Firearm Injury Analysis

2016-2022 COLORADO ALL PAYER CLAIMS DATABASE Commercial Medicaid Medicare Fee-For-Service Medicare Advantage

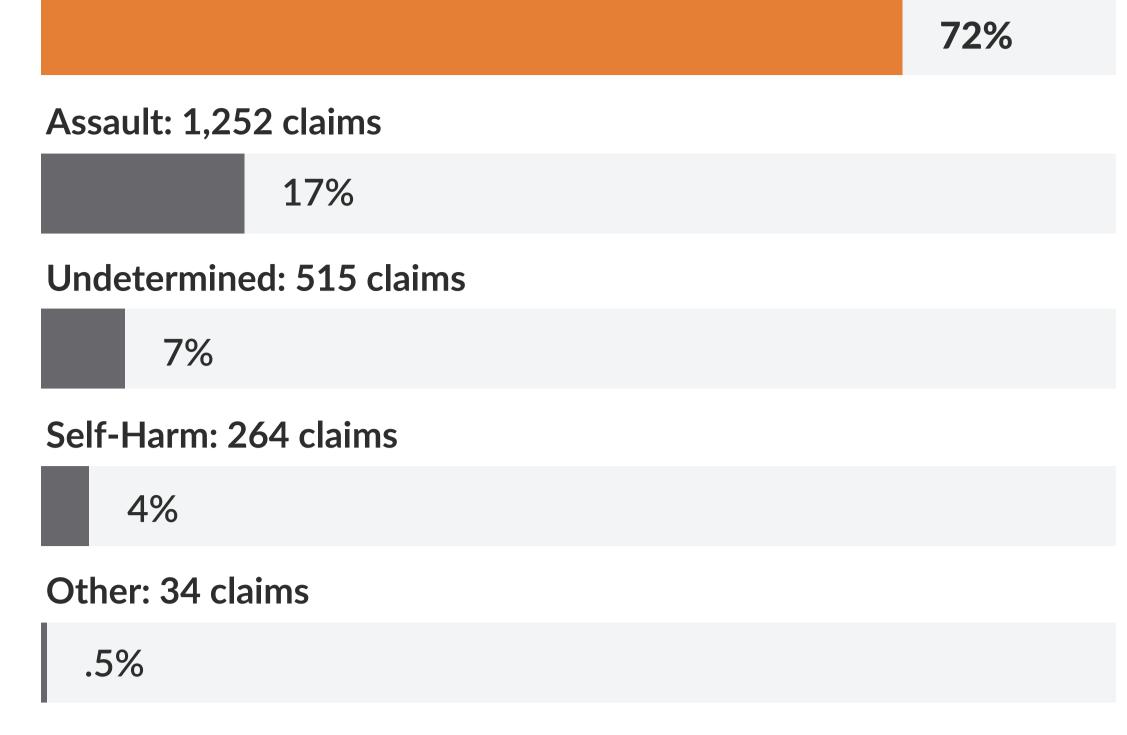
A recent analysis of Colorado Department of Public Health and Environment data showed that in 2021, firearm related violence in Colorado reached a 40-year high. Additionally, the American Public Health Association and the Centers for Disease Control classify firearm injury and death as a significant public health issue. Center for Improving Value in Health Care (CIVHC) investigates deeper in

this analysis, using 2016-2022 claims from the CO APCD to provide a snapshot of volume, rates, health care costs, geographic variation, and trends in firearm injuries across the state.

Note: Volume data includes all claims that could have been associated with a single firearm injury event. Rates are calculated as total volume of claims per 100,000 unique people in the CO APCD.

Firearm Injury Type Breakdown 2022 All Payers

Unintentional: 5,229 claims



Total Volume claims for firearm injuries in 2022, representing the highest total claim volume in the last seven years. **Total Cost**

Overall Percent

Injury Type Code Category and Description **Unintentional:** Accidental handgun discharge and malfunction

Assault: Assault by rifle, shotgun and larger firearm discharge **Undetermined:** Undetermined cause of firearm discharge

Self-Harm: Intentional self-harm by rifle, shotgun and larger firearm discharge Other: Legal intervention firearm discharge

Unintentional

2016-2022 All Payers

Firearm Injuries Are the Most

Common Type

2016-2022 All Payers

Percent Firearm Injuries by Age

Adults Account for Majority of Firearm Injuries

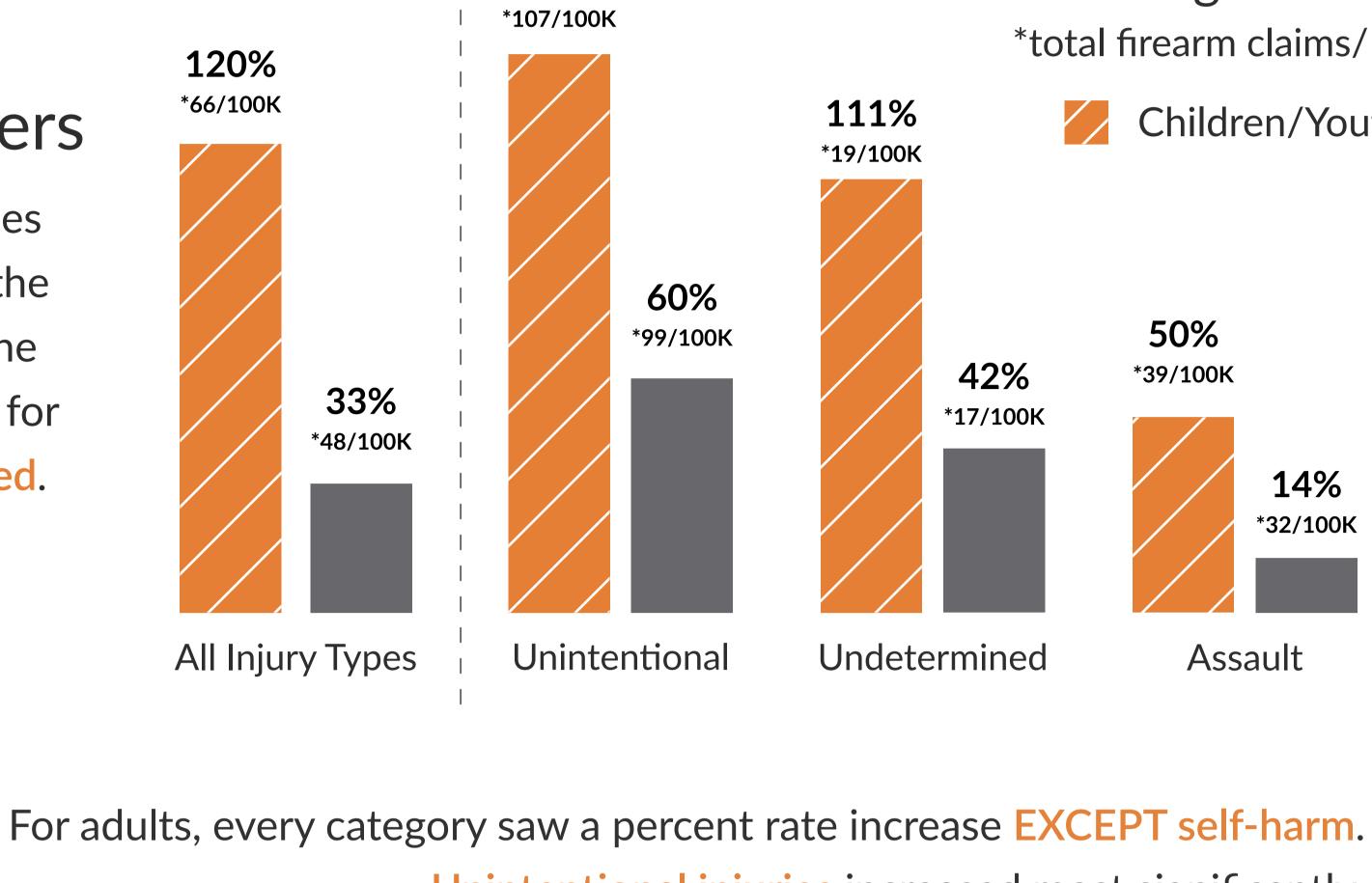
88% of all firearm injuries were among those over 18 12% Adult Children/Youth Percent Change from 2016-2022 —

From 2016-2022 firearm injuries increased in every injury type the

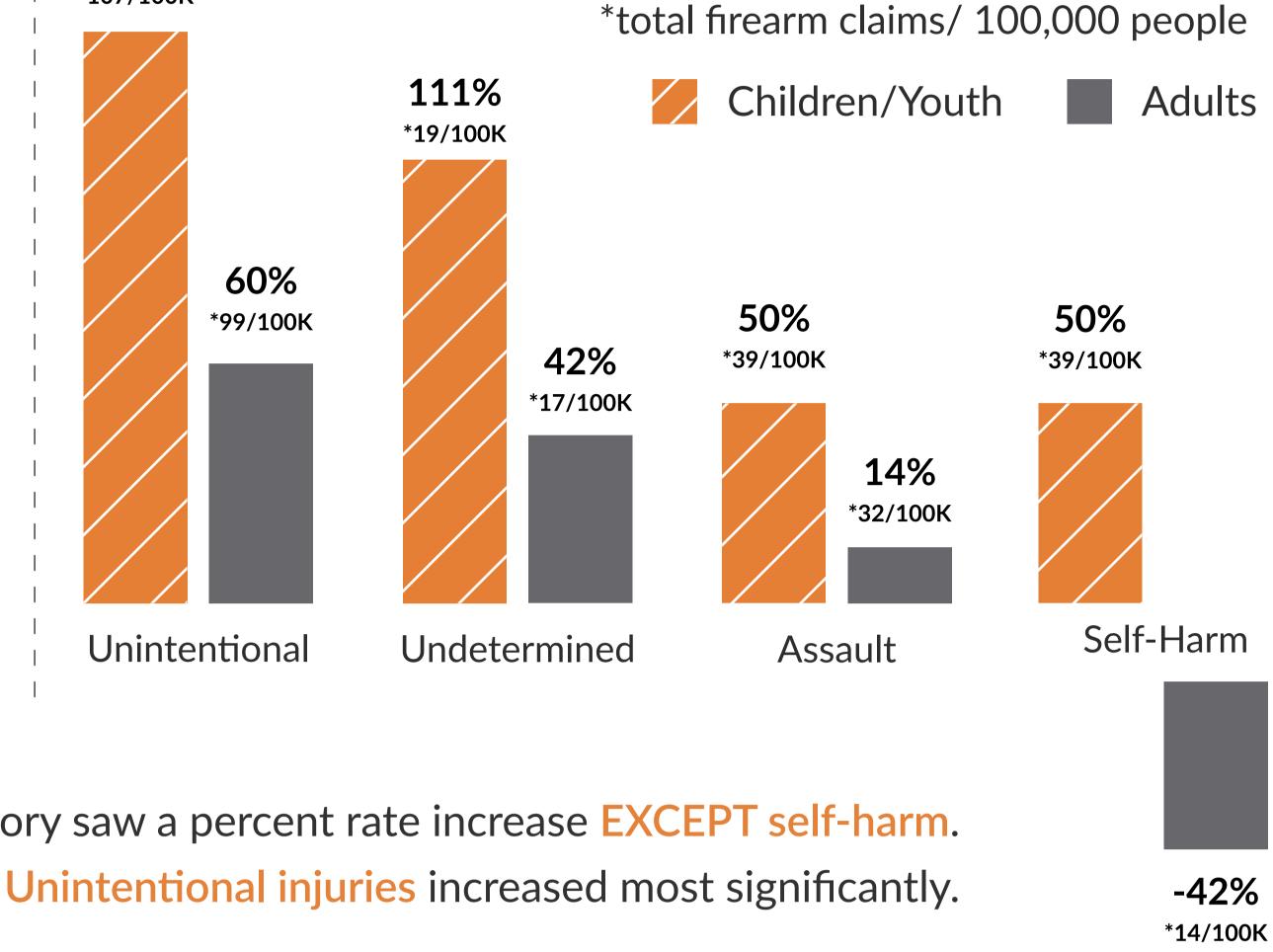
2016-2022 All Payers

Injury Type by Age

most for children and youth. The largest percent increases were for unintentional and undetermined.



143%



0%

*7/100K

76%

*95/100K

34%

*213/100K

Unintentional

250

200

150

100

50

117

2019

5%

*140/100K

Self-Harm

-33%

*18/100K

injuries for men were:

Overall, by Sex

3X more in total

In 2022, compared to women, the rate of firearm

Almost 4X more for unintentional injuries

Female

• 3X more for assault injuries

Male

167%

*149/100K

233%

*10/100K

2.5X more self-harm injuries

rate of firearm

2016-2022 All Payers

Overall, the

injuries is higher among men. Injury Type by Sex | 2016-2022 All Payers Percent Change from 2016-2022

> The largest percent increases among females were for undetermined intent injuries and assault injuries.

The largest percent increases

unintentional and undetermined

among males were for

In 2022, compared to urban counties, rural

5X higher for undetermined intent injuries

Percent Change from 2016-2022

*total firearm claims/ 100,000 people

Urban

Self-Harm

Rural

19%

*32/100K

Assault

-7%

*78/100K

intent.

counties had rates that were:

8X higher for self-harm injuries

*total firearm claims/ 100,000 people

From 2016 to 2022 firearm injuries

category for both females and males.

increased in nearly every injury

92% *23/100K 60% *16/100K 40% 29% *70/100K *22/100K 12% 11% *48/100K *41/100K Unintentional All Injury Types Undetermined Assault For females, there was no change in the rate of injuries for self-harm, as opposed to males whose rate of injury for self-harm decreased by 33%. Rural vs. Urban 2016-2022 All Payers

counties have a

In general, rural

higher rate of

firearm injuries

than urban counties. Injury Type by Geography 2016-2022 All Payers From 2016-2022, **both urban** 50% and rural communities saw the *48/100K biggest increases in the injury

2X higher for assault injuries

50%

*15/100K

26%

*82/100K

Undetermined

undetermined intent. All Injury Types

*total firearm claims/ 100,000 people

Rural

in Urban communities.

Assault

120

100

80

60

rates for unintentional and

The cost to treat an injury, per event, is 25% higher in rural communities than urban. In 2022, across all injury types, cost per event in rural communities was \$1,480, while it was \$1,113 per event Rural vs. Urban Trends | 2019-2022 All Payers

2X higher for unintentional injuries

-35% *11/100K -60% *84/100K Self-Harm Rural Urban In 2021, rates for self-harm related firearm injuries were 25 times higher in rural communities compared to urban communities.

249

10

2021

11

2022

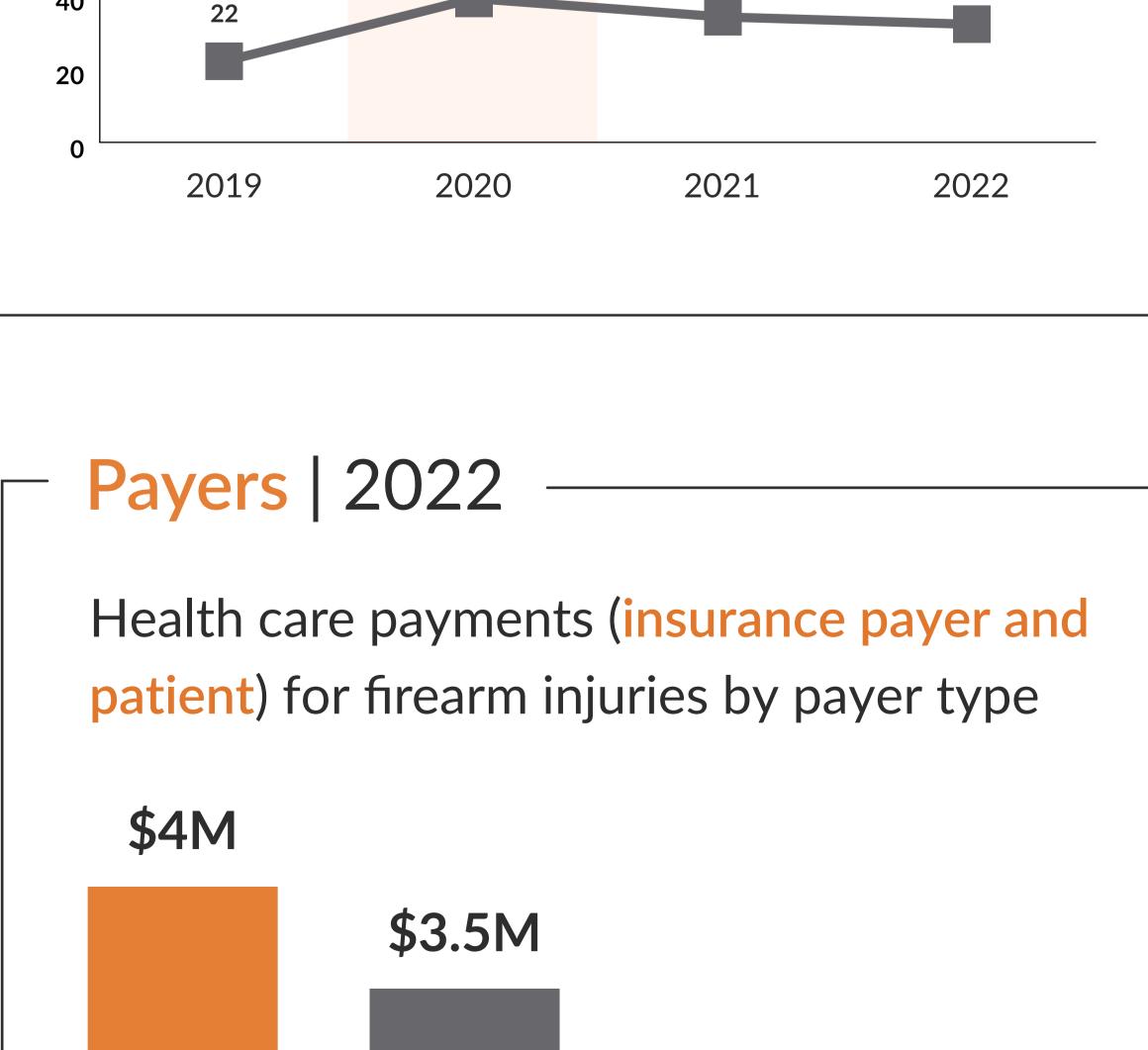
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Urban

In 2020, rates for assault were almost 3 times higher

in rural communities compared to urban communities.

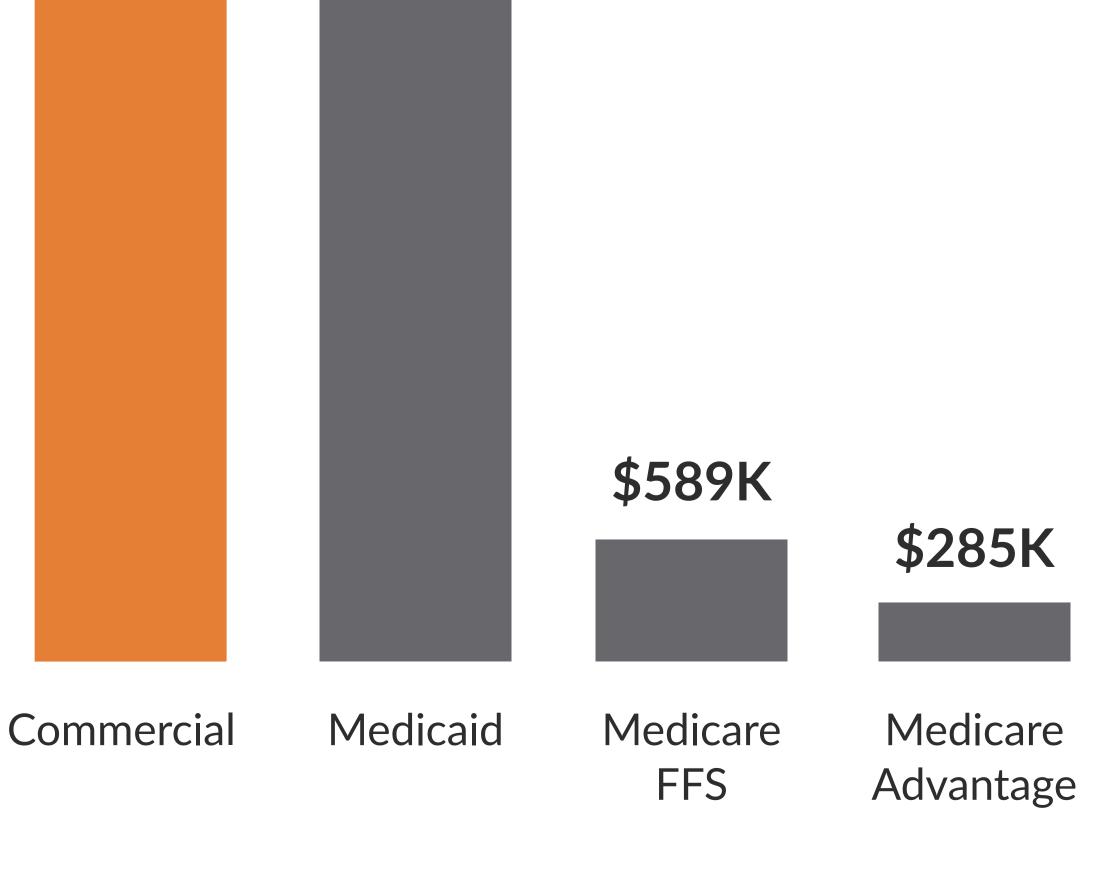
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Medicaid firearm injury rates were

2020

significantly higher than other payers.



In 2022, Medicaid rates were: • 12.5X higher than Commercial 3X higher than Medicare Advantage

2X higher than Medicare FFS

CIVHC

VALUE IN HEALTH CARE