) had a history of intimate partner violence, 15.6 percent (n=37) as a perpetrator and 11.8 percent (n=28) as a victim. Information on history of intimate partner violence was missing or unknown for 59.1 percent (n=140) of perpetrators listed.

OVERVIEW OF FIREARM DEATHS

CFPS analyzes circumstance data on deaths involving firearms in Colorado, regardless of manner. From 2013-2017, 168 children and youth ages 0-17 died as a result of firearm injuries. Figure 26 shows that the number of yearly firearm deaths ranged from 25 in 2013 to 41 in 2016, averaging 33.6 deaths per year. The rate has been increasing since 2013, although this difference was not statistically significant when comparing 2013 (2.0 per 100,000 population) to 2017 (3.1 per 100,000 population). Among these deaths, suicide was the leading manner of death (64.3 percent, n=108), followed by homicide (32.7 percent, n=55) and accidental manner (2.4 percent, n=4).

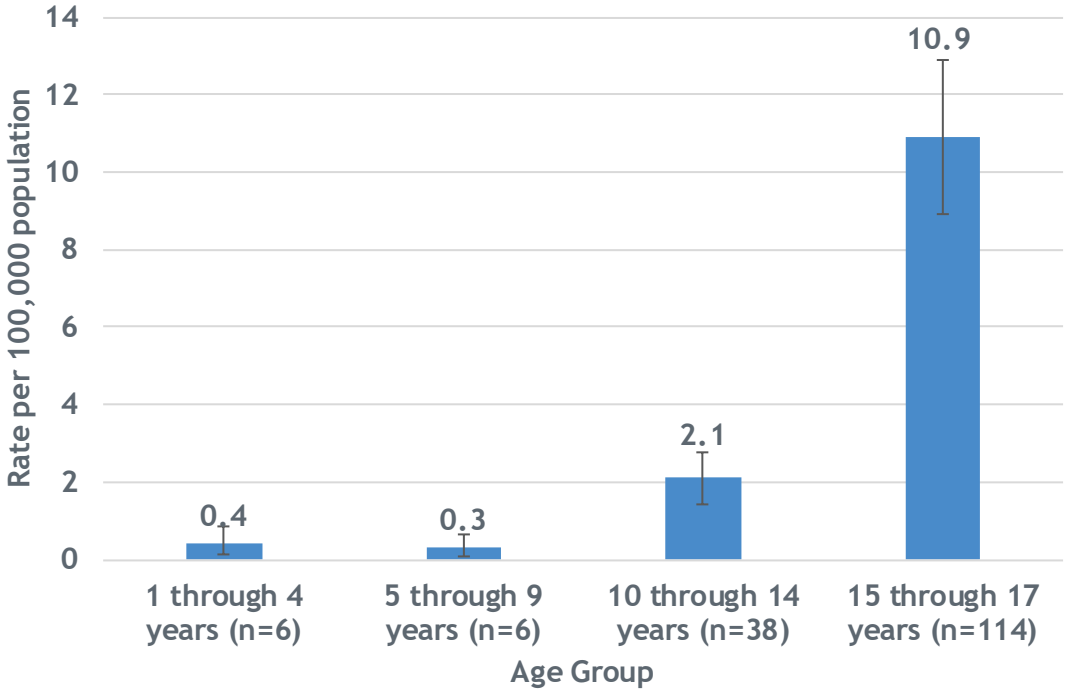
Figure 26. Firearm deaths occurring among those under age 18 in Colorado by year, 2013-2017 (n=168)



DEMOGRAPHICS OF FIREARM DEATHS

Of the 168 firearm deaths, 69.1 percent (n=116) occurred among youth ages 15-17 and 22.6 percent (n=38) occurred among those ages 10-14. Of all firearm deaths among youth in Colorado, 91.7 percent (n=154) were among youth ages 10-17. The rates of firearm deaths was significantly higher among youth ages 10-14 and 15-17 relative to other age groups (Figure 27). Of the 168 firearm deaths, 82.7 percent (n=139) of those who died were male, with the rate of firearm deaths significantly higher for males (4.2 per 100,000 population) than for females (0.9 per 100,000 population).

Figure 27. Age-specific rates of firearm deaths occurring in Colorado among Colorado residents under age 18, 2013-2017 (n=165)



*Error bars represent 95% confidence limits for rates.

RACIAL AND ETHNIC INEQUITIES

Of the 168 firearm deaths, 61.9 percent (n=107) were non-Hispanic white, 26.2 percent (n=44) were of Hispanic origin and 9.5 percent (n=16) were non-Hispanic black. The rate of firearm deaths was nearly two-fold higher among non-Hispanic black infants, children and youth in Colorado (5.2 per 100,000 populations) compared to non-Hispanic whites (2.8 per 100,000 population); however, the difference was not statistically significant. When narrowed down specifically to homicide deaths by firearm (n=39), there is a significant difference across racial and ethnic groups in Colorado. Consistent with national trends,[87] the rate of homicide deaths by firearm among non-Hispanic black infants, children and youth was 12.8 times higher (3.2 per 100,000 population) than for non-Hispanic whites (0.2 per 100,000 population). These differences exist because of community-level inequities. For example, in the United States, black families are likely to live in communities that are highly segregated with limited access to basic needs assistance, mental health and substance abuse treatment, and opportunity for employment.[88] In Colorado, 19.9 percent of black Coloradoans live below the poverty level, compared to 8.5 percent of non-Hispanic white Coloradans.[89]

In addition to harming economic opportunity, this structural injustice may reduce a community's ability to achieve collective goals of keeping residents safe and neighborhoods free of crime and interpersonal violence.[90,91] As a result communities may be less able to monitor children's play groups, intervene to prevent acts such as truancy and confront those who are disturbing

public spaces.[92] Racial segregation concentrates poverty in certain areas and isolates residents from the key resources. This results in a less cohesive neighborhood and makes it less likely for residents to intervene on behalf of the good of the community. Having poor neighborhood support and cohesion fosters a social norm in which violence is a part of daily life.[93]

Therefore, the inequity observed for firearm deaths may be partly explained by racialized residential segregation and living in high poverty areas. This is continually perpetuated by social policies that maintain segregation.[94,95] It is critical to identify, understand and eradicate the life-long inequities that persist across racial groups and that contribute to these differences in firearm death rates.

CIRCUMSTANCES OF FIREARM DEATHS

Figure 28 displays the types of firearms used in firearm deaths occurring in Colorado. The weapon type most commonly associated with these deaths was a handgun (68.5 percent, n=115), followed by shotguns (9.5 percent, n=16), hunting rifles (8.9 percent, n=15) and assault rifles (2.4 percent, n=4). Information about weapon type was missing or unknown for 10.1 percent (n=17) of these deaths.

Figure 28. Type of firearm for firearm deaths occurring among those under age 18 in Colorado, 2013-2017 (n=168)

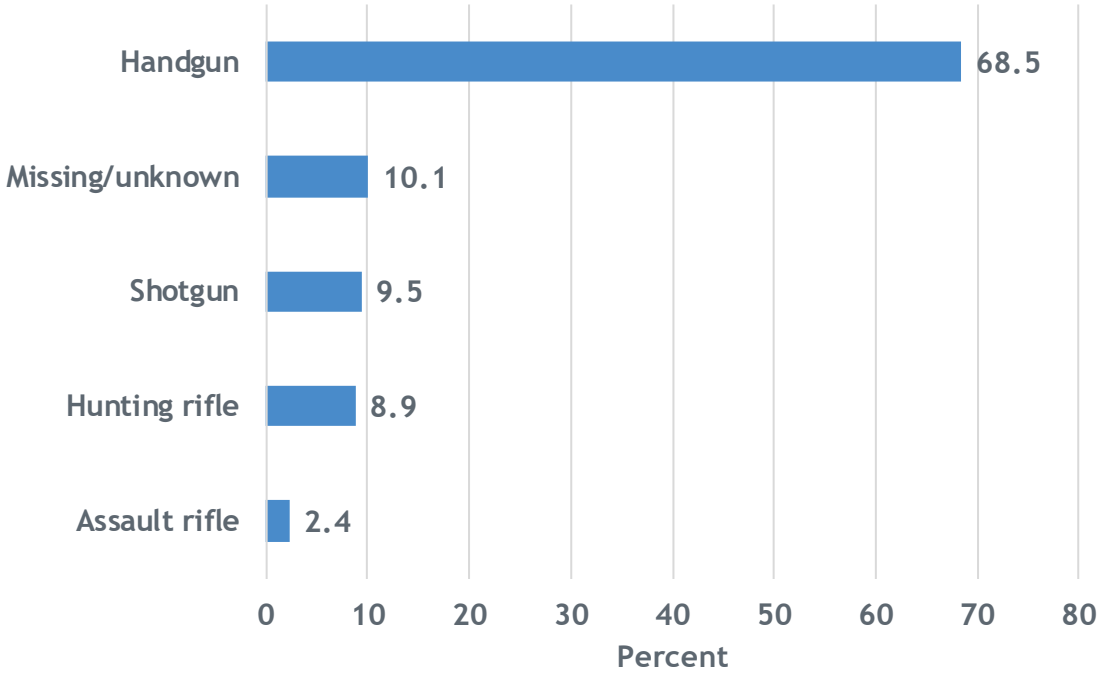


Figure 29 includes information about where and how the firearms used to inflict deadly injuries were stored. Current best practice for safe firearm storage includes storing the firearm locked and unloaded, and storing ammunition locked and in a separate location from the firearm.[96] Only 11.9 percent (n=20) of firearms involved in the death of an infant, child or youth in Colorado were known to have been stored in a locked storage location. Firearms were stored unlocked 48.8 percent (n=82) of the time. This information was missing or unknown for 39.3 percent (n=66) of these firearms. Firearms owners stored firearms unloaded 14.9 percent (n=25) of the time. This information was missing or unknown 55.9 percent (n=94) of the time.

The cause for such high numbers of unknown and missing firearm information is not clear. It may be due to lack of guidance on the importance of this information. It may also be because death scene investigators and child fatality review team members are not asking about firearm storage. This report includes a recommendation to improve data quality of the circumstances of firearm deaths by providing technical assistance to local teams on best practices for firearm death reviews.

Figure 29. Firearm storage status for firearm deaths occurring among those under age 18 in Colorado, 2013-2017 (n=168)

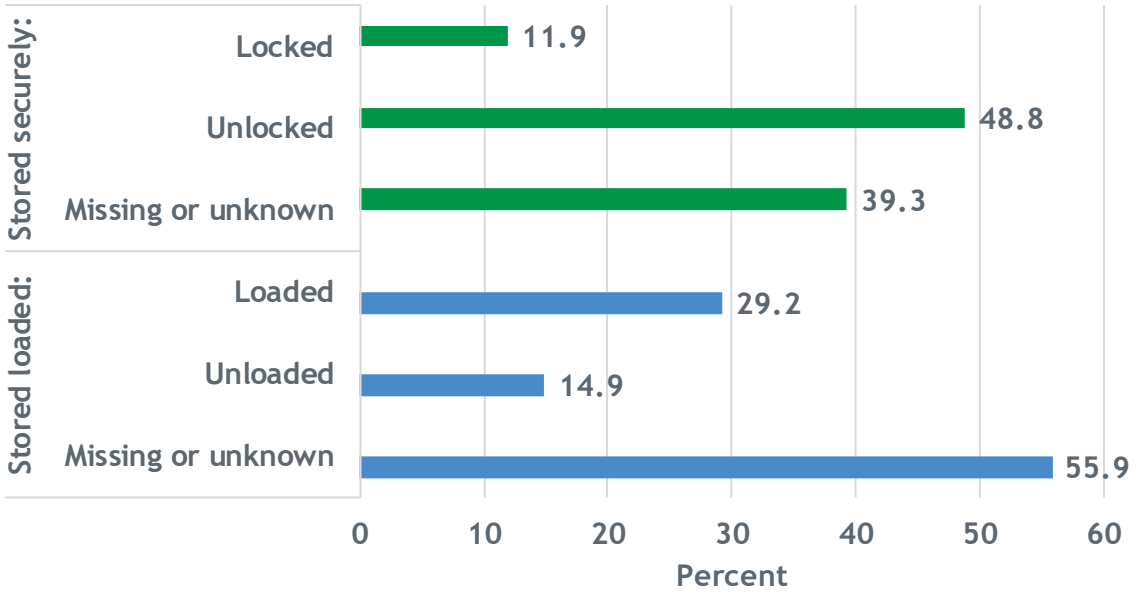
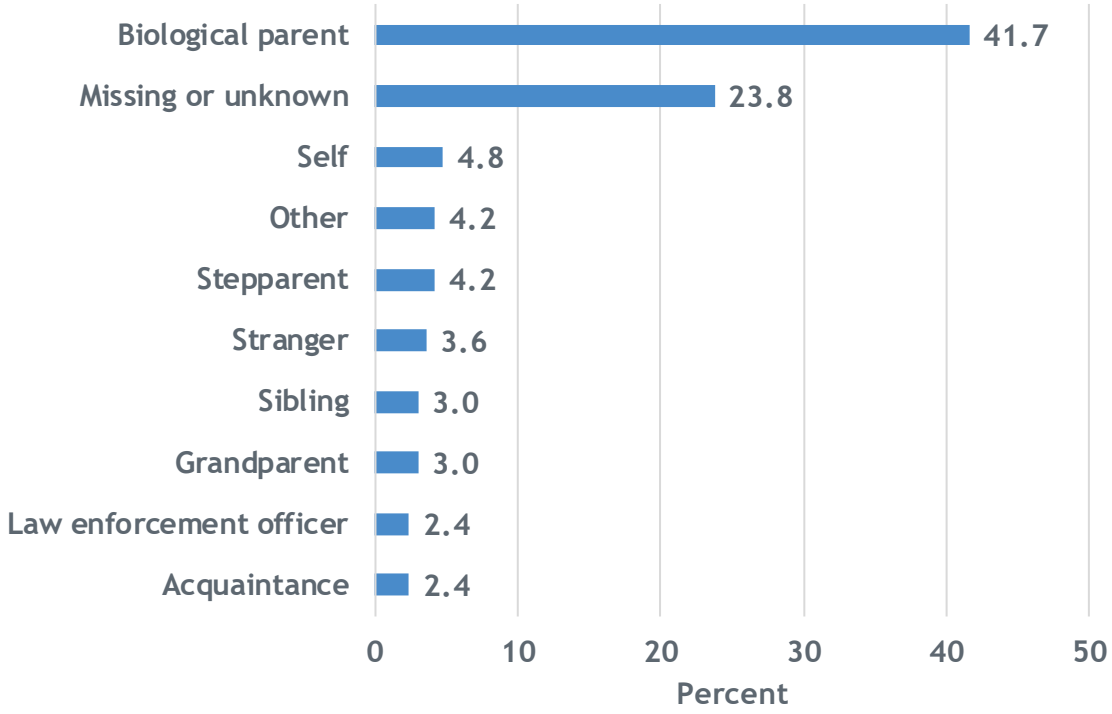


Figure 30 demonstrates ownership of firearms involved in firearm deaths in Colorado by relationship to the child or youth who died. Biological parents were most commonly the reported owners of the firearm involved in the death (41.7 percent, n=70). The child or young person owned the firearm for 4.8 percent (n=8) of the firearm deaths. This information was missing or unknown for 23.8 percent (n=40) of the deaths. Approximately 54.8 percent (n=92) of the firearm owners were male, 13.1 percent (n=22) were female, and information about the sex of the owner was missing or unknown for 32.1 percent (n=54) of these deaths.

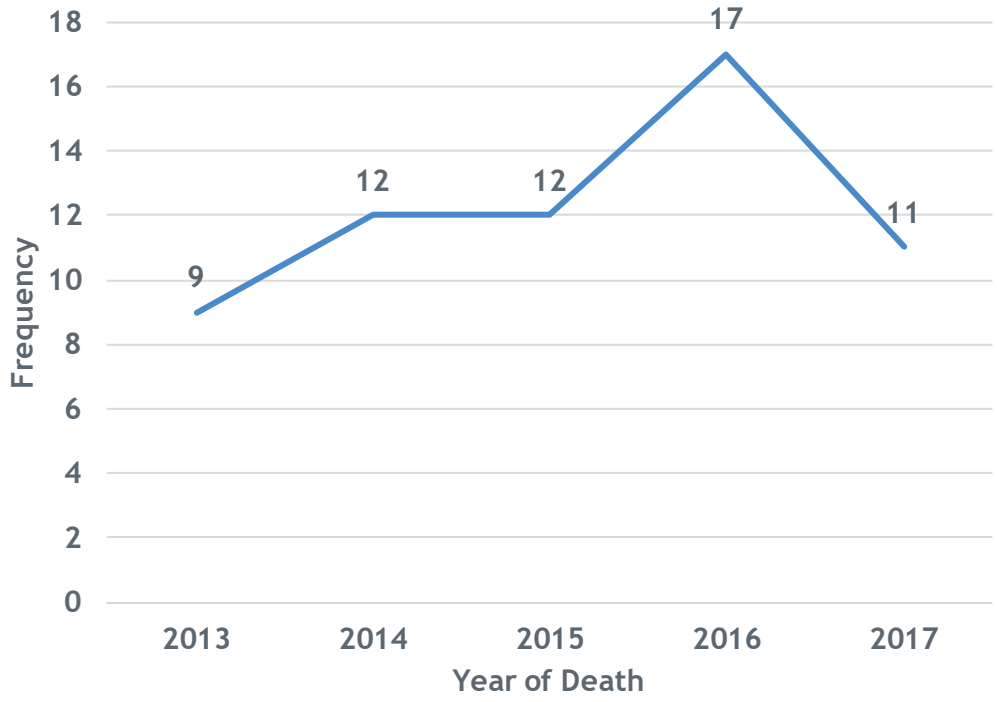
Figure 30. Firearm ownership for firearm deaths occurring among those under age 18 in Colorado, 2013-2017 (n=168)



OVERVIEW OF UNINTENTIONAL DROWNING DEATHS

From 2013-2017, 61 unintentional drowning deaths occurred among children and youth ages 0-17 in Colorado. Unintentional drowning deaths for the period ranged from nine deaths in 2013 to 17 in 2016 and averaged 12.2 per year (Figure 31). The five-year incidence of unintentional drowning deaths for the period was 0.9 per 100,000 population. This rate did not change significantly from year to year for the period (data not shown).

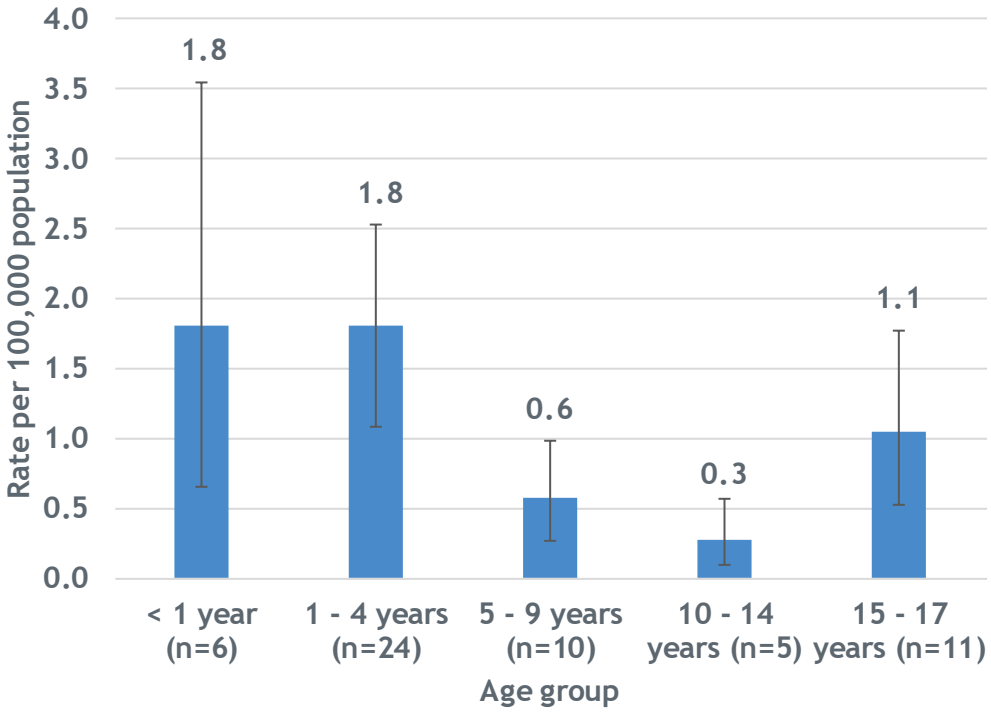
Figure 31. Unintentional drowning deaths occurring among those under age 18 in Colorado by year, 2013-2017 (n=61)



DEMOGRAPHICS OF UNINTENTIONAL DROWNING DEATHS

Among those who died by unintentional drowning, 70.5 percent (n=43) were males. About 41.0 percent (n=25) were ages 1-4, 21 percent were youth ages 15-17 (n=13), and 19.7 percent (n=12) were children ages 5-9. There were statistically significant differences in rates across age groups, with the youngest age groups having significantly higher rates when compared to the older age groups. The highest rates were among infants (1.8 per 100,000 population), at six times the rate observed for children ages 10-14 (0.3 per 100,000 population). Additionally, the rate observed among children ages 1-4 years (1.8 per 100,000 population) is three times the rate of children ages 5-9 (0.6 per 100,000 population) (Figure 32). These rates are derived from small numbers and can vary substantially if additional events occur within a particular age group.

Figure 32. Age-specific rates of unintentional drowning deaths occurring in Colorado among Colorado residents under age 18 by age group, 2013-2017 (n=61)



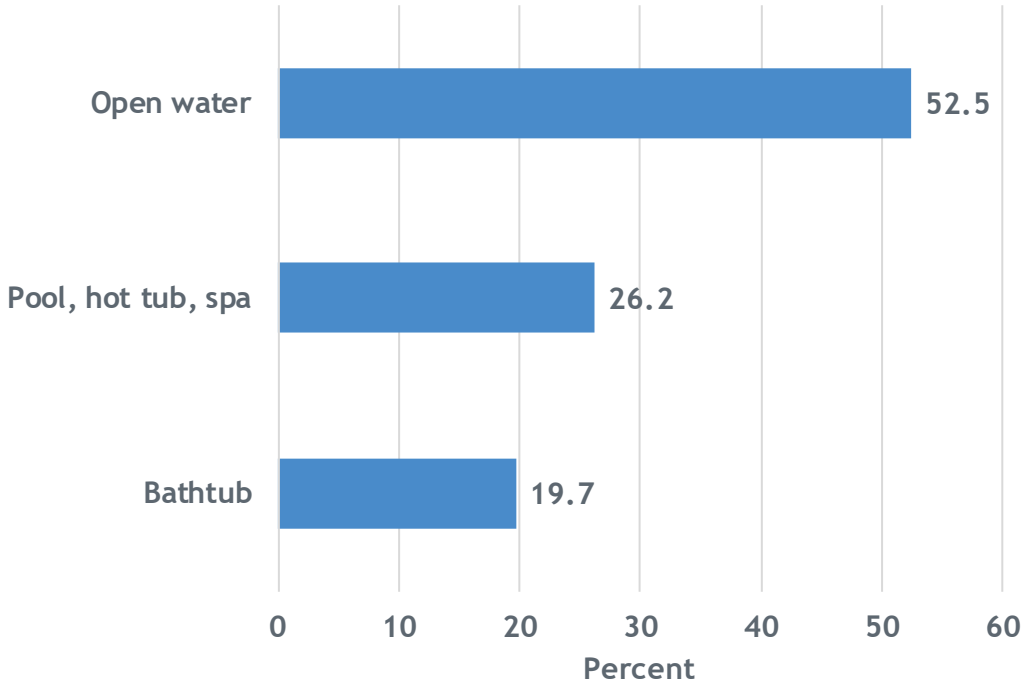
*Error bars represent 95% confidence limits for rates.

Of the 61 infants, children and youth who died by unintentional drowning, 49.2 percent (n=30) were non-Hispanic white and 37.7 percent (n=23) were Hispanic. The rate of unintentional drowning death among males (1.2 per 100,000 population) was double the rate among females (0.6 per 100,000 population), but this difference was not statistically significant (data not shown).

UNINTENTIONAL DROWNING CIRCUMSTANCES

Open water environments, including lakes, rivers, ponds, creeks, quarries, gravel pits and canals, were the most common drowning locations (52.5 percent, n=32), followed by pools, hot tubs and spas (26.2 percent, n=16) and bathtubs (19.7 percent, n=12) (Figure 33).

Figure 33. Location of unintentional drowning deaths occurring among those under age 18 in Colorado, 2013-2017 (n=61)



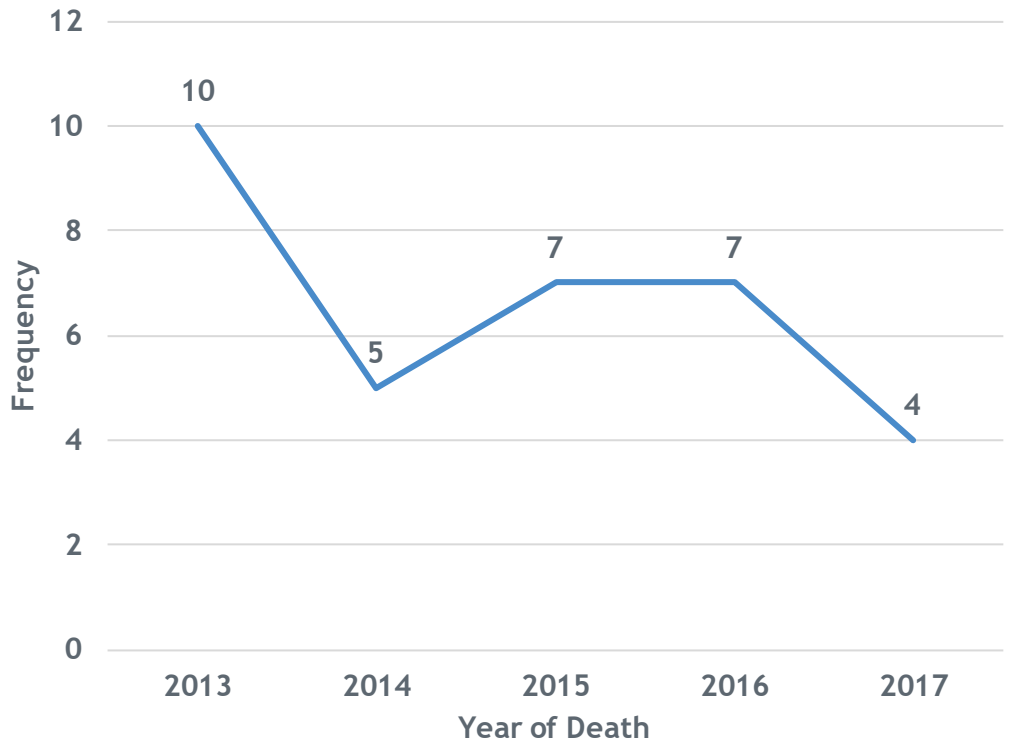
About 87.5 percent (n=28) of those who died in open water and 100.0 percent (n=16) of those who died in a pool, hot tub or spa were not known to be wearing or using a personal flotation device. Personal flotation devices include U.S. Coast Guard approved jackets, cushions or lifesaving rings, and approved devices, such as swim rings, inner tubes or air mattresses. Seventy-five percent (n=9) of all bathtub drowning deaths occurred among children under age 5. A bathing aid was not used in 91.7 percent of these deaths (n=11). Of the 32 infants, children and youth who died in open water drowning deaths, 34.4 percent (n=11) were unable to swim. Of those who died in a pool, hot tub or spa 62.5 percent (n=10) were unable to swim.

CFPS teams determined 26.2 percent (n=16) of unintentional drowning deaths met the criteria of child maltreatment (abuse or neglect). About 81 percent (n=13) of unintentional drowning deaths where child maltreatment was a factor occurred among children under age 5. Nearly all of the unintentional drowning deaths where child maltreatment contributed to death were due to neglect. Where child maltreatment was not identified as contributing to the death, 60.0 percent (n=27) occurred among children and youth ages 5-17.

OVERVIEW OF UNINTENTIONAL POISONING DEATHS

From 2013-2017, there were 33 unintentional poisoning deaths among children and youth in Colorado. Unintentional poisoning deaths include those of accidental and undetermined manners of death, as determined by the coroner. They can include deaths due to overdose by prescription, illicit or over the counter drugs, or may result from unintentional poisoning with other substances, such as household cleaners, carbon monoxide, plants or pesticides. Figure 34 demonstrates the number of unintentional poisoning deaths by year. Unintentional poisoning deaths ranged from 4 in 2017 to 10 in 2013 and averaged 6.6 deaths per year for the period. There were no significant differences in the rates of unintentional poisoning from year to year.

Figure 34. Unintentional poisoning and overdose deaths occurring among those under age 18 in Colorado by year, 2013-2017 (n=33)



DEMOGRAPHICS OF UNINTENTIONAL POISONING DEATHS

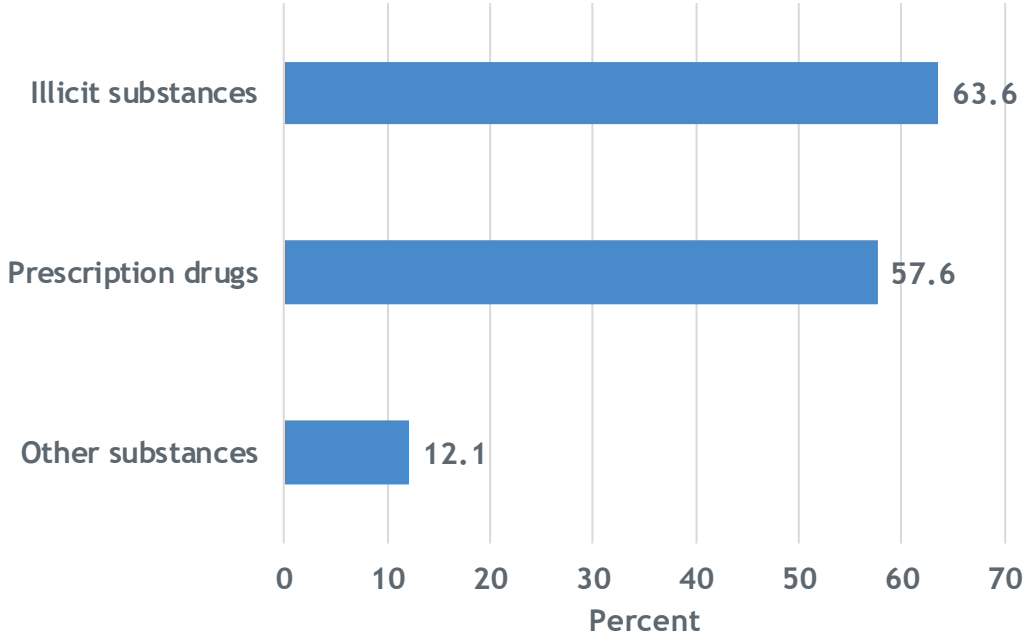
Males represented 81.8 percent (n=27) of unintentional poisoning deaths. The majority of unintentional poisoning deaths occurred among youth ages 15-17 (78.8 percent, n=26), followed by deaths occurring among children ages 1-4 years (9.1 percent, n=3). Too few deaths occurred among those under age 1, ages 5-9, and ages 10-14 to report in accordance with applicable privacy standards. Among those age categories with enough data to report, youth ages 15-17 had the highest rate of unintentional poisoning deaths at 2.5 per 100,000 population. This was 12.5 times the rate of children ages 1-4 (0.2 per 100,000 population) who represented the age category with the next highest number of deaths (data not shown). Readers should interpret this data with caution, as these represent very few deaths which, decreases the stability of these rates.

Of the 33 deaths, 48.5 percent (n=16) were non-Hispanic white, followed by Hispanic (36.4 percent, n=12) and non-Hispanic black (12.1 percent, n=4). Differences in rates of unintentional poisoning deaths by race and ethnicity were not statistically significant. Males (0.8 per 100,000 population) experienced significantly higher rates than females (0.2 per 100,000 population).

UNINTENTIONAL POISONING DEATH CIRCUMSTANCES

Among the 33 unintentional poisoning deaths, 57.6 percent (n=19) involved prescription drugs and 63.6 percent (n=21) involved illicit substances, including alcohol and other drugs, such as heroin, cocaine, synthetic cannabinoids or methamphetamine (Figure 35). These substance categories are not mutually exclusive as more than one substance could have been identified at the time of investigation as contributing to the death.

Figure 35. Unintentional poisoning and overdose deaths occurring among those under age 18 in Colorado by substance category, 2013-2017 (n=33)

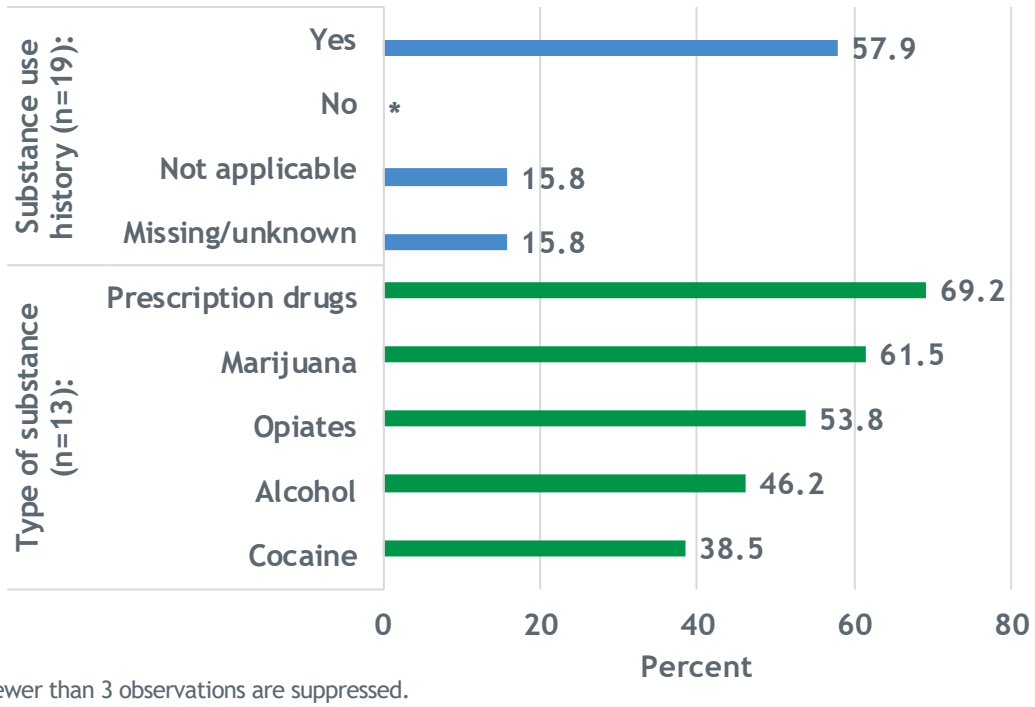


Youth ages 15-17 represented 73.7 percent (n=14) of unintentional poisoning deaths involving prescription drugs. There were 19 unintentional overdose or poisoning deaths involving prescription drugs. Among those, 84.2 percent (n=16) involved opioid analgesics. The only other drugs indicated frequently enough to report on were methadone (21.0 percent, n=4) and antidepressants (15.8 percent, n=3). These prescription drug categories are not mutually exclusive as more than one prescription medication class could have been involved in an overdose death.

There were 21 unintentional overdose or poisoning deaths involving illicit substances. Among those, 19.0 percent (n=4) involved alcohol and 14.3 percent (n=3) involved cocaine. These illicit substance categories are not mutually exclusive as more than one substance could have been involved in an overdose death.

Figure 36 displays the types of substances previously used or abused by those who died of unintentional poisoning deaths involving prescription drugs. Of the 19 unintentional poisoning deaths involving prescription drugs, 57.9 percent (n=11) were indicated to have used or abused substances previously. Among those for whom a history of substance use or abuse was known (68.4 percent, n=13), 69.2 percent (n=9) were noted to have previously used or abused prescription drugs, 61.5 percent (n=8) had previously used or abused marijuana, 53.8 percent (n=7) had previously used or abused opioids and 46.2 percent (n=6) had previously used or abused alcohol. Opioids are a category which most likely represents both prescription (diverted and otherwise) and illicit opioids (i.e. heroin).

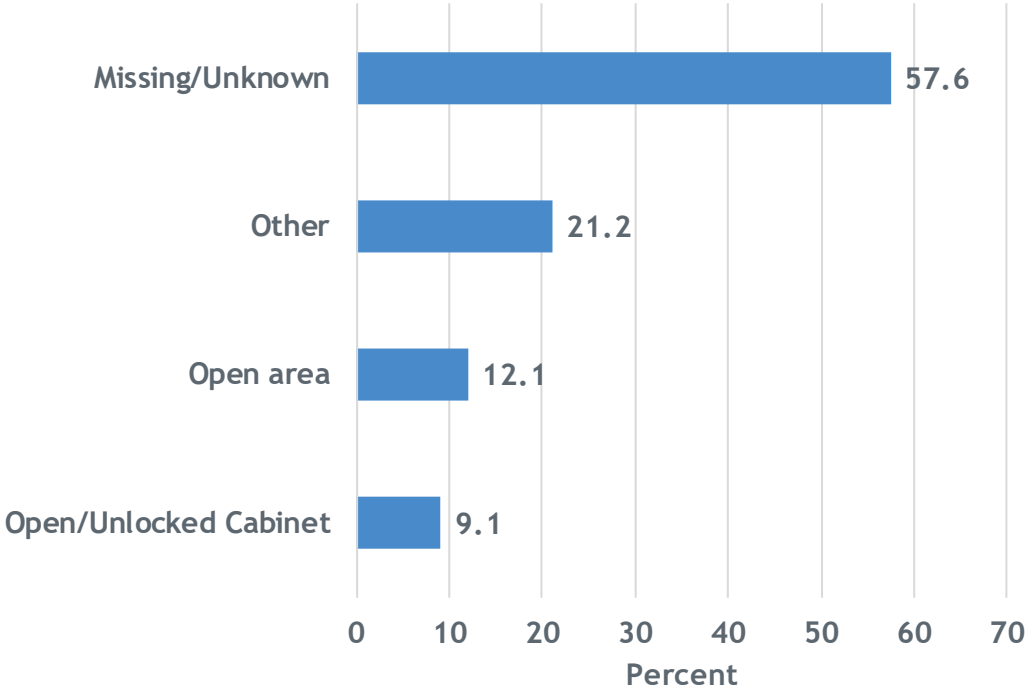
Figure 36. Unintentional prescription drug poisoning or overdose deaths occurring among those under age 18 in Colorado by substance use history, 2013-2017



*Data points with fewer than 3 observations are suppressed.

CFPS review teams also collect information on storage of substances causing unintentional poisoning deaths in Colorado. Figure 37 demonstrates the types of storage areas indicated for the 33 unintentional poisoning deaths from 2013-2017. Of these substances, none were stored in a closed, locked location. Storage information was missing or unknown for 57.6 percent (n=19) of these deaths, while 21.2 percent (n=7) were stored in other unsecured locations and 12.1 percent (n=4) were not stored and were found in an open area.

Figure 37. Unintentional poisoning or overdose deaths occurring among those under age 18 in Colorado by substance storage location, 2013-2017 (n=33)



CFPS RECOMMENDATIONS TO PREVENT CHILD DEATHS

Each year, the CFPS Support Team aggregates local team prevention recommendations and facilitates a process for CFPS partners to: 1) generate child fatality prevention recommendations based on the annual statewide data, and 2) vote on final prevention strategies to recommend for the annual legislative report. The process includes participants from the CFPS State Review Team, local teams across the state, youth serving on the Youth Partnership for Health (www.colorado.gov/cdphe/yph) and other CFPS content experts.

To create the 2019 Legislative Report, the CFPS State Support Team shared data from 2013 to 2017 with system partners in a two-hour data meeting, which informed the development of prevention recommendations at two, two-hour prevention meetings. Partners then voted on a draft list of 18 potential prevention recommendations to prioritize the following recommendations for the CFPS 2019 Legislative Report. These recommendations are based on the collective expertise of the system and do not reflect the official position of CDPHE.

Each recommendation includes a one- to two-page description of the rationale supporting the recommendation. This rationale outlines relevant data from CFPS, state and national level data sources and the evidence base behind the recommendation. The rationale also includes equity considerations, which explain the potential effects and impacts of the recommendations on certain populations.

Behavioral Health Promotion	Support policies to improve behavioral health care in Colorado, such as: 1. Increasing telehealth services, especially in rural areas. 2. Increasing diversity of the behavioral health care workforce. 3. Integrating behavioral health into primary care.
Quality, Affordable Housing	Support policies that expand access to quality, affordable and stable housing across Colorado.
Quality, Affordable Child Care	Support policies that ensure access to quality, affordable child care, especially for infants and young children.
Evidence-Based Home Visitation	Support policies that expand access to community-based home visiting programs for all families with infants and young children.
Graduated Driver License Law	Strengthen Colorado's graduated driver licensing law to better align with best practice by: 1. Increasing the minimum age for a learner's permit from age 15 to 16 and the minimum age for an intermediate (restricted) license from age 16 to 17. 2. Expanding the restricted hours for intermediate drivers from between 12 a.m. and 5 a.m. to between 10 p.m. and 5 a.m.
Primary Seat Belt Law	Establish a statutory requirement that allows for primary enforcement of Colorado's adult seat belt law, making it possible to stop a driver and issue a citation if anyone (the driver and all passengers, regardless of seating position) in the vehicle is not properly restrained.

Paid Leave for Families	Support policies that ensure paid leave for families.
Fund Research on Firearm Deaths	Fund firearm research to understand contributing factors for firearm injury and violence, including risk and protective factors, social determinants of observed racial inequities and effective prevention strategies to prevent future firearm deaths.
Delayed School Start (after 8:30 a.m.)	Encourage Colorado's school districts to delay school start times (after 8:30am).

In addition, CFPS made the following recommendations to strengthen child fatality data quality and improve how investigative agencies examine child deaths:

- Encourage and incentivize law enforcement agencies and coroner offices to use the Suicide Death Scene Investigation Form when investigating suicide deaths.
- Encourage and incentivize law enforcement agencies and coroner offices to use the Sudden Unexplained Infant Death Investigation Reporting Form (SUIDIRF) during infant death scene investigations.
- Improve CFPS data quality by providing technical assistance to local teams on best practices for firearm fatality reviews.
- Improve quality of CFPS substance use data by supplementing CFPS data with other data sources.

COLORADO CHILD FATALITY PREVENTION SYSTEM

BEHAVIORAL HEALTH PROMOTION

Prevention Recommendation:

SUPPORT POLICIES TO IMPROVE BEHAVIORAL HEALTH CARE IN COLORADO, SUCH AS:

1. Increasing telehealth services, especially in rural areas.
2. Increasing diversity of the behavioral health care workforce.
3. Integrating behavioral health into primary care.

This recommendation is based on local team, CFPS State Review Team and past CFPS recommendations.

Policies and associated funding that improve behavioral health (both mental health and substance misuse) for Coloradoans can improve overall health and well-being, promote protective factors and ultimately prevent child deaths. Over the last several years, CFPS have identified unmet behavioral needs of children and youth in Colorado:

- Among youth ages 10-17 who died by suicide in Colorado between 2013 and 2017 (n=261), 24.1 percent (n=63) indicated drug or alcohol use as a personal crisis that contributed to the death and 26.8 percent (n=70) had a history of substance use or abuse.
- Among infants, children and youth who died in passenger vehicle crashes in Colorado between 2013 and 2017 (n=160), 26.9 percent (n=43) indicated drug or alcohol use as a cause of the crash. When narrowed down to passenger vehicle deaths involving a young driver (n=76), 35.5 percent (n=27) indicated drug or alcohol use as a cause of the crash.
- Among children and youth who died by unintentional poisoning involving prescription drugs in Colorado between 2013 and 2017 (n=19), 57.9 percent (n=11) were indicated to have used or abused substances previously.

Recommendation Impacts:
Child maltreatment deaths (abuse and neglect), sudden unexpected infant deaths (SUID), violent deaths (homicides, suicides and firearm deaths), unintentional injury deaths (drowning, falls, fire, poisoning) and motor vehicle deaths.

Colorado's Governor, legislators, non-profits, hospitals and health systems, researchers and state and local agencies are working together to identify and meet the needs of all Coloradoans by improving the behavioral health system in the state. In April 2019, Governor Polis created the Colorado Behavioral Health Task Force at the Colorado Department of Human Services. The task force will assess the current landscape of Colorado's behavioral health system and supports and develop a roadmap called Colorado's "Behavioral Health Blueprint" to guide improvements by the end of Fiscal Year 2019-20.[97]

In addition to the robust work happening across the state, CFPS team members identified behavioral health promotion as an important child fatality prevention recommendation. Healthier adults, parents and caregivers raise healthier children and youth. When behavioral health care systems and providers address the behavioral health needs of children, youth and caregivers, family functioning improves and has the potential to prevent many types of child fatalities. CFPS identified three main areas for a comprehensive approach to promote family behavioral health: 1) increasing telehealth services, particularly in rural areas; 2) increasing behavioral health care workforce diversity; and 3) integrating behavioral health into primary care.

Increasing telehealth services, especially in rural areas

Telehealth is a tool or system of tools to increase

access, quality and efficiency of health care delivery for all types of health care, including behavioral health care. According to the Health Resources and Services Administration, telehealth is defined as "the use of electronic information and telecommunications technologies to support and promote long-distance clinical health care, patient and professional health-related education, public health and health administration. Technologies include videoconferencing, the internet, store-and-forward imaging, streaming media, and terrestrial and wireless communications."[98]

In Colorado, telehealth includes a spectrum of web-based and telecommunications health care services. These include telemedicine, or the direct care provided remotely to patients; eConsult, which allows providers across the state to consult with other specialists as needed; and ECHO (Extension for Community Health Outcomes) Colorado, an online community of practice for health care providers and other professionals to learn about emerging issues and connect as a cohort.

Research suggests that telehealth improves access to health care, improves quality of care and reduces health care costs.[99,100] In Colorado, House Bill 15-1029 signed by Former Governor Hickenlooper created telehealth parity, expanding access to telehealth by requiring reimbursement for telehealth services provided in all counties in Colorado.[101] Additionally, private and public insurers, including Medicaid, reimburse telehealth services for physical and behavioral health.

Privacy concerns and the stigma associated with seeking and receiving behavioral health care services may keep many people from seeking care, especially in rural areas of the state. Telehealth can be an opportunity to provide behavioral health care to those who want it, but may not seek care because of reasons listed above. However, not all communities in Colorado have access to broadband internet, which can facilitate telehealth delivery. Communities must build the internet infrastructure to support telehealth in the communities that need it most.

During the 2019 legislative session, Colorado legislators introduced and passed two bills to support broadband access across the state: Senate Bill 19-107 (Broadband Infrastructure Installation) and Senate Bill 19-078 (Open Internet Customer Protections in Colorado). Given the potential of telehealth to reduce health care costs and improve access to quality care, policymakers should continue to support telehealth as an option for behavioral health care in Colorado.

Diversity of the Behavioral Health Care Workforce

Colorado's behavioral health care workforce should represent the diversity of the communities and people who live, learn, work and play here. The positive impact of a diverse health care workforce is well known.[102,103] Increasing the diversity of the behavioral health providers in Colorado will better represent the diversity of the state and better meet the needs of patients. It will also improve behavioral health outcomes and decrease inequities among Colorado's communities.[104]

According to the National Conference of State Legislatures, state policymakers can promote health care workforce diversity by:[105]

- Creating clear career paths, or pipelines, to help underrepresented people get the training they need to enter the health care workforce.
- Providing loan repayment and financial incentives.
- Establishing workforce centers to monitor the supply and demand for specific health care providers and evaluate the effectiveness of educational and workforce strategies.
- Encouraging professional schools to prioritize diversity of students, staff and curricula.
- Engaging community health workers who represent the communities they serve.

Behavioral Health Integration into Primary Care

Integration of behavioral health into primary care is another way to improve the behavioral health of families in Colorado. Research indicates that integration of behavioral health care into primary care reduces patients'

self-reported depression and increases their satisfaction with health care services.[106] In Colorado, school-based health centers and federally-funded State Innovation Model (SIM) clinical practice transformation support behavioral health integration.

There are 62 operational school-based health centers (SBHCs) in Colorado and CDPHE funds 52 of them through the School-Based Health Center Program. School-based health centers are health care facilities located inside a school or on school grounds. These centers are staffed by multi-disciplinary teams of medical and behavioral health specialists. Some centers also have dental professionals, health educators or health insurance enrollment specialists.

CDPHE-funded SBHCs provide integrated primary, behavioral and oral health care to more than 30,000 children and youth in Colorado. Services include, but are not limited to, preventive care such as well-child exams, immunizations and health screenings. Services also include health education and promotion, and mental health and counseling services.

SBHCs increase access to health care for children and youth while maximizing students' in-school time by reducing time spent attending offsite appointments. House Bill 18-1003 passed during the 2018 legislative session and allocated additional funding to address opioid and substance use disorders in SBHCs. Despite this legislation, more funding is needed to enable SBHCs across the state to increase capacity of health care providers, expand services, and engage more youth and their families as patients. Additional funding would also help assist SBHCs collect better data on what patients need, how patients use SBHC, and what health care gaps may persist.

The State Innovation Model (SIM) is a federally funded initiative to integrate behavioral health care into physical health care in Colorado by transforming individual clinical practices. SIM coaches train and support health care professionals in how to navigate integration. This will ultimately expand access to behavioral health care. Federal funding for SIM ends in Fiscal Year 2018-19. Policymakers should allocate additional state funding to sustain and continue Colorado's efforts to integrate behavioral health care into primary care settings.

State and local policymakers can play a role in supporting behavioral health access is Colorado. Policymakers and partners involved in assessment of Colorado's behavioral health system can include these recommendations as part of the "Behavioral Health Blueprint."

Equity Considerations:

- *Supporting a wide variety of behavioral health care providers can increase access to community supports, such as faith-based communities.*
- *Increasing the diversity of the racial and cultural behavioral health care workforce will mean that providers better meet the needs of all people in Colorado.*
- *Give school-based health centers funding priority if they serve a disproportionate number of uninsured or underinsured children and youth from birth to age 21, a low-income population or both. The funding goal is to invest in SBHCs that provide high-quality, integrated health care for children and youth to improve health.*

COLORADO CHILD FATALITY PREVENTION SYSTEM

QUALITY, AFFORDABLE HOUSING

Prevention Recommendation:

SUPPORT POLICIES THAT EXPAND ACCESS TO QUALITY, AFFORDABLE AND STABLE HOUSING ACROSS COLORADO.

This recommendation is based on local team and CFPS State Review Team recommendations.

Quality, affordable and stable housing is essential for the health and well-being of everyone, but especially for children, youth and families. The impact of housing on child, youth and family health, economic, educational and social outcomes is well documented.[107,108,109,110,111] If children have stable house, it can protect them from injury and violence, including child abuse and neglect.[112]

While the impacts of housing on health outcomes have long been understood, many families still face challenges accessing and affording quality housing. Research shows that families with children are the most likely to be evicted and experience housing instability.[113,114] Due to a long standing history of discriminatory housing and lending practices, black and Latinx people have and continue to face even more challenges securing safe, affordable and stable housing than white people do.[115] People of color and low- and moderate-income renters are the most impacted by rising housing costs, and among renters in the US, women of color are the most rent-burdened population, meaning that 61 percent of women of color pay more than 30 percent of their income on rent.[116] Despite the burden of housing costs, research demonstrates that providing families with rental assistance can improve child health outcomes.[117] This suggests that while housing is a complex problem, there are solutions to make housing more secure, safe and affordable.

Policymakers can promote family and child health by supporting policies that ensure access to affordable, quality housing. These policies can have a profound impact on low- and moderate-income families and families of color, as households and communities most impacted by the lack of affordable, quality housing. Below are several policy solutions that support safe, stable and affordable housing:

- Expand access to legal services[118] and other free and low-cost case management supports to protect families from evictions.
- Increase funding for rental assistance.[119]
- Preserve existing affordable rental units.[120]
- Protect renters from rising costs or pressure to move and help long-term residents who wish to stay in the neighborhood [such as rent control].[121]
- Ensure that a share of new development is affordable.[122]
- Harness growth to expand financial resources.[123]
- Create incentives to develop affordable housing.[124]
- Support efforts of the Colorado Department of Local Affairs, Division of Housing to ensure compliance with the federal Fair Housing Act and resolution of tenant and landlord disputes.

Recommendation Impacts:
Child maltreatment deaths (abuse and neglect), sudden unexpected infant deaths (SUID), violent deaths (homicides, suicides and firearm deaths), unintentional injury deaths (drowning, falls, fire, poisoning) and motor vehicle deaths.

Housing is an important social factor to protect children from violence and injury and improve health. If policymakers make quality, affordable housing more accessible, Colorado families will see improvements in a variety of outcomes.

Equity considerations:

- *Policies to increase access to housing must consider affordability and the impacts of gentrification on communities of color and low-income communities in Colorado.*
- *While systemic supports like rental assistance can help families access safe, stable, and affordable housing, families must also interact with various systems to access public assistance. Policymakers and agencies providing these supports should ensure that families do not face undue barriers to accessing vital supports.*[125]

COLORADO CHILD FATALITY PREVENTION SYSTEM

QUALITY, AFFORDABLE CHILD CARE

Prevention Recommendation:

SUPPORT POLICIES THAT ENSURE ACCESS TO QUALITY, AFFORDABLE CHILD CARE, ESPECIALLY FOR INFANTS AND YOUNG CHILDREN.

Joint Colorado Department of Human Services (CDHS) Child Fatality Review Team and CFPS State Review Team recommendation. This recommendation is based on local team, CFPS State Review Team and past CFPS recommendations.

Pursuant to C.R.S. 25-20.5-407 (1) (i), the Child Fatality Prevention System (CFPS) State Review Team collaborates with the Colorado Department of Human Services (CDHS) Child Fatality Review Team (CFRT) to make joint recommendations to prevent child fatalities. In an effort to collaboratively identify a recommendation for the 2019 Legislative Report to prevent child maltreatment deaths, CFRT and CFPS completed a methodical, joint review of the 79 fatal incidents from 2013 to 2017 that met the review criteria for both systems. Following this review CFRT and CFPS identified trends associated with the circumstances surrounding these deaths. The joint review revealed that lack of access to quality, affordable child care was a contributing factor in 19 percent of the 62 deaths among infants and children under 5 years old.

Recommendation Impacts:
Child maltreatment deaths (abuse and neglect), sudden unexpected infant deaths (SUID), violent deaths (homicides, suicides and firearm deaths), unintentional injuries deaths (drowning, falls, fire, poisoning) and motor vehicle deaths.

Child care is an important factor to protect against family stress and is an evidence-based strategy to support families and prevent child maltreatment.[126,127,128] Subsidized child care has been shown to decrease child maltreatment, including both abuse and neglect.[129] Child maltreatment is less likely to occur when children are in families where caregivers have less economic strain and stress.[130] Additionally, child care encourages family engagement and allows caregivers to work outside the home, which contributes to family economic stability. Quality child care often includes early learning and education, which can positively impact infant and child development for children under 5 years old.[131]

Despite the demonstrated positive impact of child care, the high cost of child care in Colorado is a major barrier for families. While cost can be a barrier for families of all incomes, it can be especially difficult for families with the lowest incomes. Child Care Aware of America estimates the annual cost of center-based child care in Colorado is $14,950 and $10,522 for home-based care. The annual cost of college tuition at a four-year college in Colorado is $10,797, which means that center-based child care costs exceed the costs of higher edcuation.[132] Married caregivers of two children living at the poverty line pay 110 percent of their household income for center-based child care in Colorado.[133]

During the 2019 legislative session, state policymakers passed several bills to address the lack of access to quality, affordable child care in Colorado:

- House Bill 19-1005, Early Childhood Educator Tax Credit, establishes a refundable, annual tax credit for credentialed early childhood educators working at qualified facilities.

- House Bill 19-1013, Child Care Expenses Tax Credit Low-income Families, extends existing tax credits for families earning less than $25,000 annually.
- House Bill 19-1193, Behavioral Health Supports for High-Risk Families, creates a pilot program to provide child care services to pregnant or parenting individuals seeking or participating in substance use disorder treatment.
- House Bill 19-1262, State Funding for Full-day Kindergarten, increases access to full-day kindergarten and ensures that caregivers are not charged kindergarten tuition.
- Senate Bill 19-063 requires the Colorado Department of Human Services and partners to develop a strategic action plan to address the shortage of infant child care and family-home child care.

State and local policymakers and organizations have an opportunity to further support strategies that ensure access to quality, affordable child care by:

- Increasing funding for child care assistance programs, specifically Colorado Child Care Assistance Program (CCCAP), to expand access to more families with infants and young children.
- Expanding enrollment in Colorado Works/Temporary Assistance to Needy Families (TANF) and the Special Supplemental Nutrition Program for Women, Infants, and Children (WIC). These programs support families in being able to afford child care.[134]
- Passing policies that provide training and education to family, friend and neighbor caregivers to increase the quality of care in licensed-exempt settings. This is important because many families choose this care option because of the high cost of child care in licensed child care centers.
- Supporting participation by more social service programs in Colorado PEAK, the centralized system where families can be screened and apply for a variety of economic supports, including assistance for medical care services, food and cash assistance and early childhood programs.[135]
- Dedicating additional resources to support child care workforce development to increase the number of child care slots in Colorado and the quality of care provided by well-trained professionals.

Equity Considerations:

- *Lack of affordable, quality child care, especially for infants and those under age 5, disproportionately impacts families with the lowest incomes.*
- *Many families are not able to afford child care, which may lead to increased financial and emotional stress and may force families to make decisions based on money, rather than what they think is best for their infants and young children.*

The CDHS CFRT reviews incidents of fatal, near fatal or egregious abuse or neglect determined to be a result of child maltreatment when the child or family had previous involvement with the child welfare system within the last three years. CFRT reviews the incident and identifies factors that may have led to the incident. CFRT also assess the sufficiency and quality of services state and local agencies provide to families and their prior involvement with the child welfare system. As a result of identified strengths, as well as systemic gaps and/or deficiencies, CFRT puts forth policy and practice recommendations that may help prevent future incidents of fatal, near fatal or egregious abuse or neglect. These recommendations could also strengthen the systems that deliver services to children and families.

COLORADO CHILD FATALITY PREVENTION SYSTEM

EVIDENCE-BASED HOME VISITATION

Prevention Recommendation:

SUPPORT POLICIES THAT EXPAND ACCESS TO COMMUNITY-BASED HOME VISITING PROGRAMS FOR ALL FAMILIES WITH INFANTS AND YOUNG CHILDREN.

This recommendation is based on local team, CFPS State Review Team and past CFPS recommendations.

Children get off to a better, healthier start when caregivers and parents have the supports and the skills needed to raise them. Community-based home visiting programs are family support programs that take place in a location that is convenient and comfortable for the family, including the family home or a neutral location such as a park or library. Home visiting programs offer support from non-judgmental, trained professionals, such as nurses or trained parent support providers. These professionals meet regularly with expectant caregivers and families with young children. Home visitors evaluate a family's needs and provide tailored services. The exact services and topics vary based on the specific home visiting program and may include:

- Teaching parenting skills and modeling effective techniques.
- Promoting early learning in the home with an emphasis on positive interactions between parents and children. Creating a language-rich environment that stimulates early language development.
- Providing information and guidance on a wide range of topics including breastfeeding, infant safe sleep, injury prevention, home safety, child health and nutrition.
- Conducting screenings and providing referrals to address postpartum depression, substance use and family violence.
- Screening children for developmental delays and facilitating early diagnosis and intervention for autism and other developmental disabilities.
- Linking families to available resources and services related to basic needs, housing, child care, food assistance, employment and insurance.

Recommendation Impacts:
Child maltreatment deaths (abuse and neglect), sudden unexpected infant deaths (SUID), violent deaths (homicides, suicides and firearm deaths), unintentional injury deaths (drowning, falls, fire, poisoning) and motor vehicle deaths.

Home visiting programs contribute to positive health outcomes. These programs improve child health and development, school readiness, parenting skills, caregiver health, and family income, employment and economic self-sufficiency. They also reduce family violence or crime and child maltreatment. Home visiting programs help families by connecting with services and referrals.[136] Between 2013 and 2017, CFPS identified 223 cases where child maltreatment either directly caused or contributed to the death of an infant, child or youth in Colorado. The rates of child maltreatment fatalities were significantly higher for infants and children ages 0-4 compared to older populations.

Community-based home visiting programs support the Strengthening Families' Protective Factors Framework.[137] Strengthening Families is an approach to increase family strengths, enhance child development

and reduce the likelihood of child abuse and neglect. The goal is to engage families, programs and communities in building five factors which can protect children and youth from child maltreatment: parental resilience, social connections, knowledge of parenting and child development, concrete support in times of need and social and emotional competence.

In 2017, home visiting programs in Colorado served more than 8,184 families. However, the National Home Visiting Resource Center estimates that an additional 315,200 pregnant caregivers and families with 394,900 infants and children in Colorado would benefit from participation in an evidence-based home visiting program.[138]

There is not a single county in Colorado that has home visiting programs to meet the overall needs of families in the county. The lack of variety of home visiting programs in communities, especially in rural counties, means some families who would benefit from home visiting do not receive these services. For example, while Nurse Family Partnership serves all 64 counties in Colorado, this program only serves first-time mothers who enroll in the program within a month of their child's birth. Many counties only have access to this home visiting model, which means many families in need of services are not eligible to receive them.

It is important for counties to have a variety of home visiting program options because families have different needs and each program has specific eligibility requirements. It is necessary for Colorado to scaling up community-based home visiting programs in Colorado so that all families with infants and young children can benefit.

Equity Considerations:

- *If a government agency operates a home visitation program, some families may negatively perceive home visitors as child welfare or human service staff sent to "check up on them" and not want to be involved.*
- *Not all types of home visiting programs are offered in every community in Colorado, meaning some families have limited access to home visitation options.*
- *If scaling up home visiting programs, Colorado should consider workforce implications to ensure there are enough trained home visitors to meet the needs of families in Colorado.*
- *Home visiting services should be culturally relevant and meaningful. Home visitors should reflect the communities they serve so they can provide the most effective services.*

COLORADO CHILD FATALITY PREVENTION SYSTEM

GRADUATED DRIVER LICENSE LAW

Prevention Recommendation:

STRENGTHEN COLORADO'S GRADUATED DRIVER LICENSING LAW TO BETTER ALIGN WITH BEST PRACTICE BY:

1. Increasing the minimum age for a learner's permit from age 15 to 16 and the minimum age for an intermediate (restricted) license from age 16 to 17.
2. Expanding the restricted hours for intermediate drivers from between 12 a.m. and 5 a.m. to between 10 p.m. and 5 a.m.

This recommendation is based on local team, CFPS State Review Team, and past CFPS recommendations. It is also a priority of the Colorado Young Drivers Alliance (CYDA), the Colorado Occupant Protection Task Force and the Colorado Task Force on Drunk and Impaired Driving.

CFPS data suggests that young drivers in Colorado are not getting the training they need to prevent motor vehicle crashes. From 2013-2017 there were 76 infants, children or youth ages 0-17 who died in passenger vehicle crashes involving 79 young drivers 18 years of age and under. Those who died in these crashes were most often the passenger of a young driver (50.0 percent, n=38) or the young driver themselves (50.0 percent, n=38). Seventy-two of the 79 young drivers (91.1 percent) in these 76 deadly crashes were responsible for causing the crash. Speeding over the limit (63.9 percent, n=46), recklessness (61.1 percent, n=44), and inexperience (59.7 percent, n=43) were the leading circumstances in passenger vehicle deaths in Colorado where a young driver was indicated to be responsible for causing the crash.

Recommendation Impacts:
Motor vehicle deaths.

Colorado's graduated driver licensing (GDL) law was first enacted in 1999 to increase the amount of behind-the-wheel training necessary for beginning drivers. In 2005, the Colorado General Assembly passed additional components to the GDL law restricting the number of passengers that a driver under 18 years old can transport and prohibiting any minor driver who has held a license for less than one year from driving between midnight and 5 a.m.

CFPS data suggests that this piece of legislation may have been successful in reducing child deaths due to motor vehicles. In 2004, before the law went into effect, 59 teenagers (ages 15-17), died in motor vehicle passenger crashes. In 2005, the year the GDL law was enhanced, and again in 2006, 25 youth ages 15-17 died in motor vehicle crashes. This represents a 57.6 percent reduction in motor vehicle passenger among youth aged 15-17 in just one year.

Despite reductions in motor vehicle deaths among youth likely due to the current GDL law, according to CFPS data motor vehicle crashes remain the second preventable leading cause of death for youth, and the number of deaths has been steadily increasing from 34 deaths in 2015, 49 deaths in 2016, to 56 deaths in 2017. To better align with best practice[139,140,141] and prevent child deaths, Colorado could strengthen its GDL law by: 1) increasing the minimum age for a learner's permit from age 15 to 16 and for an intermediate (restricted) license from age 16 to 17; and 2) expanding the restricted hours for intermediate drivers to between 10 p.m. to 5 a.m. Making these changes to the GDL law would more effectively support

inexperienced drivers, and the Insurance Institute for Highway Safety estimates that the combined effect of making these changes would further reduce teen driver fatalities in Colorado by twenty-eight percent.[142] Additionally, the current educational requirements to obtain a driver's permit are confusing since there are different requirements depending on the age that someone is when they begin driver's education courses. Streamlining these educational requirements could make it easier for families to understand the steps needed to obtain a driver's license.

Equity considerations:

- *There is not equitable access to driver's education in Colorado. Low income families may have difficulty paying for driver's education. Youth living in rural areas may have to travel long distances to access the nearest driving school and may not have broadband internet to access online options.*
- *Colorado's GDL law requirements are complex, so state agencies and motor vehicle safety partners must write educational materials in plain language and translate them into multiple languages.*

Colorado's current requirements to obtain a license in Colorado depends on the age of a young person when they begin the process. Colorado's current GDL law by the age of a young person when they begin the process is as follows:*

Age	Driver's Education	Driver's Permit	In-Vehicle Training	Driver's License
15 - 15 1/2 years of age	Complete a 30 hour driver's education course	Apply for permit	Log 50 hours of supervised driving and complete a **mandatory** 6 hour behind-the-wheel training	Apply for license after one year holding driver's permit
15 1/2 to 16 years of age	4 hour driver awareness program	Apply for permit	Log 50 hours of supervised driving and complete an **optional** 6 hour behind-the-wheel training	Apply for a license after one year holding driver's permit
	OR			
	Complete 30-hour driver's education course (includes 4 hour driver awareness)	Apply for permit	Log 50 hours of supervised driving and complete an **optional** 6 hour behind-the-wheel training	Apply for license after one year holding driver's permit
16 to 17 years of age	Complete 30-hour driver's education course (includes 4 hour driver awareness)	Apply for permit	Log 50 hours of supervised driving and complete an **optional** 6 hour behind-the-wheel training	Apply for license after one year holding driver's permit

*Adapted from the Rocky Mountain Insurance Information Association. (2015). Steps to obtaining a license. Retrieved on June 6, 2019 from: www.rmiia.org/auto/teens/Colorado_GDL.asp.

COLORADO CHILD FATALITY PREVENTION SYSTEM

PRIMARY SEAT BELT LAW

Prevention Recommendation:

ESTABLISH A STATUTORY REQUIREMENT THAT ALLOWS FOR PRIMARY ENFORCEMENT OF COLORADO'S ADULT SEAT BELT LAW, MAKING IT POSSIBLE TO STOP A DRIVER AND ISSUE A CITATION IF ANYONE (THE DRIVER AND ALL PASSENGERS, REGARDLESS OF SEATING POSITION) IN THE VEHICLE IS NOT PROPERLY RESTRAINED.

This recommendation is based on local team, CFPS State Review Team, and past CFPS recommendations. It is also a priority of the Colorado Young Drivers Alliance (CYDA), the Colorado Occupant Protection Task Force and the Colorado Task Force on Drunk and Impaired Driving.

Recommendation Impacts:
Motor vehicle deaths.

Increasing safety belt use is the single most effective way to save lives and reduce injuries due to crashes on Colorado roadways. Studies have affirmed that seat belts reduce serious injuries and deaths in crashes by about 50 percent.[143] According to a systematic review of 13 published studies on restraint laws, primary safety belt laws are incrementally more effective in decreasing fatal injuries and increasing safety belt use than secondary safety belt laws.[144] States with primary seat belt laws, which allow law enforcement officers to issue citations to drivers solely for not buckling up, have seat belt use rates that are 13 to 16 percent higher than states with secondary laws, which require officers to first stop a motorist for another violation before issuing a seat belt citation.[145] Colorado has fallen behind other states and is now one of only 15 states that have not passed a primary seat belt law.[146]

Colorado's seat belt use rate remains stagnant at 86 percent, over 3 percent less than the national average of 89.6 percent and over 4 percent less than states that have a primary law of 90.6 percent.[147,148] In 2017 alone, 410 motor vehicle occupants (drivers and passengers of all ages combined) died in passenger vehicle crashes in Colorado, and 54 percent (n=222) were unrestrained at the time of the crash.[149] According to CFPS data, of the 160 infants, children and youth who died in Colorado in passenger vehicle crashes from 2013- 2017, only 32.5 percent (n=52) of all infants, were properly restrained.

Among the Hispanic infants, children and youth who died in passenger vehicle crashes in Colorado from 2013 - 2017, 68.7 percent (n=46) were improperly restrained, compared to 50.6 percent (n=40) of non-Hispanic whites. Studies have shown that primary seat belt laws mitigate this disparity by increasing seat belt use rates, particularly among Hispanic and Latinx vehicle occupants, and decreasing fatalities at higher rates among these populations.[150,151,152]

Increasing adult seat belt use has a significant impact on child passenger safety because drivers who wear seat belts are more likely to restrain their child passengers. A national study of crashes with fatally injured children ages birth to 15 found that when adult drivers used a seat belt, children riding with them were also restrained an average of 74 percent of the time. If the adult driver was not using a seat belt, child restraint use decreased to 35 percent.[153]

Increasing seat belt use in Colorado will also decrease health care cost. The CDC estimates that primary enforcement of seat belt laws in Colorado could prevent 2,385 injuries, 25 deaths, and save over $94 million

per year from injuries prevented and lives saved.[154] In addition to pain and suffering to families, research from the CDC indicates motor vehicle crashes cost Colorado more than $623 million each year in medical expenses and work loss costs.[155] The National Highway Traffic Safety Administration estimates that three-fourths of vehicle crash related costs are paid by citizens not involved in the crashes through increased taxes, insurance premiums, and crash-delay costs such as excess fuel use and increased environmental impacts.[156]

Currently, Colorado has primary restraint laws for children ages 0-15 years as well as for young drivers under age 18 years, but the restraint law for adults remains secondary enforcement. In addition, the Colorado child passenger restraint laws only cover children through age 15 years and the safety belt components of the Graduated Drivers Licensing (GDL) law only apply when a vehicle is driven by an adolescent driver. Young people ages 16 and 17 years who ride in a vehicle driven by an adult driver are subject to secondary enforcement. The fact that there are different types of enforcement for different age groups makes it difficult for law enforcement to properly enforce the laws, particularly for adolescent drivers who may appear to be older than they are.

Due to the data and strong evidence base supporting implementation of a primary seat belt enforcement law, motor vehicle stakeholders throughout Colorado prioritized supporting policies and activities that promote seat belt use, such as primary seat belt laws, in the Colorado 2015-2019 Strategic Highway Safety Plan and the Colorado Task Force on Drunk and Impaired Driving 2018 Annual Report.[157,158] Making all safety restraint laws primary enforcement would close the gap in Colorado's law, improve Colorado's commitment to public safety, support law enforcement's work on the roadways and drastically reduce serious injuries and fatalities from passenger vehicle crashes.

Equity considerations:

- *Some partners are concerned that primary seat belt legislation could lead to profiling communities of color. Two National Highway Traffic Safety Administration studies discovered no difference in ticketing by race or a higher increase in tickets to white drivers following the passage of the primary seat belt law.[159,160] Colorado law prohibits profiling by law enforcement toward anyone based on race, national origin, language, religion, sexual orientation, gender identity, and/or disability (C.R.S 24-31-309 (2)). In order to prevent differential profiling in traffic safety, communities of color should be involved in policy discussions and policies should require systems to track and evaluate citations by demographic characteristics with data available to the public.[161,162]*

COLORADO CHILD FATALITY PREVENTION SYSTEM

PAID LEAVE FOR FAMILIES

Prevention Recommendation:

SUPPORT POLICIES THAT ENSURE PAID LEAVE FOR FAMILIES.

This recommendation is based on local team, CFPS State Review Team and past CFPS recommendations.

The ability to take paid leave allows for closer bonding among family members and protects against infant mortality and child maltreatment.[163] Studies show that paid family leave has a significant association with reductions in hospitalizations for abusive head trauma and reductions in parental stress and maternal depression, both risk factors for child maltreatment.[164] Additionally, paid leave promotes family financial stability by helping families maintain employment and stay above the poverty level.[165,166]

Recommendation Impacts:
Child maltreatment deaths (abuse and neglect), sudden unexpected infant deaths (SUID), violent deaths (homicides, suicides and firearm deaths), unintentional injury deaths (drowning, falls, fire, poisoning) and motor vehicle deaths.

Research also indicates paid leave is supportive of breastfeeding, which has significant health benefits for both mothers and babies. Breastfeeding protects against sudden unexpected infant deaths (SUID).[167] Both breastfeeding and the ability to take longer leave are associated with lower rates of child abuse and neglect.[168] Between 2013 and 2017, CFPS identified 228 SUID and 223 child maltreatment deaths. Paid caregiver leave policies are a protective factor which might have contributed to preventing these deaths.

Despite evidence to support the importance of paid leave to prevent abuse and neglect and promote family wellbeing, and the widespread support for paid leave in the U.S., the U.S. is one of only two countries that does not have a national paid leave policy (the other is Papua New Guinea). Federal law only allows some employees to take unpaid leave. An estimated 40 percent of the U.S. workforce is not eligible for the Family and Medical Leave Act of 1993 (FMLA).[169] Employees who are eligible may not be able to afford to take unpaid time off.[170]

An analysis of a 2012 U.S. Department of Labor survey data found that nearly one in four women who took leave to have a baby was back at work within two weeks, half of which only took one week or less.[171] In 2017, only 17 percent of U.S. civilian workers had access to paid family leave through their employers[172] and fewer than 39 percent had access to the partial pay benefits for pregnancy and childbirth offered by employer-provided short-term disability insurance.[173]

Workers in the lowest paid jobs are least likely to have paid caregiver leave and least likely to be able to afford to take unpaid leave. In 2017, only five percent of low-wage workers had paid parental leave, compared to 30 percent of high-wage workers.[174] Parents and caregivers who are financially able to take longer parental leave choose to do so and their children are healthier as a result.[175] Since many parents and caregivers are not able to afford to take unpaid leave, families with the least resources will continue to experience health inequities associated with the lack of paid leave.

Five states (New York, New Jersey, California, Hawaii and Rhode Island) and the District of Columbia currently offer, or will offer, paid leave.[176] In Colorado, Boulder and Pueblo Counties offer paid leave for county employees. Colorado legislators attempted to pass a bill to create the Family Medical Leave Insurance (FAMLI) program during the 2019 legislative session. This bill and similar bills proposed in 2015, 2016, 2017 and 2018, would have set up a state insurance program that establishes a pool of money so employees can take the time they need to care for themselves and to live up to their family responsibilities in caring for a sick child or parent and still be able to make ends meet. Although policymakers were not successful in creating the state insurance program to fund paid family leave, the legislature amended Senate Bill 19-188 to require the Colorado Department of Labor and Employment to analyze implementation of paid family and medical leave statewide. The bill also created a Task Force to oversee the result of the actuarial analysis.

Additionally, Senate Bill 19-188 charged CDPHE to produce a report identifying the health impact of paid family leave for the Task Force.

CFPS encourages local and state policymakers and employers to support policies that promote paid family leave. This will enable parents and caregivers to take adequate time to care for and bond with their children. This will also reduce stressors like accessing quality, affordable child care, which CFPS also recommends to reduce child abuse and neglect and achieve other positive outcomes.

Equity considerations:

- *Paid leave should be accessible to everyone, but is especially important for low-wage workers and caregivers of color, who are less likely to have access to paid leave and are disproportionately impacted by financial pressures associated with unpaid leave.*[177]

COLORADO CHILD FATALITY PREVENTION SYSTEM

FUND RESEARCH ON FIREARM DEATHS

Prevention Recommendation:

FUND FIREARM RESEARCH TO UNDERSTAND CONTRIBUTING FACTORS FOR FIREARM INJURY AND VIOLENCE, INCLUDING RISK AND PROTECTIVE FACTORS, SOCIAL DETERMINANTS OF OBSERVED RACIAL INEQUITIES AND EFFECTIVE PREVENTION STRATEGIES TO PREVENT FUTURE FIREARM DEATHS.

This recommendation is based on local team, CFPS State Review Team and past CFPS recommendations.

Firearm deaths among children and youth are a growing concern in Colorado. From 2013 to 2017, CFPS identified 168 deaths from firearms, a rate that has been increasing since 2013. Of the 168 firearm deaths occurring in Colorado from 2013-2017, 69.1 percent occurred among youth ages 15-17. During this same time, 22.6 percent occurred among those ages 10-14, representing 91.7 percent of all firearm deaths. Among these deaths, suicide was the leading manner of death (64.3 percent), followed by homicide (32.7 percent) and accidental (2.4 percent).

Recommendation Impacts:
Child maltreatment deaths (abuse and neglect), violent deaths (homicides, suicides and firearm deaths), unintentional injury deaths (drowning, falls, fire, poisoning) and motor vehicle deaths.

In addition, CFPS data on these deaths demonstrate that the burden of firearm injury and violence deaths is not equally distributed among Colorado's communities. The rate of firearm deaths was nearly two-times higher among non-Hispanic black infants, children and youth in Colorado (5.2 per 100,000 population) compared to the non-Hispanic white population (2.8 per 100,000 population).

When narrowed down specifically to homicide deaths by firearm (n=39), there is a significant difference across racial and ethnic groups in Colorado. Consistent with national trends,[178] the rate of homicide deaths by firearm among non-Hispanic black children and youth was 12.8 times higher than for the non-Hispanic white population.

Long-standing federal restrictions on firearm research under the Dickey Amendment passed by Congress in 1996 effectively banned the CDC from using its funding to "advocate or promote gun control." Federal funding for firearm research and prevention dropped 94 percent after the Dickey Amendment passed. As a result, CDC has had little federal funding to research solutions to reduce gun violence or for states to directly work on gun violence issues. This makes firearm research one of the least funded causes of death. Only accidental falls receives less funding.[179] In 2018, the federal spending bill included a compromise on violence research, clarifying that the "CDC has the authority to conduct research on the causes of gun violence." However, Congress has not appropriated any money to CDC for this purpose.[180] This lack of funding has limited research about how the risk and protective factors and the social determinants of health contribute to firearm violence, including suicide, homicide and unintentional firearm injuries and deaths.

The lack of research makes it difficult to truly understand what policy and practice changes may have the biggest impact on these types of injuries and fatalities. Effective prevention strategies start with research that

identifies risk and protective factors and opportunities for intervention and evaluates the effectiveness of each intervention.[181] According to the Safe States Alliance, increased funding for firearms research will allow researchers and practitioners to:[182]

- Use data reporting systems to better understand firearm-related injuries and deaths.
- Thoroughly evaluate the implementation of firearm-related policies proposed at state and local levels.
- Analyze and evaluate common but under-researched firearm-related issues and interventions.
- Thoroughly review and evaluate laws, practices, and approaches for firearm injury prevention.

One way to address this lack of research is to leverage state public and private funding to develop and fund a firearms research grant program. Policymakers have developed and funded similar types of research programs for other understudied public health issues. The Colorado General Assembly allocates funding to the Medical Marijuana Research Grant Program which funds a variety of research projects to understand the health impacts of medical marijuana and the public health impact of legal marijuana use in Colorado. Given the limitations on federal funding, it is imperative that state policymakers support state-level firearm research efforts by allocating funding to this important work.

COLORADO CHILD FATALITY PREVENTION SYSTEM

DELAYED SCHOOL START (AFTER 8:30AM)

Prevention Recommendation:

ENCOURAGE COLORADO'S SCHOOL DISTRICTS TO DELAY SCHOOL START TIMES (AFTER 8:30AM).

This recommendation is based on CFPS State Review Team recommendations.

Research suggests that adolescents in the United States do not get enough sleep.[183] Nationally, 73 percent of youth are sleep deprived, meaning that they get less than 8 hours of sleep on a school night.[184] According to the 2017 Healthy Kids Colorado Survey, only 30.8 percent of middle and high school youth surveyed in Colorado reported sleeping 8 or more hours per night on average school nights.[185]

Lack of sleep is associated with a wide range of poor health outcomes for young people, including being overweight, using substances (such as alcohol, tobacco and drugs), as well as poor academic performance.[186] Lack of sleep is also associated with poor mental health, including depression, hopelessness and thinking about suicide.[187,188,189] Additionally, research suggests that the risk of suicide attempts is nearly three times greater among young people who sleep less than eight hours per night.[190]

One of the reasons young people do not get enough sleep may be related to early school start times. The American Academy of Pediatrics recommends that middle and high schools start at 8:30 a.m. or later to give students the opportunity to get the amount of sleep they need.[191] Emerging research on the impact of sleep on mental health of young people suggests that delaying school start times may protect against poor mental health outcomes.[192]

Recommendation Impacts:
Child maltreatment deaths (abuse and neglect), violent deaths (homicides, suicides and firearm deaths), unintentional injury deaths (drowning, falls, fire, poisoning) and motor vehicle deaths.

Noting the research that supports delaying school start times to improve behavioral and physical student health, several Colorado school districts have already implemented or are considering implementing delayed start times for high schoolers. For example, Cherry Creek and Littleton School Districts start high school at 8:20 a.m. Jefferson and Boulder School Districts are considering delayed start times.[193] Cherry Creek School District and a research partner at National Jewish Health have published a journal article outlining lessons learned, the process used to engage parents, caregivers and students and their evaluation plans to assess the impact of the delayed start time in the district.[194]

State and local policymakers should encourage Colorado's school districts to delay school start times for high school youth. This will support youth access to sleep and promote youth physical and behavioral health and school outcomes.

Equity considerations:

- *Schools will need to modify bus schedules to accommodate changes in school start times, which may impact school resources.*
- *For youth who work after school, later start times may also make it challenging to get to an after-school job. Later start times may also create challenges for caregivers who must drop off and pick up students.*
- *School districts and policymakers need to meaningfully engage families to make sure they are onboard with the changes to the school schedule.*
- *Policymakers need to consider transportation budget to meet changing needs if school start times change.*

CHILD FATALITY PREVENTION SYSTEM RECOMMENDATIONS TO IMPROVE DATA QUALITY

Pursuant to Colorado Revised Statutes (C.R.S.) 25-20.5-407 (1)(g), CFPS is required to report on system strengths and weaknesses identified during the child fatality review process. For the purpose of the report, "system" is defined as state and local agencies or Colorado laws that potentially impact the health and well-being of children. "Systematic child-related issues" means any issues involving one or more agencies. System strengths are included in Appendix B: CFPS Prevention Activities: Analysis and Updates on Prevention Recommendations.

CFPS identified weaknesses primarily related to how data is collected, shared, analyzed and used by different systems. CFPS prioritized four recommendations to strengthen the quality and utility of child fatality data. These recommendations include ideas to improve how investigative agencies examine child deaths and ideas to improve systems to track and analyze data. Enhanced data quality has the potential to improve the use of the data to inform decisions about which prevention programs and policies to recommend and implement in Colorado.

ENCOURAGE AND INCENTIVIZE LAW ENFORCEMENT AGENCIES AND CORONER OFFICES TO USE THE SUDDEN UNEXPLAINED INFANT DEATH INVESTIGATION REPORTING FORM (SUIDIRF) DURING INFANT DEATH SCENE INVESTIGATIONS.

CFPS State Review Team recommendation.

Infant death scene investigations are critical to a comprehensive understanding of the circumstances and factors contributing to unexplained infant deaths. A full infant death scene investigation includes a thorough examination of the death scene, a review of clinical history and an autopsy. CFPS has limited ability to determine the circumstances related to infant deaths when death scene investigators do not conduct a full infant death scene investigation or if they don't complete the Sudden Unexplained Infant Death Investigation Reporting Form (SUIDIRF) (www.cdc.gov/sids/SUIDRF.htm). Having this information can help the system identify risk factors associated with infant deaths and improve future prevention recommendations.

The CDC designed the SUIDIRF to assist investigative agencies in understanding the circumstances and factors contributing to unexplained infant deaths and to establish a standardized death scene investigation protocol for the investigation of all sudden unexpected infant deaths (SUID).[195]

The SUIDIRF improves classification of infant deaths that occur in a sleep environment by standardizing data collection. It guides investigators through the steps involved in an investigation and produces information that researchers can use to recognize new threats and risk factors for SUID.

Although the SUIDIRF is a useful tool for death scene investigators, Colorado has historically had among the lowest rates of all states for filling out the SUIDIRF.[196] According to the most recent information collected by the National Conference of State Legislatures, 12 states require special SUID training for infant death scene investigators.[197] Due to CFPS promoting the use of the SUIDIRF over the past several years, Colorado data indicated an increase in the proportion of SUID investigations where the SUIDIRF was used (23.8 percent in 2013 to 51.0 percent in 2017). Encouraging and incentivizing law enforcement agencies and coroner offices to use of the SUIDIRF in Colorado has the potential to improve the information collected about unexplained infant deaths and enhance prevention recommendations for SUID across the state.

ENCOURAGE AND INCENTIVIZE LAW ENFORCEMENT AGENCIES AND CORONER OFFICES TO USE THE SUICIDE DEATH SCENE INVESTIGATION FORM WHEN INVESTIGATING SUICIDE DEATHS.

Data systems in Colorado, including the CFPS and the Colorado Violent Death Reporting System (CoVDRS), often have missing and unknown data related to suicide circumstances. For example, death scene investigators typically collect limited information about a decedent's mental health history and access to lethal means, especially regarding firearm storage and ownership.

To improve the case review process and conduct quality, case-specific reviews, CFPS recommends that law enforcement agencies and coroner offices develop protocols and implement standardized use of the Suicide Death Scene Investigation Form to ensure law enforcement officers and coroner investigators consistently collect circumstance data when investigating a suspected suicide death.

Joint Suicide Prevention Commission and CFPS State Review Team recommendation.

The CFPS Investigative and Data Quality Subcommittee, Office of Suicide Prevention and the Suicide Prevention Commission drafted the Suicide Death Scene Investigation Form in Fiscal Year 2016-17. Content experts from numerous organizations worked collaboratively to produce this comprehensive investigation tool that will improve Colorado's understanding of suicide deaths and help identify new prevention strategies.

During Fiscal Year 2016-17, 10 counties across Colorado piloted the form. The CFPS Investigative and Data Quality Subcommittee gathered feedback from death scene investigators who piloted the form and made improvements based on their suggestions.

In Fiscal Year 2017-18, CDPHE made the form and an accompanying guidance manual available online (www.colorado.gov/cdphe/suicide-investigation-form). CFPS and Colorado Violent Death Report System (CoVDRS) partners promoted the form to coroners and law enforcement through presentations at the Colorado Coroners Association in October 2017 and June 2018 and at the Colorado Sheriffs Association meeting in January 2018.

In Fiscal Year 2018-19, partners again promoted the form at the New Coroners Institute in October 2018. To begin measuring progress, CFPS added two questions to the National Center for Fatality Review and Prevention's (NCFRP) Case Reporting System. The survey asks questions for each youth suicide death: 1.) Was a suicide death scene investigation form (or jurisdictional equivalent) completed during the death scene investigation? and 2.) If so, was the form shared with the local child fatality prevention review team to aid in the child death review process?

Partners continue to raise awareness of the purpose and availability of the form with death scene investigators across Colorado. The Office of Suicide Prevention relies on data coroners, law enforcement, and other death investigators collect to guide current and future priorities and funding allocation. These data directly inform opportunities for prevention and intervention, and help to identify gaps in programming. Implementing policies and protocols within agencies investigating potential deaths by suicide will improve the quality of data received by CFPS, increase understanding of the circumstances of suicide deaths in Colorado, and help to identify common risks and points for intervention.

IMPROVE CFPS DATA QUALITY BY PROVIDING TECHNICAL ASSISTANCE TO LOCAL TEAMS ON BEST PRACTICES FOR FIREARM FATALITY REVIEWS.

Among the 168 firearm deaths that occurred among infants, children and youth in Colorado from 2013 through 2017, safe and secure weapon storage data was missing for a large proportion of the deaths reviewed. Information regarding whether the weapon was stored locked was missing for 39.3 percent (n=66) of the deaths. Information regarding whether the firearm was stored loaded was missing for 55.9 percent (n=94) of these cases. The cause for the missing information is not clear. It may be because CDPHE has not provided sufficient guidance about how important this information is. It also may be because death scene investigators and local teams are uncertain about how to ask about firearm storage or if families are using firearms around children and youth, among other factors.

One way the system plans to increase firearm data quality is by developing and disseminating firearm-specific guidance for local teams. In Fiscal Year 2018-19, CFPS developed firearm-specific guidance for local teams to support case reviews and increase firearm data quality in the system. The purpose of the guide is to assist teams in discussing aspects of firearm deaths that may not be readily clear from the case review or easy to discuss.

CFPS State Review Team recommendation.

As an example, the guidance will instruct local teams to ask whether the child or youth had formal training in firearm use and safety. The guide will purposefully align with the Suicide Death Scene Investigation Form (www.colorado.gov/cdphe/suicide-investigation-form). The CFPS Investigative and Data Quality Subcommittee and the Colorado Suicide Prevention Commission developed this form in response to the lack of circumstance data collected about cases of suicide deaths in Colorado, especially regarding firearm storage and ownership.

In Fiscal Year 2018-19, the CFPS also added two questions to the National Center for Fatality Review and Prevention (NCFRP) Case Reporting System to collect data around if the firearm was stored securely and if the youth: 1) knew where the firearm was stored, 2) knew how to access the firearm, 3) had fired firearms before, and 4) had formal firearm training.

In addition to supporting teams in discussing this challenging topic, the guide will increase the system's understanding of the circumstances of firearm deaths and help to identify common risks and points for intervention. To support enhanced data collection, the CFPS State Support Team commits to more intentional and timely quality assurance of firearm deaths in the system to ensure that the information on these deaths is as thorough and complete as possible. Finally, data about firearm deaths will guide data-informed decisions for recommendations and strategies to prevent firearm fatalities among children and youth in Colorado, whether due to unintentional injury, homicide or suicide.

IMPROVE QUALITY OF CFPS SUBSTANCE USE DATA BY SUPPLEMENTING CFPS DATA WITH OTHER DATA SOURCES.

CFPS regularly collects information on substance use, substance use disorders and mental health histories through law enforcement and coroners' reports. However, the data is often incomplete and may present an incomplete picture of the role of substance use in child fatalities across Colorado. Much of this information is subjective, as it originates from interviews with family members, friends or others on scene at the time of the investigation.

While CFPS provides guidance on how to enter mental health and substance use information into the NCFRP Case Reporting System, the data local teams enter does not reflect a strict adherence to the NCFRP data entry guidance. Much of the data is subjective, incomplete or missing. At the time of this report, information on substance use disorder history was missing or unknown in 26.8 percent (n=70) of suicide deaths, and mental health history was missing or unknown for approximately 23.4 (n=61) to 31.4 percent (n=82) of suicide deaths, depending on the question under consideration.

Based on local team and CFPS State Review Team recommendation.

CFPS is committed to understanding how substances, including alcohol, tobacco, marijuana and prescription drugs, may contribute to the fatal circumstances leading to death among children and youth under age 18. As an example, research indicates maternal smoking during pregnancy, smoke in the environment of an infant and third-hand smoke (residual contamination of the environment after a cigarette has been extinguished) may lead to preterm birth, but also affect how easily an infant will wake from sleeping.[198] These contribute to an increased risk of SUID and sudden infant death syndrome (SIDS).

Understanding and improving the quality of data regarding smoking during pregnancy and after birth, will help to identify specific actions to take to reduce the risk of SUID in Colorado. CFPS data on the mother's smoking behaviors prior to and during pregnancy comes from birth certificate information. Information on secondhand smoke exposure following birth relies heavily on reports received during the fatality review. Information on maternal smoking during pregnancy from 2013-2017 was missing or unknown for 10.5 percent (n=24) of all SUID reviewed. Information on secondhand smoke exposure was missing or unknown 29.9 percent (n=68) of the time. Improved scene investigation and continued use of the SUIDIRF when investigating these deaths will improve our understanding of how smoke exposure can contribute to SUID in Colorado.

Alcohol, marijuana and other legal and illicit substances can impact the causes of death that CFPS reviews. The CDC identifies history of mental disorders and alcohol and substance use as significant risk factors for suicide.[199] Similarly, substance use or a history of mental health concerns within a family may lead to child maltreatment.[200]

Substance use, specifically alcohol use and impaired driving, was responsible for approximately one in five child passenger fatalities from 2001–2010.[201] Among all poisoning or overdose deaths reviewed by CFPS, none of the information collected indicated a locked, secured storage location for substances. This includes for many addictive and potentially lethal substances and medications.

One way to improve mental health and substance use disorder history data is to link the CFPS data system with other state-level data systems. This can be done through formal data sharing agreements and by using additional data sources to supplement CFPS data. CFPS has used supplemental data sets, such as the Colorado Pregnancy Risk Assessment Monitoring System

(PRAMS). CFPS has also explored the opportunity to link with the Colorado Department of Human Services Office of Behavioral Health data system to improve the understanding of the impacts of mental health and substance use on child fatalities.

CFPS is also participating in Illuminate Colorado's Impact on Children of Caregiver Substance Use Project funded by the ZOMA Foundation (www.illuminatecolorado.org/iccsu). This work group is exploring how caregiver substance use impacts children's lives. The group is looking at a variety of statewide data systems to create a more comprehensive and contextualized understanding of the impact of substance use.

CFPS explored increasing data quality by adding a question to the NCFRP Case Reporting System on the impact of substance use in child deaths in Colorado to supplement existing questions in the tool. After a robust discussion, CFPS decided not to add this question to the tool. Instead, CFPS plans to produce a data brief using existing substance use data from the system to raise awareness about the what contextual factors contribute to substance use in Colorado.

In Fiscal Year 2019-20, CFPS will develop and widely distribute this data brief. CFPS will also continue efforts to improve the quality of data collected during investigations and entered into the case reporting system during case reviews by promoting the use of the comprehensive Suicide Death Scene Investigation Form (www.colorado.gov/cdphe/suicide-investigation-form). The form may help death scene investigators collect better information on if substance use impacts youth suicide deaths.

Next year, the CFPS Investigative and Data Quality Subcommittee, with the support of partner state agencies, will explore additional sources of mental health and substance use and misuse data to better understand the contribution of these risk factors to the deaths of infants, children and youth occurring in Colorado.

CONCLUSION

The goal of the Child Fatality Prevention System is to promote the health of infants, children and youth and their families by increasing economic stability, creating positive social norms and meaningful connections, and increasing access to behavioral health to prevent child deaths. This report reflects the culmination of the collective expertise of system partners across Colorado. The structure of the Colorado Child Fatality Prevention System ensures coordination at the state and local level and provides an opportunity to advance prevention strategies and systems improvements. Research shows that changes in policy and enforcement of laws are the most effective prevention strategies for many types of child deaths.[202] Colorado policymakers can reduce child deaths by supporting and adopting the recommendations outlined in this report.

APPENDIX A: CFPS STATE REVIEW TEAM MEMBERS

Name	Title	Agency	Role
Amy Nichols	Executive Director	DRIVE SMART	Team-Selected Member: Auto Safety/Driver Safety Organization
Andrew Gabor	Director of Child and Adolescent Services	CDHS, Office of Behavioral Health	State Agency-Appointed Member: Department of Human Services - Mental Health Services
Ashley Tunstall	Director of Behavioral Health & Medical Services	CDHS, Behavioral Health and Medical Services	State Agency-Appointed Member: Department of Human Services - Division of Youth Corrections
Brian Jackson	Assistant Professor of Pediatrics	University of Colorado, Anschutz	Governor-Appointed Member: Physician who specializes in traumatic Injury or children's health
Brooke Ely-Milen	Domestic Violence Program Director and member of Violence Free Colorado	Colorado Department of Human Services	Team-Selected Member: State Domestic Violence Coalition
Chris Henderson	Executive Director	Office of the Child's Representative	Team-Selected Member: Office of the Child's Representative
Christal Garcia	Family Leader	CDPHE, Violence and Injury Prevention-Mental Health Promotion Branch	State Agency-Appointed Member: Department of Public Health & Environment
Curtis Rashaan Ford	Pediatrician	Castle Rock Pediatrics, Children's Hospital Colorado	Governor-Appointed Member: Physician who specializes in traumatic Injury or children's health
Diana Goldberg	Executive Director	Children's Advocacy & Family Resources, Inc./ SungateKids	Team-Selected Member: Child Advocacy Centers Network

Name	Title	Agency	Role
Dwayne Smith	Senior Strategist	Children's Hospital Colorado, Child Health Advocacy Institute	Team-Selected Member: Hospital Injury Prevention or Safety Specialists
Ethan Jamison	Colorado Violent Death Reporting System (CoVDRS) Coordinator & Epidemiologist	CDPHE, Health Statistics Section	State Agency-Appointed Member: Department of Public Health & Environment
Ginna Jones	Motor Vehicle Safety Manager	CDPHE - Violence and Injury Prevention - Mental Health Promotion Branch	State Agency-Appointed Member: Department of Public Health & Environment
Helen Sigmond	Alamosa County Commissioner	Alamosa County	Governor-Appointed Member: County Commissioner
Jane Flournoy	Manager	CDHS, Office of Behavioral Health, Culturally Informed and Inclusive Programs	State Agency-Appointed Member: Department of Human Services - Behavioral Health Services (MH/SA)
Jenny Bender	Executive Director	Colorado CASA	Team-Selected Member: Court-appointed Special Advocate Program Director
Jill Bednarek	Tobacco Policy Initiatives Supervisor	CDPHE, Tobacco Program	State Agency-Appointed Member: Department of Public Health & Environment
Jodi McClure	Program Director	Kid's Crossing	Team-Selected Member: Private Out-of-Home Placement Provider
Joni Reynolds	Director	Gunnison County Department of Health and Human Services	State Agency-Appointed Member: Department of Human Services - Director of a County Department of Human Services

Name	Title	Agency	Role
Joseph Morris	Chief of Police	Arapahoe Community College Campus Police Department	Governor-Appointed Member: Peace Officer who specializes in crimes against children
Kelly Lear	Coroner/Forensic Pathologist	Arapahoe County Coroner's Office	Governor-Appointed Member: County Coroner
Korey Elger	Ongoing Services Unit Manager	CDHS, Office of Children, Youth and Families, Division of Child Welfare, Child Protection Services	State Agency-Appointed Member: Department of Human Services - Child Welfare Division
Krista Timm	Forensic Pathologist and Assistant Medical Examiner	Denver Office of the Medical Examiner	Team-Selected Member: Sudden Infant Death Specialists (or Injury Violence Specialists within the state)
Laurie Andrews	Public Heath Nurse, CFRT Coordinator	Tri-County Health Department	Governor-Appointed Member: Nurse who specializes in traumatic injury or children's health
Lena Heilmann	Youth Suicide Prevention Coordinator - Office of Suicide Prevention	CDPHE, Violence and Injury Prevention-Mental Health Promotion Branch	State Agency-Appointed Member: Department of Public Health & Environment
Lucinda Connelly	Child Protection Services Manager	CDHS, Office of Children, Youth and Families, Division of Child Welfare, Child Protection Services	State Agency-Appointed Member: Department of Human Services - Child Welfare Division
Matt Clark	Lieutenant	Major Crimes Division - Robbery / Homicide at Denver Police Department	Governor-Appointed Member: Peace Officer who specializes in crimes against children
Matthew Karzen	Chief Deputy/Assistant District Attorney	14th Judicial District	Governor-Appointed Member: District Attorney from a rural area

Name	Title	Agency	Role
Melissa Vigil	Child Protection System's Analyst	Office of Colorado's Child Protection Ombudsman	Governor-Appointed Member: Representative from Ombudsman's Office
Pat Givens	Senior Vice President, Chief Nursing Officer & Dr. Dori Biester Chair in Pediatric Nursing	Colorado Organization of Nurse Leaders; Children's Hospital Colorado	Team-Selected Member: Hospital Injury Prevention or Safety Specialists
Randal Williams	Physician Assistant	Castle Rock Pediatrics	Governor-Appointed Member: Physician who specializes in traumatic Injury or children's health
Robert Glassmire	Garfield County Coroner	Garfield County Coroner's Office	Governor-Appointed Member: County Coroner
Sarah Schmidt	Pediatrician	"University of Colorado School of Medicine/ Children’s Hospital Colorado"	Governor-Appointed Member: Physician who specializes in traumatic Injury or children's health
Scott Hophan	Sergeant	District 2 Vehicular Crimes Unit	State Agency-Appointed Member: Department of Public Safety
Scott Ross		Colorado Department of Education	State Agency-Appointed Member: Colorado Department of Education
Sedona Allen	Youth Advisor	CDPHE - Children, Youth and Families Branch	State Agency-Appointed Member: Department of Public Health & Environment
Shannon Meddings	Senior Assistant City Attorney	Denver City and County Attorney's Office Human Services Section, Child Protection	Governor-Appointed Member: County Attorney who practices in the area of dependency and neglect

Name	Title	Agency	Role
Shivani Bhatia	Maternal Wellness Manager	CDPHE - Children, Youth and Families Branch	State Agency-Appointed Member: Department of Public Health & Environment
Sophie West	Safe & Healthy Families: Epidemiologist/ Coordinator	Jefferson County Public Health	State Agency-Appointed Member: Department of Public Health & Environment - County Health Department
Theresa Rapstine	Child Care Health Consultant	Qualistar and Children's Hospital Colorado	Team-Selected Member: Hospital Injury Prevention or Safety Specialists
Tracey Holmberg	Pediatric Trauma Nurse Coordinator at Swedish Medical Center	Swedish Medical Center	Team-Selected Member: Hospital Injury Prevention or Safety Specialists
VACANT			Governor-Appointed Member: District Attorney
VACANT			Governor-Appointed Member: County Sheriff
VACANT			Governor-Appointed Member: Local Fire Department
VACANT			Governor-Appointed Member: County sheriff from a rural area
VACANT			Governor-Appointed Member: Nurse who specializes in traumatic injury or children's health
VACANT			Team-Selected Member: Community member with experience in childhood death

APPENDIX B: ANALYSIS AND UPDATES ON CFPS PREVENTION RECOMMENDATIONS

Since 2006, the CFPS has made annual prevention recommendations to policymakers to prevent child fatalities in Colorado. State agencies and other partners made significant progress towards accomplishing the majority of the recommendations. An analysis and summary of the recommendations from the previous five years is described in the table below. Details of past CFPS recommendations are located in previous CFPS annual reports: www.cochildfatalityprevention.com/p/reports.html.

Analysis and Updates on Child Fatality Prevention System (CFPS) Prevention Recommendations

Recommendation Year	Legislative Recommendation	Progress Toward Recommendation
Completed Recommendations		
2014	Incorporate safe sleep education and how to address safety concerns related to infant safe sleep practices as part of the Colorado Department of Human Services Child Welfare Training System for child welfare professionals.	In 2015, the Kempe Center for the Prevention and Treatment of Child Abuse and Neglect, which coordinates the Child Welfare Training System on behalf of the Colorado Department of Human Service, developed a training curriculum for child welfare professionals to improve their knowledge and skills regarding infant safe sleep. The training was incorporated into the Child Welfare Training System in September 2015 to improve the ability of child welfare professionals to provide information to parents and other caregivers about infant sleep related risks and how to ensure safe sleeping environments. As of June 2018, 1497 learners have successfully completed the training since it was launched in 2015.
2014	Modify child care licensing requirements and regulations regarding infant safe sleep to better align with American Academy of Pediatrics (AAP) safe sleep recommendations.	Effective April 1, 2015, Colorado Department of Human Services (CDHS) Office of Early Childhood amended rules that regulate licensed child care centers and homes to incorporate best practices for infant safe sleep environments. In spring 2017, Qualistar Colorado released a web-based, mandatory safe sleep training for licensed child care providers: Prevention of Sudden Infant Death Syndrome (SIDS) and Use of Safe Sleep Practices.
2014	Increase funding for the Colorado Department of Public Health and Environment to expand the Colorado Household Medication Take-Back Program at pharmacies across the state.	The Colorado Department of Public Health and Environment receives an annual appropriation of $300,000 in general funds to implement the Colorado Household Medication Take-Back Program for medication take-back activities.

Recommendation Year	Legislative Recommendation	Progress Toward Recommendation
2014	Incorporate safe sleep education and how to address safety concerns related to infant safe sleep practices as part of the Colorado Department of Human Services Child Welfare Training System for child welfare professionals.	In 2015, the Kempe Center for the Prevention and Treatment of Child Abuse and Neglect, which coordinates the Child Welfare Training System on behalf of the Colorado Department of Human Service, developed a training curriculum for child welfare professionals to improve their knowledge and skills regarding infant safe sleep. The training was incorporated into the Child Welfare Training System in September 2015 to improve the ability of child welfare professionals to provide information to parents and other caregivers about infant sleep related risks and how to ensure safe sleeping environments.
2015	Continue to provide dedicated resources for the implementation of Colorado's Child Welfare Plan, "Keeping Kids Safe and Families Healthy 2.0," to make prevention programs for families with young children available in every county in Colorado.	The Colorado Department of Human Services continues to dedicate resources and efforts to implement Colorado's Child Welfare Plan, "Keeping Kids Safe and Families Healthy 2.0." In early 2015, CDHS launched a statewide hotline to facilitate reporting of suspected cases of child abuse and neglect, which was one of the components of the Child Welfare Plan. The hotline (1-844-CO-4-KIDS) operates out of a centralized location and is Colorado's first child-abuse hotline of its kind. In 2017, CDHS unveiled the Colorado Child Maltreatment Prevention Framework for Action. The purpose of the framework is to help local communities and state agencies create a more focused and integrated approach to prevent child maltreatment and promote child well-being. Fifteen communities across Colorado began comprehensive planning processes to implement the plan starting in fall 2017. Community plans will be final and implementation will begin summer 2018.
2015	Modify Colorado Department of Human Services' rules regulating family foster care homes to better align with the American Academy of Pediatrics (AAP) infant safe sleep recommendations, including training for foster families regarding infant safe sleep.	*2015 Joint CFPS and Colorado Department of Human Services' Child Fatality Review Team recommendation:* In 2016, CFPS and CDHS partners reviewed the current rules regulating family foster care homes to assess alignment with the Academy of Pediatrics infant safe sleep recommendations. As a result, CDHS' Division of Child Welfare included a mandatory infant safe sleep webinar as part of foster care training through the Child Welfare Training System. Additionally, in Fiscal Year 2018-19, Division of Child Welfare issued an operation memo to counties and child placement agencies regarding safe sleep recommendations.
2016	Improve Colorado's Traffic Accident Report to include more specific information about motor vehicle crashes.	The Colorado Department of Transportation, Colorado Department of Revenue, Colorado State Patrol, local law enforcement and other members of the Statewide Traffic Records Advisory Committee (STRAC) created a committee to update the crash form. Members of the STRAC, law enforcement, public works and other crash data users met in Fiscal Year 2017-18 to identify necessary changes to the form. The new form will improve Colorado's data driven decision making with better initial data collection by officers in the field and may be deployed as soon as May 2019. For additional updates, visit the STRAC website: https://www.codot.gov/about/committees/strac.
2016	Support policies that ensure the long-term financial stability of free full-day preschool and free full-day kindergarten.	During the 2019 legislative session, Colorado legislators passed House Bill 19-1262 (State Funding For Full-day Kindergarten) successfully securing funding for free, all-day Kindergarten in Colorado.

Recommendation Year	Legislative Recommendation	Progress Toward Recommendation
Ongoing Recommendations		
2014, 2015, 2016, 2017, 2018	Establish a statutory requirement that allows for primary enforcement of Colorado's adult seat belt law, making it possible to stop a driver and issue a citation if anyone (the driver and all passengers, regardless of seating position) in the vehicle is not properly restrained.	Based on the strong evidence-base for this type of legislation, the CFPS has recommended this policy in its annual legislative report for over 10 years. During the 2018 legislative session, a primary seat belt bill was introduced and received strong community support during the hearing. Despite compelling data, victim and community advocacy and survey results showing that the majority of Colorado citizens support the bill, it was defeated in committee with a 3-2 vote. A primary seat belt bill was not introduced during the 2019 legislative session. In Fiscal Year 2019-20, the Occupant Protection Task Force will address additional strategies to support local and statewide adoption of primary seat belt legislation in the future.
2014, 2015, 2017	Increase funding for the Office of Suicide Prevention to implement the following activities: 1) expand the statewide community grant program and increase funding levels for youth suicide prevention; 2) expand the implementation and evaluation of means restriction education training (Emergency Department- Counseling on Access to Lethal Means (ED-CALM)) at hospitals statewide; 3) expand implementation and evaluation of a full- spectrum of school-based suicide prevention programs that promote resilience, school connectedness and positive youth development as protective factors from suicide and the development and standardization of protocols for K-12 schools for prevention, intervention and postvention; and 4) expand means safety initiatives, including training clinicians to counsel on access to lethal means and safety planning and implement the Gun Shop Project in more counties; 5) expand implementation of the Zero Suicide framework within health systems.	In Fiscal Year 2016-17, the Office of Suicide Prevention (OSP) received an additional appropriation of $100,000. OSP dedicated the funding to expand the community grant program and implement the Zero Suicide framework for health systems. The Zero Suicide framework (http://zerosuicide.sprc.org/about) is a system-level approach that improves the quality of care in health systems to include suicide prevention as a core organizational mission. By spring 2017, all 17 of Colorado's community mental health centers were trained in the framework, as well as 11 other health care entities. Three OSP community grantees were awarded five years of funding for Zero Suicide starting July 1, 2017. OSP updated the Suicide Prevention Toolkit for Primary Care Practices to align with Zero Suicide and it is currently being disseminated statewide in hard copy and electronically. In fall 2018, Colorado received a five-year grant from the Substance Abuse and Mental Health Services Administration (SAMHSA) to help support implementation of the Zero Suicide model within Colorado health care systems ($725,000 in Year 1 and $700,000 for each subsequent year). This funding supports evidence-based clinical trainings, Zero Suicide Academies and learning collaboratives, as well as infrastructure to assist local health systems with implementation needs and electronic health system build outs within 5 counties. In 2016, a research team received a grant from the American Foundation for Suicide Prevention to expand the implementation and evaluation of ED-CALM to six additional hospitals throughout Colorado. The research project runs from October 2016 to September 2019. Results are expected to be positive and, if so, OSP intends to make the training and protocol available statewide. In 2016, CFPS partnered with OSP and the Interpersonal Violence Prevention Unit at CDPHE to fund training for certified Sources of Strength trainers and two years of implementation of Sources of Strength (an evidence-based suicide prevention program) at seven high schools in Colorado. In 2017, building on the initial pilot study, the Interpersonal Violence Prevention Unit received CDC funding for a four-year research grant to evaluate Sources of Strength in 24 schools across Colorado to measure the effectiveness of using a shared risk and protective factor approach on multiple violence outcomes, including youth sexual violence, bullying and suicide. Four current OSP community grantees were awarded five years of funding for Sources of Strength through June 2022. In 2018, the Colorado Attorney General's Office also contributed funding to expand implementation of the Sources of Strength program in up to 40 schools during the 2018 spring semester. That funding continued in 2019 to support 50 schools with Sources of Strength. Through a variety of funding streams, over 100 schools and organizations in Colorado are implementing the evidence-based program.

Recommendation Year	Legislative Recommendation	Progress Toward Recommendation
		In 2017, OSP was awarded a five-year Garrett Lee Smith Youth Suicide Prevention grant through SAMHSA. This federally funded grant supports OSP's efforts to saturate youth (defined as ages 10-24) suicide prevention efforts in eight Colorado counties with high burdens of youth suicide. In Fiscal Year 2018-19, OSP expanded the Colorado Gun Shop Project (www.colorado.gov/pacific/cdphe/gun-safety-suicide) to over thirty counties in Colorado. This project provides educational information and suicide resources to gun shop owners to display within retail stores. During the 2018 legislative session, the legislature passed Senate Bill 18-272 (Crisis and Suicide Prevention Training Grant Program), creating a grant program for schools and school districts to enhance suicide prevention and crisis response through training for all staff. Seventeen schools/districts will receive funding support through this grant program through June 2021.
2014 2018	Require newly licensed K-12 educators and special service providers (nurses, school psychologists, school counselors and social workers) to complete suicide prevention trainings. Support training for mental health and substance use disorder providers on evidence-based treatment approaches for suicidal youth.	In 2016, the Suicide Prevention Commission conducted a statewide survey of mental health providers, including those within school settings, to help identify preferences and barriers to accessing clinical suicide prevention training. Survey results indicate a need for additional training and to address barriers to existing training. An overwhelming majority of respondents had either professional or personal experiences with suicide, although a quarter of respondents reported that they had not attended any suicide prevention training within the past five years. The Colorado Office of Suicide Prevention has prioritized the Collaborative Assessment and Management of Suicidality (CAMS) clinical trainings as they are evidence-based, client-centered, and the treatment can be provided in any modality or theoretical orientation. The Office of Suicide Prevention leverages federal grant funding to bring CAMS training opportunities to Colorado, hosting five training events each year across the state with a goal of training 500 providers each year. Additionally, during the 2018 and 2019 legislative sessions, Colorado legislators passed House Bill 18-272 (Crisis and Suicide Prevention Training Grant Program), creating a grant program for schools and school districts to enhance suicide prevention and crisis response through training for all staff; House Bill 19-1017 (Kindergarten Through Fifth Grade Social and Emotional Health Act), which increases access to school social workers in elementary schools in high-need pilot sites; House Bill 19-1032 (Comprehensive Human Sexuality Education); House Bill 19-1120 (Youth Mental Health Education & Suicide Prevention), which reduces the age of consent to 12 years old to increase mental health access for youth and establishes new mental health and suicide prevention standards; House Bill 19-1203 (School Nurse Grant Program) creates a grant program to increase school nurses; House Bill 19-1129 (Prohibit Conversion Therapy for a Minor); House Bill 19-1177 (Extreme Risk Protection Orders); Senate Bill 19-195 (Child And Youth Behavioral Health System Enhancements); and Senate Bill 19-010 (Professional Behavioral Health Services for Schools), expanding the school-based behavioral health professionals grant program by $3 million, all to promote behavioral health of Colorado's children and youth.

Recommendation Year	Legislative Recommendation	Progress Toward Recommendation
2015	Support policies that impact the priorities of the Colorado Essentials for Childhood project: 1) increase family friendly business practices across Colorado; 2) increase access to child care and after school care; 3) increase access to preschool and full-day kindergarten; and 4) improve social and emotional health of mothers, fathers, caregivers and children.	Essentials for Childhood is Centers for Disease Control and Prevention (CDC)-funded child maltreatment prevention initiative that supports the creation of safe, stable and nurturing relationships and environments for children and families in Colorado. In Fiscal Year 2018-19, Colorado was awarded the second round of funding under the CDC's Essentials for Childhood grant. As part of this new project, five pilot communities (Denver, Morgan, Mesa, Montezuma, Kiowa/Prowers) were selected to work on improving family economic security through addressing systemic barriers to food systems and child care assistance, educating on family friendly policies that reduce stress for families, particularly low wage workers, and to increase social norms around help-seeking for caregivers and collective prosperity or the role the policy makers and decision makers have in preventing child abuse and neglect. The Essentials program and CFPS are jointly funding the five communities. In Fiscal Years 2016-17 and 2017-18, local child fatality prevention review teams (local teams) began working towards implementation of organizational and county level policies aligned with the Essentials for Childhood four priority areas. The goal of this work was to expand the focus of the project from state level policies and coalitions to the local level. During the same period, CFPS partnered with Essentials staff to develop and disseminate a State of the State Report, capturing local level polices from across the state of Colorado designed to create safe, stable and nurturing relationships, environments and communities for families, which is updated periodically to include new examples. During this time period, the Essentials for Childhood program and Executives Partnering to Invest in Children (EPIC) partnered to host business forums designed to educate business owners and employers about family-friendly employer practices and policies to implement at their places of employment. Colorado Essentials for Childhood staff and EPIC hosted six business forums since 2016. In addition, staff updated the Family Friendly Toolkit (https://sites.google.com/site/familyfriendlycolorado/toolkit) with case studies from Colorado businesses and others as well as best practices for worker health and well-being. Over 1800 hard copies of the toolkit have been disseminated to partners across the state, and the electronic toolkit has been shared with national partners as well as agencies from other states. Additionally, Essentials for Childhood staff partnered with Health Links to develop a family-friendly assessment (www.healthlinkscertified.org/certification/family-friendly) focused on identifying employers' needs and opportunities to create environments that are supportive of families. As in previous legislative sessions, during the 2019 legislative session, Colorado legislators introduced several state bills that supported Colorado's Essentials for Childhood priorities. The following bills passed: House Bill 19-1013 (Child Care Expenses Tax Credit Low-income Families), House Bill 19-1052 (Early Childhood Development Special Districts), House Bill 19-1280 (Child College Savings Accounts), House Bill 19-1194 (School Discipline For Preschool Through Second Grade), House Bill 19-1005 (Early Childhood Educator Tax Credit), House Bill 19-1262 (State Funding For Full-day Kindergarten), House Bill 19-1210 (Local Government Minimum Wage), House Bill 19-1193 (Behavioral Health Supports For High-risk Families), House Bill 19-1017 (Kindergarten Through Fifth Grade Social And Emotional Health Act), Senate Bill 19-085 (Equal Pay for Equal Work Act), Senate Bill 19-063 (Infant And Family Child Care Action Plan), Senate Bill 19-010 (Professional Behavioral Health Services for Schools) and Senate Bill 19-188 (FAMLI Family Medical Leave Insurance Program). The following bill did not pass: House Bill 19-1194 (Child Tax Credit).

Recommendation Year	Legislative Recommendation	Progress Toward Recommendation
2015 2016	Mandate that hospitals develop and implement policies to provide education and information about infant safe sleep promotion and to require the practice and modeling of safe sleep behaviors in labor/ delivery and neonatal intensive care unit (NICU) hospital settings. Mandate that all health care settings develop and implement policies to provide education and information about infant safe sleep promotion.	In Fiscal Year 2017-18, the Infant Safe Sleep Partnership began work on a toolkit for providers to use when educating families and caregivers about safe sleep practices. In Fiscal Year 2018-19, the partnership continued this work to engage hospitals and health care settings to provide them with model safe sleep policies and provider training opportunities to improve skills and knowledge of infant safe sleep. A "Safe Sleep, Every Sleep" infographic for providers was created using CFPS data showing that more infants died from sudden unexpected infant death (SUID) than children and youth died in motor vehicle crashes during 2011-2015. The partnership also continued to partner with Colorado's birthing hospitals to implement the Cribs for Kids® National Infant Safe Sleep Hospital Certification program. The partnership expanded to include partners from the HealthOne system at Sky Ridge Medical Center, who currently have and implement a model safe sleep policy. Additionally, the partnership developed and disseminated a baby box statement for providers with information about what is known and not known about the efficacy and use of baby boxes across Colorado and nationally. In Fiscal Year 2019-20, the partnership will continue to engage health care providers and health systems in safe infant sleep practices and policies. Additionally, in Fiscal Year 2018-19 CFPS linked data sets with the Colorado Immunization Information System (CIIS) to explore the impact of immunization, a known protective factor against SUID, on infants who die in Colorado. The results indicated that 89.2% of infants who died by SUID between 2009 and 2017 had an immunization record in CIIS. Of those infants who had an immunization record in CIIS, 58.3% were not up to date with the American Academy of Pediatrics (AAP) immunization schedule at the time of death. When comparing infants who were up to date with immunizations and those who were not, there were very few significant differences. However, one significant finding was that 16.2% of infants not up to date lived in a rural or frontier county, compared to 8.8% of those up to date with vaccines, which may speak to access to vaccines in rural areas. While we did not see many differences between populations, CFPS will still encourage health care providers to increase access to immunizations.
2015	Provide funding for the Colorado Consortium for Prescription Drug Abuse Prevention to promote uptake of the Quad-Regulator Policy for Prescribing and Dispensing Opioids through increased training and education of prescribers.	After successfully securing approximately $4.7 million dollars in grant funding from the Centers for Disease Control and Prevention (CDC) to prevent prescription drug overdoses in Fiscal Year 2018-19, CDPHE provided $910,000 to local public health agencies in high-burden communities to implement evidence-based opioid prescriber education strategies and increase local provider uptake of opioid prescribing guidelines beginning in Fiscal Year 2018-19. CDPHE also continued to partner with the Colorado Consortium for Prescription Drug Abuse Prevention to promote provider uptake of opioid prescribing guidelines with several CDPHE staff co-chairing committees of the Consortium. Finally, during the 2019 legislative session, seven opioid related bills passed that will increase funding for local communities, expand medication assisted treatment in Colorado jails and prisons, require prescribers to undergo training related to opioids and opioid prescribing, expand the availability of naloxone in the state, and create a naloxone bulk purchase fund, among other activities.

Recommendation Year	Legislative Recommendation	Progress Toward Recommendation
2015	Increase funding to Child Fatality Prevention System (CFPS) to support the implementation and evaluation of youth programs that promote pro-social activities, resilience and positive youth development as protective factors against child fatalities statewide.	CFPS continues to partner with state agencies to implement and evaluate youth programs that promote protective factors against child fatalities statewide. In Fiscal Year 2015-16, the Maternal and Child Health (MCH) program at CDPHE selected the prevention of youth suicide and bullying as one of its state-level priorities. As part of this priority, state and local MCH programs will implement strategies which build and promote the protective factors of community connectedness, school connectedness, and economic stability. Additionally, MCH staff provide technical assistance for preventing bullying and youth suicide to local CFPS coordinators and their teams. In Fiscal Years 2016-17 and 2017-18, CFPS provided supplemental funding to local teams to enhance suicide prevention efforts. Local team prevention activities include suicide prevention messaging campaigns developed by youth engaged in Sources of Strength; hosting Youth Mental Health First Aid training courses for adults and youth; conducting focus groups with middle and high school aged youth to understand opportunities for youth suicide prevention and mental health promotion in partnership with community organizations; and safe reporting for local media and community groups.
2016	Mandate all schools in Colorado implement a full spectrum of suicide prevention programming, including programs that promote resilience and positive youth development as protective factors for suicide.	While there are no mandates for schools to have established policies and procedures for comprehensive suicide prevention on campus, many protocols and toolkits already exist and are made available to schools in Colorado upon request. Additionally, during the 2018 and 2019 legislative sessions, Colorado legislators passed House Bill 18-272 (Crisis and Suicide Prevention Training Grant Program), creating a grant program for schools and school districts to enhance suicide prevention and crisis response through training for all staff; House Bill 19-1017 (Kindergarten Through Fifth Grade Social and Emotional Health Act), which increases access to school social workers in elementary schools in high-need pilot sites; House Bill 19-1032 (Comprehensive Human Sexuality Education); House Bill 19-1120 (Youth Mental Health Education & Suicide Prevention), which reduces the age of consent to 12 years old to increase mental health access for youth and establishes new mental health and suicide prevention standards; House Bill 19-1203 (School Nurse Grant Program) creates a grant program to increase school nurses; House Bill 19-1129 (Prohibit Conversion Therapy for a Minor); House Bill 19-1177 (Extreme Risk Protection Orders); Senate Bill 19-195 (Child And Youth Behavioral Health System Enhancements); and Senate Bill 19-010 (Professional Behavioral Health Services for Schools), expanding the school-based behavioral health professionals grant program by $3 million, all to promote behavioral health of Colorado's children and youth.

Recommendation Year	Legislative Recommendation	Progress Toward Recommendation
2015, 2016, 2017, 2018	Mandate the use of the Centers for Disease Control and Prevention's Sudden Unexplained Infant Death Investigation Reporting Form (SUIDIRF) for law enforcement agencies and coroner offices during infant death scene investigations.	The CFPS Investigative and Data Quality Subcommittee of the CFPS State Review Team prioritized the development and facilitation of training for law enforcement agencies and coroner offices to improve skills and knowledge of the Sudden Unexplained Infant Death Investigation Reporting Form (SUIDIRF) to be used during infant death scene investigations. In December 2015, coroners were trained about the importance of infant death scene investigation, SUIDIRF and doll reenactments as part of a Sudden Unexpected Infant Death (SUID) Training. In Fiscal Year 2016-17, CFPS provided funds to the Jefferson/ Gilpin County Child Fatality Prevention Team to host an infant death scene investigation training for coroners and law enforcement officers. In addition, this activity is a priority of the Sudden Unexpected Infant Death (SUID) Case Registry Grant, a CDC-funded project to improve surveillance (incidence, risk factors and trends) of SUID that Colorado has participated in since 2009. In Fiscal Year 2017-18, CFPS partnered with an investigator at the Arapahoe County Coroner's Office to conduct infant death scene investigation trainings with law enforcement agencies across the state, at which investigators learned about the SUIDIRF, infant safe sleep and death scene investigations for infants and children. In Fiscal Year 2018-19, CFPS partnered with the Colorado Coroners Association to present on SUID and use of the SUIDIRF at the New Coroner Institute, a multi-day training for newly elected coroners. As a result, CFPS distributed over 22 SUID investigation kits (patrol bags with guidance on SUID investigation and two scene re-enactment dolls and a sleep sack) to newly elected coroners across the state. Due to CFPS promoting the use of the SUIDIRF over the past several years, Colorado data indicated an increase in the proportion of SUID investigations where the SUIDIRF was utilized from 23.8 percent in 2013 to 51.0 percent in 2017. The CFPS Investigative and Data Quality Subcommittee also plans to host additional SUIDIRF and infant death scene investigation trainings in Fiscal Year 2019-20.
2016, 2017, 2018	Mandate the use of a suicide investigation form for law enforcement and coroners when investigating suicide deaths.	The CFPS Investigative and Data Quality Subcommittee in partnership with the Office of Suicide Prevention and the Suicide Prevention Commission drafted the Suicide Death Scene Investigation Form in Fiscal Year 2016-17. Content experts from numerous organizations worked collaboratively to produce this comprehensive investigation tool that will improve Colorado's understanding of suicide deaths and aid in the identification of new prevention strategies. During Fiscal Year 2016-17, 10 counties across Colorado piloted the form. The CFPS Investigative and Data Quality Subcommittee gathered feedback from death scene investigators who piloted the form and made improvements based on their suggestions. In Fiscal Year 2017-18, the form and an accompanying guidance manual were made available online. CFPS and Colorado Violent Death Report System (CoVDRS) partners promoted the form to coroners and law enforcement through presentations at the Colorado Coroners Association in October 2017 and June 2018 and at the Colorado Sheriffs Association meeting in January 2018. In Fiscal Year 2018-19, partners again promoted the form at the New Coroners Institute in October 2018. In addition, to begin measuring progress made on this data quality recommendation, CFPS added two questions to the National Center for Fatality Review and Prevention's (NCFRP) Case Reporting System. The questions are asked for each youth suicide death and inquire 1) whether a suicide death scene investigation form (or jurisdictional equivalent) was completed during the death scene investigation, and 2) if so, if the form was shared with the local child fatality prevention review team to aid in the child death review process. Partners continue to raise awareness of the purpose and availability of the form with death scene investigators across Colorado.

Recommendation Year	Legislative Recommendation	Progress Toward Recommendation
2016, 2017	Strengthen practices related to sharing child maltreatment data across local agencies in Colorado.	*2016 and 2017 Joint CFPS and Colorado Department of Human Services' Child Fatality Review Team recommendation:* In Fiscal Year 2016-17, CFPS conducted a needs assessment of several Denver metro area local teams regarding information sharing, background research on other state processes to share information and key informant interviews with partners at various state and local agencies. Additionally, efforts to coordinate various statewide projects to increase information sharing related to child maltreatment, focusing on access to municipal court records, began during the fall of 2017 with an in-person convening of interested agencies and partners, including Colorado Department of Human Services, Child Protection Ombudsman of Colorado, Colorado Department of Public Safety, court-appointed professionals, representatives from Colorado municipal courts, state and local law enforcement, state and local prosecutors, State Court Administrator's Office, Colorado Supreme Court and Colorado Department of Public Health and Environment. While the project gained support from legislators during the 2018 legislative session, a legislative request for an interim study committee, the Municipal Court Record Storage and Access Interim Committee proposal, was ultimately denied. In Fiscal Year 2018-19, the Child Protection Ombudsman of Colorado continued convening interested partners to increase access to municipal court records.
2016, 2017, 2018	Support policies that ensure paid parental leave for families.	Colorado legislators did not come to an agreement to pass a bill to create the Family Medical Leave Insurance (FAMLI) program during the 2019 legislative session. Similar to bills proposed in 2015, 2016, 2017, and 2018, the FAMLI program would have set up a state insurance program that establishes a pool of money, administered by the Colorado Department of Labor and Employment, so employees can take the time they need to care for themselves and to live up to their family responsibilities in caring for a sick child or parent and still be able to make ends meet. Policymakers passed an amended version of Senate Bill 19188 that requires the Colorado Department of Labor and Employment to analyze implementation of paid family and medical leave and includes a Task Force to oversee the result of the actuarial analysis. Additionally, CDPHE is tasked with producing a report identifying the health impact of paid family leave for the Task Force.
2016	Enhance the Graduated Drivers Licensing (GDL) law to increase the minimum age for a learner's permit to 16 years and expand restricted driving hours to 10:00pm-5:00am.	A statewide survey of law enforcement officials indicated that few officers knew all the GDL restrictions and penalties by age and licensing status so the Colorado Young Drivers Alliance (CYDA), formerly Colorado Teen Driving Alliance, developed a portable fact card to improve officers' understanding and enforcement abilities. Additionally, a CDPHE survey of almost 750 parents of youth in Colorado showed that only 6.4 percent of parents knew all the components of GDL laws, so the CYDA launched an online class to help parents teach and supervise their young drivers particularly around curfews, passenger restrictions, and seat belt requirements. The CYDA continues to provide support to local and statewide groups moving Colorado closer to GDL best practices.

Recommendation Year	Legislative Recommendation	Progress Toward Recommendation
2017, 2018	Improve substance use data quality by exploring additional data sources to supplement CFPS data.	CFPS is committed to understanding the contribution of substances, including alcohol, tobacco, marijuana and prescription drugs, to the fatal circumstances leading to death among children and youth under 18 years of age occurring in Colorado. The system regularly collects information on substance use, substance abuse disorders and mental health histories through law enforcement and coroners' reports; however, the data collected on these topics is often incomplete and may present an incomplete picture of the role of substance use in child fatalities across Colorado. In Fiscal Year 2017-18, CFPS met with partners at the Office of Behavioral Health at the Colorado Department of Human Services to explore a data sharing agreement between systems. While there was initial interest in this work, the data sharing agreement has yet to be finalized. In Fiscal Year 2018-19, CFPS continued to participate in Illuminate Colorado's Impact on Children of Caregiver Substance Use Project funded by the ZOMA Foundation (www.illuminatecolorado.org/iccsu). This work group is exploring the impact of caregiver substance use on children's lives by collecting indicators from a variety of statewide data systems to create a more comprehensive and contextualized understanding of the impact of substance use. Additionally, CFPS explored increasing data quality by adding a question to the National Center for Fatality Review and Prevention's (NCFRP) Case Reporting System on the impact of substance use in child deaths in Colorado to supplement existing questions in the tool. After a robust discussion, CFPS decided not to add this question to the tool. Instead, CFPS planned to produce a data brief using existing substance use data from the system to raise awareness about the contextual factors that contribute to substance use in Colorado. In Fiscal Year 2019-20, CFPS will develop and widely distribute this brief as well as continue efforts to improve the quality of data collected during investigations and entered into the case reporting system during case reviews. CFPS will also exploration of additional sources of mental health and substance use and abuse data to better understand the contribution of these risk factors to the deaths of infants, children and youth occurring in Colorado.

Recommendation Year	Legislative Recommendation	Progress Toward Recommendation
2017 2018	Support policies to improve behavioral health for children, youth and families in Colorado. Support policies to improve caregiver behavioral health, such as: • Screening and referral during the perinatal period • Health insurance coverage • Behavioral health integration into primary care	During the 2019 legislative session, Colorado legislators passed bills to promote the behavioral health of Colorado's children, youth and families. Many of these bills were designed to improve access to treatment and behavioral health care providers and services, including: House Bill 19-1193 (Behavioral Health Supports For High-risk Families) creates a pilot program to provide child care services to pregnant or parenting individuals seeking or participating in substance use disorder treatment; House Bill 19-1017 (Kindergarten Through Fifth Grade Social and Emotional Health Act); House Bill 19-1269 (Mental Health Parity Insurance Medicaid); House Bill 19-1044 (Advance Behavioral Health Orders Treatment); Senate Bill 19-195 (Child And Youth Behavioral Health System Enhancements); and Senate Bill 19-010 (Professional Behavioral Health Services for Schools). Additionally, many bills were passed to address and treat opioid misuse disorders among Coloradoans: House Bill 19-1287 (Treatment For Opioids And Substance Use Disorders), House Bill 19-1044 (Advance Behavioral Health Orders Treatment), House Bill 19-1009 (Substance Use Disorders Recovery), Senate Bill 19-008 (Substance Abuse Treatment in Criminal Justice), Senate Bill 19-227 (Harm Reduction Substance Use Disorders), Senate Bill 19-228 (Substance Use Disorders Prevention Measures), Senate Bill 19-079 (Electronic Prescribing Controlled Substances), and Senate Bill 19-001 (Expand Medication-assisted Treatment Pilot Program). Additionally, a variety of bills were introduced to improve caregiver and family behavioral health by reducing family stressors, such as House Bill 19-1013 (Child Care Expenses Tax Credit Low-income Families), House Bill 19-1052 (Early Childhood Development Special Districts), House Bill 19-1280 (Child College Savings Accounts), House Bill 19-1194 (School Discipline For Preschool Through Second Grade), House Bill 19-1005 (Early Childhood Educator Tax Credit), House Bill 19-1262 (State Funding For Full-day Kindergarten), House Bill 19-1210 (Local Government Minimum Wage), Senate Bill 19-085 (Equal Pay for Equal Work Act), Senate Bill 19-063 (Infant And Family Child Care Action Plan), House Bill 19-1032 (Comprehensive Human Sexuality Education) and Senate Bill 19-188 (FAMLI Family Medical Leave Insurance Program). The following bill did not pass: House Bill 19-1194 (Child Tax Credit).
2017, 2018	Support policies that ensure access to quality, affordable child care for families.	As in previous legislative sessions, during the 2019 legislative session, state policymakers committed to understanding and addressing lack of access to child care in Colorado by passing several bills. House Bill 19-1005 Early Childhood Educator Tax Credit establishes a refundable, annual tax credit for credentialed early childhood educators working at qualified facilities, and Senate Bill 19-063 requires the development of a strategic action plan to address the shortage of infant child care and family-home child care. House Bill 19-1262 State Funding For Full-day Kindergarten increases access to full-day kindergarten and ensures that caregivers are not charged kindergarten tuition. House Bill 19-1013 Child Care Expenses Tax Credit Low-income Families, which extends existing tax credits for families earning less than $25,000 annually. Lastly, House Bill 19-1193 Behavioral Health Supports for High-Risk Families creates a pilot program to provide child care services to pregnant or parenting individuals seeking or participating in substance use disorder treatment. House Bill 1194 (Child Tax Credit) did not pass.

Recommendation Year	Legislative Recommendation	Progress Toward Recommendation
2017, 2018	Support policies that expand access to community-based home visiting programs for all families with new infants.	According to the National Home Visiting Resource Center, Colorado currently offers at least six nationally known home visiting programs and many smaller, local programs. Statewide, over 80 local agencies operate at least one of the home visiting models. While home visiting programs serve many families in Colorado, there are still many families who could benefit from participation in an evidence-based home visiting program. Currently, there is not a single county in Colorado that has home visiting programs to meet the overall needs of families in the county. Scaling up community-based home visiting programs in Colorado has the potential to enable all families with new infants to benefit from participation in the programs.
2018	Improve CFPS data quality by providing technical assistance to local teams on best practices for firearm fatality reviews.	In Fiscal Year 2018-19, CFPS developed firearm-specific guidance for local child fatality prevention review teams (local teams) to support case reviews and increase firearm data quality in the system. The purpose of the guide is to assist teams in discussing aspects of firearm deaths that may not be readily clear from the case review or easy to discuss. This guidance includes a set of questions to supplement the firearms questions in the National Center for Fatality Review and Prevention's (NCFRP) Case Reporting System. As an example, the guidance prompts local teams to ask whether the child or youth had formal training in firearm use and safety. Additionally, CFPS added two new questions to the NCFRP's Case Reporting System to collect data around if the firearm was stored securely and if the youth 1) knew where the firearm was stored; 2) knew how to access the firearm; 3) had fired firearms before and 4) had formal firearm training. In Fiscal Year 2019-20, CFPS will continue to support local teams in reviewing firearm fatalities.
2018	Raise awareness and provide education to child welfare providers and community agencies on safe firearm storage to prevent child deaths involving firearms.	*2018 Joint CFPS and Colorado Department of Human Services' Child Fatality Review Team recommendation:* CFPS and CFRT presented to several stakeholders including Child Abuse and Neglect Public Awareness Campaign and provided testimony to the Early Childhood School Readiness Legislative Committee. CFRT and CFPS also partnered with Illuminate Colorado who secured funding to produce several safe storage briefs based on the joint recommendation outlining safe firearm storage to be shared with in-home service providers and families. Additionally, CDHS' Division of Child Welfare is working with the Child Welfare Training System to conduct a continuous quality improvement process to assess if and how firearm safety is currently covered by trainings offered in the system and where it could be incorporated. The results of the assessment are expected to be complete by the end of Fiscal Year 2018-19.

REFERENCES

1. Office of Health Equity, Colorado Department of Public Health and Environment, Statement on structural inequity. Retrieved from www.colorado.gov/pacific/cdphe/statement-on-structural-inequity.
2. Bailey, Z. D., Krieger, N., Agénor, M., Graves, J., Linos, N., & Bassett, M. T. (2017). Structural racism and health inequities in the USA: evidence and interventions. *The Lancet, 389*(10077), 1453-1463.
3. Pager, D., & Shepherd, H. (2008). The Sociology of Discrimination: Racial Discrimination in Employment, Housing, Credit, and Consumer Markets. *Annual Review of Sociolgy, 34*, 181-209.
4. Williams, D. R., & Collins, C. (2016). Racial residential segregation: a fundamental cause of racial disparities in health. *Public Health Reports, 116*(5), 404-16.
5. Williams, D. R., & Collins, C. (2016). Racial residential segregation: a fundamental cause of racial disparities in health. *Public Health Reports, 116*(5), 404-16.
6. Collins, C. A., & Williams, D. R. (1999). Segregation and mortality: the deadly effects of racism?. In *Sociological Forum*, 14(3), 495-523. Kluwer Academic Publishers-Plenum Publishers.
7. Larson, N. I., Story, M. T., & Nelson, M. C. (2009). Neighborhood environments: disparities in access to healthy foods in the US. A*merican journal of preventive medicine, 36*(1), 74-81.
8. White, K., Haas, J. S., & Williams, D. R. (2012). Elucidating the role of place in health care disparities: the example of racial/ethnic residential segregation. *Health Services Research, 47*(3pt2), 1278-1299.
9. Acevedo-Garcia, D., Lochner, K. A., Osypuk, T. L., & Subramanian, S. V. (2003). Future directions in residential segregation and health research: a multilevel approach. *American journal of public health, 93*(2), 215-221.
10. Collins, C. A., & Williams, D. R. (1999, September). Segregation and mortality: the deadly effects of racism?. In *Sociological Forum* (Vol. 14, No. 3, pp. 495-523). Kluwer Academic Publishers-Plenum Publishers.
11. King, M. (2017). Under The Hood: Revealing Patterns Of Motor Vehicle Fatalities In The United States. *Publicly Accessible Penn Dissertations. 2396*. Retrieved on June 19, 2019 from: repository.upenn.edu/edissertations/2396.
12. Office of Health Equity, Colorado Department of Public Health and Environment, Health Inequities Fact Sheet 2019: Latinx Coloradans Fact Sheet. Retrieved from: drive.google.com/file/d/1z1b15A9hGaRxvx4XTTa9BiPnz5lwjvfr/view.
13. Centers for Disease Control and Prevention, National Center for Health Statistics. Underlying Cause of Death 1999-2017 on CDC WONDER Online Database, released December, 2018. Data are from the Multiple Cause of Death Files, 1999-2017, as compiled from data provided by the 57 vital statistics jurisdictions through the Vital Statistics Cooperative Program. Accessed at http://wonder.cdc.gov/ucd-icd10.html on May 2, 2019 10:33:26 AM.
14. Rhodes, A. E., Boyle, M. H., Bridge, J. A., Sinyor, M., Links, P. S., Tonmyr, L., ... Szatmari, P. (2014). Antecedents and sex/gender differences in youth suicidal behavior. *World Journal of Psychiatry, 4*(4), 120–132.
15. Centers for Disease Control and Prevention, National Center for Health Statistics. Underlying Cause of Death 1999-2017 on CDC WONDER Online Database, released December, 2018. Data are from the Multiple Cause of Death Files, 1999-2017, as compiled from data provided by the 57 vital statistics jurisdictions through the Vital Statistics Cooperative Program. Accessed at http://wonder.cdc.gov/ucd-icd10.html on May 2, 2019 10:33:26 AM.
16. Suicide Prevention Resource Center. (2013). *Suicide among racial/ethnic populations in the U.S.: Whites*. Newton, MA: Education Development Center, Inc.
17. Suicide Prevention Resource Center. (2013). *Suicide among racial/ethnic populations in the U.S.: Hispanics*. Waltham, MA: Education Development Center, Inc.
18. Zayas, L. H., & Pilat, A. M. (2008). Suicidal behavior in Latinas: Explanatory cultural factors and implications for intervention. *Suicide and Life-Threatening Behavior, 38*(3), 334-342.
19. Suicide Prevention Resource Center. (2013). *Suicide among racial/ethnic populations in the U.S.: Hispanics*. Waltham, MA: Education Development Center, Inc.
20. Wilkins, N., Tsao, B., Hertz, M., Davis, R., & Klevens, J. (2014). *Connecting the Dots: An Overview of the Links Among Multiple Forms of Violence*. Atlanta, GA: National Center for Injury Prevention and Control, Centers for Disease Control and Prevention Oakland, CA: Prevention Institute.
21. Centers for Disease Control and Prevention, National Center for Health Statistics. Underlying Cause of Death 1999-2017 on CDC WONDER Online Database, released December, 2018. Data are from the Multiple Cause of Death Files, 1999-2017, as compiled from data provided by the 57 vital statistics jurisdictions through the Vital Statistics Cooperative Program. Accessed at http://wonder.cdc.gov/ucd-icd10.html on May 2, 2019 10:33:26 AM.
22. Bridge, J. A., Greenhouse, J. B., Sheftall, A. H., Fabio, A., Campo, J. V., & Kelleher, K. J. (2010). Changes in suicide

rates by hanging and/or suffocation and firearms among young persons aged 10–24 years in the United States: 1992–2006. *Journal of Adolescent Health, 46*(5), 503-505.
23. Grossman, D. C., Mueller, B. A., Riedy, C., Dowd, M. D., Villaveces, A., Prodzinski, J., ... & Harruff, R. (2005). Gun storage practices and risk of youth suicide and unintentional firearm injuries. *Jama, 293*(6), 707-714.
24. Buckingham, E. T., & Daniolos, P. (2013). Longitudinal outcomes for victims of child abuse. *Current Psychiatry Reports*, 15(2), 342.
25. Miller, A. B., Esposito-Smythers, C., Weismoore, J. T., & Renshaw, K. D. (2013). The relation between child maltreatment and adolescent suicidal behavior: a systematic review and critical examination of the literature. *Clinical Child and Family Psychology Review, 16*(2), 146-172.
26. Moskos, M. A., Olson, L. , Halbern, S. R. & Gray, D. (2007). Utah youth suicide study: barriers to mental health treatment for adolescents. *Suicide and Life-Threatening Behavior, 37*, 179-186.
27. Vaca, F., & Anderson, C. L. (2009). US motor vehicle fatality trends in young Latino males. In *Annals of Advances in Automotive Medicine/Annual Scientific Conference, 53*, 77. Association for the Advancement of Automotive Medicine.
28. Hayes-Bautista, D. E., Hsu, P., Hayes-Bautista, M., Iniguez, D., Chamberlin, C. L., Rico, C., & Solorio, R. (2002). An anomaly within the Latino epidemiological paradox: the Latino adolescent male mortality peak. *Archives of Pediatrics & Adolescent Medicine, 156*(5), 480-484.
29. Weingroff, R. F. (1996). Federal-aid highway act of 1956: creating the interstate system. *Public Roads, 60*(1).
30. Davies, R. O. (1975). *The age of asphalt: The automobile, the freeway, and the condition of metropolitan America*. Lippincott.
31. Kay, J. H. (1998). *Asphalt nation: How the automobile took over America and how we can take it back*. Univ of California Press.
32. Males, M. A. (2009). Poverty as a determinant of young drivers' fatal crash risks. *Journal of Safety Research, 40*(6), 443-448.
33. Office of Health Equity, Colorado Department of Public Health and Environment, Health Inequities Fact Sheet 2019: Latinx Coloradans Fact Sheet. Retrieved from: drive.google.com/file/d/1z1b15A9hGaRxvx4XTTa9BiPnz5lwjvfr/view.
34. Harper, S., Charters, T. J., & Strumpf, E. C. (2015). Trends in socioeconomic inequalities in motor vehicle accident deaths in the United States, 1995–2010. *American Journal of Epidemiology, 182*(7), 606-614.
35. Hanfling, M. J., Mangus, L. G., Gill, A. C., & Bailey, R. (2000). A multifaceted approach to improving motor vehicle restraint compliance. *Injury Prevention, 6*(2), 125-129.
36. Sauber-Schatz, E. K., West, B. A., & Bergen, G. (2014). Vital Signs: restraint use and motor vehicle occupant death rates among children aged 0–12 years—United States, 2002–2011. *MMWR. Morbidity and mortality weekly report, 63*(5), 113.
37. Harper, J. S., Marine, W. M., Garrett, C. J., Lezotte, D., & Lowenstein, S. R. (2000). Motor vehicle crash fatalities: a comparison of Hispanic and non-Hispanic motorists in Colorado. *Annals of Emergency Medicine, 36*(6), 589-596.
38. Zonfrillo, M. R., Ferguson, R. W., & Walker, L. (2015). Reasons for child passenger nonrestraint in motor vehicles. *Traffic Injury Prevention, 16*(2), S41-S45.
39. Cubbin, C., LeClere, F. B., & Smith, G. S. (2000). Socioeconomic status and injury mortality: individual and neighbourhood determinants. *Journal of Epidemiology & Community Health, 54*(7), 517-524.
40. Sauber-Schatz, E. K., West, B. A., & Bergen, G. (2014). Vital Signs: restraint use and motor vehicle occupant death rates among children aged 0–12 years—United States, 2002–2011. *MMWR. Morbidity and mortality weekly report, 63*(5), 113.
41. Moon, R. Y., & Task Force on Sudden Infant Death Syndrome. (2016). SIDS and other sleep-related infant deaths: evidence base for 2016 updated recommendations for a safe infant sleeping environment. *Pediatrics, 138*(5), e2-e34.
42. Moon, R. Y., & Task Force on Sudden Infant Death Syndrome. (2016). SIDS and other sleep-related infant deaths: evidence base for 2016 updated recommendations for a safe infant sleeping environment. *Pediatrics, 138*(5), e2-e34.
43. Shapiro-Mendoza, C. K., Kimball, M., Tomashek, K. M., Anderson, R. N., & Blanding, S. (2009). US infant mortality trends attributable to accidental suffocation and strangulation in bed from 1984 through 2004: are rates increasing?. *Pediatrics, 123*(2), 533-539.
44. Moon, R. Y., & Task Force on Sudden Infant Death Syndrome. (2016). SIDS and other sleep-related infant deaths: evidence base for 2016 updated recommendations for a safe infant sleeping environment. *Pediatrics, 138*(5), e2-e34.
45. Willinger, M., James, L. S., & Catz, C. (1991). Defining the sudden infant death syndrome (SIDS): deliberations of an expert panel convened by the National Institute of Child Health and Human Development. *Pediatric Pathology, 11*(5), 677-684.

46. Schnitzer, P. G., Covington, T. M., & Dykstra, H. K. (2012). Sudden unexpected infant deaths: sleep environment and circumstances. *American Journal of Public Health, 102*(6), 1204-1212.
47. Centers for Disease Control and Prevention. Data and Statistics. (2019). Retrieved from www.cdc.gov/sids/data.htm.
48. Task Force on Sudden Infant Death Syndrome. (2011). SIDS and other sleep-related infant deaths: expansion of recommendations for a safe infant sleeping environment. *Pediatrics, 128*, 1030-1039.
49. Task Force on Sudden Infant Death Syndrome. (2016). SIDS and other sleep-related infant deaths: Updated 2016 recommendations for a safe infant sleeping environment. *Pediatrics, 138*(5), 1-12.
50. Parks, S. E., Lambert, A. B. E., & Shapiro-Mendoza, C. K. (2017). Racial and ethnic trends in sudden unexpected infant deaths: United States, 1995–2013. *Pediatrics, 139*(6).
51. Mathews, T. J., MacDorman, M. F., & Thoma, M. E. (2015). Infant mortality statistics from the 2013 period linked birth/infant death data set. *National Vital Statistics Reports, 64*(9), 1-29.
52. Matoba, N., & Collins Jr, J. W. (2017). Racial disparity in infant mortality. In *Seminars in Perinatology, 41*(6), 354-359. WB Saunders.
53. Collins Jr, J. W., & David, R. J. (1990). The differential effect of traditional risk factors on infant birthweight among blacks and whites in Chicago. *American Journal of Public Health, 80*(6), 679-681.
54. Pickett, K. E., Collins Jr, J. W., Masi, C. M., & Wilkinson, R. G. (2005). The effects of racial density and income incongruity on pregnancy outcomes. *Social Science & Medicine, 60*(10), 2229-2238.
55. O'campo, P., Burke, J. G., Culhane, J., Elo, I. T., Eyster, J., Holzman, C., ...Laraia, B. A. (2007). Neighborhood deprivation and preterm birth among non-Hispanic Black and White women in eight geographic areas in the United States. *American Journal of Epidemiology, 167*(2), 155-163.
56. Office of Health Equity, Colorado Department of Public Health and Environment, Health Inequities Fact Sheet 2019: Black/African American Coloradans Fact Sheet. Retrieved from drive.google.com/file/d/1s0dh56JHqKpbduwjh0_9MU-VY_EfBysrg/view.
57. Polednak, A. P. (1996). Trends in US urban black infant mortality, by degree of residential segregation. *American Journal of Public Health, 86*(5), 723-726.
58. Brown, K. S., Kijakazi, K., Runes, C., & Turner, M. A. (2019). *Confronting Structural Racism in Research and Policy Analysis*. Urban Institute. Retrieved from www.urban.org/sites/default/files/publication/99852/confronting_structural_racism_in_research_and_policy_analysis_0.pdf.
59. Office of Health Equity, Colorado Department of Public Health and Environment, Health Inequities Fact Sheet 2019: Black/African American Coloradans Fact Sheet. Retrieved from drive.google.com/file/d/1s0dh56JHqKpbduwjh0_9MU-VY_EfBysrg/view.
60. Anthopolos, R., James, S. A., Gelfand, A. E., & Miranda, M. L. (2011). A spatial measure of neighborhood level racial isolation applied to low birthweight, preterm birth, and birthweight in North Carolina. *Spatial and Spatio-Temporal Epidemiology, 2*(4), 235-246.
61. Holzman, C., Eyster, J., Kleyn, M., Messer, L. C., Kaufman, J. S., Laraia, B. A., ...Elo, I. T. (2009). Maternal weathering and risk of preterm delivery. *American Journal of Public Health, 99*(10), 1864-1871.
62. Pregnancy Risk Assessment Monitoring System Data: 2016-2017. Center for Health and Environmental Data, Colorado Department of Public Health and Environment.
63. Pregnancy Risk Assessment Monitoring System Data: 2016-2017. Center for Health and Environmental Data, Colorado Department of Public Health and Environment.
64. Shapiro-Mendoza, C. K., Colson, E. R., Willinger, M., Rybin, D. V., Camperlengo, L., & Corwin, M. J. (2015). Trends in infant bedding use: National Infant Sleep Position study, 1993–2010. *Pediatrics, 135*(1), 10.
65. Malloy, M. H., & MacDorman, M. (2005). Changes in the classification of sudden unexpected infant deaths: United States, 1992–2001. *Pediatrics, 115*(5), 1247-1253.
66. Iyasu, S., Rowley, D. L., & Hanzlick, R. L. (1996). Guidelines for death scene investigation of sudden, unexplained infant deaths: recommendations of the Interagency Panel on Sudden Infant Death Syndrome. *Morbidity and Mortality Weekly Report: Recommendations and Reports*, i-22.
67. Merritt, D. H. (2009). Child abuse potential: Correlates with child maltreatment rates and structural measures of neighborhoods. *Children and Youth Services Review, 31*(8), 927-934.
68. Coulton, C. J., Korbin, J. E., & Su, M. (1999). Neighborhoods and child maltreatment: A multi-level study. *Child Abuse & Neglect, 23*(11), 1019-1040.
69. Brown, K. S., Kijakazi, K., Runes, C., & Turner, M. A. (2019). *Confronting Structural Racism in Research and Policy Analysis*. Urban Institute. Retrieved from www.urban.org/sites/default/files/publication/99852/confronting_structur-

al_racism_in_research_and_policy_analysis_0.pdf.
70. Hipp, J., & Yates, D. (2011). Ghettos, thresholds, and crime: Does poverty really have an accelerating increasing effect on crime?. *Criminology, 49*(4), 955–990.
71. Lee, M. (2000). Concentrated poverty, race and homicide. *Sociological Quarterly, 41*, 189–206.
72. Allard, S. (2009). *Out of reach: Place, poverty and the New American Welfare state*. New Haven, CT: Yale University Press.
73. Office of Health Equity, Colorado Department of Public Health and Environment, Health Inequities Fact Sheet 2019: Black/African American Coloradans Fact Sheet. Retrieved from drive.google.com/file/d/1s0dh56JHqKpbduwjh0_9MU-VY_EfBysrg/view.
74. Office of Health Equity, Colorado Department of Public Health and Environment, Health Inequities Fact Sheet 2019: Latinx Coloradans Fact Sheet. Retrieved from: drive.google.com/file/d/1z1b15A9hGaRxvx4XTTa9BiPnz5lwjvfr/view.
75. Miller, M. G. (2008). *Racial disproportionality in Washington State's child welfare system*. Olympia, WA: Washington State Institute for Public Policy.
76. Fluke, J., Harden, B. J., Jenkins, M., & Ruehrdanz, A. (2011). Research synthesis on child welfare: Disproportionality and disparities. *Disparities and Disproportionality in Child Welfare: Analysis of the Research*, 1. Retrieved from casala.org/wp-content/uploads/2015/12/Disparities-and-Disproportionality-in-Child-Welfare_An-Analysis-of-the-Research-December-2011-1.pdf.
77. Sedlak, A. J., & Broadhurst, D. D. (1996). Executive summary of the third national incidence study of child abuse and neglect (NIS-3). *National Center on Child Abuse and Neglect (DHHS), Washington, DC*.
78. Sedlak, A., McPherson, K. S., Das, B., & Westat, Inc. (2010). *Supplementary analyses of race differences in child maltreatment rates in the NIS-4*. Westat, Incorporated.
79. Font, S. A., Berger, L. M., & Slack, K. S. (2012). Examining racial disproportionality in child protective services case decisions. *Children and Youth Services Review, 34*(11), 2188-2200.
80. Hill, R. B. (2004). *Institutional racism in child welfare. Race and Society, 7*(1), 17–33.
81. Johnson-Motoyama, M., Putnam-Hornstein, E., Dettlaff, A., Zhao, K., Finno-Velasquez, M., & Needell, B. (2014). Disparities in reported and substantiated infant maltreatment by maternal Hispanic origin and nativity: A birth cohort study. Maternal and Child Health Journal.
82. Drake, B., & Rank, M. (2009). The racial divide among American children in poverty: Reassessing the importance of neighborhood. *Children and Youth Services Review, 31*, 1264–1271.
83. Maguire-Jack, K., Lanier, P., Johnson-Motoyama, M., Welch, H., & Dineen, M. (2015). Geographic variation in racial disparities in child maltreatment: The influence of county poverty and population density. *Child Abuse & Neglect, 47*, 1-13.
84. Wilkins, N., Tsao, B., Hertz, M., Davis, R., Klevens, J. (2014). *Connecting the Dots: An Overview of the Links Among Multiple Forms of Violence*. Atlanta, GA: National Center for Injury Prevention and Control, Centers for Disease Control and Prevention Oakland, CA: Prevention Institute.
85. Knickerbocker, L., Heyman, R. E., Smith Slep, A. M., Jouriles, E. N., & McDonald, R. (2007). Co-occurrence of child and partner maltreatment. *European Psychologist, 12*(1), 36-44.
86. American Psychological Association. Presidential Task Force on Violence and the Family. (1996). *Violence and the family: Report of the American Psychological Association presidential task force on violence and the family*. American Psychological Association.
87. Cooper, A., & Smith, E. L. (2011). *Homicide trends in the United States, 1980-2008*. Bureau of Justice Statistics, 536-543.
88. Allard, S. (2009). *Out of reach: Place, poverty and the New American Welfare state*. New Haven, CT: Yale University Press.
89. Office of Health Equity, Colorado Department of Public Health and Environment, Health Inequities Fact Sheet 2019: Black/African American Coloradans Fact Sheet. Retrieved from drive.google.com/file/d/1s0dh56JHqKpbduwjh0_9MU-VY_EfBysrg/view.
90. Burgason, K. A., Thomas, S. A., & Berthelot, E. R. (2014). The nature of violence: A multilevel analysis of gun use and victim injury in violent interpersonal encounters. *Journal of Interpersonal Violence, 29*(3), 371-393.
91. Ulmer, J. T., Harris, C. T., & Steffensmeier, D. (2012). Racial and ethnic disparities in structural disadvantage and crime: White, Black, and Hispanic comparisons. *Social Science Quarterly, 93*(3), 799-819.
92. Sampson, R. J., Raudenbush, S. W., & Earls, F. (1997). Neighborhoods and violent crime: A multilevel study of collective efficacy. *Science, 277*(5328), 918-924.

93. Ulmer, J. T., Harris, C. T., & Steffensmeier, D. (2012). Racial and ethnic disparities in structural disadvantage and crime: White, Black, and Hispanic comparisons. *Social Science Quarterly, 93*(3), 799-819.
94. Sampson, R. J., Morenoff, J. D., & Raudenbush, S. (2005). Social anatomy of racial and ethnic disparities in violence. *American Journal of Public Health, 95*(2), 224-232.
95. Williams, D. R., & Collins, C. (2016). Racial residential segregation: a fundamental cause of racial disparities in health. *Public Health Reports, 116*(5), 404-16.
96. Grossman, D. C., Mueller, B. A., Riedy, C., Dowd, M. D., Villaveces, A., Prodzinski, J., ...Harruff, R. (2005). Gun storage practices and risk of youth suicide and unintentional firearm injuries. *Jama, 293*(6), 707-714.
97. Colorado Department of Human Services. (2019). Colorado Behavioral Health Task Force. Retrieved from: www.colorado.gov/pacific/cdhs/colorado-behavioral-health-task-force.
98. HealthIT.gov. (2017). *Telemedicine and Telehealth*. Retrieved from: www.healthit.gov/topic/health-it-initiatives/telemedicine-and-telehealth.
99. Casey W. Neville, C.W. (2018). Telehealth: A balanced look at incorporating this technology into practice. *SAGE Open Nursing, 4*, 1–5.
100. Mace, S., Boccanelli, A., & Dormond, M. (2018). *The Use of Telehealth within Behavioral Health Settings: Utilization, Opportunities, and Challenges*. University of Michigan, School of Public Health, Behavioral Health Workforce Research Center.
101. Sealover, E. (2015, May 20). Colorado's telehealth expansion signed into law. *Denver Business Journal*.
102. Cohen, J.J., Gabriel, B.A., & Terrell, C. (2002). The Case for Diversity in the Health Care Workforce. *Health Affairs, 21*(5), 90-102.
103. Buche, J., Beck, A.J., & Singer, P.M. (2017). *Factors Impacting the Development of a Diverse Behavioral Health Workforce*. University of Michigan, School of Public Health, Behavioral Health Workforce Research Center.
104. Shimasaki, S., & Freeland Walker, S. (2013). *Health Equity and Racial and Ethnic Workforce Diversity: How to address the Shortage of Racially and Ethnically Diverse Health Professionals*. Prepared for The Colorado Trust. Retrieved from: www.coloradotrust.org/sites/default/files/CT_Workforce_Diversity_Brief_FINAL.pdf.
105. Hansen, M.K. (2014). *Diversity in the Healthcare Workforce*. National Conference of State Legislatures. Retrieved from: www.ncsl.org/documents/health/workforcediversity814.pdf.
106. Balasubramanian, B. A., Cohen, D. J., Jetelina, K. K., Dickinson, L. M., Davis, M., Gunn, R., Gowen, K., Miller, B.F., & Green, L.A. (2017). Outcomes of integrated behavioral health with primary care. *The Journal of the American Board of Family Medicine, 30*(2), 130-9.
107. MacArthur Foundation. (2017). *Housing: Why Educators, Health Professionals and Those Focused on Economic Mobility Should Care About It. Lessons Learned from the MacArthur Foundation's Investment in Housing Research*. Retrieved from: www.macfound.org/press/article/lessons-learned-housing-research/.
108. Maqbool N, Viveiros J, & Ault M. (2015). *The Impacts of Affordable Housing on Health: A Research Summary*. Insights from Housing Policy Research. Retrieved from: www.rupco.org/wp-content/uploads/pdfs/The-Impacts-of-Affordable-Housing-on-Health-CenterforHousingPolicy-Maqbool.etal.pdf.
109. Cutts, D., Coleman, S., Black, M.M., Chilton, M.M., Cook, J.T., de Cuba, S.E., Heeren, T.C., Meyers, A., Sandel, M., Casey, P.H., & Frank, D.A. (2015). Homelessness during pregnancy: a unique, time-dependent risk factor of birth outcomes. *Maternal Child Health Journal, 19*(6), 1276-83.
110. Krieger, J., & Higgins, D. L. (2002). Housing and health: time again for public health action. *American journal of public health, 92*(5), 758–768.
111. Kottke, T., Abariotes, A., & Spoonheim, J. B. (2018). Access to Affordable Housing Promotes Health and Well-Being and Reduces Hospital Visits. *The Permanente Journal, 22*, 17–79.
112. Association of State and Territorial Health Officials (ASTHO). (n.d.). *Essentials for childhood: Policy guide*. Retrieved from www.astho.org/Prevention/Essentials-for-Childhood-Policy-Guide/.
113. Desmond, M., An, W., Winkler, R., & Ferriss, T. (2013). *Evicting Children. Social Forces, 92*(1), 303–327.
114. First Focus Campaign for Children. (2017). *Children and Families Facing Eviction: Policy Recommendations to Support Stability*. Retrieved from: campaignforchildren.org/wp-content/uploads/sites/2/2017/07/Housing-Policy-Recommendations-Report-FINAL-07-18-Recommendations.pdf.
115. Fulwood, S. (2016). *The United States' History of Segregated Housing Continues to Limit Affordable Housing. Center for American Progress*. Retrieved from: www.americanprogress.org/issues/race/reports/2016/12/15/294374/the-united-states-history-of-segregated-housing-continues-to-limit-affordable-housing/.
116. Chew, A. & Treuhaft, S. (2019). *Our Homes, Our Future: How Rent Control Can Build Stable, Healthy Communities*.

PolicyLink, the Center for Popular Democracy, and the Right To The City Alliance. Retrieved from: drive.google.com/file/d/1-z2yo_nmUuse8_k0b2jiIYOyV9WcxDN/view.
117. Fulwood, S. (2016). *The United States' History of Segregated Housing Continues to Limit Affordable Housing*. Center for American Progress. Retrieved from: www.americanprogress.org/issues/race/reports/2016/12/15/294374/the-united-states-history-of-segregated-housing-continues-to-limit-affordable-housing/.
118. First Focus Campaign for Children. (2017). *Children and Families Facing Eviction: Policy Recommendations to Support Stability*. Retrieved from: campaignforchildren.org/wp-content/uploads/sites/2/2017/07/Housing-Policy-Recommendations-Report-FINAL-07-18-Recommendations.pdf.
119. Sandel, M., Cook, J., Poblacion, A., Sheward, R., Coleman, S., Viveiros, J., & Sturtevant, L. (2016). *Housing as a Health Care Investment: Affordable Housing Supports Children's Health*. Insights from Housing Policy Research. Children's HealthWatch and National Housing Conference. Retrieved from: www.nhc.org/wp-content/uploads/2016/03/Housing-as-a-Health-Care-Investment-Affordable-Housing-Supports-Childrens-Health.pdf.
120. ChangeLab Solutions. (2015). *Preserving, Protecting, and Expanding Affordable Housing: A Policy Toolkit for Public Health*. Retrieved from: www.changelabsolutions.org/sites/default/files/Preserving_Affordable_Housing-POLICY-TOOLKIT_FINAL_20150401.pdf.
121. ChangeLab Solutions. (2015). *Preserving, Protecting, and Expanding Affordable Housing: A Policy Toolkit for Public Health*. Retrieved from: www.changelabsolutions.org/sites/default/files/Preserving_Affordable_Housing-POLICY-TOOLKIT_FINAL_20150401.pdf.
122. ChangeLab Solutions. (2015). *Preserving, Protecting, and Expanding Affordable Housing: A Policy Toolkit for Public Health*. Retrieved from: www.changelabsolutions.org/sites/default/files/Preserving_Affordable_Housing-POLICY-TOOLKIT_FINAL_20150401.pdf.
123. ChangeLab Solutions. (2015). *Preserving, Protecting, and Expanding Affordable Housing: A Policy Toolkit for Public Health*. Retrieved from: www.changelabsolutions.org/sites/default/files/Preserving_Affordable_Housing-POLICY-TOOLKIT_FINAL_20150401.pdf.
124. ChangeLab Solutions. (2015). *Preserving, Protecting, and Expanding Affordable Housing: A Policy Toolkit for Public Health*. Retrieved from: www.changelabsolutions.org/sites/default/files/Preserving_Affordable_Housing-POLICY-TOOLKIT_FINAL_20150401.pdf.
125. Taylor J, Novoa C, Hamm K, & Phadke S. (2019). *Eliminating Racial Disparities in Maternal and Infant Mortality: A Comprehensive Policy Blueprint*. Center for American Progress.
126. Association of State and Territorial Health Officials (ASTHO). (n.d.). *Essentials for childhood: Policy guide*. Retrieved from www.astho.org/Prevention/Essentials-for-Childhood-Policy-Guide/.
127. Fortson, B. L., Klevens, J., Merrick, M. T., Gilbert, L. K., & Alexander, S. P. (2016). *Preventing child abuse and neglect: A technical package for policy, norm, and programmatic activities*. Atlanta, GA: National Center for Injury Prevention and Control, Centers for Disease Control and Prevention.
128. Executive Office of the President Council of Economic Advisers. (2016). *Inequality in early childhood and effective public policy and effective public policy interventions*. In Economic report of the president (Chapter 4). Retrieved from www.gpo.gov/fdsys/pkg/ERP-2016/pdf/ERP-2016-chapter4.pdf.
129. Association of State and Territorial Health Officials (ASTHO). (n.d.). *Essentials for childhood: Policy guide*. Retrieved from www.astho.org/Prevention/Essentials-for-Childhood-Policy-Guide/.
130. Fortson, B. L., Klevens, J., Merrick, M. T., Gilbert, L. K., & Alexander, S. P. (2016). *Preventing child abuse and neglect: A technical package for policy, norm, and programmatic activities*. Atlanta, GA: National Center for Injury Prevention and Control, Centers for Disease Control and Prevention.
131. Executive Office of the President Council of Economic Advisers. (2016). *Inequality in early childhood and effective public policy and effective public policy interventions*. In Economic report of the president (Chapter 4). Retrieved from www.gpo.gov/fdsys/pkg/ERP-2016/pdf/ERP-2016-chapter4.pdf.
132. Child Care Aware of America. (2018). *Colorado, Cost of Child Care*. Retrieved from usa.childcareaware.org/advocacy-public-policy/resources/research/costofcare/.
133. Child Care Aware of America. (2018). *Colorado, Cost of Child Care*. Retrieved from usa.childcareaware.org/advocacy-public-policy/resources/research/costofcare/.
134. Association of State and Territorial Health Officials (ASTHO). (n.d.). *Essentials for childhood: Policy guide*. Retrieved from www.astho.org/Prevention/Essentials-for-Childhood-Policy-Guide/.
135. Association of State and Territorial Health Officials (ASTHO). (n.d.). *Essentials for childhood: Policy guide*. Retrieved from www.astho.org/Prevention/Essentials-for-Childhood-Policy-Guide/.

136. U.S. Department of Health & Human Services. (2017). *Home visiting evidence of effectiveness*. Retrieved from homvee.acf.hhs.gov/Models.aspx.
137. Center for the Study of Social Policy. (2017). *Strengthening families: A protective factors framework*. Retrieved from www.cssp.org/reform/strengtheningfamilies/about.
138. National Home Visiting Resource Center. (2018). *2018 Home Visiting Yearbook*. Arlington, VA: James Bell Associates and the Urban Institute. Retrieved from www.nhvrc.org/wp-content/uploads/NHVRC_Yearbook_2018_FINAL.pdf.
139. The Insurance Institute for Highway Safety and Highway Loss Data Institute. (2019). *Teenagers*. Retrieved from www.iihs.org/topics/teenagers.
140. The Insurance Institute for Highway Safety and Highway Loss Data Institute (2019). *Graduated Licensing Calculator*. Retrieved from www.iihs.org/topics/teenagers/gdl-calculator#background.
141. The Centers for Disease Control and Prevention. (2016, August 19). *Graduated Driver Licensing*. Retrieved from: www.cdc.gov/phlp/publications/topic/gdl.html.
142. The Governors Highway Safety Association. (2019). *Teen Driver Safety*. Retrieved from www.ghsa.org/index.php/issues/teen-drivers.
143. Centers for Disease Control and Prevention National Center for Injury Prevention and Control. (2011, January). CDC vital signs: *Adult seat belt use*. Retrieved from www.cdc.gov/vitalsigns/SeatBeltUse.
144. Dihn-Zarr, T. B., Sleet, D. A., Shults, R. A., Zaza, S., Elder, R. W., Nichols, J. L.,...Task Force on Community Preventive Services. (2001). Reviews of evidence regarding interventions to increase the use of safety belts. *American Journal of Preventive Medicine, 21*(4S), 48-65.
145. Nichols, J. L. & Ledingham, K. A. (2008). *The impact of legislation, enforcement, and sanctions on safety belt use*. Washington, DC: Transportation Research Board.
146. Enriquez, J., & Pickrell, T. M. (2019, January). *Seat belt use in 2018 – Overall results*. Traffic Safety Facts Research Note. Report No. DOT HS 812 662. Washington, DC: National Highway Traffic Safety Administration.
147. Enriquez, J., & Pickrell, T. M. (2019, January). *Seat belt use in 2018 – Overall results*. Traffic Safety Facts Research Note. Report No. DOT HS 812 662. Washington, DC: National Highway Traffic Safety Administration.
148. Colorado Department of Transportation. (2018). *2018 State of Colorado Statewide Seat Belt Survey*. Retrieved from www.codot.gov/library/surveys/2018-statewide-seat-belt-survey.
149. Colorado Department of Transportation. (2019). *Colorado motor vehicle problem identification dashboard*. Retrieved from www.codot.gov/safety/safety-data-sources-information/colorado-problem-identification-id-reports.
150. Preusser, D.F. & Preusser, C.W. Evaluation of Louisiana's safety belt law change to primary enforcement. Washington, DC: U.S. Department of Transportation, National Highway Traffic Safety Administration, 1997. DOT HS 808 620.
151. Ulmer, R.G., Preusser, C.W., Preusser, D.F., & Cosgrove, L.A. Evaluation of California's safety belt law change from secondary to primary enforcement. J Safety Res 1995;26:213–20.
152. Tison, J., Williams, A. F., Chaudhary, N. K., & Nichols, J. L. (2011, September). *Determining the Relationship of Primary Seat Belt Laws to Minority Ticketing*. (Final Report. Report No. DOT HS 811 535). Washington, DC: National Highway Traffic Safety Administration.
153. Dunn, L., Holliday, A., & Vegega, M. (2016, March). *Motor vehicle occupant protection facts - Children, youth, young adults* (Fact book. Report No. DOT HS 812 251). Washington, DC: National Highway Traffic Safety Administration.
154. Centers for Disease Control and Prevention. (2019). *Motor Vehicle Prioritizing Interventions and Cost Calculator for States*. Retrieved from www.cdc.gov/motorvehiclesafety/calculator/index.html.
155. Centers for Disease Control and Prevention. (2014). Injury prevention and control: Data and statistics (WISQARS): *Cost of injury reports*. Retrieved from www.cdc.gov/injury/wisqars/Index.html.
156. Blincoe, L. J., Miller, T. R., Zaloshnja, E., & Lawrence, B. A. (2015, May). *The economic and societal impact of motor vehicle crashes, 2010 (Revised)* (Report No. DOT HS 812 013). Washington, DC: National Highway Traffic Safety Administration.
157. Colorado Department of Transportation. (2014, October). *Colorado strategic highway safety plan*. Retrieved from www.codot.gov/safety/safety-data-sources-information/safety-plans/colorado-strategic-highway-safety-plan/view.
158. Colorado Task Force on Drunk and Impaired Driving. (2019). *2018 Annual Report*. Retrieved from www.codot.gov/library/AnnualReports/colorado-task-force-on-drunk-and-impaired-driving-annual-reports/2018-ctfdid-annual-report.pdf.
159. Preusser, D.F. & Preusser, C.W. (1997). *Evaluation of Louisiana's safety belt law change to primary enforcement*. Washington, DC: U.S. Department of Transportation, National Highway Traffic Safety Administration. DOT HS 808 620.
160. Tison, J., Williams, A. F., Chaudhary, N. K., & Nichols, J. L. (2011, September). *Determining the Relationship of Primary Seat Belt Laws to Minority Ticketing*. (Final Report. Report No. DOT HS 811 535). Washington, DC: National Highway

Traffic Safety Administration.
161. Dihn-Zarr, T. B., Sleet, D. A., Shults, R. A., Zaza, S., Elder, R. W., Nichols, J. L.,...Task Force on Community Preventive Services. (2001). Reviews of evidence regarding interventions to increase the use of safety belts. *American Journal of Preventive Medicine, 21*(4S), 48-65.
162. Tison, J., Williams, A. F., Chaudhary, N. K., & Nichols, J. L. (2011, September). *Determining the Relationship of Primary Seat Belt Laws to Minority Ticketing*. (Final Report. Report No. DOT HS 811 535). Washington, DC: National Highway Traffic Safety Administration.
163. Association of State and Territorial Health Officials (ASTHO). (n.d.). *Essentials for childhood: Policy guide*. Retrieved from www.astho.org/Prevention/Essentials-for-Childhood-Policy-Guide/.
164. Fortson, B. L., Klevens, J., Merrick, M. T., Gilbert, L. K., & Alexander, S. P. (2016). *Preventing child abuse and neglect: A technical package for policy, norm, and programmatic activities*. Atlanta, GA: National Center for Injury Prevention and Control, Centers for Disease Control and Prevention.
165. Klerman, J., Daley, K., & Pozniak, A. (2014). *Family and medical leave in 2012: Technical report*. Cambridge, MA: Abt Associates.
166. Houser, L., & Vartanian, T. (2012, January). P*ay matters: The positive economic impact of paid family leave for families, businesses and the public*. New Brunswick, NJ: Center for Women and Work at Rutgers, the State University of New Jersey Publication.
167. Task Force on Sudden Infant Death Syndrome. (2016). SIDS and other sleep-related infant deaths: Updated 2016 recommendations for a safe infant sleeping environment. *Pediatrics, 138*(5), 1-12.
168. Fortson, B. L., Klevens, J., Merrick, M. T., Gilbert, L. K., & Alexander, S. P. (2016). *Preventing child abuse and neglect: A technical package for policy, norm, and programmatic activities*. Atlanta, GA: National Center for Injury Prevention and Control, Centers for Disease Control and Prevention.
169. AEI-Brookings Working Group on Paid Family Leave. (2017). *Paid Family and Medical Leave: An Issue Whose Time Has Come*. Retrieved from www.brookings.edu/research/paid-family-and-medical-leave-an-issue-whose-time-has-come/.
170. AEI-Brookings Working Group on Paid Family Leave. (2017). *Paid Family and Medical Leave: An Issue Whose Time Has Come*. Retrieved from www.brookings.edu/research/paid-family-and-medical-leave-an-issue-whose-time-has-come/.
171. Lerner, S. (August 18, 2015). The real war on families: Why the U.S. needs paid leave now. *In These Times*. Retrieved from inthesetimes.com/article/18151/therealwaronfamilies.
172. U.S. Department of Labor, Bureau of Labor Statistics. (2018). *National compensation survey: Employee benefits in the United States, March 2018*. Retrieved from www.bls.gov/ncs/ebs/benefits/2018/employee-benefits-in-the-united-states-march-2018.pdf.
173. U.S. Department of Labor, Bureau of Labor Statistics. (2018). *National compensation survey: Employee benefits in the United States, March 2018*. Retrieved from www.bls.gov/ncs/ebs/benefits/2018/employee-benefits-in-the-united-states-march-2018.pdf.
174. U.S. Department of Labor, Bureau of Labor Statistics. (2018). *National compensation survey: Employee benefits in the United States, March 2018*. Retrieved from www.bls.gov/ncs/ebs/benefits/2018/employee-benefits-in-the-united-states-march-2018.pdf.
175. Minnesota Department of Health, Center for Health Equity. (2015). *White paper on paid leave and health*. Retrieved from www.health.state.mn.us/news/2015paidleave.pdf.
176. AEI-Brookings Working Group on Paid Family Leave. (2017). *Paid Family and Medical Leave: An Issue Whose Time Has Come*. Retrieved from www.brookings.edu/research/paid-family-and-medical-leave-an-issue-whose-time-has-come/.
177. Taylor J, Novoa C, Hamm K, & Phadke S. (2019, May 2). *Eliminating Racial Disparities in Maternal and Infant Mortality: A Comprehensive Policy Blueprint*. Center for American Progress.
178. Cooper, A., & Smith, E. L. (2011). *Homicide trends in the United States, 1980-2008*. Bureau of Justice Statistics, 536-543.
179. Everytown for Gun Safety. (2019, April 18). *Why Funding Gun Violence Research Matters*. Retrieved from everytown-research.org/funding-gun-violence-research-matters/#foot_note_18.
180. Rostron, A. (2018). The Dickey Amendment on federal funding for research on gun violence: A legal dissection. *American Journal of Public Health. 108*(7), 865–867.
181. Dzau, V. J., & Leshner, A. I. (2018). Public health research on gun violence: long overdue. *Annals of Internal Medicine, 168*(12), 876-877.

182. Safe States Alliance. (2019, March). *Firearm Policy Statement: Policy Recommendations to Prevent Firearm Related Injuries & Violence*. Retrieved from cdn.ymaws.com/www.safestates.org/resource/resmgr/policy/SSA_Firearm_Policy_Statement.pdf.
183. Twenge, J.M., Krizan, Z., & Hisler, G. (2017). Decreases in self-reported sleep duration among U.S. adolescents 2009-2015 and association with new media screen time. *Sleep Medicine, 39*, 47-53.
184. Basch, C. E., Basch, C. H., Ruggles, K. V., & Rajan, S. (2014). Prevalence of sleep duration on an average school night among 4 nationally representative successive samples of American high school students, 2007-2013. *Preventing chronic disease, 11*, E216.
185. Healthy Kids Colorado Survey Data. (2017). Percentage of students who sleep 8 or more hours per night on average school nights. Retrieved from: www.colorado.gov/cdphe/healthy-kids-colorado-survey-data.
186. Centers for Disease Control and Prevention (2018). *School Starts Too Early.* Retrieved from: www.cdc.gov/features/school-start-times/index.html.
187. Wahlstrom, K., Dretzke, B., Gordon, M., Peterson, K., Edwards, K., & Gdula, J. (2014). *Examining the impact of later school start times on the health and academic performance of high school students: a multi-site study*. University of Minnesota Libraries Digital Conservancy website.
188. Winsler, A., Deutsch, A., Vorona, R.D., Payne, P.A., Szklo-Coxe, M. (2015). Sleepless in Fairfax: the difference one more hour of sleep can make for teen hopelessness, suicidal ideation, and substance use. *Journal of Youth Adolescence, 44*(2), 362–378.
189. Wong, M.M. & Brower, K.J. (2012). The prospective relationship between sleep problems and suicidal behavior in the National Longitudinal Study of Adolescent Health. *Journal of Psychiatric Research, 46*(7), 953-959.
190. Xianchen Liu. (2004). Sleep and Adolescent Suicidal Behavior. *Sleep, 27*(7), 1351–1358.
191. Watson, N.F., Martin, J.L., Wise, M.S., Carden, K.A., Kirsch, D.B., Kristo, D.A., Malhotra, R.K., Olson, E.J., Ramar, K., Rosen, I.M., Rowley, J.A., Weaver, T.E., Chervin, R.D., & the American Academy of Sleep Medicine Board of Directors. (2017). Delaying Middle School and High School Start Times Promotes Student Health and Performance: An American Academy of Sleep Medicine Position Statement. *Journal of Clinical Sleep Medicine, 13*(4), 623–625.
192. Peltz, J.S., Rogge, R.D., Connolly, H., & O'Connor, T.G. (2017). A process-oriented model linking adolescents' sleep hygiene and psychological functioning: the moderating role of school start times. *Sleep Health: Journal of the National Sleep Foundation, 3*(6), 465 - 471.
193. Whaley, M. (2018, August 19). "Cherry Creek students get boost from later start times: Littleton Public Schools switches to new, later schedule this week." *The Denver Post*. Accessed on June 2, 2019 from www.denverpost.com/2018/08/19/cherry-creek-schools-late-start/?clearUserState=true.
194. Meltzer, L.J., McNally, J., Plog, A.E., & Siegfried, S.A. (2017). Engaging the community in the process of changing school start times: experience of the Cherry Creek School District. *Sleep Health: Journal of the National Sleep Foundation, 3*(6), 472 - 478.
195. Centers for Disease Control and Prevention. (2012). *Sudden unexpected infant death and sudden infant death syndrome: Infant death scene investigation*. Retrieved from www.cdc.gov/sids/SceneInvestigation.htm.
196. Erck Lambert, A. B., Parks, S. E., Camperlengo, L., Cottengim, C., Anderson, R. L., Covington, T. M., & Shapiro-Mendoza, C. K. (2016). Death scene investigation and autopsy practices in sudden unexpected infant deaths. *Journal of Pediatrics, 174*, 84-90.
197. National Conference of State Legislatures. (2015, March). *Sudden unexpected infant death legislation*. Retrieved from www.ncsl.org/research/health/sudden-infant-death-syndrome-laws.aspx.
198. Moon, R., Y., and AAP Task Force on Sudden Infant Death Syndrome. (2016). SIDS and other sleep-related infant deaths: Evidence base for 2016 updated recommendations for a safe infant sleeping environment. *Pediatrics, 138*(5).
199. Centers for Disease Control and Prevention. (n.d.). *Suicide: Risk and protective factors*. Retrieved from www.cdc.gov/violenceprevention/suicide/riskprotectivefactors.html.
200. Child Welfare Information Gateway. (2014). *Parental substance use and the child welfare system*. Washington, DC: U.S. Department of Health and Human Services, Children's Bureau.
201. Quinlan K., Shults R. A., & Rudd R. A. (2014). Child passenger deaths involving alcohol-impaired drivers. *Pediatrics, 133*(6).
202. Frieden, T. R. (2010). A framework for public health action: The health impact pyramid. *American Journal of Public Health, 100*: 590-595.