



COLORADO
Department of Transportation

Colorado Department of Transportation 2022 Problem Identification Report



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<https://www.colorado.gov/pacific/cdphe/motor-vehicle-safety>

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Report Highlights

Motor vehicle crashes are among the leading causes of death in Colorado. This annual report describes motor vehicle crash characteristics for crashes that occurred in Colorado to identify traffic safety issues to reduce the number and severity of traffic crashes. The Colorado Department of Transportation (CDOT), law enforcement agencies, local government agencies, nonprofit organizations, and health and prevention professionals utilize this document to develop strategies to improve traffic safety in Colorado. In the sections on the core performance measures, this report lists the top five counties with the highest counts and the effective countermeasures to improve performance.

The year 2020 was unique because of the COVID-19 pandemic, a world-wide outbreak of a novel corona virus. The governor issued an executive order directing all Coloradans to stay at home effective March 26, 2020 through April 11, 2020. The limited exceptions were obtaining food and other necessities, going to and from work at critical businesses, seeking medical care, caring for dependents or pets, or caring for a vulnerable person in another location. This may have had an impact on motor vehicle injury and death trends, as vehicle miles traveled decreased by 7 billion vehicle miles.

- The total number of motor vehicle **fatalities** in Colorado increased in 2020. There were 622 fatalities, an increase of 4% from the previous year.
- **Speeding-related fatalities** increased 20% from 2019 and was a factor in 46% of all fatalities in 2020. There were 287 speeding-related motor vehicle fatalities in 2020 compared to 239 in 2019.
- Among the people who died in an occupant motor vehicle crash, 51% were not wearing a **seat belt**. There were 190 **unrestrained motor vehicle occupant fatalities** in 2020, one more than in 2019.
- **Alcohol-impaired drivers** were involved in 24% of all fatalities. In 2020, an estimated 151 motor vehicle deaths resulted from crashes involving an **alcohol-impaired driver**, a 7.9% decrease from 2019.
- In 2020, there were 140 **motorcyclist fatalities**, a 36% increase from 2019. More than half of the motorcyclists (53%) who died in 2019 were not wearing a helmet.
- The number of **fatalities per vehicle miles traveled (VMT)** in Colorado increased 21% over the past year. Colorado's fatality rate per 100 million VMT was slightly lower than the United States (1.32 and 1.37, respectively).
- Fatalities in **rural areas** decreased in 2020 over the past year by 2.5%, while fatalities in **urban areas** increased 9.7%.

Core performance measures varied in 2020, compared to 2019 when most core performance measures improved. This report on the core performance measures can inform continued efforts on countermeasures to improve performance measures or support increased efforts.

Motor Vehicle Crashes and Fatalities Overview

Table 1 presents an overview of motor vehicle crashes across Colorado, including core performance measures for 2016-2020. One-year and five-year percent changes for each measure appear in the last two columns. Green font indicates *improvement*, and red font indicates *undesired change*. The ↑ symbol indicates a percent increase in the number, rate, or percent. The ↓ symbol indicates a percent decrease in the number, rate, or percent. See the last two pages of this report for the core performance measures of each county. Note that 2019 data has been updated for this report.

	2016	2017	2018	2019	2020	1-year % Δ	5-year %Δ
Total crashes (n)	121,149	119,373	122,504	121,648	87,629	↓ - 28.0%	↓ - 27.7%
Colorado population (millions)	5.54	5.60	5.70	5.76	5.81	↑ 0.9%	↑ 4.9%
Seat belt use (%)	84	83.8	86.3	88.3	86.3	↓ - 2.3%	↑ 2.7%
Core Performance Measures:							
Fatalities (n)	608	648	632	596	622	↑ 4.4%	↑ 2.3%
Serious injuries (n)	2,956	2,884	3,112	3,190	3,164	↓ - 0.8%	↑ 7.0%
Motor vehicle occupant fatalities, unrestrained all seat positions (n)	186	222	216	189	190	↑ 0.5%	↑ 2.2%
Fatalities in crashes where driver/motorcycle operator has blood alcohol content ≥0.08* (n)	163	177	192	164	151	↓ - 7.9%	↓ - 7.4%
Speeding-related fatalities (n)	211	230	210	239	287	↑ 20.1%	↑ 36.0%
Motorcyclist fatalities (n)	125	103	103	103	140	↑ 35.9%	↑ 12.0%
Unhelmeted motorcyclist fatalities (n)	82	72	58	54	74	↑ 37.0%	↓ - 9.8%
Driver 15-20 years old in fatal crashes (n)	59	91	81	76	83	↑ 9.2%	↑ 40.7%
Pedestrian fatalities (n)	79	92	89	73	87	↑ 19.2%	↑ 10.1%
Bicyclist fatalities (n)	16	16	22	20	15	↓ - 25.0%	↓ - 6.3%
Driver 65+ years old in fatal crashes (n)	131	125	129	116	114	↓ - 1.7%	↓ - 13.0%
Distracted drivers involved in a fatal crash	67	67	53	35	54	↑ 54.3%	↓ - 19.4%
Fatalities involving driver/motorcycle operator testing positive for drugs	68	93	84	78	91	↑ 16.7%	↑ 33.8%

Data sources: Traffic crash reports, Colorado Department of Revenue, Division of Motor Vehicles; Fatality Analysis Reporting System (FARS), National Highway Traffic Safety Administration (NHTSA)

C-1 Top Five Counties

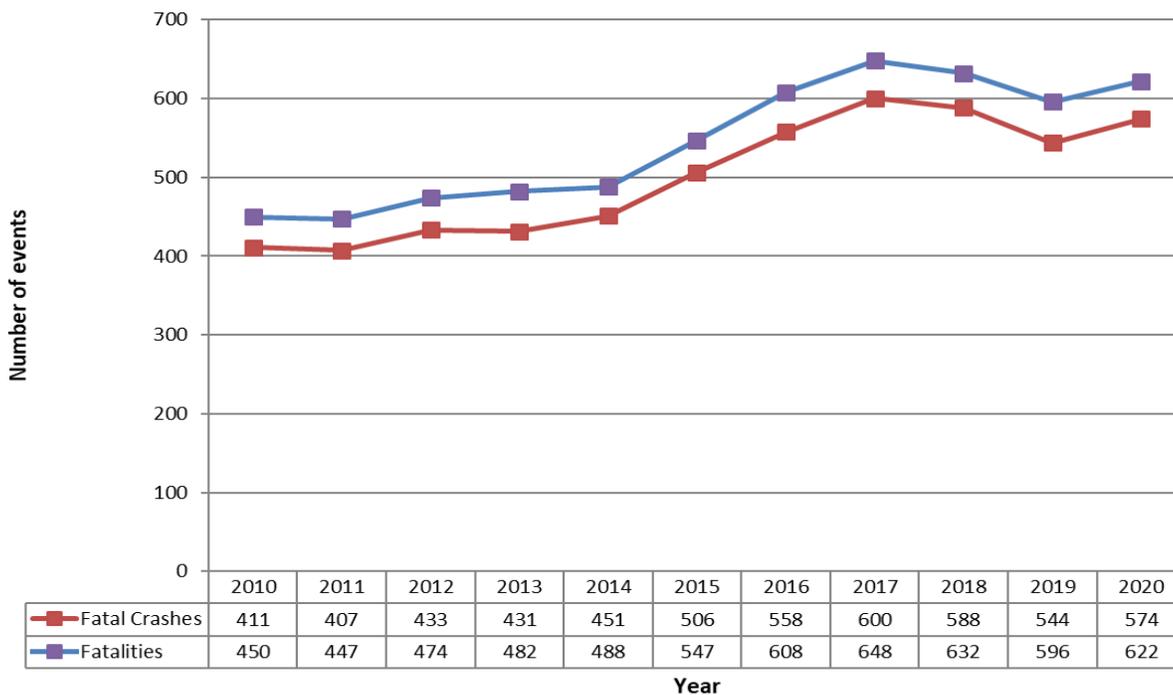
El Paso – 85 fatalities
Weld – 54 fatalities
Adams – 53 fatalities
Arapahoe – 52 fatalities
Denver – 51 fatalities

Fatal Crashes and Fatalities

Core Performance Measure (C-1): Reduce the number of traffic fatalities.

This section of the report gives an overview of fatalities from motor vehicle crashes in Colorado over time, including demographics and other characteristics. Figure 1 shows the number of fatal crashes and fatalities in Colorado from 2010-2020. 2020 had an increase in fatalities and fatal crashes following decreases in 2018 and 2019. Between 2019 and 2020, the number of fatal motor vehicle traffic crashes in Colorado increased by 5.5%, and the number of traffic fatalities increased by 4.4%. There was also an increase in motor vehicle traffic fatalities across the United States. Some crashes involve more than one fatality; as a result, the number of fatalities is greater than the number of fatal crashes. There were 36,355 fatalities in 2019 and 38,824 fatalities in 2020, a 6.8% increase.¹

Figure 1: Fatal motor vehicle crashes and fatalities in Colorado, 2010-2020

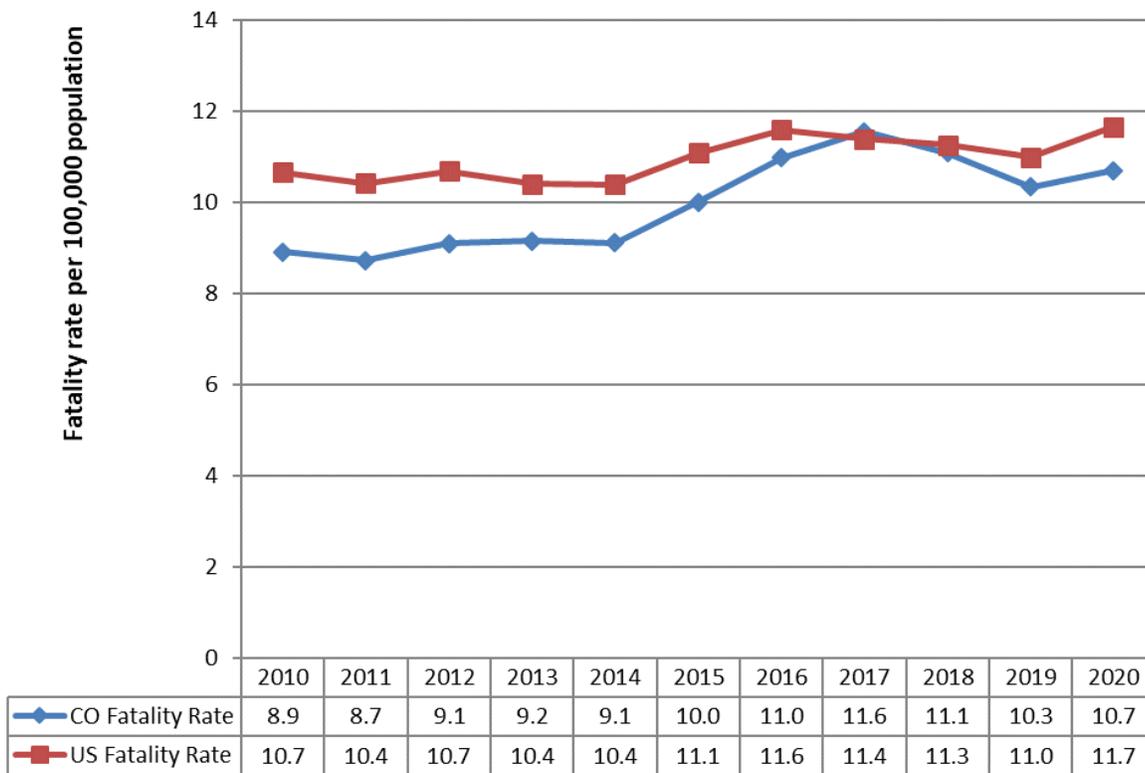


Source: FatalTracker

¹ <https://www.nhtsa.gov/press-releases/2020-traffic-crash-data-fatalities> Last accessed April, 2022

Colorado’s motor vehicle fatality rate increased in 2020 after decreases in 2018 and 2019. In 2020, 10.7 people per 100,000 Colorado residents died from a motor vehicle crash compared with 10.3 people per 100,000 Colorado residents in 2019. With the exception of the year 2017, the motor vehicle fatality rate in Colorado has been lower than the national average over the past ten years (Figure 2).

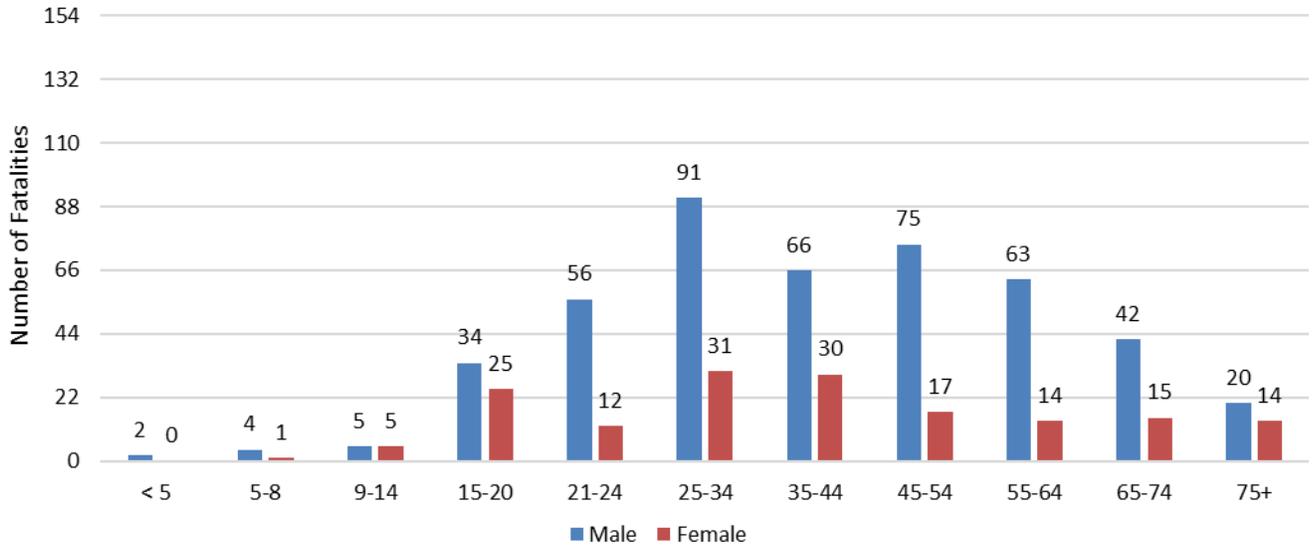
Figure 2: Motor vehicle fatality rate per 100,000 population in Colorado, 2010-2020



Source: FatalTracker

Figure 3 displays the age and sex of the people who died due to a motor vehicle crash in 2020. The 25-34 year olds had the highest number of fatalities in 2020. More males died in motor vehicle crashes than females during 2020 in every age category except youth ages 9-14, where an equal number of males and females died. Table 2 shows the fatality rate by age and sex. The fatality rate also shows males ages 21-24 had the highest death rate among all sex and age groups. Among all age groups combined, males had nearly three times the rate of deaths from motor vehicle crashes than females.

Figure 3. Number of Individuals Fatally Injured in Motor Vehicle Crashes by Age Group and Sex, 2020



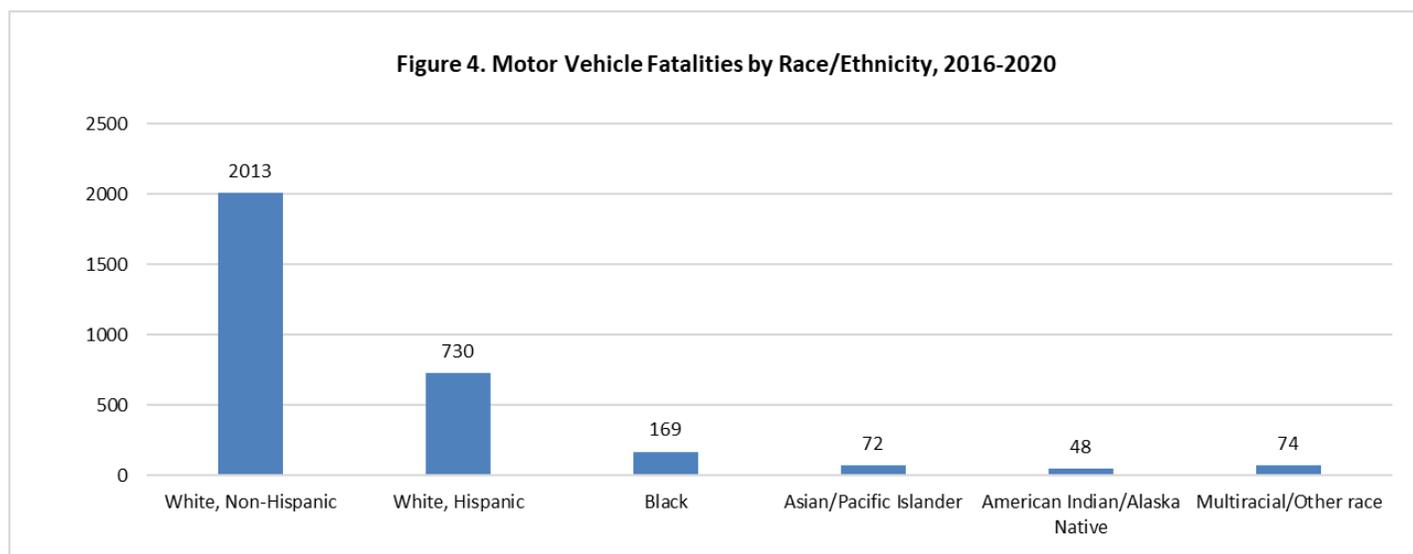
Source: FARS

Table 2. Rate of Fatalities per 100,000 population due to motor vehicle crashes in 2020 in Colorado, by age and sex

Age Group	Male	Female	Rate for age group*
< 5	1.2	0.0	0.6
5-8	2.9	0.8	1.8
9-14	2.2	2.4	2.3
15-20	14.1	11.1	12.6
21-24	32.7	7.9	21.1
25-34	20.2	7.2	13.8
35-44	16.4	7.6	12.0
45-54	20.6	4.7	12.7
55-64	18.0	3.8	10.8
65-74	16.5	5.4	10.6
75+	13.6	7.2	9.9
All Ages	25.6	9.6	17.8

Source: FARS

Not only were there differences in motor vehicle fatalities by age and sex, but there were also differences in motor vehicle fatalities among races and ethnicities. Figure 4 displays the aggregate number of fatalities by race and ethnicity from 2016 to 2020, due to the small counts in some of the race and ethnicity categories. White, non-Hispanic individuals had the highest number of motor vehicle fatalities; however, when factoring in population size of racial and ethnic groups living in Colorado, White, non-Hispanic individuals had a lower rate of motor vehicle deaths compared to White Hispanic, Black, and American Indian/Alaska Native individuals (Table 3). Differences in fatality rates for race/ethnicity groups could reflect external differences in geography, access to emergency medical care, access to safe transportation methods and transportation options other than motor vehicles, the built environment, road use design, weather patterns, and cultural factors.



Source: FARS

Table 3. Five-year Average Rate of Fatalities per 100,000 population due to motor vehicle crashes by race and ethnicity, Colorado, 2016-2020

Race/Ethnicity	Rate for race/ethnicity
White, Non-Hispanic	10.5
White, Hispanic	16.3
Black	14.5
American Indian/Alaska Native	17.5
Asian/Pacific Islander	7.7
Multiracial/Other race*	3.5
All races and ethnicities	11.1

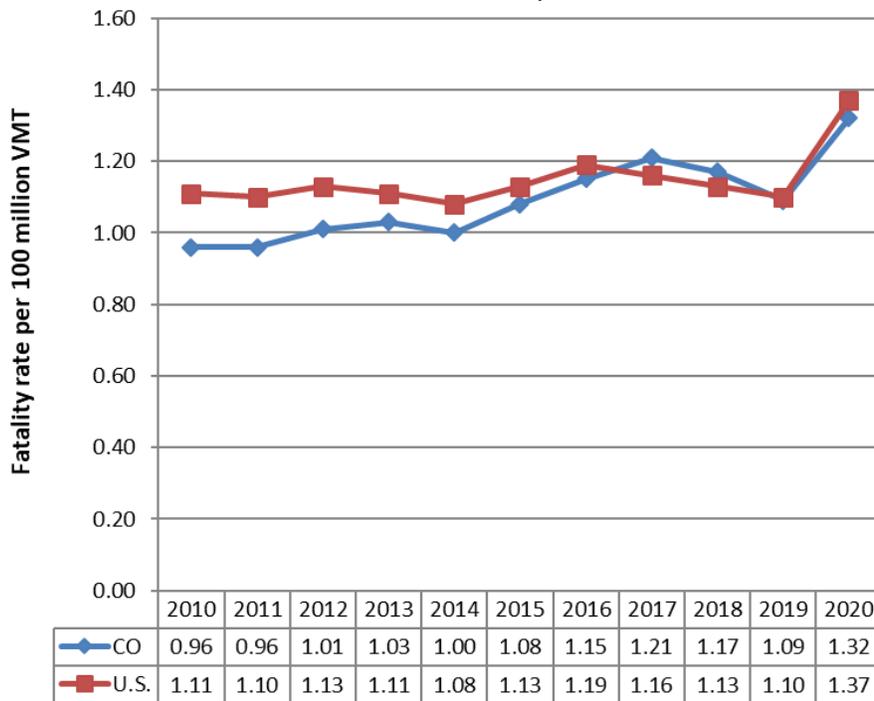
* Contains other races, including persons who identify with more than one race

Source: FARS and US Census Bureau

Core Performance Measure (C-3): Reduce the number of fatalities per Vehicle Miles Traveled (VMT)

Dividing the number of motor vehicle fatalities by the number of vehicle miles traveled (VMT) takes into account changes in the population, fuel prices, driving habits, and distances driven. Fatalities per 100 million VMT can be compared over time and between different geographic areas. Figure 5 shows the rate of fatalities per 100 million VMT for Colorado and the United States.²² Colorado’s fatality rate increased sharply (21%) in 2020 after a decrease in 2019. However, Colorado’s fatality rate was slightly lower than the average fatality rate in the United States in 2020 (see Figure 5).

Figure 5: Fatalities per 100 million vehicle miles traveled (VMT) in Colorado and in the United States, 2010-2020



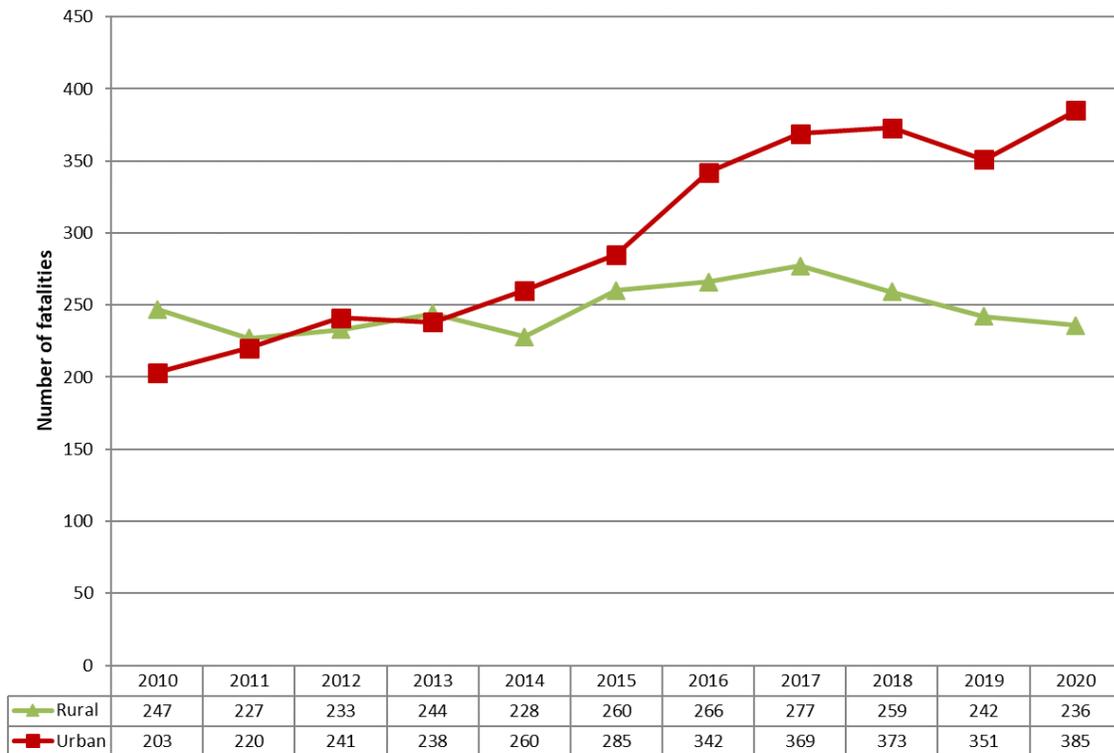
Source: FARS and USDOT FHWA

²² https://www.fhwa.dot.gov/policyinformation/travel_monitoring/tvt.cfm Last accessed April 2022

Urban versus Rural Fatalities

Figure 6 displays the number of motor vehicle fatalities that occurred in urban or rural roadways. The Colorado Department of Transportation defines which roadways are urban or rural in Colorado, and the Federal Highway Administration approves the definitions. While motor vehicle fatalities occurring on rural roadways have remained relatively constant over the last decade, fatalities occurring on urban roadways increased 9.7% in one year and 89.7% between 2010 and 2020.

Figure 6. Fatalities from motor vehicle crashes in Urban versus Rural areas in Colorado, 2010-2020



Source: FARS

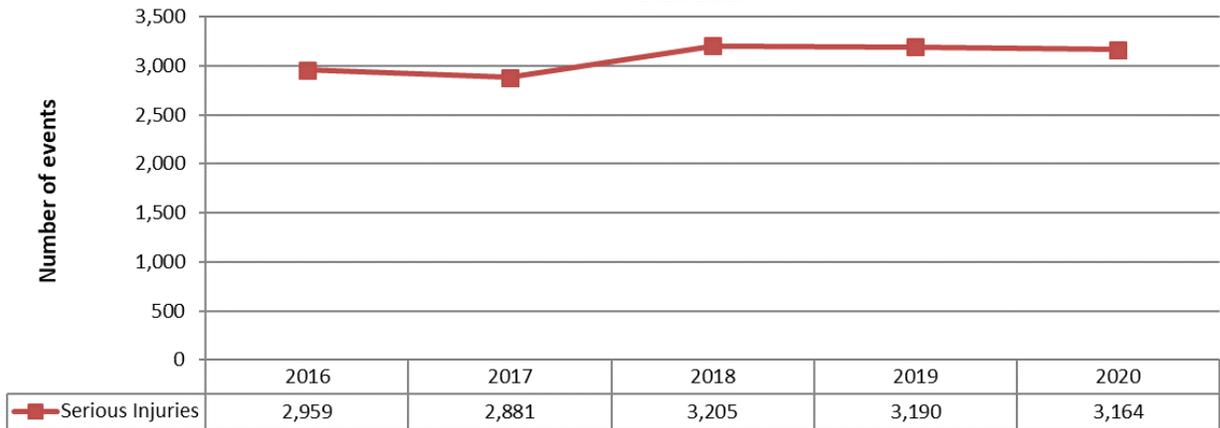
Serious Injuries from Traffic Crashes

Core Performance Measure (C-2): Reduce the number of serious injuries in traffic crashes

C-2 Top Five Counties
 Denver – 396 serious injuries
 Adams – 251 serious injuries
 Arapahoe – 217 serious injuries
 El Paso – 189 serious injuries
 Jefferson – 171 serious injuries

The number of serious injuries resulting from traffic crashes has remained steady over the past five years (Figure 7). In this report, serious injury is defined as “evident incapacitating” on the crash report by the responding law enforcement officer. An incapacitating injury is a type of injury that prevents the person from walking, driving, or continuing the normal activities previously capable of performing prior to being injured.

Figure 7: Serious injuries from traffic crashes in Colorado, 2016-2020



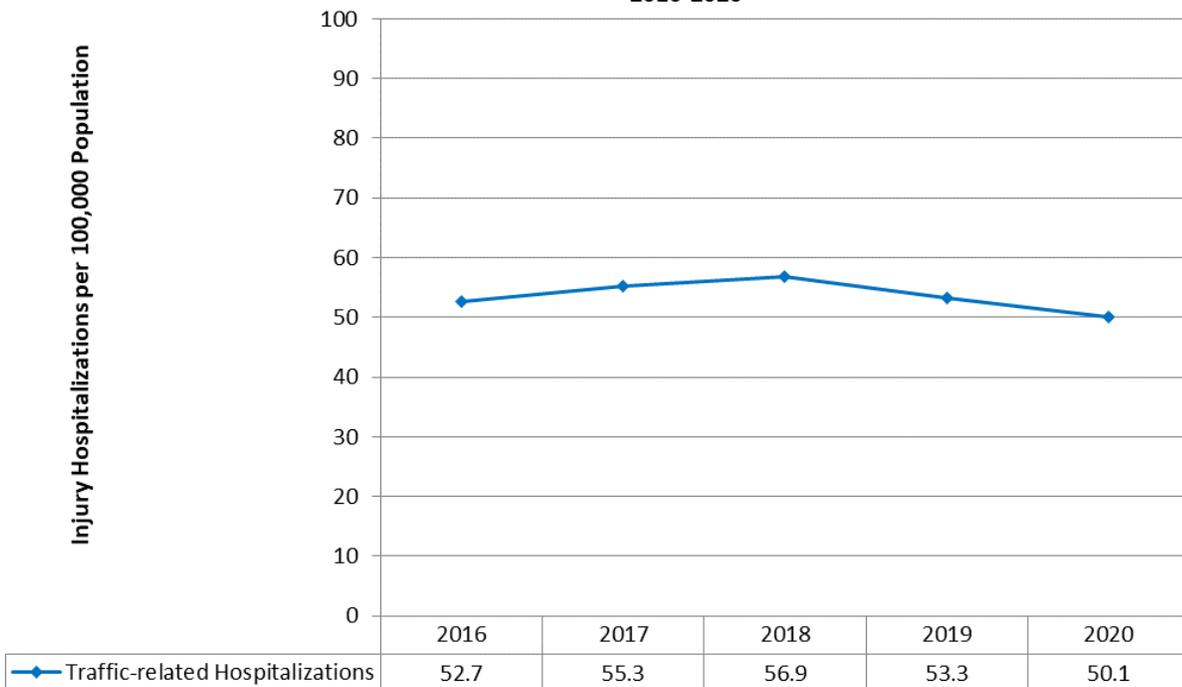
Source: Crash Reports, DOR



Injury Hospitalizations

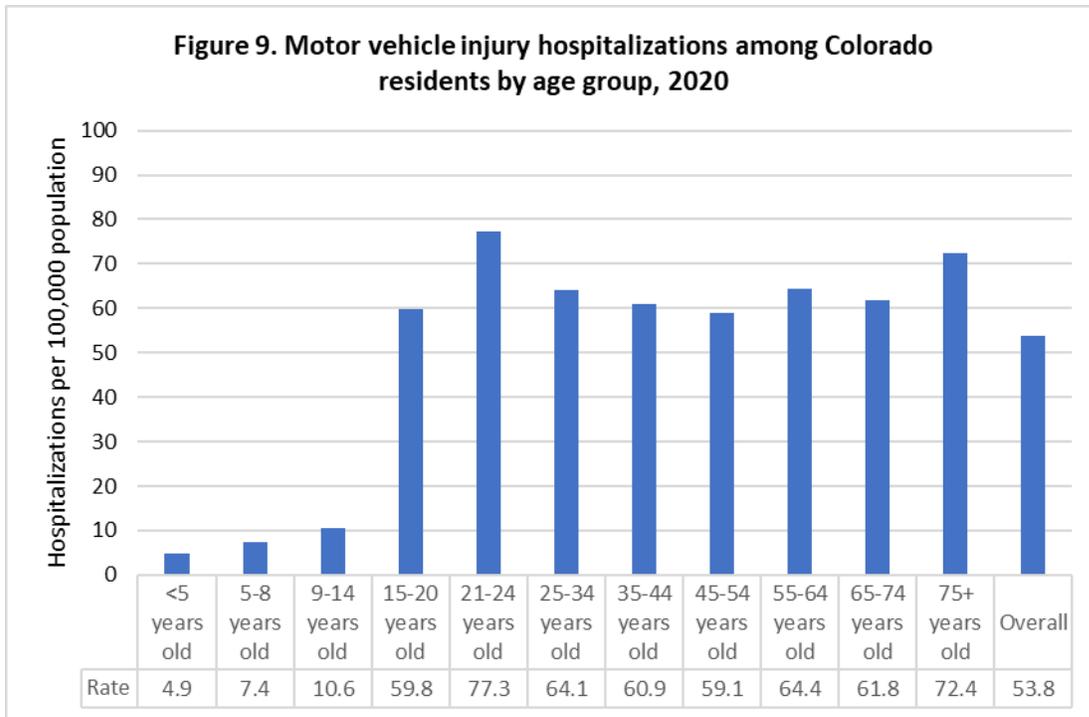
The age-adjusted rate of hospitalizations for Colorado residents injured in motor vehicle crashes decreased by 4.9% from 2016 to 2020 (Figure 8), and the age-adjusted hospitalization rate decreased by 6% from 2019 to 2020 despite a 5% increase in the Colorado population in 2020. The motor vehicle crashes occurred in traffic or on public roadways, and the hospitalizations occurred in non-federal, acute care hospitals in Colorado.

Figure 8.
Motor vehicle injury hospitalization rates over five years among Colorado residents, 2016-2020



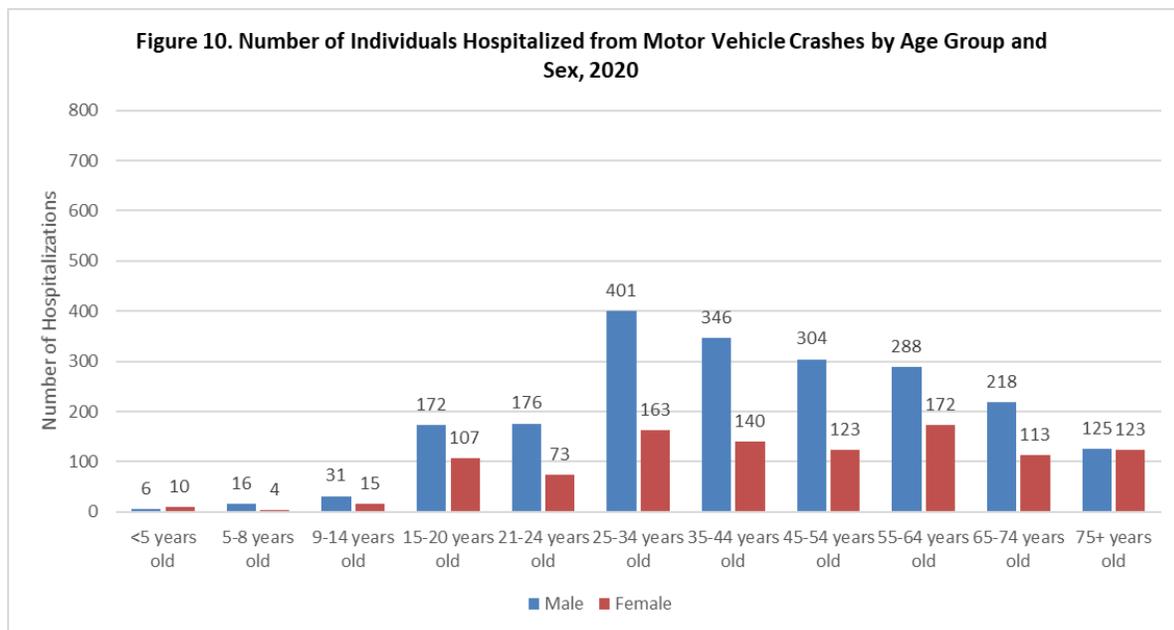
Source: Colorado Hospital Association, Hospital Discharge

In 2020, there were 3,127 hospitalizations among Colorado residents injured from motor vehicle crashes in traffic or on public roads (Figure 9). The age-specific hospitalization rate for Colorado residents sustaining injuries in motor vehicle crashes varied by age group. Adults 21 to 24 years old had the highest hospitalization rates related to motor vehicle injuries.



Source: Colorado Hospital Association, Hospital Discharge

Figure 10 shows the number of individuals hospitalized from motor vehicle crashes in Colorado during 2020, including the number of males and females within each age group. The 25-34 and 35-44 year age groups had the highest numbers of people hospitalized from motor vehicle crashes. Males accounted for two-thirds of those hospitalized from crashes during 2020.



Source: Colorado Hospital Association, Hospital Discharge

Table 4 shows the hospitalization rate per 100,000 population by age group and sex. The 21-24 years old age group had the highest hospitalization rate. Males aged 21-24 had the highest hospitalizations rate from motor vehicle crashes for every 100,000 persons, compared to the other age and sex groups.

Table 4. Crude rate of hospitalizations per 100,000 population due to motor vehicle crashes in 2020 in Colorado, by age and sex			
Age Group	Male	Female	Crude Rate for age group
<5 years old	3.6	6.3	4.9
5-8 years old	11.6	3.0	7.4
9-14 years old	13.9	7.1	10.6
15-20 years old	71.2	47.5	59.8
21-24 years old	102.9	48.3	77.3
25-34 years old	88.8	37.9	64.1
35-44 years old	86.1	35.4	60.9
45-54 years old	83.4	34.3	59.1
55-64 years old	82.4	47.1	64.4
65-74 years old	85.5	40.3	61.8
75+ years old	84.9	63.0	72.4
All Ages	71.6	35.9	53.8

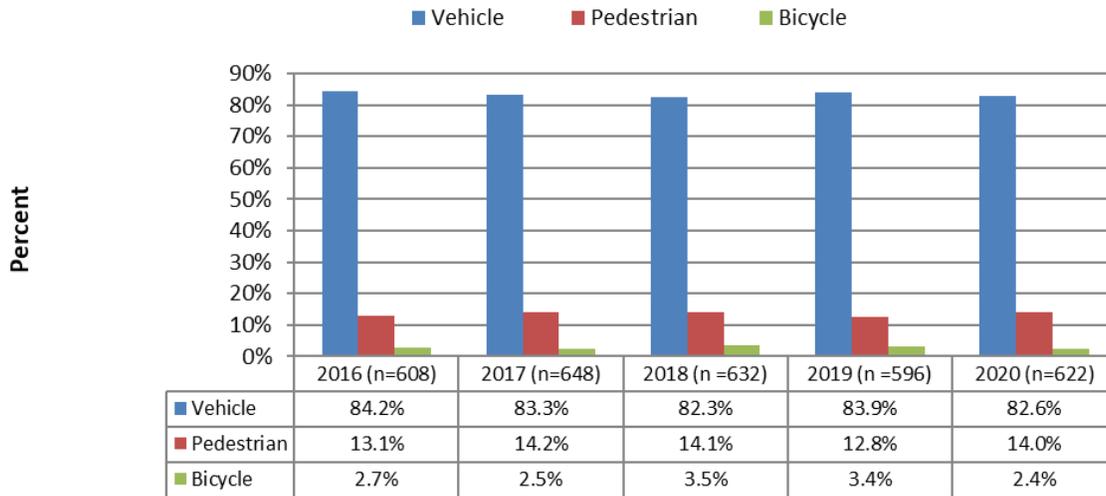
Source: Colorado Hospital Association, Hospital Discharge data



Mode of Transportation

Individuals driving or riding motorized vehicles made up an average of 83% of the motor vehicle-related fatalities in Colorado between 2016 and 2020 (Figure 11). Pedestrians accounted for 13% of fatalities in motor vehicle crashes, while bicyclists averaged 3% over the five years. The percentage of pedestrian fatalities increased in 2020, after a decrease in 2019.

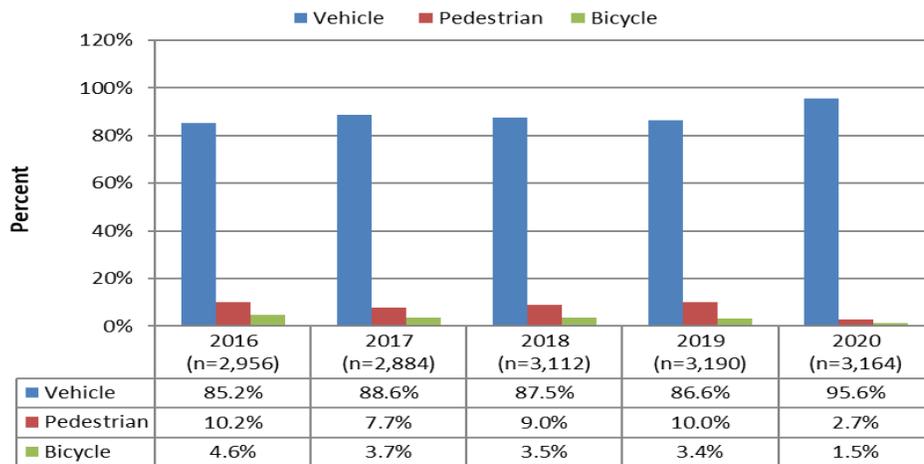
Figure 11: Motor vehicle fatalities by mode of transportation in Colorado, 2016-2020



Source: FARS

Figure 12 displays the mode of transportation among persons seriously injured from a motor vehicle crash. Most people seriously injured from a motor vehicle crash in 2020 were riding in a vehicle (96%). Pedestrians comprised almost 3% in 2020, a decrease from 2019. Bicyclists ranged from one to five percent over the past five years.

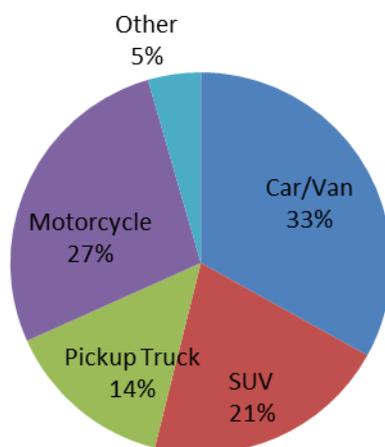
Figure 12: Motor vehicle serious injuries by mode of transportation, Colorado, 2016-2020



Source: Crash reports, DOR

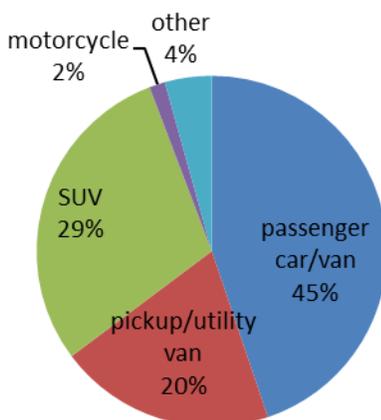
As shown in Figure 11 and Figure 12, persons riding motorized vehicles comprised the majority of motor vehicle-related fatalities and serious injuries. A motorized vehicle can be a car/van, motorcycle, pickup truck, SUV, other vehicle type, or unknown vehicle type (such as can occur in a hit-and-run crash). Other vehicle types include a large truck, motor home, bus, or these vehicle types when used on a public road: all-terrain vehicle, snowmobile, and farm or construction equipment. Figure 13 below shows the type of motor vehicle individuals were using when fatally injured. Among the fatally injured, over half (68%) of the individuals fatally injured were riding in a passenger vehicle (car, van, SUV, or pickup truck), and 27% were riding a motorcycle. Of those who were seriously injured, 45% were riding in a car/van, 29% were in an SUV, and 2% riding a motorcycle (Figure 14).

Figure 13: Type of motor vehicle individuals were riding in when fatally injured, Colorado, 2020



Source: FARS

Figure 14: Type of motor vehicle individuals were riding in when seriously injured, Colorado, 2020



Source: Crash reports, DOR

Occupant Protection

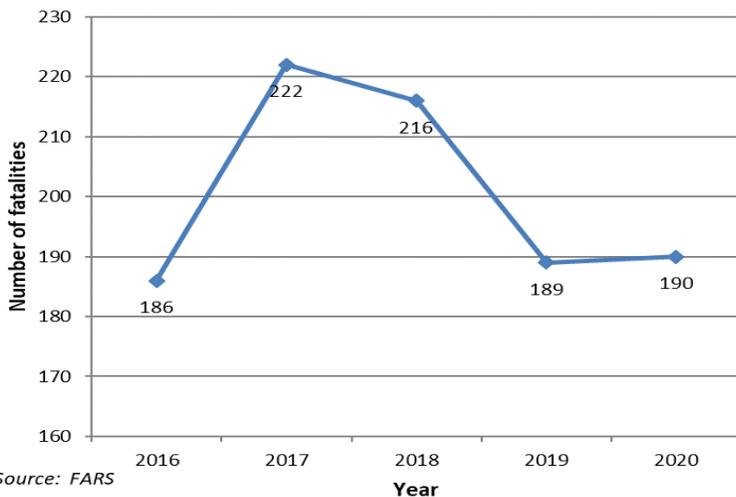
Core Performance Measure (C-4): Reduce the number of unrestrained passenger vehicle occupant fatalities, all seat positions.

C-4 Top Five Counties

- El Paso – 24 fatalities
- Weld – 22 fatalities
- Arapahoe– 21 fatalities
- El Paso – 21 fatalities
- Adams – 19 fatalities

In 2020, there were 190 unrestrained passenger vehicle occupant fatalities, almost the same as 2019 (Figure 15). After rising sharply from 2016 to 2017, unrestrained passenger fatalities have declined to a similar number as 2016. In 2020, these 190 fatalities of unrestrained occupants represented 54.1% of the 351 passenger vehicle occupant fatalities (Table 5).

Figure 15: Unrestrained passenger vehicle occupant fatalities in Colorado, all seat positions, 2016-2020



Source: FARS



Countermeasures that Work

Increase seat belt use:

Targeting Adults:

Seat Belt Use Laws

- State primary enforcement seat belt use laws
- Local primary enforcement seat belt use laws
- Increased seat belt use law penalties

Seat Belt Law Enforcement

- Short term high-visibility belt law enforcement
- Integrated nighttime seat belt enforcement
- Sustained enforcement

Communications & Outreach

- Supporting enforcement
- Strategies for low-belt-use groups

Targeting Youth:

Child/Youth Occupant Restraint Laws

- Strengthening child/youth occupant restraint laws

Child Restraint/Booster Seat Belt Law Enforcement

- Short term high-visibility CR law enforcement

Communications & Outreach

- Strategies for older children
- Strategies for child restraint and booster seat use

https://www.nhtsa.gov/sites/nhtsa.gov/files/2021-09/Countermeasures-10th_080621_v5_tag.pdf

Table 5 shows the number of unrestrained fatalities in Colorado by age and sex for 2019 and 2020. Of 351 total fatalities among motor vehicle occupants in 2020, 190 occupants (54.1%) were unrestrained. In 2020, the 25-34 age group had the highest percentage of unrestrained occupant fatalities, compared to the 15-20 age group in 2019. In 2020, for all ages combined, almost twice as many males were unrestrained than females.

Table 5. Unrestrained motor vehicle occupant fatalities by age and sex, Colorado, 2019 & 2020			
Age Group	Sex	2019	2020
<5	Male	0	0
	Female	1	0
	Total	1/4 (25%)	0/1 (0%)
5-8	Male	0	3
	Female	0	0
	Total	0/2= (0.0%)	3/4 (75%)
9-14	Male	1	2
	Female	1	3
	Total	2/3 (66.7%)	5/8 (62.5%)
15-20	Male	26	21
	Female	13	16
	Total	39/50 (78%)	37/55 (67.3%)
21-24	Male	19	13
	Female	6	6
	Total	25/35 (71.4%)	19/36 (52.8%)
25-34	Male	29	36
	Female	9	16
	Total	38/68 (41.2%)	52/75 (69.3%)
35-44	Male	12	15
	Female	5	9
	Total	17/42 (40.5%)	24/49 (49%)
45-54	Male	11	14
	Female	6	5
	Total	15/38 (39.5%)	19/39 (48.7%)
55-64	Male	16	9
	Female	6	3
	Total	22/49 (44.9%)	12/34 (35.3%)
65-74	Male	9	8
	Female	7	4
	Total	16/40 (40%)	12/27 (44.4%)
75+	Male	9	3
	Female	3	4
	Total	12/39 (30.8%)	7/23 (30.4%)
All Ages	Male	132	124
	Female	57	66
	%crashes	189/370 (51.1%)	190/351 (54.1%)

Source: FARS

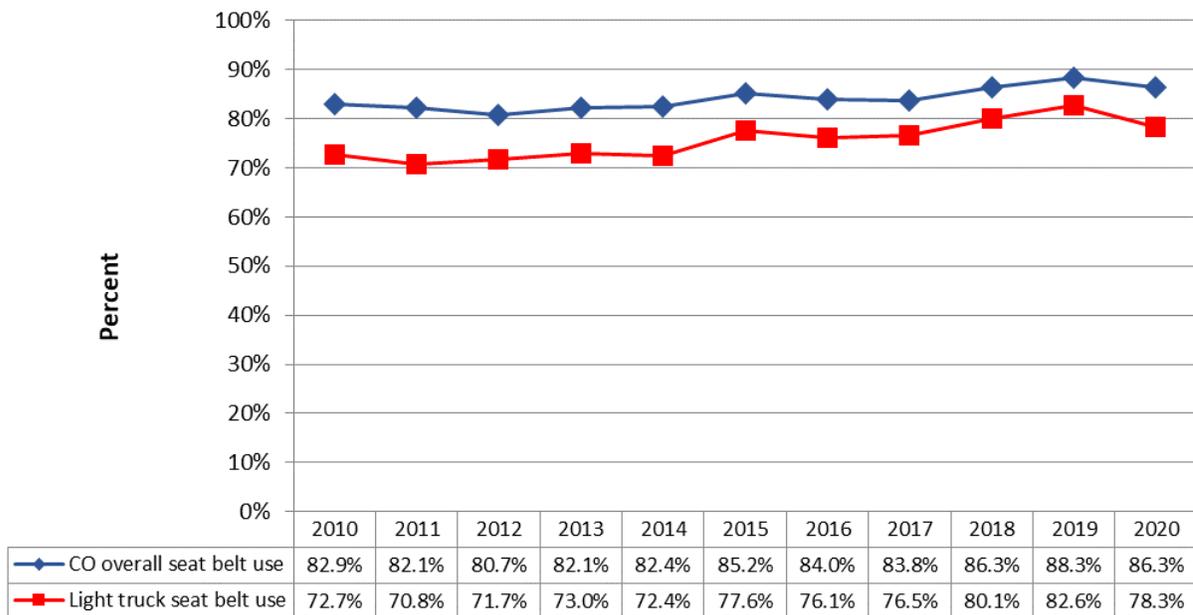
Seat Belt Compliance

Behavioral Performance Measure (B-1):

Increase the observed seat belt use for passenger vehicles.

Increasing seat belt use is a major initiative of the Highway Safety Office (HSO). Each year, HSO funds an observational survey of occupant protection use statewide. Figure 16 shows the steady increase in seat belt use from 2010-2019 with a slight decrease in 2020. In 2020, Colorado’s seat belt use rate was 86.3% which remained lower than the national rate of 90%.³³

Figure 16. Statewide overall and light truck seat belt use in Colorado, 2010-2020



Source: Atelior, Division of Transportation in partnership with Colorado Department of Transportation

Historically, fewer occupants in light trucks wear seat belts compared to occupants in other passenger vehicles. In 2010, almost 73% of light truck occupants wore seat belts. Over the past 10 years, this increased to 78%. Despite this improvement, seat belt use among light truck occupants was still lower than the 86% overall seat belt use.

³³ <https://crashstats.nhtsa.dot.gov/Api/Public/ViewPublication/813072> Last accessed April 2022.

C-5 Top Counties

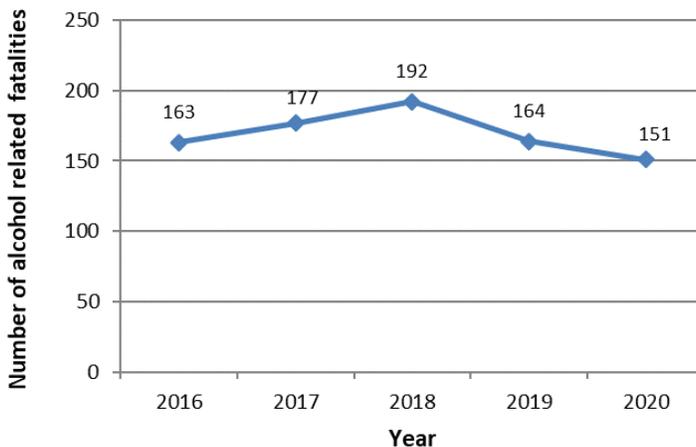
El Paso – 21 fatalities
Arapahoe– 20 fatalities
Weld -15 fatalities
Adams – 14 fatalities
Denver - 11

Impaired Driving

Core Performance Measure (C-5): Reduce the number of fatalities in crashes involving a driver or motorcycle operator with Blood Alcohol Content (BAC) of ≥ 0.08 .

Information regarding driving while impaired in Colorado is complex. In fatal crashes, the standard procedure is to test the person who died for alcohol and/or drugs. The law requires an arrested driver to take a chemical test of their breath or blood if the law enforcement officer has probable cause to believe that the driver’s impairment is from alcohol or another impairing substance. Drivers who refuse to comply with testing face consequences to their driving privileges. Despite the best efforts of law enforcement, some crash records lack driver’s BAC test results. To remedy missing test results on BAC, the National Highway Traffic Safety Administration (NHTSA) uses methods to impute missing BAC values for drivers involved in a crash where a fatality occurred. Imputation is a process of replacing missing data with a probable value based on other available data. The alcohol-related performance measure in Figure 17 is NHTSA’s imputed measure. The number of fatalities involving an alcohol-impaired driver increased each year from 2016 to 2018 but decreased 8% in the past year.

Figure 17: Fatalities in Colorado motor vehicle crashes involving a driver or motorcycle operator with a BAC ≥ 0.08 , 2016-2020



Source: FARS

Countermeasures that Work

To reduce alcohol- and drug-impaired driving:

Deterrence

1) Laws

- Administrative license revocation/suspension
- Open container
- High-BAC sanctions
- BAC test refusal penalties
- Alcohol-impaired driving law review

2) Enforcement

- Publicized sobriety checkpoints
 - High visibility saturation patrols
 - Preliminary breath test devices
 - Passive alcohol sensors
 - Integrated enforcement
- ###### 3) Prosecution and Adjudication
- DWI Courts
 - Limits on diversion and plea agreements
 - Court monitoring

4) DWI offender treatment, monitoring, control

- Alcohol problem assessment, treatment
- Alcohol ignition interlocks
- Vehicle and license plate sanctions
- DWI offender monitoring
- Lower BAC limit for repeat offenders

Prevention, intervention, communications & outreach

- Alcohol screening and brief intervention
- Mass-media campaigns

Underage drinking & alcohol-impaired driving

- Minimum drinking age 21 laws
- Zero-tolerance law enforcement
- Alcohol vendor compliance checks
- Other minimum legal drinking age 21 law enforcement

Drugged Driving

- Enforcement of drug-impaired driving
- https://www.nhtsa.gov/sites/nhtsa.gov/files/2021-09/Countermeasures-10th_080621_v5_tag.pdf

A blood alcohol content (BAC) of 0.08 grams of alcohol per deciliter of blood increases crash risk exponentially and therefore is the state and federal standard for legal intoxication. It is important to look at the drivers who were involved in a fatal crash, not just the person who was fatally injured, to help inform prevention efforts. Table 6 shows the number of drivers with a blood alcohol content greater than or equal to 0.08 involved in a fatal crash in 2019 and 2020. Males aged 25-34 had the highest number of drivers with a BAC at or above legal intoxication involved in a fatal crash. During 2020, there were 878 drivers involved in a fatal crash in Colorado, 15.7% of whom were intoxicated. The percentage of alcohol-intoxicated drivers involved in a fatal crash increased from 14.3% in 2019 to 15.7% in 2020.

Table 6: Drivers with a blood alcohol content \geq 0.08 in fatal crashes in Colorado, by impaired driver age and sex			
Age Group	Sex	2019	2020
Driver			
15-20	Male	6	12
	Female	4	5
	Total	10/76 (13.2%)	15/83 (18.1%)
21-24	Male	17	22
	Female	2	5
	Total	19/93 (20.4%)	27/88 (30.7%)
25-34	Male	33	36
	Female	12	8
	Total	45/195 (23.1%)	44/201 (21.9%)
35-44	Male	16	15
	Female	3	5
	Total	19/145 (13.1%)	20/154 (13%)
45-54	Male	15	20
	Female	3	1
	Total	18/118 (15.3%)	21/120 (17.5%)
55-64	Male	10	4
	Female	1	1
	Total	11/108 (10.2%)	5/94 (5.3%)
65-74	Male	1	3
	Female	1	0
	Total	2/75 (2.7%)	3/75 (4%)
75+	Male	0	0
	Female	0	0
	Total	0/41 (0%)	0/39 (0%)
All Ages	Male	98	113
	Female	26	25
	%crashes	124/866 (14.3%)	138/878 (15.7%)

Source: FARS

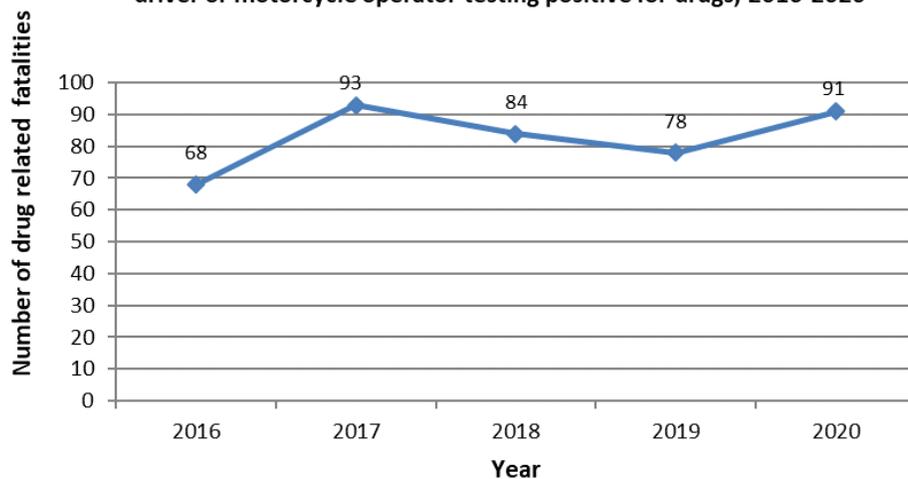
C-14 Top Five Counties

El Paso – 12 fatalities
Adams, Weld – 10 fatalities
Denver – 6 fatalities
Douglas – 5 fatalities

Core Performance Measure (C-14): Reduce the number of drivers or motorcycle operators involved in fatal crashes testing positive for drugs.

Prescription drugs, over-the-counter drugs, and illegal drugs can affect a person’s ability to drive. Taking legal drugs or illegal drugs, alone or in combination with alcohol, can cause impairment. An impaired driver puts the driver, passengers, and other road users at risk. ⁴ Figure 18 shows the trend of motor vehicle fatalities involving a driver under the influence of drugs. After a three-year decrease, the number of fatalities involving a driver under the influence of drugs increased in 2020.

Figure 18: Fatalities in Colorado motor vehicle crashes involving a driver or motorcycle operator testing positive for drugs, 2016-2020



Source: FARS



⁴ Berning, A., Compton, R., & Wochinger, K. (2015, February). Results of the 2013–2014 National Roadside Survey of alcohol and drug use by drivers. (Traffic Safety Facts Research Note. Report No. DOT HS 812 118). Washington, DC: National Highway Traffic Safety Administration.

Table 7 describes drivers who tested positive for drugs and were involved in fatal motor vehicle crashes in 2019 and 2020. The percentage of drivers involved in fatal crashes who were impaired by drugs increased slightly from 2019 to 2020. Males in the 25-34 age group had the highest number of drug-impaired drivers in 2020.

Table 7: Drivers testing positive for drugs in fatal crashes in Colorado, by impaired driver age and sex			
Age Group	Sex	2019	2020
Driver			
15-20	Male	13	11
	Female	2	3
	Total	15/76 (19.7%)	14/83 (16.9%)
21-24	Male	15	8
	Female	2	2
	Total	17/93 (18.3%)	10/88 (11.4%)
25-34	Male	17	19
	Female	4	7
	Total	21/195 (10.8%)	26/201 (12.9%)
35-44	Male	12	17
	Female	2	8
	Total	14/145 (9.7%)	25/154 (16.2%)
45-54	Male	8	15
	Female	4	2
	Total	12/118 (10.2%)	17/120 (14.2%)
55-64	Male	5	11
	Female	5	1
	Total	10/108 (9.3%)	12/94 (12.8%)
65-74	Male	7	8
	Female	0	1
	Total	7/75 (9.3%)	9/75 (12%)
75+	Male	1	1
	Female	0	0
	Total	1/41 (2.4%)	1/39 (2.6%)
All Ages	Male	79	91
	Female	19	24
	%crashes	98/866 (11.3%)	115/878 (13.1%)

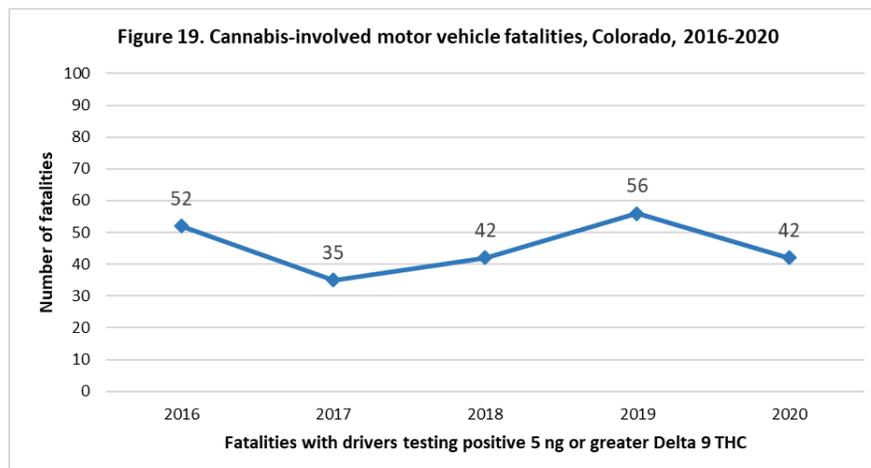
Source: FARS

Marijuana Impaired Driving

Like alcohol, marijuana has measurable physiological effects that may impair the ability of a person to drive and react quickly in critical situations.^{5, 6} National Highway Traffic Safety Administration (NHTSA) studies have shown marijuana impairs crucial abilities needed to drive safely.⁷ Impairments include:

- Slowed reaction time
- Difficulties in road tracking and lane-position variability (inability to stay in the driving lane).
- Decreased divided attention
- Impaired cognitive performance
- Impaired executive functions, including route planning, decision-making and risk-taking or a combination

Colorado law allows the prosecution of drivers that show signs of impairment from marijuana. Five nanograms of active tetrahydrocannabinol (THC) in their blood creates a permissible inference that the driver is under the influence of cannabis. However, there is no roadside device in Colorado to detect THC, so law enforcement officers, including those trained as drug recognition experts (DREs), base arrests on observed impairment. Under Colorado law, officers can arrest someone who uses marijuana for medicinal purposes for driving under the influence (DUI) if an officer observes impairment. Figure 19 displays the number of fatalities from motor vehicle crashes where the driver tested positive with five nanograms or higher of Delta 9 THC (the active component in marijuana). Prior to 2016, data collection on Delta 9 was not complete. Fatalities from a cannabis-involved driver decreased 25% from 2019 to 2020.



Source: *Toxicology results, Colorado Department of Transportation*

1. Data includes fatalities where alcohol or other drugs may also be present.
2. In Colorado, there is a "permissible inference" that a person is under the influence of a) cannabis - if their blood contains 5 nanograms or more of Delta 9-THC per milliliter in whole blood or b) alcohol - if their blood contains .08 grams or more of alcohol per 100 grams in the whole blood.

⁵ National Academies of Sciences, Engineering, and Medicine. 2017. *The health effects of cannabis and cannabinoids: Current state of evidence and recommendations for research*. Washington, DC: The National Academies Press.

⁶ Monitoring Health Concerns Related to Marijuana in Colorado: 2018 Summary. Colorado Department of Public Health and Environment.

⁷ Compton, R. (2017, July). Marijuana-Impaired Driving - A Report to Congress. (DOT HS 812 440). Washington, DC: National Highway Traffic Safety Administration.

Speed Enforcement

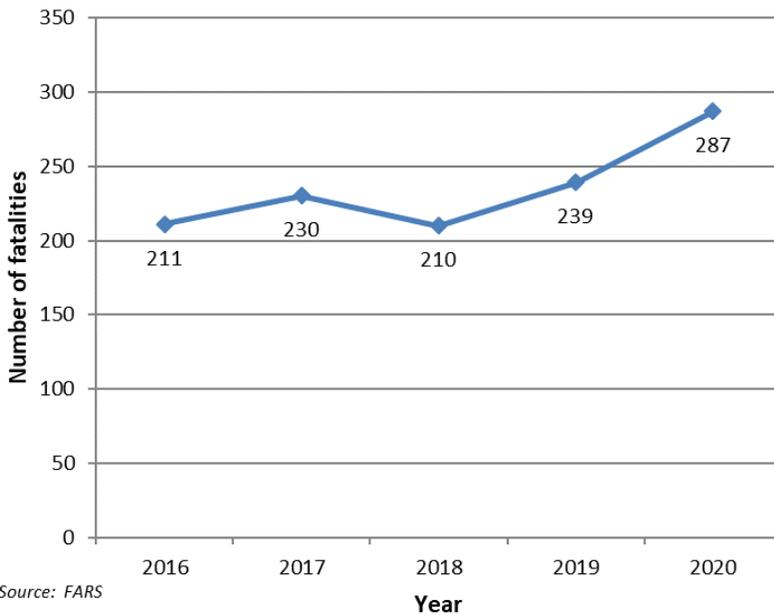
Core Performance Measure (C-6): Reduce the number of speeding related fatalities.

Speeding-related motor vehicle fatalities increased by 20% between 2019 and 2020 (Figure 20). Speeding contributed to 46% of all fatalities in 2020.

C-6 Top Five Counties

- El Paso – 40 fatalities
- Adams – 25 fatalities
- Arapahoe – 25 fatalities
- Jefferson – 24 fatalities
- Weld – 21 fatalities

Figure 20: Speeding Related Fatalities in Colorado, 2016-2020



Countermeasures that Work

Reduce aggressive driving & speeding:

Laws

- Speed Limits

Enforcement

- Automated enforcement

Communications & Outreach

- Public information supporting enforcement

Listed have a 3-5 star effectiveness rating. For all countermeasures, visit https://www.nhtsa.gov/sites/nhtsa.gov/files/2021-09/Countermeasures-10th_080621_v5_tag.pdf



Table 8 describes drivers who were cited to be speeding or exceeding the safe or posted speed in crashes in which a fatality occurred in 2019 and 2020. Law enforcement officers indicated that speeding was the driver action, or specific law violation, among 28% of all drivers in a fatal crash in 2020, compared with 24% in 2019. The pattern by age and sex was similar for 2019 and 2020. Males ages 21-24 and ages 25-35 had a high number of drivers speeding among the total number of drivers in crashes involving fatalities in 2019 and 2020. Males ages 21-24 represented the greatest percentage of speeding drivers in fatal crashes in both years.

Table 8: Drivers who were speeding in fatal crashes in Colorado, by driver age and sex			
Age Group	Sex	2019	2020
Driver			
15-20	Male	20	24
	Female	6	7
	Total	26/76 (34.2%)	31/83 (37.3%)
21-24	Male	35	29
	Female	5	7
	Total	40/93 (43%)	36/88 (40.9%)
25-34	Male	46	54
	Female	12	14
	Total	58/195 (29.7%)	68/201 (33.8%)
35-44	Male	27	31
	Female	3	8
	Total	30/145 (20.7%)	39/154 (25.3%)
45-54	Male	15	36
	Female	4	2
	Total	19/118 (16.1%)	38/120 (31.7%)
55-64	Male	17	12
	Female	1	2
	Total	18/108 (16.7%)	14/94 (14.9%)
65-74	Male	9	8
	Female	1	3
	Total	10/75 (13.3%)	11/75 (14.7%)
75+	Male	1	3
	Female	1	1
	Total	2/41 (4.9%)	4/39 (10.3%)
All Ages	Male	171	200
	Female	33	44
	%crashes	205/866 (23.7%)	245/878 (27.9%)

Source: FARS

Motorcycle Safety

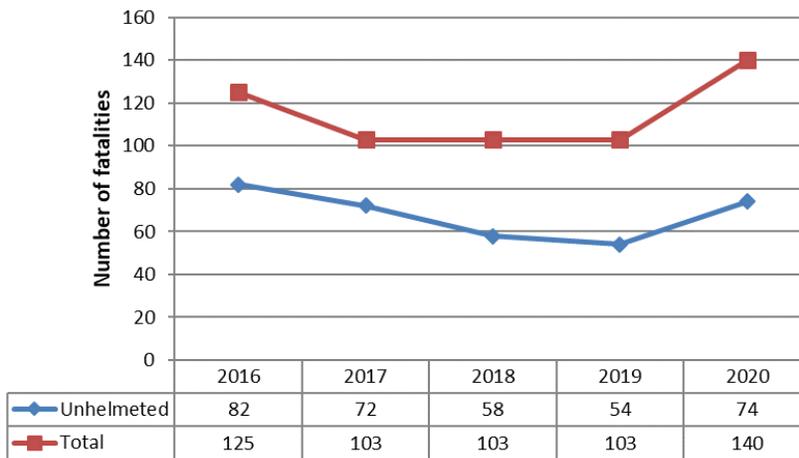
Core Performance Measure (C-7): Reduce the number of motorcyclist fatalities.

C-7 Top Five Counties

- El Paso – 26 fatalities
- Jefferson – 15 fatalities
- Adams – 12 fatalities
- Denver – 11 fatalities
- Pueblo – 9 fatalities

Motorcyclist fatalities increased by 12% from 2016 to 2020. However, the number of motorcyclist fatalities increased 36% in 2020 from 2019 s (Figure 21). The number of unhelmeted motorcyclists also increased in 2020 after three years of decreases. Unhelmeted motorcyclist fatalities represented 53% of all motorcyclist fatalities in 2020.

Figure 21: Motorcyclist fatalities in Colorado, 2016-2020



Source: FARS

Countermeasures that Work

Improve motorcycle safety:

Motorcycle Helmets

- Universal coverage state motorcycle helmet use laws

Alcohol Impairment

- Alcohol-impaired motorcyclists: detection, enforcement, & sanctions

Listed have a 3-5 star effectiveness rating. For all countermeasures, visit

chrome-extension://efaidnbmnnnibpcajpcqlclefnmkaj/viewer.html?pdfurl=https%3A%2F%2Fwww.nhtsa.gov%2Fsites%2Fnhtsa.gov%2Ffiles%2F2021-09%2F15100_Countermeasures10th_080621_v5_tag.pdf&clem=7302462&chunk=true



Core Performance Measure (C-8): Reduce the number of unhelmeted motorcyclist fatalities.

There were 103 motorcyclist fatalities in 2019 and 140 in 2020. About 53% of the motorcyclists who died were not wearing helmets in both years (Figure 21).

C-8 Top Five Counties
 El Paso – 15 fatalities
 Denver – 8 fatalities
 Jefferson, Pueblo – 7 fatalities
 Adams, Mesa, Weld – 6 fatalities

Table 9 shows the number of motorcyclists (operators and/or passengers) who died in a motorcycle crash by age, sex, and helmet status in 2019 and 2020. In 2020, most motorcyclist fatalities were male (127 of 140 riders). Of these 140 fatalities, 74 (53%) did not wear a helmet, about the same as 2019. The 25-34 age group had the most motorcyclist fatalities; however, the 21-24 age group had the largest percentage (84%) of unhelmeted motorcyclist fatalities in 2019.

Table 9: Motorcyclist fatalities and serious injuries in Colorado, by age and sex					
		2019		2020	
		Motorcyclist Fatalities		Motorcyclist Fatalities	
Age group	Sex	No Helmet	Total	No Helmet	Total
15-20	Male	1	2	1	2
	Female	1	1	0	0
	Total	2/3 (66.6%)	3	1/2 (50%)	2
21-24	Male	3	10	7	17
	Female	0	0	9	2
	Total	3/10 (30%)	10	16/19 (84.2%)	19
25-34	Male	10	20	14	31
	Female	1	3	0	2
	Total	11/23 (47.8%)	23	14/33 (42.4%)	33
35-44	Male	15	21	14	21
	Female	1	2	2	6
	Total	16/23 (69.6%)	23	16/27 (59.3%)	27
45-54	Male	9	13	13	26
	Female	3	4	1	1
	Total	12/17 (70.6%)	17	14/27 (51.9%)	27
55-64	Male	8	16	12	16
	Female	0	1	0	0
	Total	8/17 (47%)	17	12/16 (75%)	16
65-74	Male	2	9	8	12
	Female	0	1	1	2
	Total	2/10 (20%)	10	9/14 (64.3%)	14
All Ages	Male	48	91	70	127
	Female	6	12	4	13
	Total	54/103 (52.4%)	103	74/140 (52.8%)	140

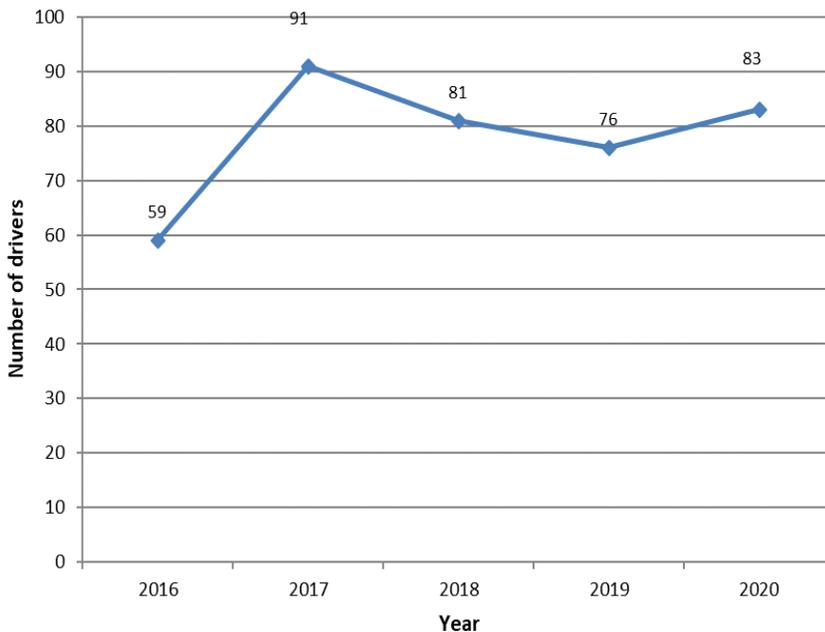
Source: FARS

Young Drivers

Core Performance Measure (C-9): Reduce the number of drivers age 20 or younger involved in fatal crashes.

The number of drivers ages 15-20 involved in a fatal motor vehicle crash decreased from 2017 to 2020. Overall, the number of young drivers who were involved in a fatal crash increased 11.9% from 2016 to 2020 (Figure 22). The population of persons aged 15 to 20 in Colorado increased only five percent during the same time frame, indicating that population alone did not drive the increase in young drivers involved in a fatal crash.

Figure 22: Number of drivers aged 15-20 years old involved in a fatal motor vehicle crash, Colorado, 2016-2020



Source: Fatality Analysis Reporting System (FARS)

C-9 Top Five Counties

Adams – 12 drivers
El Paso – 10 drivers
Arapahoe – 8 drivers
Weld – 7 drivers
Jefferson – 6 drivers

Countermeasures that Work

Improve young-driver safety:

Graduated Driver Licensing (GDL)

- Graduated driver licensing
- Learner's permit length, supervised hours
- Intermediate-nighttime restrictions
- Intermediate- passenger restrictions

Traffic Law Enforcement

- Enforcement of GDL & zero-tolerance laws

Listed have a 3-5 star effectiveness rating. For all countermeasures, visit

https://www.nhtsa.gov/sites/nhtsa.gov/files/2021-09/Countermeasures-10th_080621_v5_taq.pdf

Table 10 compares the number of drivers ages 15-20 involved in a fatal crash in 2019 and 2020. Young drivers ages 15-20 accounted for nine percent of the drivers involved in fatal crashes in 2019 and for eight percent of the drivers involved in fatal crashes in 2020. Twice as many young male drivers than young female drivers were involved in a fatal crash in 2020.

Table 10: Young drivers involved fatal crashes by age and sex of driver			
		2019	2020
Age Group	Sex	Drivers in fatal crashes	Drivers in fatal crashes
15-16	Male	6	4
	Female	3	7
	Total	9	11
17-18	Male	23	21
	Female	7	14
	Total	30	35
19-20	Male	25	28
	Female	12	9
	Total	37	37
Total: 15-20	Male	54	53
	Female	22	30
	Total	76	83

Source: FARS



Table 11 displays the type of driver’s license the driver aged 15 to 20 possessed at the time of the fatal crash. A learner’s permit is the first stage of a tiered licensing process.⁸ A person with a learner’s permit can drive if they are accompanied by an adult 21 years of age or older seated next to the driver and in possession of a valid Colorado license. Intermediate driver’s license is the second stage toward obtaining a full driver’s license, which eliminates the supervision requirement but still includes driving restrictions, including nighttime restrictions and a limit on the number of passengers allowed in the vehicle. A full driver’s license is a license with unlimited driving privileges. A temporary license is any non-permanent license that may be issued while the permanent license is being processed by the Department of Motor Vehicles or is issued to drive in an area different from where the permanent driver’s license was issued (i.e. foreign country). In 2020, the majority of young drivers in a fatal crash had an intermediate driver’s license (n=21), 11 drivers did not have a driver’s license, and three had a learner’s permit.

Table 11: Young drivers involved fatal crashes by type of driver's license, Colorado, 2020					
Age Group	Not Licensed	Learner's Permit	Intermediate Driver's License	Full Driver's License	Temporary License
15-16	2	1	5	1	0
17-18	6	2	5	4	1
19-20	3	0	11	3	4
Total: 15-20	11	14	34	13	11

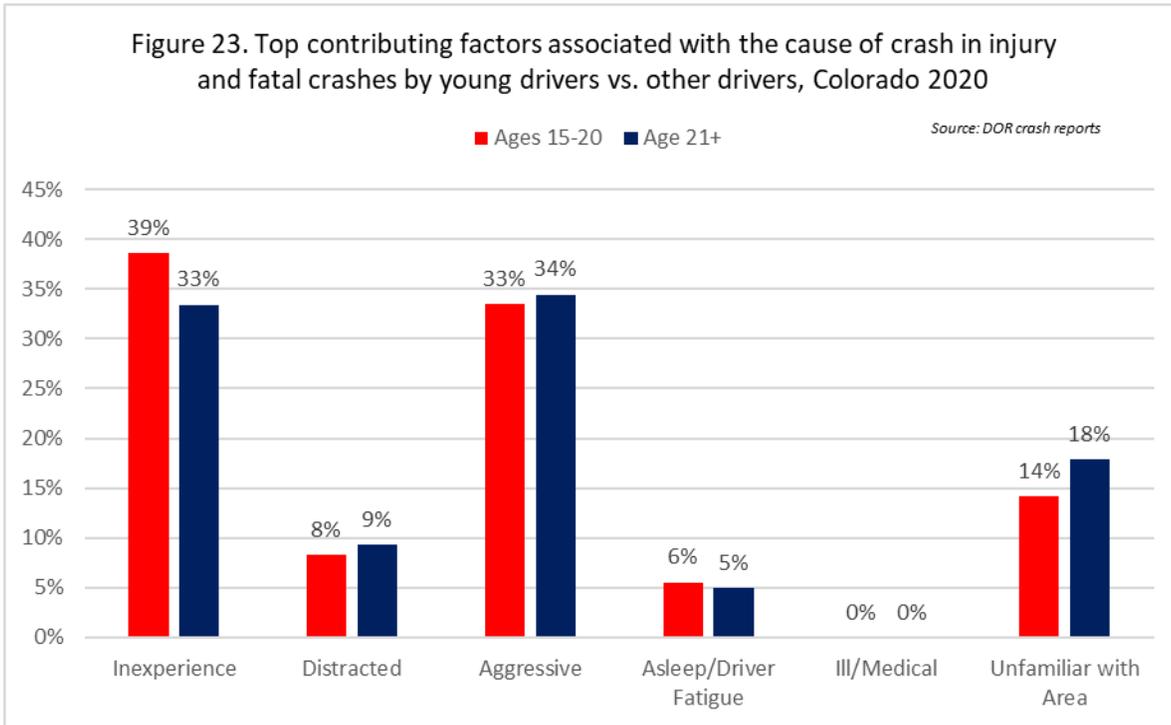
Source: FARS



Law enforcement officers investigating the crash also record the most apparent human factor that contributed to the crash. Figure 23 shows the top contributing factors associated with injury and fatal crashes among young

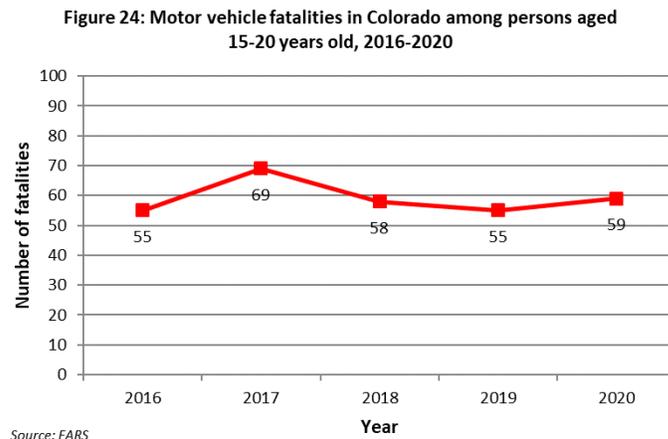
⁸ Colorado Driver Handbook, Colorado Department of Revenue. Accessible at <https://www.codot.gov/safety/traffic-safety-pulse/2020/november-2020/the-colorado-driver-handbook>

drivers, ages 15 to 20, compared to drivers age 21 or older in 2020. Inexperience was the leading contributing factor in injury/fatal crashes among young drivers followed by aggressive driving.



Source: Crash reports, Colorado Department of Revenue
 Distracted = passenger, cell phone, radio, food, object, animal, etc.

Motor vehicle fatalities among people ages 15-20 (all motor vehicle occupant, pedestrian, and bicyclist fatalities) increased by 7.3% from 2016 to 2020 (Figure 24). Though not shown here, more drivers than passengers aged 15-20 were killed in a motor vehicle crash in 2020 (30 drivers versus 27 passengers). There were only two pedestrians and no bicyclists aged 15-20 killed in a motor vehicle crash in 2020.

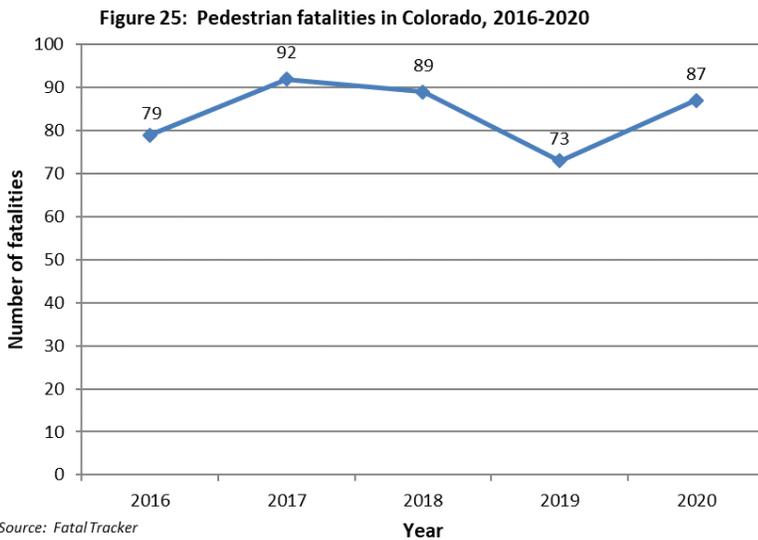


Pedestrian Safety

Core Performance Measure (C-10): Reduce the number of pedestrian fatalities.

In 2020, 87 pedestrians died from a motor vehicle collision. These pedestrian fatalities accounted for 14% of all 622 motor vehicle fatalities in 2020. Pedestrian fatalities increased by 10% from 2016-2020 and 19% from 2019-2020 (Figure 25).

C-10 Top Five Counties
 Denver – 15 fatalities
 Adams – 12 fatalities
 Arapahoe – 11 fatalities
 El Paso – 11 fatalities
 Jefferson – 10 fatalities



Countermeasures that Work

Improve pedestrian and bicycle safety:

Pedestrian

School-aged Children

- Elementary-age child pedestrian training
- Safe routes to school

All Pedestrians

- Pedestrian safety zones
- Reduce and enforce speed limits
- Conspicuity enhancement
- Enforcement strategies

Bicycle

Children

- Bicycle helmet laws for children
- Safe routes to school

Adult Bicyclists

- Bicycle helmet laws for adults

All Bicyclists

- Active lighting and rider conspicuity

Listed have a 3-5 star effectiveness rating. For all countermeasures, visit https://www.nhtsa.gov/sites/nhtsa.gov/files/2021-09/Countermeasures-10th_080621_v5_tag.pdf

Table 12 shows pedestrian fatalities from motor vehicle crashes for each age and sex group in 2019 and 2020. The “Total” row within each age group shows the total number of fatalities in that age group. The last row in Table 12 shows pedestrian

fatalities as a percentage of all motor vehicle fatalities (of all ages). More pedestrian fatalities occurred among males than females in both years. In 2020, 76% of the 87 pedestrian fatalities were male.

Table 12. Pedestrian fatalities by age and sex, Colorado, 2019 & 2020

Age Group	Sex	2019	2020
<5	Male	1	1
	Female	0	0
	Total	1	1
5-8	Male	1	0
	Female	0	1
	Total	1	1
9-14	Male	0	1
	Female	2	0
	Total	2	1
15-20	Male	1	1
	Female	0	1
	Total	1	2
21-24	Male	3	8
	Female	0	1
	Total	3	9
25-34	Male	12	9
	Female	0	3
	Total	12	12
35-44	Male	10	12
	Female	5	1
	Total	15	13
45-54	Male	6	13
	Female	4	5
	Total	10	18
55-64	Male	12	14
	Female	2	2
	Total	14	16
65-74	Male	8	4
	Female	1	3
	Total	9	7
75+	Male	3	3
	Female	2	4
	Total	5	7
All Ages	Male	57	66
	Female	16	21
	Total	73/596 (12.2%)	87/622 (14%)

Source: FARS

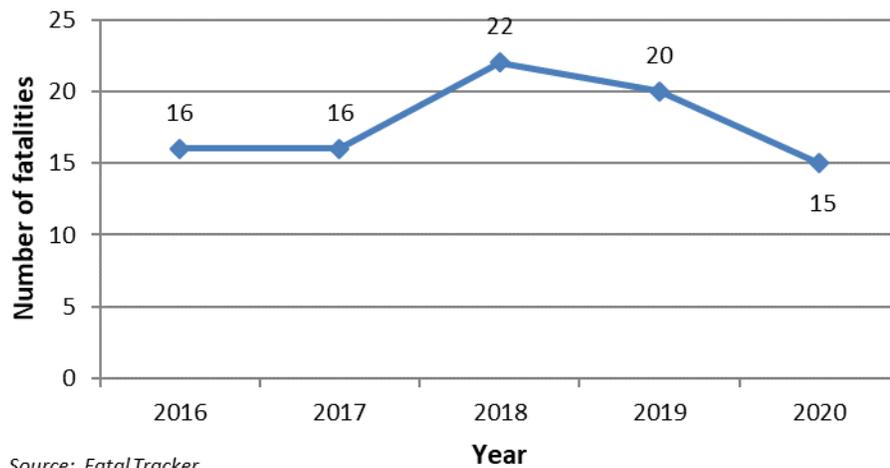
Bicyclist Safety

Core Performance Measure (C-11): Reduce the number of bicyclist fatalities

C-11 Top Counties
Boulder, El Paso – 3 fatalities
Arapahoe – 2 fatalities
Adams, Douglas, Garfield, Jefferson, La Plata, Larimer, Montrose– 1 fatalities

In 2020, 15 bicyclists died from a motor vehicle crash (Figure 26), a 25% decrease from 2019. The number of bicycle fatalities in 2020 returned to similar level as 2016.

Figure 26: Bicyclist fatalities in Colorado, 2016-2020



Source: FatalTracker



Table 13 shows the number of bicyclist fatalities due to a motor vehicle crash for each age group and sex in 2019 and 2020. All bicyclist fatalities in 2020 were over the age of 21 and male.

Table 13. Bicyclist fatalities by age and sex, Colorado, 2019 & 2020			
Age Group	Sex	2019	2020
<5	Male	0	0
	Female	0	0
	Total	0	0
5-8	Male	0	0
	Female	0	0
	Total	0	0
9-14	Male	0	0
	Female	0	0
	Total	0	0
15-20	Male	1	0
	Female	0	0
	Total	1	0
21-24	Male	1	2
	Female	0	0
	Total	1	2
25-34	Male	5	0
	Female	0	0
	Total	5	0
35-44	Male	0	2
	Female	1	0
	Total	1	2
45-54	Male	2	2
	Female	0	0
	Total	2	2
55-64	Male	4	5
	Female	0	0
	Total	4	5
65-74	Male	4	4
	Female	0	0
	Total	4	4
75+	Male	2	0
	Female	0	0
	Total	2	0
All Ages	Male	19	15
	Female	1	0
	Total	20/596 (3.4%)	15/622 (2.4%)

Source: FARS

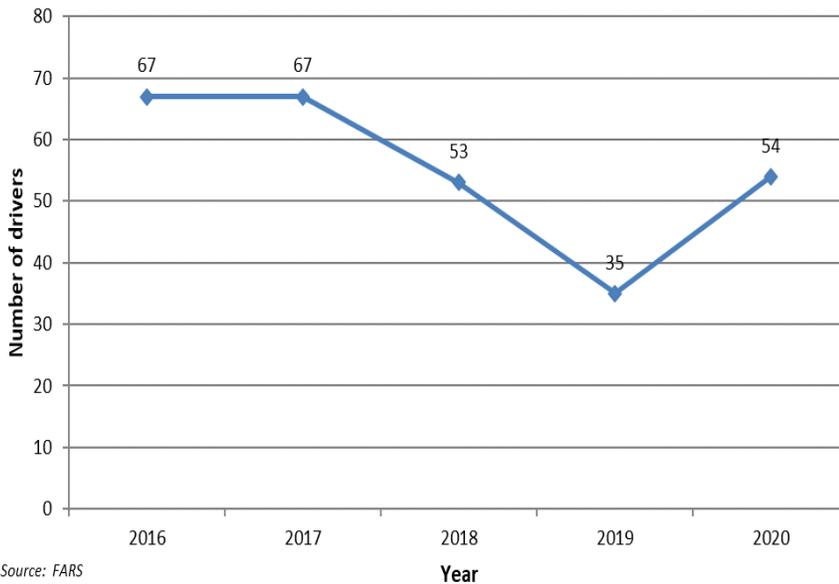
Distracted Driving

Core Performance Measure (C-12): Reduce the number of Distracted Drivers involved in a fatal crash

In this report, “distracted” means a passenger, animal, cell phone, radio, food, or other objects in the motor vehicle diverted the driver’s attention from the road. There were 54 drivers involved in a distracted driving crash, which resulted in 68 fatalities in 2020. Figure 27 displays the number of distracted drivers involved in a fatal crash during the past five years. The number of distracted drivers decreased by 19% over the past five years and yet increased 54% from 2019 to 2020.

C-12 Top Counties
Adams, Weld– 5 drivers
Arapahoe, Denver, Jefferson – 4 drivers

Figure 27. Colorado distracted drivers involved in a fatal crash, 2016-2020



Source: FARS
Distracted = passenger, cell phone, radio, food, object, pet, etc.

Countermeasures that Work
Reduce distracted and drowsy driving:

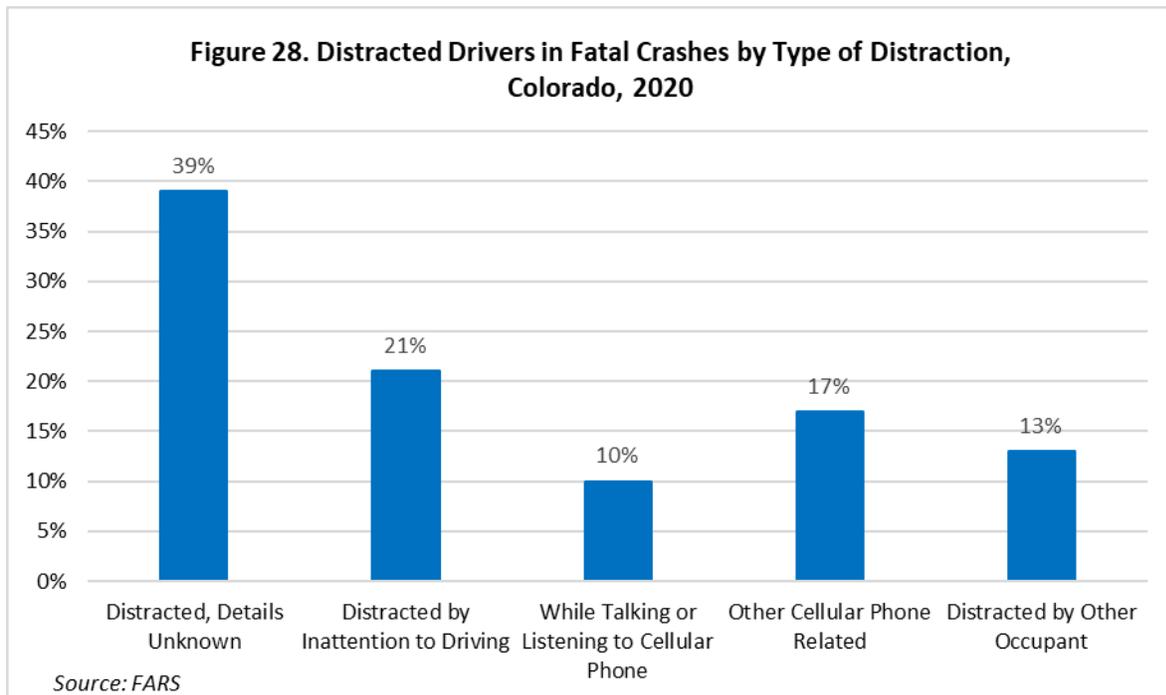
Laws and Enforcement

- GDL requirements for beginning drivers
- High visibility cell phone/text messaging enforcement

Listed have a 3-5 star effectiveness rating. For all countermeasures, visit https://www.nhtsa.gov/sites/nhtsa.gov/files/2021-09/Countermeasures-10th_080621_v5_tag.pdf

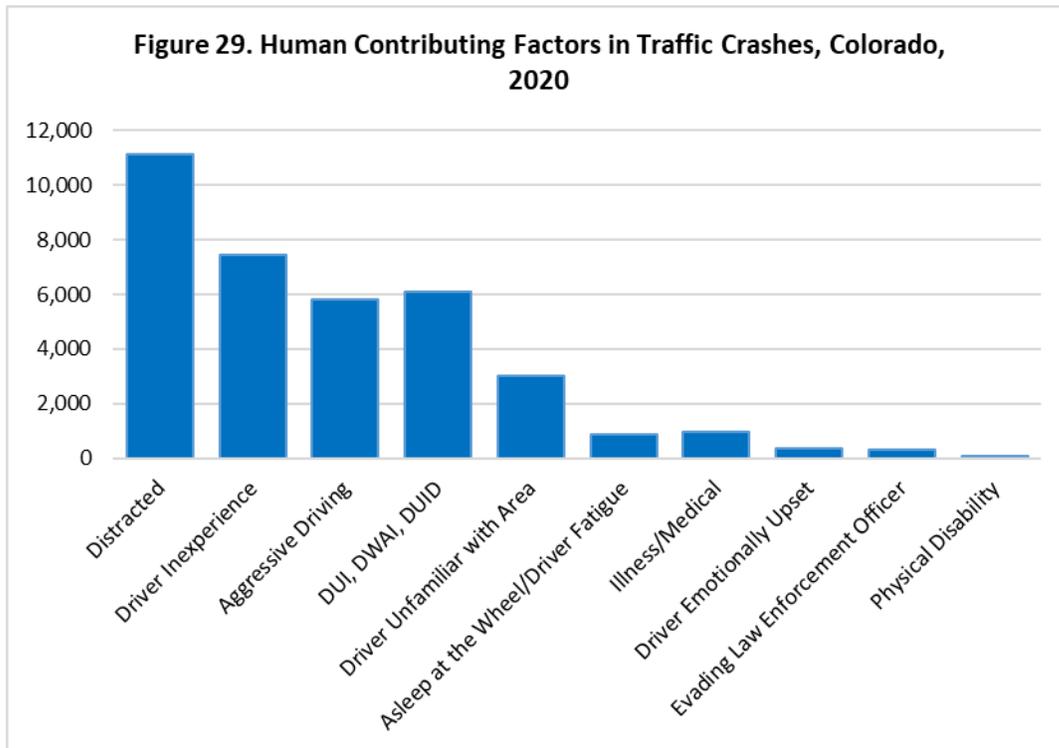
Figure 28 shows the type of distraction among drivers involved in a fatal distracted driving crash in Colorado in 2020. A large percentage, 39% of drivers, had no details known about the type of distraction. Inattention to driving was the source of distraction for 21% of distracted drivers. A cellular phone, either talking/listening or

other phone use, was the source of distraction for 27% of distracted drivers. Another occupant in the vehicle distracted the driver in 13% of the crashes where distracted driving was involved.



Human Contributing Factors in All Traffic Crashes

Figure 29 shows the top human contributing factors that law enforcement officers noted in motor vehicle crashes in 2020. Selecting one contributing factor poses a challenge because a driver’s circumstance and contributing factor may fall into one or more categories, and a driver may not fully reveal their behavior and the circumstances at the time of the crash. The top human contributing factor in all crashes in 2020 was ‘distracted’. The definition ‘distracted’ includes a driver being distracted by a passenger, cell phone, radio, food, pet or other object diverting the driver’s attention from the road and from the traffic.

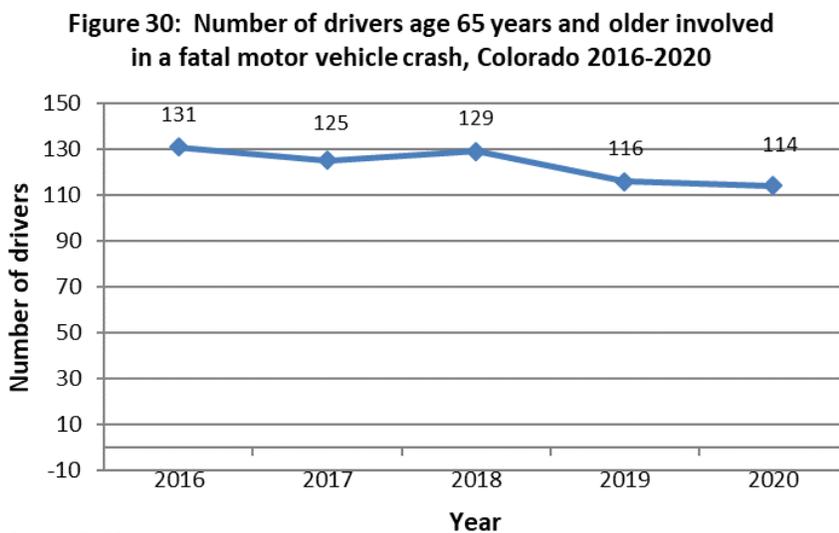


Source: Crash reports, Colorado Department of Revenue
 Distracted = passenger, cell phone, radio, food, object, animal, etc.

Older Drivers

Core Performance Measure (C-13): Reduce the number of drivers age 65 and older involved in fatal crashes

Between 2016 and 2020, the number of drivers age 65 years or older who died in a motor vehicle crash, whether or not at fault for the crash, decreased 13% (Figure 30). During this same period, the number of Coloradans aged 65 and older increased by 19% from 738,773 persons in 2016 to 877,647 persons in 2020. In 2020, there were 114 drivers ages 65 or older involved in a fatal motor vehicle crash, about the same as 2019.



Source: FARS

C-13 Top Counties

El Paso, Larimer – 14 drivers
Arapahoe – 8 drivers
Denver, Douglas – 7 drivers

Countermeasures that Work

Improve older driver safety:

Licensing

- License screening & testing
- Referring older drivers to licensing agencies
- License restrictions

Traffic Law

Enforcement

- Law enforcement roles

Listed have a 3-5 star effectiveness rating. For all countermeasures, visit https://www.nhtsa.gov/sites/nhtsa.gov/files/2021-09/Countermeasures-10th_080621_v5_tag.pdf

Conclusion

Efforts are still needed to reduce fatalities and serious injuries from motor vehicle crashes. The information provided in this report, including the county results below, can help traffic safety and injury prevention professionals at the state and local levels to address modifiable driving behaviors to improve traffic safety. Policy-makers, community organizations, and individuals should use information from this report to identify where and how to focus prevention efforts.

Data Sources and Acknowledgements

Data Sources for the FY 2022 Problem Identification Report

Colorado Performance Measures and Statewide Goals for 2020

This information comes from the 2020 Colorado Integrated Safety Plan by the Colorado Department of Transportation. The 2020 Colorado Integrated Safety Plan includes performance targets that are set for the year 2020.

Countermeasures That Work

For select performance measures of CDOT, this report summarizes countermeasures that have a 3-5 star effectiveness rating from *Countermeasures That Work: A Highway Safety Countermeasure Guide for State Highway Safety Offices*, Tenth Edition, published in 2020 and available on the web. See: https://www.nhtsa.gov/sites/nhtsa.gov/files/2021-09/Countermeasures-10th_080621_v5_tag.pdf

Crash Reports (Colorado DRIVES)

Colorado Driver License, Record, Identification and Vehicle Enterprise Solution (Colorado DRIVES) provides crash data, defined as an incident where at least one motor vehicle in motion on a traffic way (public road) resulted in an injury or unintentional property damage. This data tracking system originates from the Colorado Department of Revenue.

Fatality Analysis Reporting System (FARS)

FARS provides detailed data about persons who died within 30 days of the crash, including motorcyclists, motor vehicle drivers, motor vehicle passengers, pedestrians, and bicyclists involved in fatal motor vehicle crashes. FARS SAS data files are obtained from the National Highway Traffic Safety Administration website.

Hospital Discharge Data

Hospital discharge data provides data where injury was mentioned as a discharge diagnosis in one of the thirty diagnoses and the mechanism of injury was motor vehicle, traffic for Colorado residents treated in non-federal, acute care hospitals as reported to the Colorado Hospital Association (CHA). National hospital coding rules defines “motor vehicle, traffic” as events involving a motor vehicle that occur entirely or partially on public streets, roadways, and highways. This data source is referenced as CHA Discharge Data in figures in this report. The Colorado Department of Public Health and Environment analyzed the CHA Discharge Data in compliance with the data use agreement. CHA was not involved in the analysis or production of this report.

Population Estimates

The Colorado Department of Local Affairs (DOLA) estimates state and county population in Colorado. This report uses that DOLA population estimates accessed from the DOLA website or the Colorado Health Information Dataset website. This data is referenced as DOLA data in the figures of this report. Population estimates for the United States were obtained from the U.S. Census website.

Restraint Use

The prevalence of seat belt use, car seat use, and booster seat use come from observational surveys conducted by Atelior, Division of Transportation in partnership with Colorado Department of Transportation and posted on the Colorado Department of Transportation website.

Vehicle Miles Traveled (VMT)

VMT data come from the Office of Highway Policy Information, Highway Statistics Series at the U.S. Department of Transportation (USDOT) Federal Highway Administration (FHA) and are referenced as "USDOT FHA" in figures in this report.

Acknowledgements

The Colorado Department of Transportation, Highway Safety Office, contracted with the Colorado Department of Public Health and Environment (CDPHE) to prepare the Problem Identification Report. CDPHE would like to gratefully acknowledge the leadership and contributions of the following individuals:

Glenn Davis, M.Ed

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Highway Safety Manager

Colorado state performance measures by county, 2020									
Performance Measures	Fatalities	Serious injuries	Occupant fatalities, unrestrained all seat positions	Fatalities in crashes where driver/ motorcycle operator has BAC ≥ 0.08	Speeding-related fatalities	Unhelmeted motorcyclist fatalities	Motorcyclist fatalities	Driver under 21 years old in fatal crashes	Pedestrian fatalities
Colorado ISP Target	603	3,161	198	184	225	55	103	79	80
Colorado	622	3,164	190	151	287	74	140	83	87
Adams	53	251	19	14	25	6	12	12	12
Alamosa	5	3	2	0	1	0	0	1	1
Arapahoe	52	217	21	20	25	2	8	8	11
Archuleta	0	3	0	0	0	0	0	0	0
Baca	3	4	3	1	0	0	0	1	0
Bent	2	0	2	0	0	0	0	0	0
Boulder	16	101	4	4	8	0	0	5	4
Broomfield	4	15	1	1	2	2	2	0	0
Chaffee	3	10	1	0	2	0	0	1	0
Cheyenne	10	0	1	1	8	0	0	1	0
Clear Creek	1	12	0	0	0	0	1	0	0
Conejos	1	1	1	1	1	0	0	0	0
Costilla	0	2	0	0	0	0	0	0	0
Crowley	2	1	1	1	0	0	0	1	0
Custer	5	1	1	0	4	1	3	0	1
Delta	8	10	4	1	3	0	1	2	1
Denver	51	396	8	11	15	8	11	4	15
Dolores	1	0	0	0	0	0	0	0	0
Douglas	22	118	7	4	15	2	8	5	1
Eagle	2	25	0	1	1	0	0	0	1
El Paso	85	189	24	21	40	15	26	10	11
Elbert	5	6	1	0	3	1	2	1	0
Fremont	6	17	2	1	1	1	2	1	0
Garfield	12	14	3	6	6	1	1	2	1
Gilpin	1	0	0	0	1	0	1	0	0
Grand	1	12	0	0	0	1	1	0	0
Gunnison	12	6	6	5	5	0	1	3	0
Hinsdale	1	0	0	0	0	1	1	0	0
Huerfano	7	6	3	2	0	0	0	0	0
Jackson	3	3	0	0	1	0	0	0	0
Jefferson	43	171	9	9	24	7	15	6	10
Kiowa	2	1	1	0	1	0	0	0	0

Performance Measures	Fatalities	Serious injuries	Occupant fatalities, unrestrained all seat positions	Fatalities in crashes where driver/motorcycle operator has BAC ≥ 0.08	Speeding-related fatalities	Unhelmeted motorcyclist fatalities	Motorcyclist fatalities	Driver under 21 years old in fatal crashes	Pedestrian fatalities
Colorado ISP Target	603	3,161	198	184	225	55	103	79	80
Kit Carson	2	2	2	1	1	0	0	0	0
La Plata	5	23	3	4	4	0	0	1	0
Lake	1	4	0	0	1	0	0	1	0
Larimer	32	107	5	7	12	5	8	1	3
Las Animas	1	4	0	0	0	0	0	0	1
Lincoln	5	4	2	0	5	0	0	0	0
Logan	5	6	3	2	2	0	0	0	0
Mesa	13	47	1	5	7	6	7	1	0
Mineral	1	0	0	0	1	0	0	0	0
Moffat	1	2	1	1	1	0	0	1	0
Montezuma	5	10	1	1	1	0	0	1	3
Montrose	6	9	1	2	3	1	2	1	0
Morgan	10	6	7	2	3	0	0	1	2
Otero	3	5	3	0	0	0	0	0	0
Ouray	0	0	0	0	0	0	0	0	0
Park	5	15	1	0	3	0	3	0	0
Phillips	0	0	0	0	0	0	0	0	0
Pitkin	4	7	0	0	1	1	1	0	1
Prowers	1	5	0	0	0	0	0	0	0
Pueblo	24	65	7	5	12	7	9	3	4
Rio Blanco	1	4	0	0	0	0	1	0	0
Rio Grande	0	0	0	0	0	0	0	0	0
Routt	3	11	1	1	1	0	0	0	0
Saguache	3	4	1	0	1	0	0	0	0
San Juan	1	0	0	0	1	0	0	0	0
San Miguel	2	0	1	1	2	0	0	0	0
Sedgwick	0	1	0	0	0	0	0	0	0
Summit	1	8	0	0	1	0	1	0	0
Teller	5	2	1	0	0	0	3	0	0
Washington	5	0	2	0	5	0	0	2	0
Weld	54	107	22	15	21	6	9	7	4
Yuma	4	1	0	0	2	0	0	0	0

