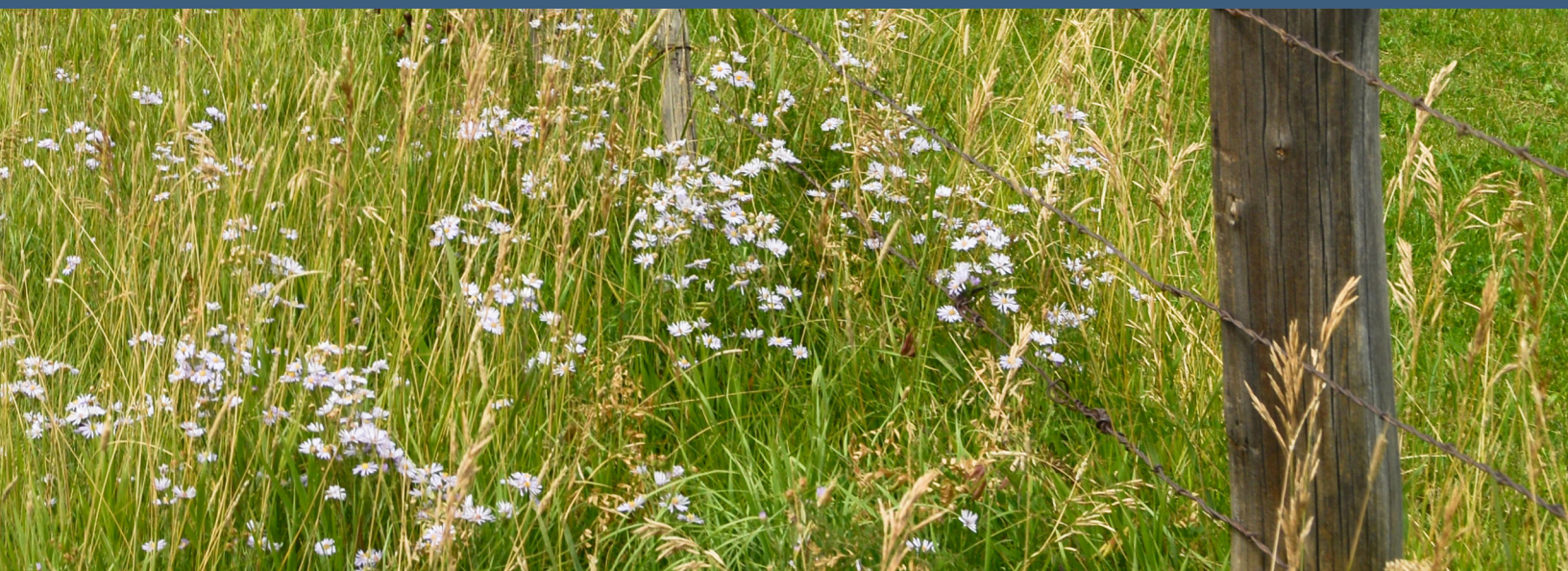
COLORADO

Child Fatality Prevention System

Motor Vehicle/Transport-related Death Data, 2012 - 2016

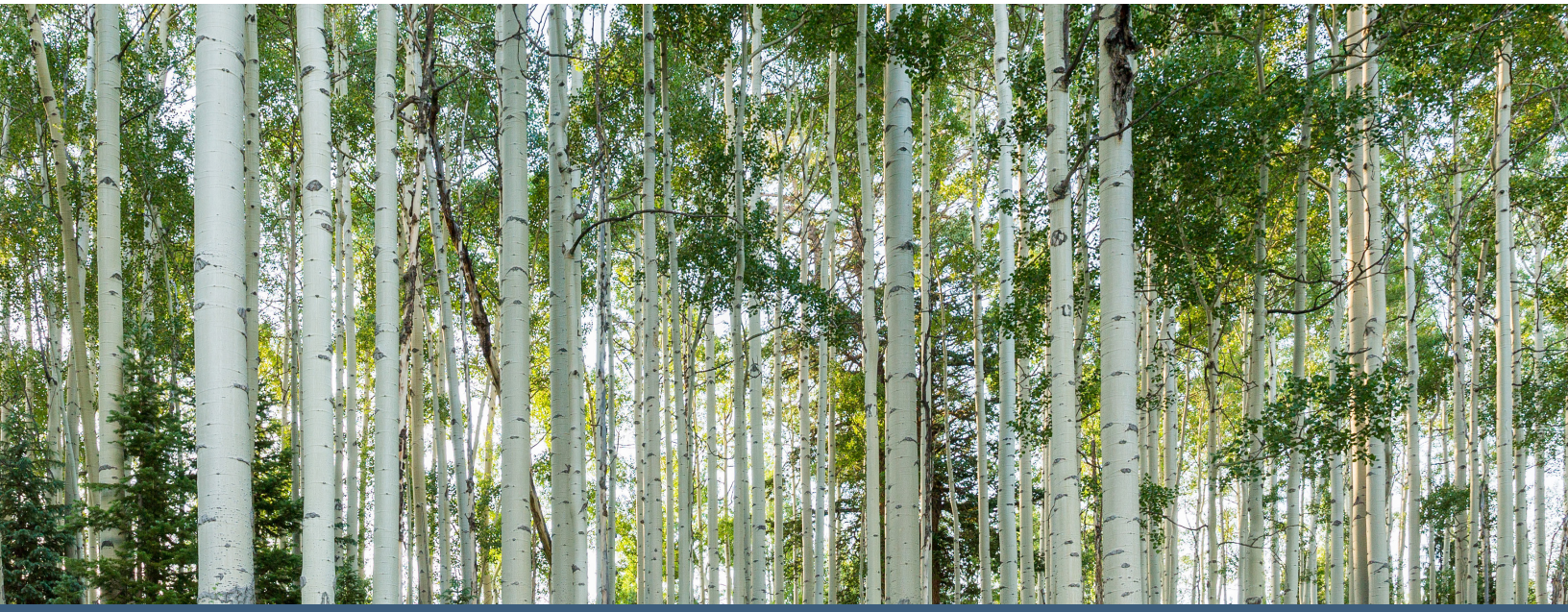


Introduction

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 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. Child fatality prevention review teams and their partners implement and evaluate the identified strategies at the state and local levels with the goal of preventing similar deaths in the future.

The data presented within this data summary come from comprehensive, statutorily-mandated reviews of deaths among those under 18 years of age occurring in Colorado between 2012 and 2016. Local child fatality prevention review 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/transport-related, child maltreatment, sudden unexpected infant death (SUID) and suicide. During Fiscal Year 2018, local teams reviewed deaths that occurred in 2016.

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 the state. These criteria are different from other reports of child fatality data and in many other Colorado government data sources. As a result, the data presented in this topic-specific data brief may not match other statistics reported at both the state and national levels. This data brief provides an overview of motor vehicle/transport-related death data from CFPS. For more details on CFPS data, access cause-specific data briefs and an interactive data dashboard here: www.cochildfatalityprevention.com/p/reports.html.



Motor Vehicle/Transport-related Death Data, 2012-2016

Overview of Motor Vehicle/Transport-related Deaths

From 2012 through 2016, 221 motor vehicle/transport-related deaths occurred among children ages 0-17 in Colorado. Motor vehicle/transport-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 and farm equipment crashes or events. Figure 1 displays the number of motor vehicle/transport-related deaths occurring from 2012-2016. The number of deaths ranged from 37 in 2015 to 51 in 2013 and averaged 44.2 deaths per year for the five-year period. Figure 2 demonstrates that 63.4 percent (n=140) of children and youth in fatal motor vehicle/transport-related events were occupants of passenger vehicles, 18.6 percent (n=41) were pedestrians and 5.9 percent (n=13) were involved in all-terrain vehicle crashes.

Figure 1. Motor vehicle/transport-related deaths occurring among those under 18 in Colorado, 2012-2016 (n=221)

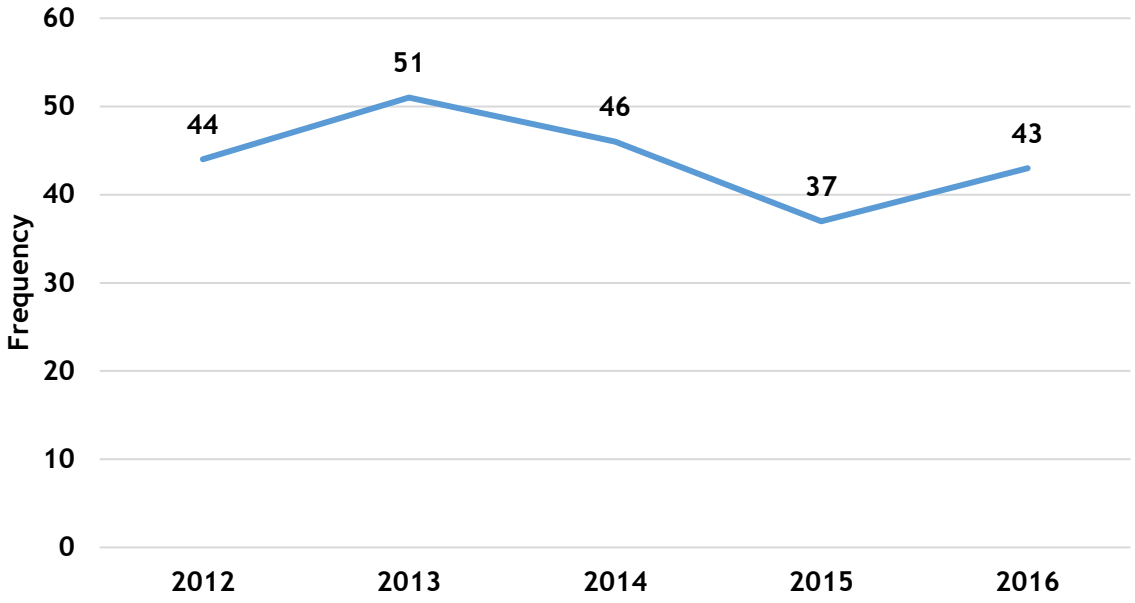
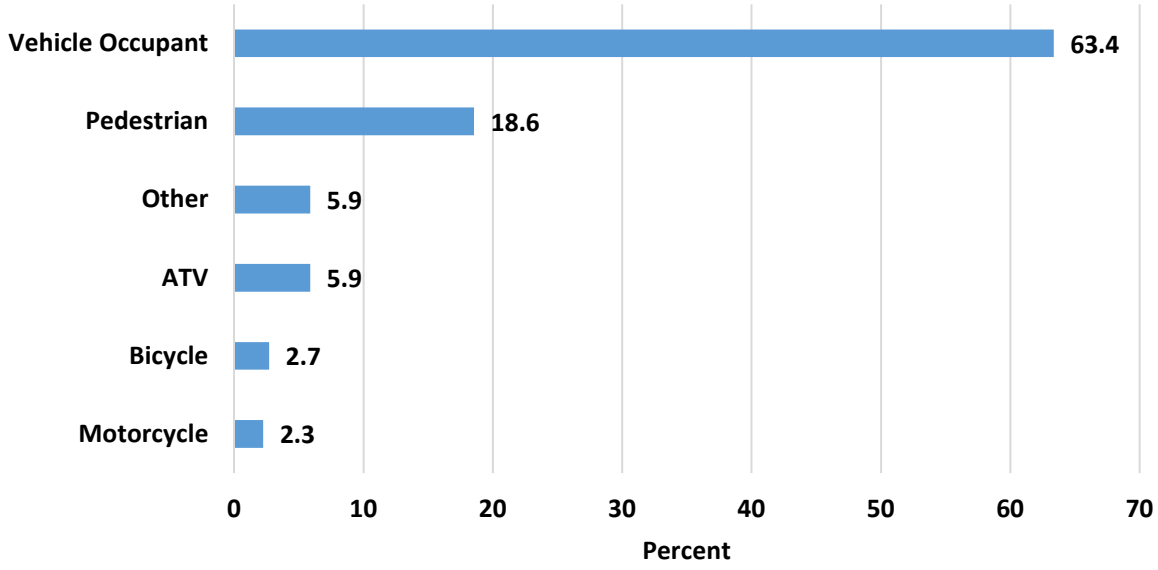


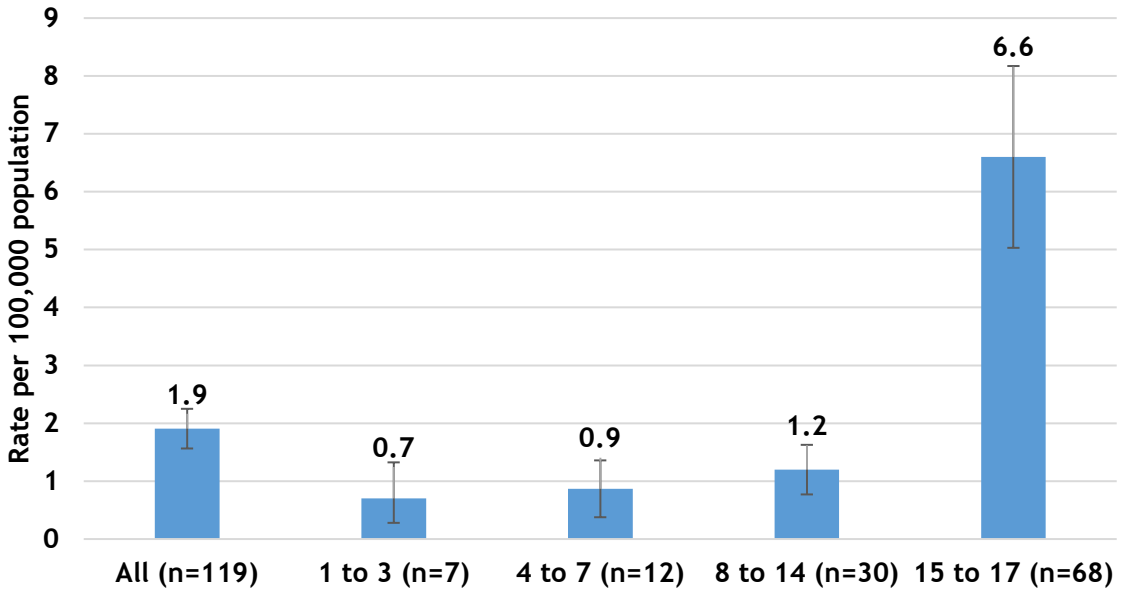
Figure 2. Motor vehicle/transport-related deaths occurring among those under 18 in Colorado by type, 2012-2016 (n=221)



Passenger Vehicle Deaths

From 2012-2016, 140 infants, children and youth died in Colorado as a result of passenger vehicle crashes. Of the 140 deaths, 82.9 percent (n=116) of passenger vehicle fatalities occurred among those ages 8-17. Males represented 60.0 percent (n=84) of all deaths (data not shown).

Figure 3. Crude rates of passenger vehicle deaths occurring in Colorado among Colorado residents under 18 by age group, 2012-2016 (n=119)

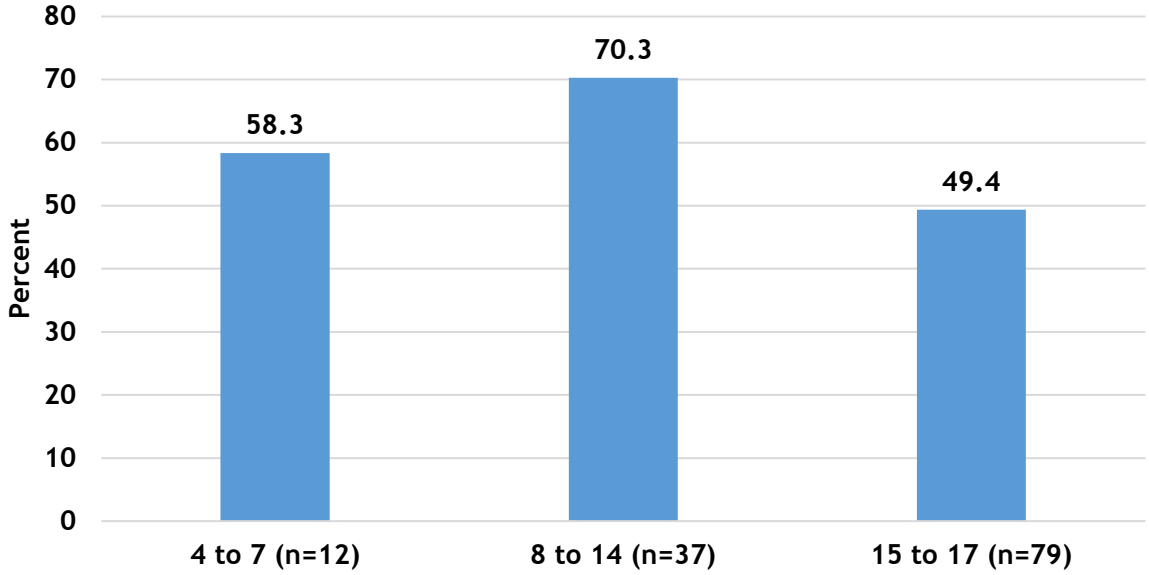


*Error bars represent 95% confidence limits for rates.

Figure 3 displays the age-specific rates of passenger vehicle deaths occurring in Colorado among Colorado residents. The age-specific rate of passenger vehicle deaths was highest among those ages 15-17 at 6.6 per 100,000 population. This is significantly higher than for all other age groups. There were too few deaths of children under age 1 to report in accordance with applicable privacy standards. While males trended toward a higher rate than females in all age groups, this difference was not statistically significant (data not shown). The rate for Hispanic or Latino children and youth (2.8 per 100,000 population) was significantly higher than non-Hispanic White children and youth (1.5 per 100,000 population) for the period (data not shown). For 124 of the decedents of fatal passenger vehicle crashes, a driver was determined to be responsible for causing the fatal crash. In these instances, the most frequently reported causes of the fatal crash were recklessness (50.0 percent, n=62), speeding over the limit (46.0 percent, n=57) and inexperience (33.1 percent, n=41).

Restraint Use

Figure 4. Proportion of passenger vehicle deaths occurring among those under 18 in Colorado where an age-appopriate restraint was not used correctly by age group, 2012-2016 (n=140)



Increasing safety belt 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.[1] Colorado's child passenger safety law requires:

- Children to be in a rear-facing car seat until 1 year of age;
- 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 140 decedents ages 0-17 who died in Colorado in passenger vehicle crashes from 2012-2016, 120 (85.7 percent) had known data on restraint use. Of the 140 decedents, 47.1 percent (n=66) were not in an age-appropriate restraint. An additional 7.2 percent (n=10) of these decedents were improperly restrained (data not shown). A total of 54.3 percent (n=76) of all children and youth who died in passenger vehicle crashes were improperly restrained. Figure 4 displays the proportion of decedents improperly restrained by age group. Too few decedents under age 1 and ages 1-3 were improperly restrained to report in accordance with applicable privacy standards. This may be in part due to consistent and clear messaging on the importance of properly restraining infants and young children. The highest proportions of improperly restrained decedents of fatal passenger vehicle crashes occurred among children ages 4-7 (58.3 percent, n=7) and ages 8-14 (70.3 percent, n=26). Nearly half of youth ages 15-17 who died from 2012-2016 were improperly restrained.

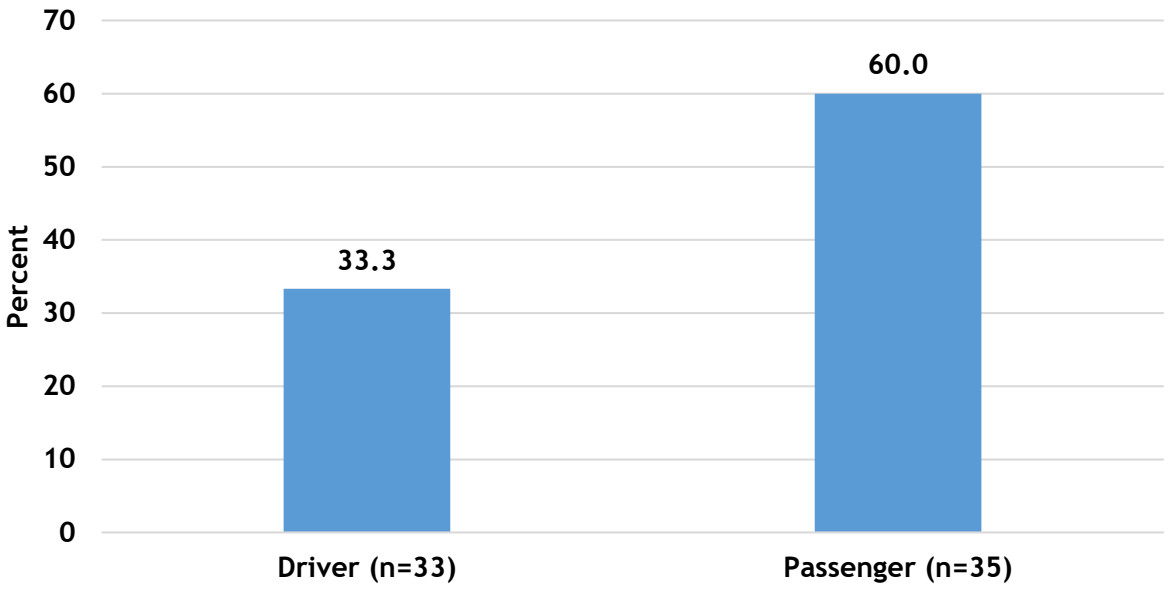
1. Centers for Disease Control and Prevention National Center for Injury Prevention and Control. (2011, January 4). *CDC vital signs: Adult seat belt use*. Retrieved from http://www.cdc.gov/vitalsigns/SeatBeltUse/

Young Drivers

From 2012-2016 there were 68 infants, children or youth ages 0-17 who died in fatal passenger vehicle crashes involving 70 young drivers 18 years of age and under. The decedents in these fatal crashes were most often the passenger of a young driver (51.5 percent, n=36) or the young driver themselves (48.5 percent, n=33). Sixty-two of the 70 young drivers (88.6 percent) in these 68 fatal crashes were responsible for causing the fatal passenger vehicle crash. Of the 68 fatal passenger vehicle crashes involving young drivers, 35.3 percent (n=24) indicated that drug or alcohol impairment was a circumstance contributing to the crash. Recklessness (59.7 percent, n=37), speeding over the limit (59.7 percent, n=37) and inexperience (54.8 percent, n=34) were the leading circumstances in fatal passenger vehicle crashes in Colorado where a young driver was indicated to be responsible for causing the crash. Young drivers were indicated to be in violation of graduated driver licensing laws 5.7 percent (n=4) of the time (data not shown).

Figure 5 demonstrates the proportion of decedents who were young drivers or passengers of young drivers who were improperly restrained. While 33.3 percent (n=11) of young drivers who died were not properly restrained, 60.0 percent (n=21) of their passengers who died were not properly restrained. Nearly all of these passengers were also ages 15-17. Based on this data, it is clear that restraint use among youth passengers of young drivers is an area for focused prevention efforts to increase proper restraint use among this age group.

Figure 5. Proportion of passenger vehicle deaths involving young drivers (18 and under) in Colorado who were improperly restrained by position, 2012-2016



For more information about CFPS data, please contact the CFPS Support Team at the Colorado Department of Public Health and Environment: support@cfps.freshdesk.com