

BICYCLE SAFETY

Helmet Use.

Fifty-nine percent of Colorado households with bicycles report owning bicycle helmets. The use of these helmets varies depending on the age of the cyclist and the type of surface. Survey respondents were asked to indicate the frequency of helmet use when riding on various surfaces. The frequency is indicated by selecting from a five point scale with one indicating that the rider “never wears a helmet” and five indicating that the rider “always wears a helmet.”

Adult riders (over the age of 16) are most likely to either always wear a helmet or never wear a helmet as shown in Figures 17 - 20. Helmet use by this group is most common on mountain terrain (Figure 20). Just over half (51%) report that they always wear a helmet when riding in the mountains, but 37 percent report that they never do. Similar patterns of helmet use by adults (although at slightly lower levels) are reported for those riding on unpaved trails, streets and paved bike paths. Adult riders are least likely to wear helmets on paved paths where 38 percent report that they always wear a helmet and 42 percent never wear one (Figure 17).

Figure 17
Frequency of Helmet Use by Adults when Riding on a Paved Bicycle Path

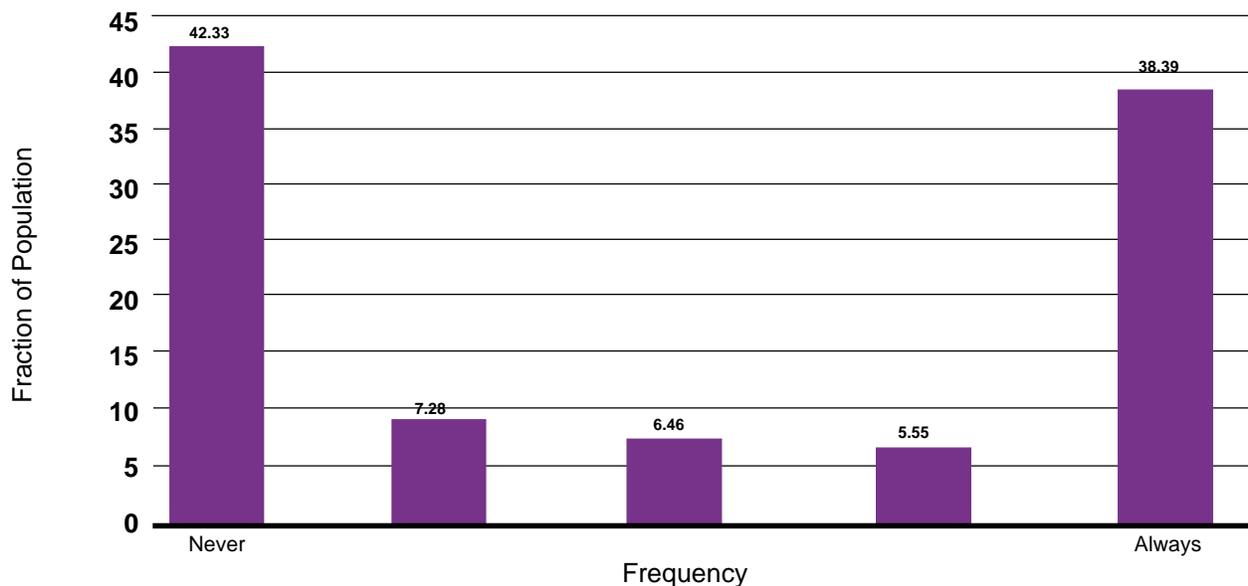


Figure 18
 Frequency of Helmet Use by Adults when Riding on a Street

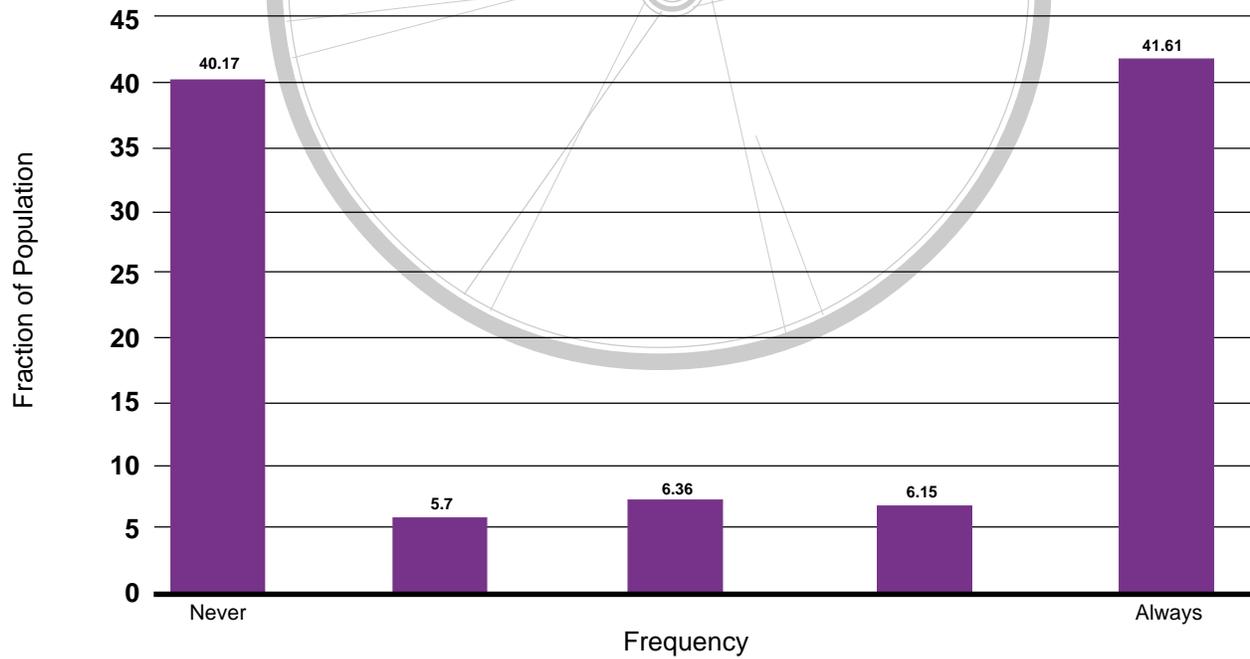


Figure 19
 Frequency of Helmet Use by Adults when Riding on an Unpaved Trail

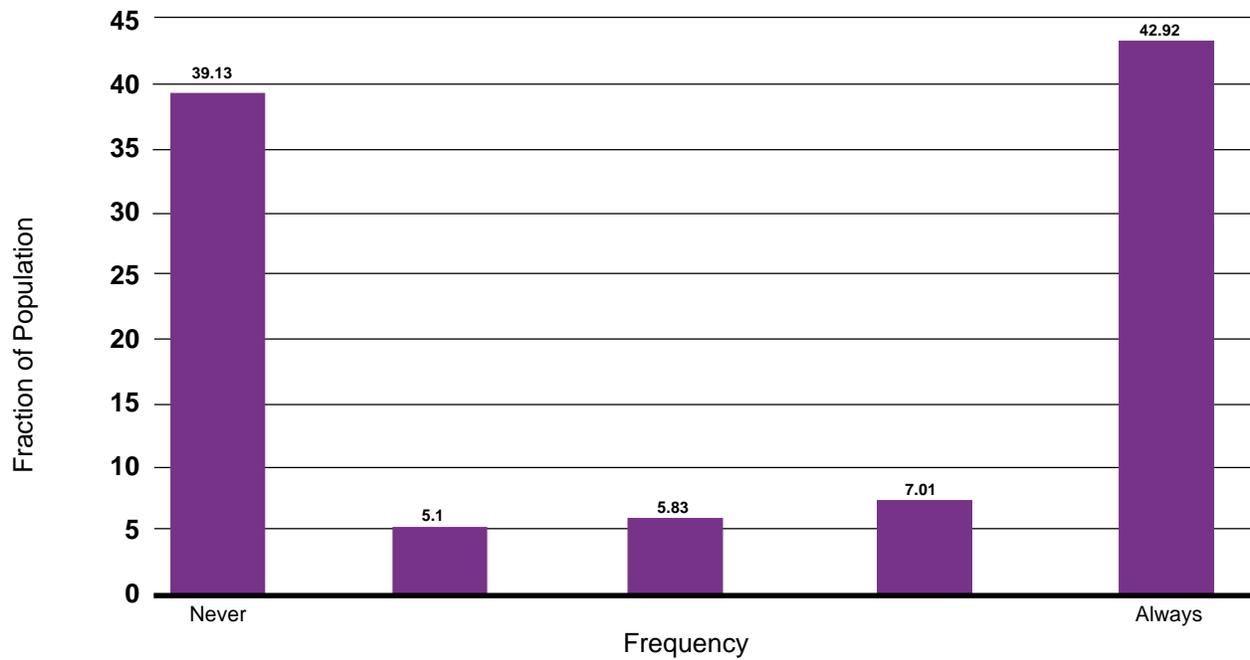
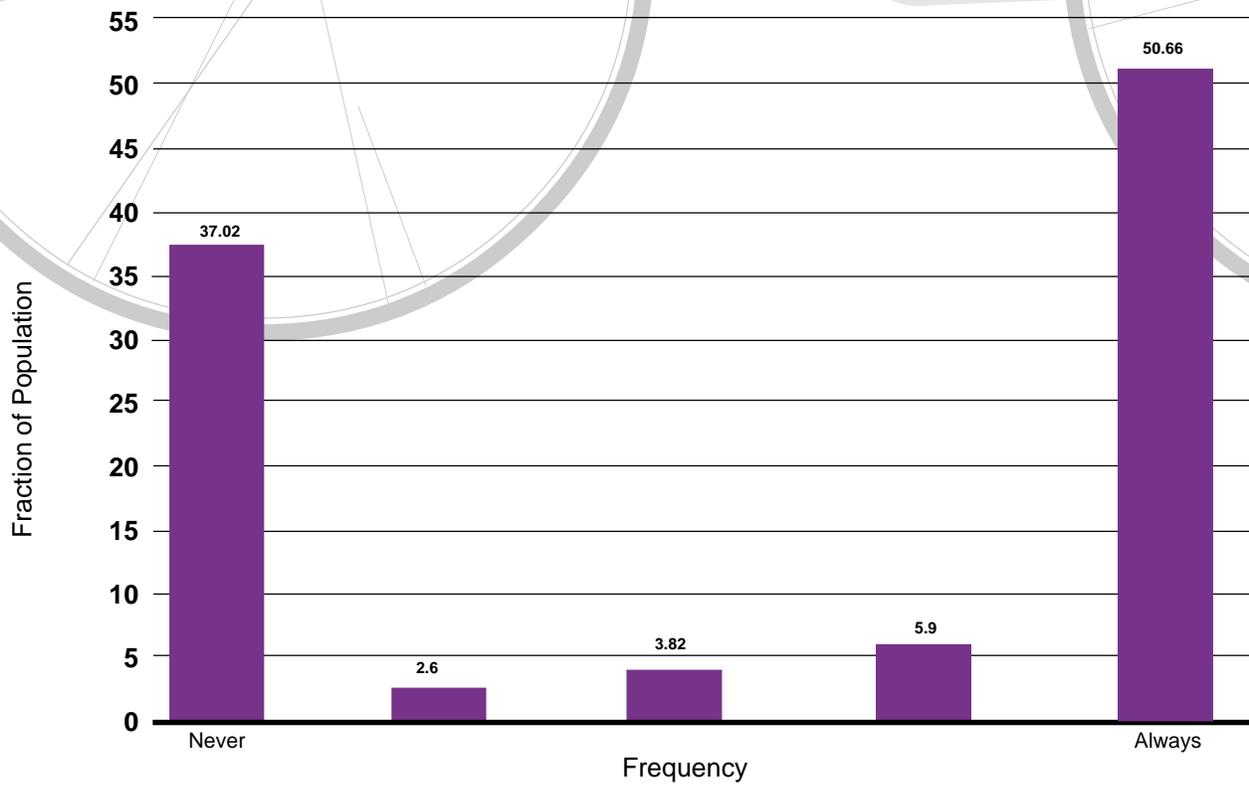


Figure 20
Frequency of Helmet Use by Adults when Riding on Mountain Terrain



Helmet Use By Children.

As reported in Figures 21 - 24, young children who ride bikes are much more likely than adults to wear helmets. Just under 70 percent of young children always wear helmets when riding on mountain terrain, although 16 percent never do. Fewer, 61 percent, of young children always wear a helmet when riding on the street. Just over 13 percent of children never wear a helmet when bicycling on streets.

Figure 21
 Frequency of Helmet Use by Children when Riding on a Paved Bike Path

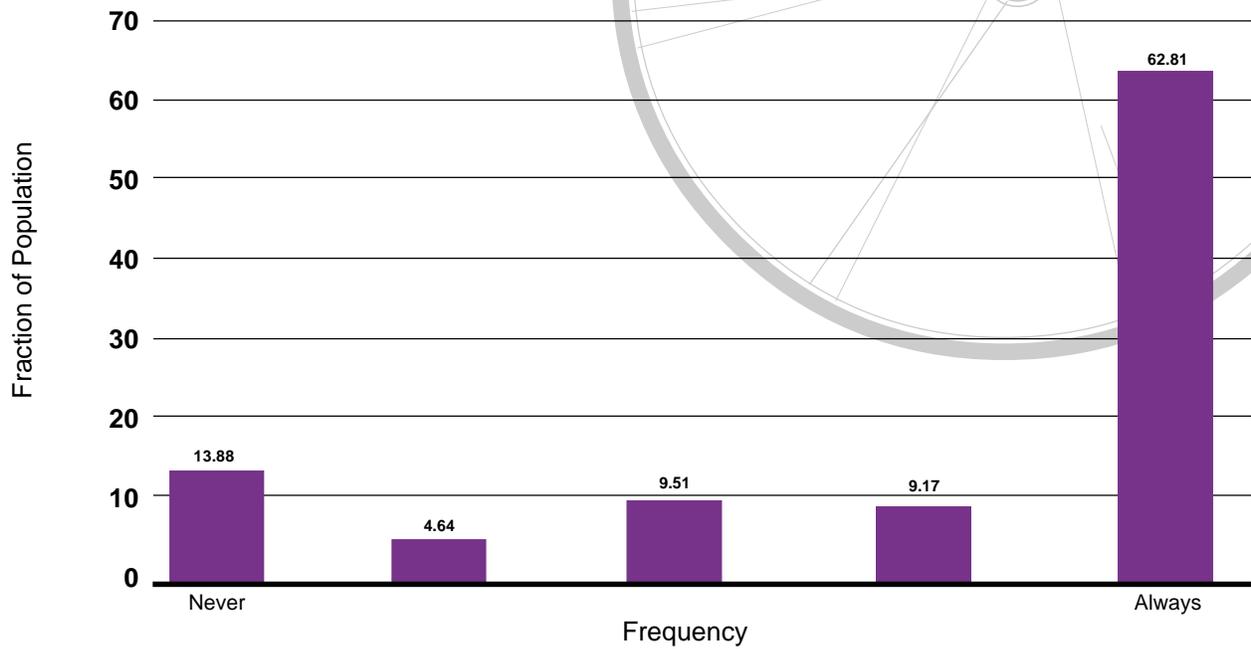


Figure 22
 Frequency of Helmet Use by Children when Riding on Street

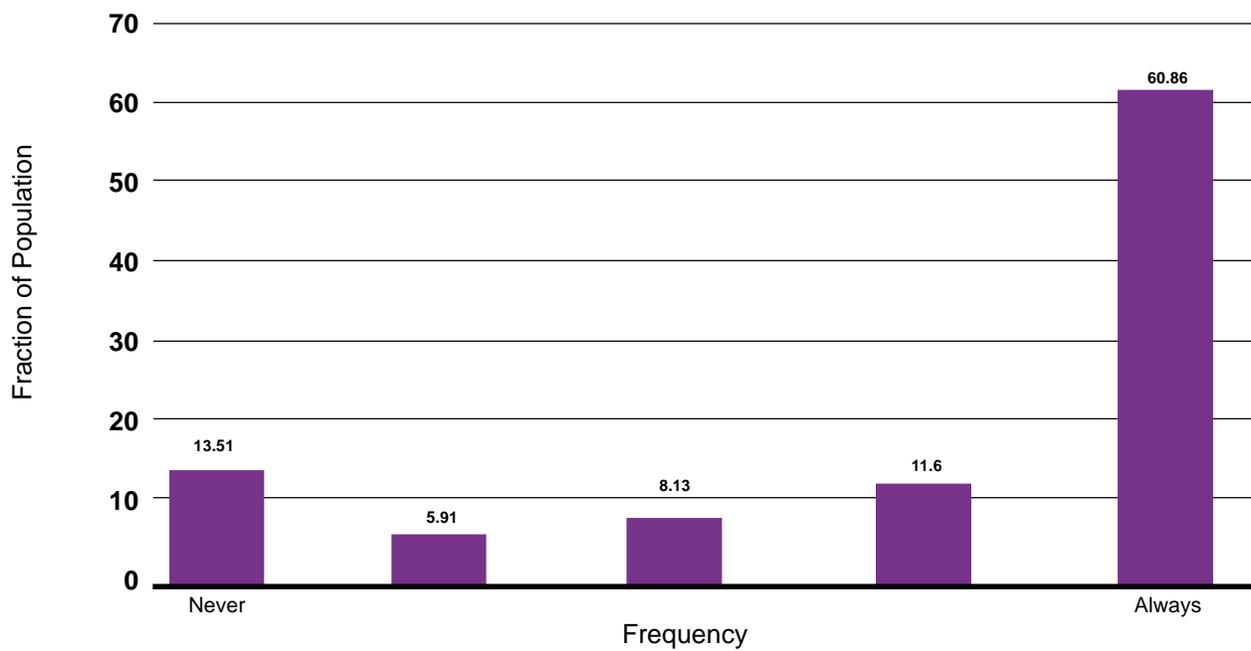


Figure 23
 Frequency of Helmet Use by Children when Riding on Unpaved Trails

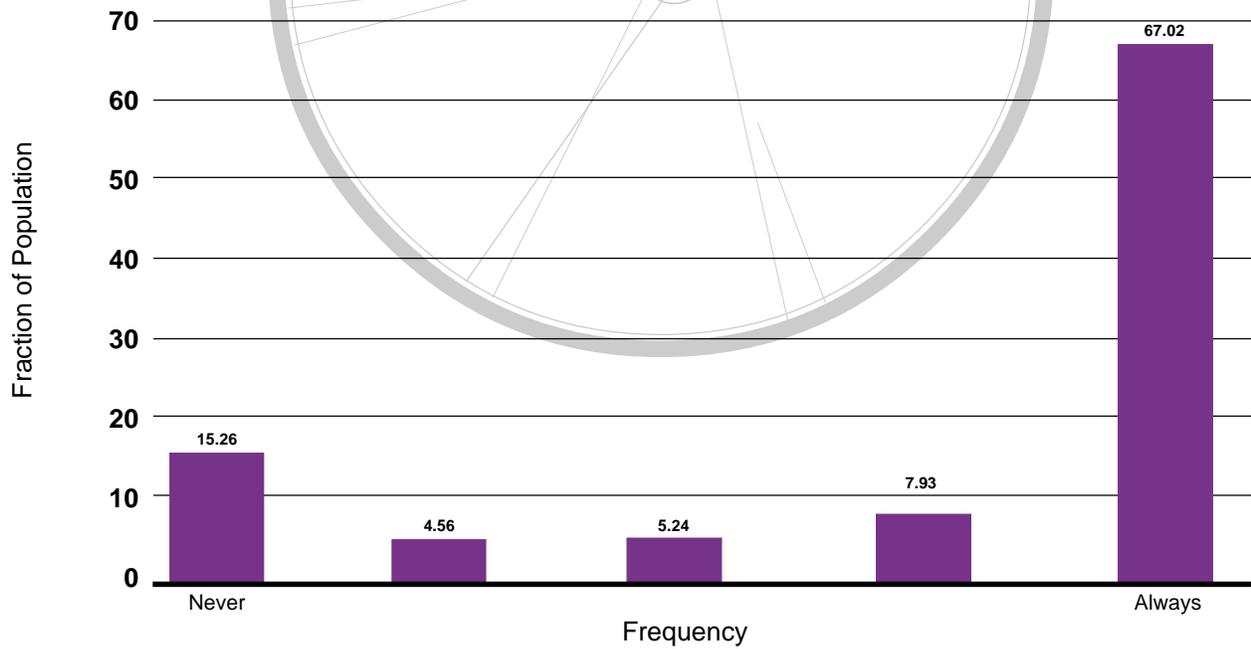
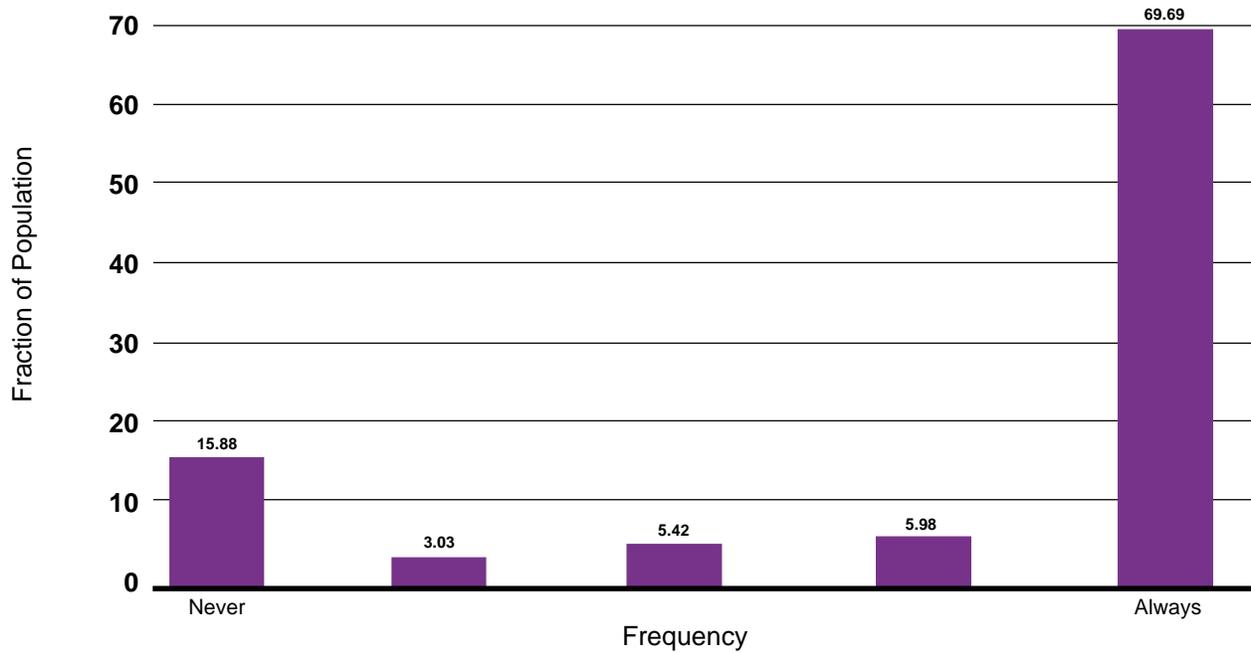


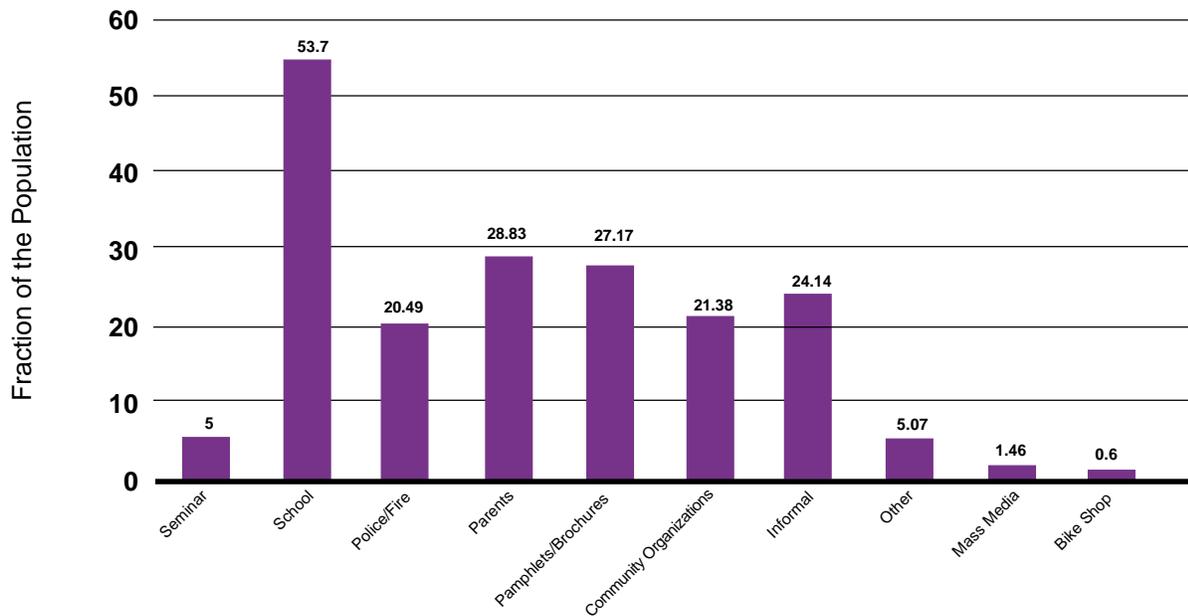
Figure 24
 Frequency of Helmet Use by Children when Riding on Mountain Terrain



Bicycle Safety Instruction.

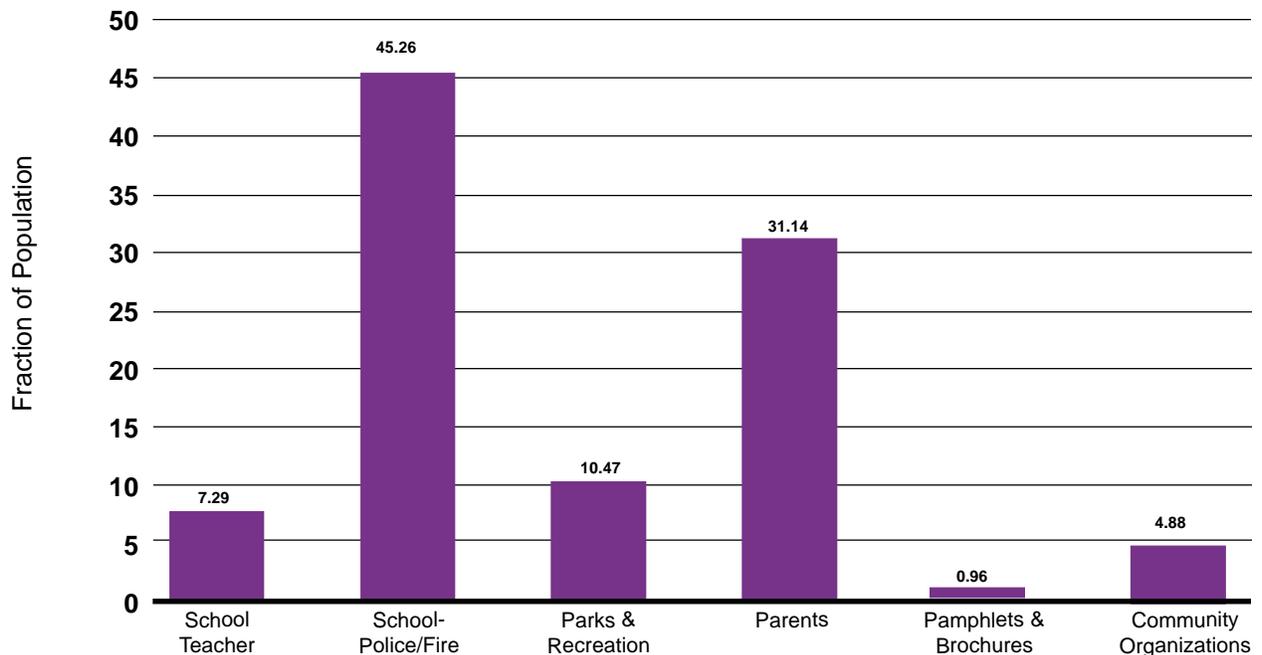
Just over 40 percent of Coloradans report having received some type of bicycle safety instruction. Respondents were asked to indicate all of the types of bicycle safety instruction they have received (many mentioned more than one type). Of those who received instruction, Figure 25 shows that more than half (54%) received some training at school. Other frequent sources of bicycle training instruction included parents, police and fire departments, community organizations, pamphlets and brochures and other informal sources.

Figure 25
Where Colorado Residents Received Bicycle Safety Instruction



The majority of Coloradans believe that the best place for children to receive bicycle safety training is in school (Figure 26). Forty-five percent think that the instruction should be provided by police or fire department personnel, and 7 percent believe that teachers should be providing safety information at schools. Almost a third (31%) think that parents should provide safety information. Smaller percentages feel that bicycle safety instruction should be provided by other organizations in the community—10 percent think that parks and recreation district personnel are best equipped to provide training to children and 5 percent think that it should be provided by community organizations. Although 27 percent of adults indicated that they had received some of their training from pamphlets and brochures, less than 1 percent of residents believe that this is the best way for children to learn about bicycle safety.

Figure 26
Where Colorado Residents Prefer Children Receive Bicycle Safety Instruction

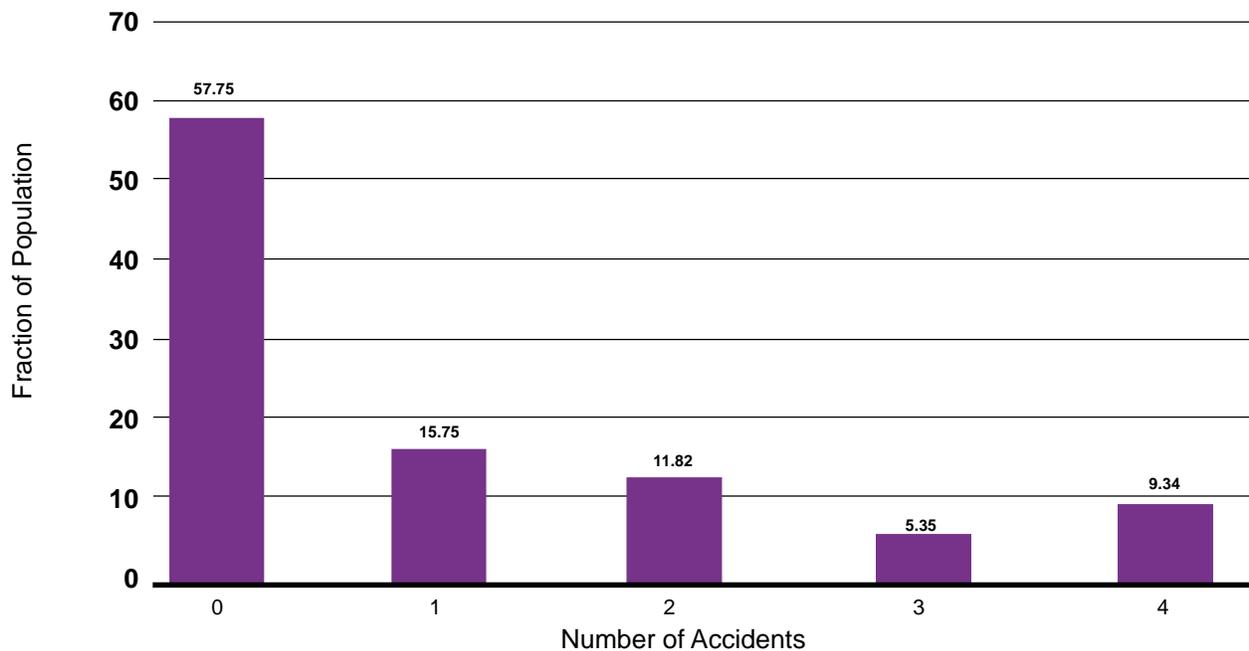


Bicycle Crashes on Unpaved Trails.

In addition to their attitudes and expectations about bicycle crashes, survey respondents were asked about crashes that they have been involved in while riding a bicycle. Nearly half (46%) of all Colorado bicycle riders report having ever had a crash on an unpaved trail, and many riders (27%) have experienced more than one in the last twelve months (Figure 27).

The riders with the most experience, who ride most frequently are least likely to experience a crash. For example, 38 percent of those who bicycle more than once per week reported a crash on an unpaved trail, while almost 60 percent of those who bicycle less than once per month were in a crash.

Figure 27
Number of Bicycle Crashes in the last 12 Months on an Unpaved Trail Among Bicycle Riders



Though many Coloradans have experienced a crash on an unpaved trail, the consequences typically are not severe. As shown in Figure 28, less than five percent indicated that their crash resulted in severe or worse injuries. Fourteen percent indicated that they received no injuries at all,

and 67 percent reported only minor injuries. These reports are consistent with the expenses involved in a bicycle crash on an unpaved trail reported in Figure 29. Three-quarters of the riders who were involved in this type of crash incurred no expenses as a result. Only 5 percent incurred expenses greater than \$100. The average amount spent per crash was \$51.

Figure 28
Severity of Injury in Last Bicycle Crash on an Unpaved Trail

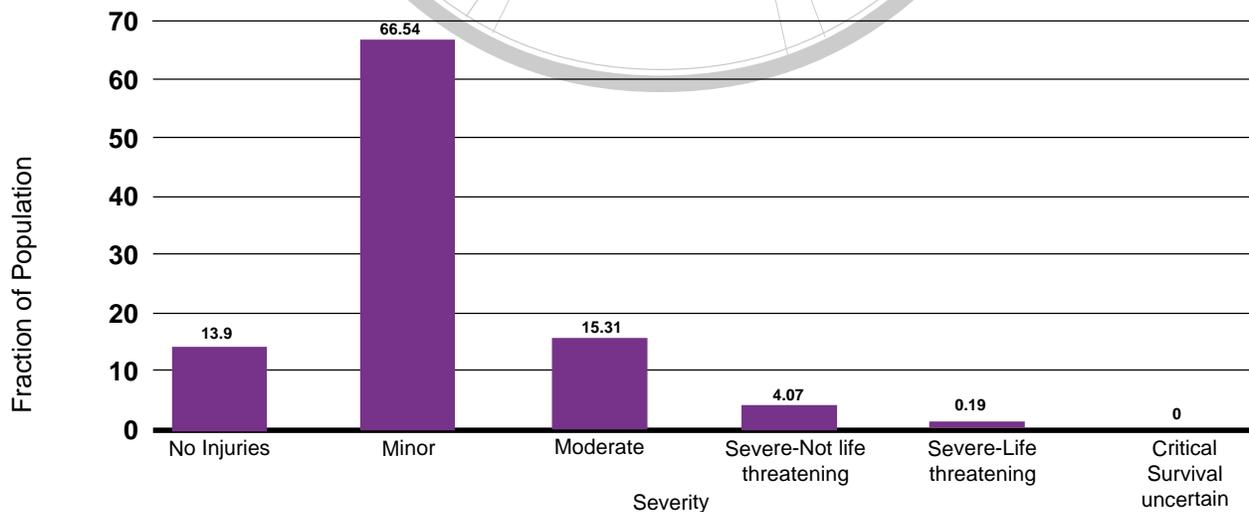
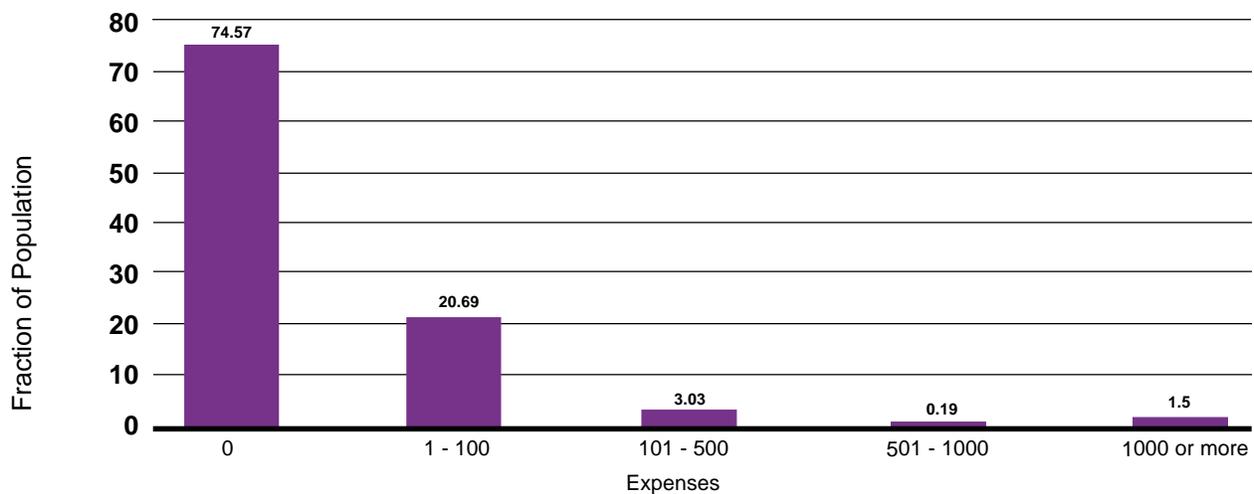


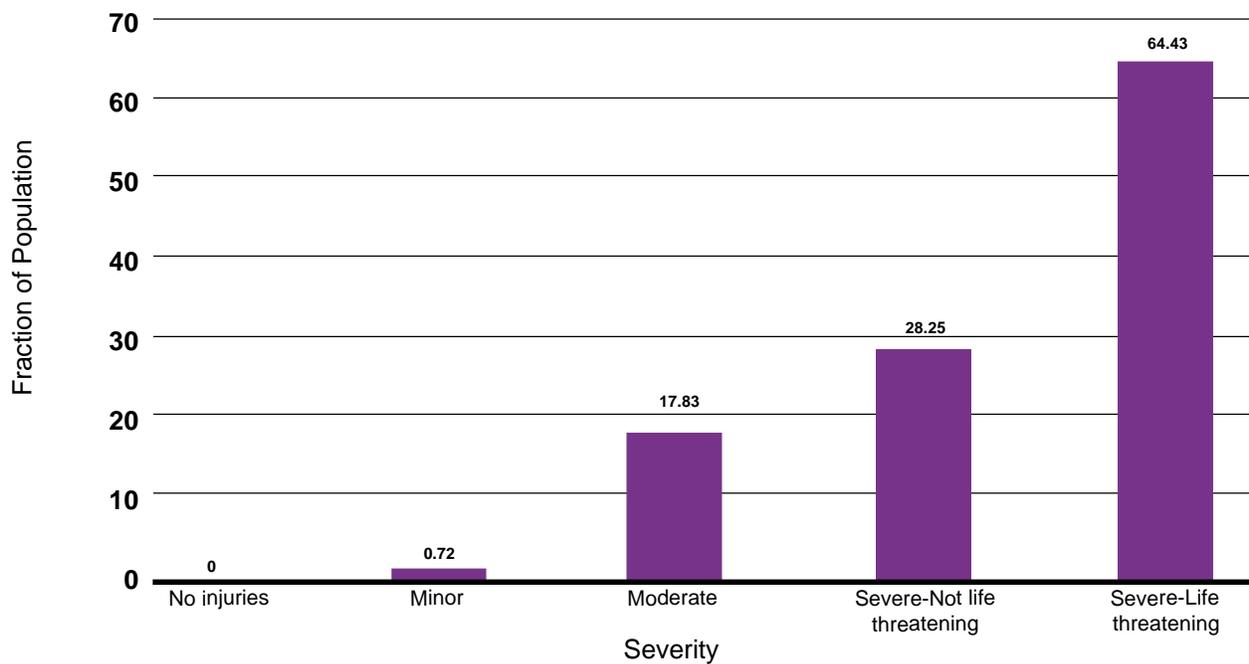
Figure 29
Total Expenses Incurred in Most Recent Bicycle Crash on Unpaved Trail

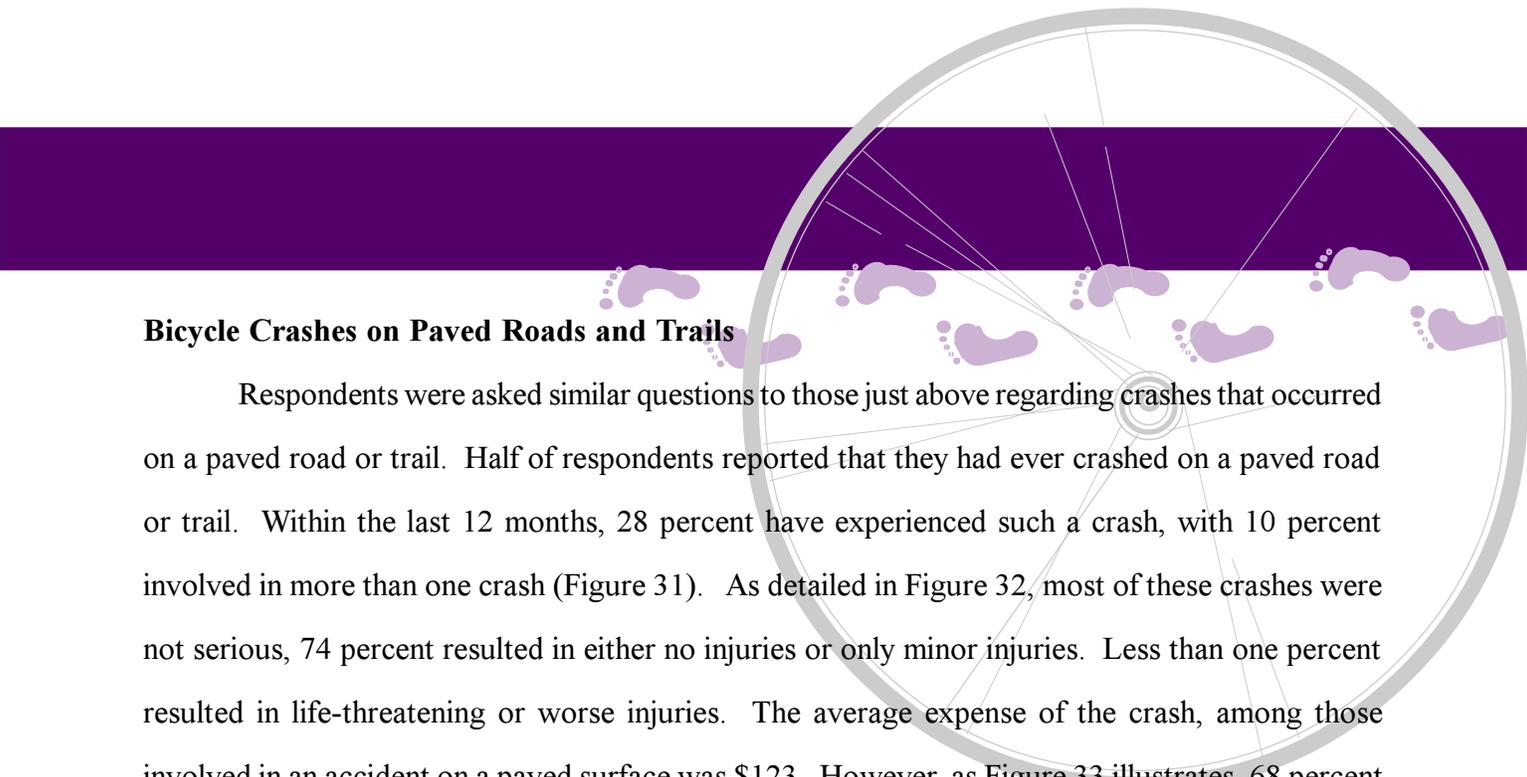


Crash Reporting.

Bicyclists who experienced a crash on an unpaved trail were asked if they reported it to the authorities, including the police, park rangers and medical personnel. Predictably, the fraction of crash victims reporting their crash increased with the severity of the crash. As Figure 30 indicates, no one reported a crash on an unpaved trail that resulted in no injuries. One percent of those who had minor injuries reported their crash. Among those with moderate and severe, non-life-threatening-injuries, the reporting rates were 18% and 28% respectively. The highest reporting rates were for those who had severe life-threatening injuries. Responses to this question are not available for those with critical injuries because the sample size is too small to report reliable estimates.

Figure 30
Fraction Reporting the Most Recent Bicycle Crash on an Unpaved Trail by Severity of Injuries





Bicycle Crashes on Paved Roads and Trails

Respondents were asked similar questions to those just above regarding crashes that occurred on a paved road or trail. Half of respondents reported that they had ever crashed on a paved road or trail. Within the last 12 months, 28 percent have experienced such a crash, with 10 percent involved in more than one crash (Figure 31). As detailed in Figure 32, most of these crashes were not serious, 74 percent resulted in either no injuries or only minor injuries. Less than one percent resulted in life-threatening or worse injuries. The average expense of the crash, among those involved in an accident on a paved surface was \$123. However, as Figure 33 illustrates, 68 percent incurred no expenses, while 3 percent incurred expenses that exceeded \$1000. As with crashes on unpaved surfaces, the fraction reporting their injuries is low. Nine percent of respondents experiencing a bicycle crash indicated that it was reported to authorities. Figure 34 demonstrates the same pattern that we found earlier, the more severe the injuries, the more likely that a report is made. Three percent of those with no injuries or only minor injuries are reported, but nearly all, 91 percent, of crashes with severe-life threatening injuries are reported. (Again, there were too few individuals with critical injuries to calculate a reporting percentage for this group).

Figure 31
Number of Bicycle Crashes on a Paved Road Among Bicycle Riders
Within the Last 12 Months

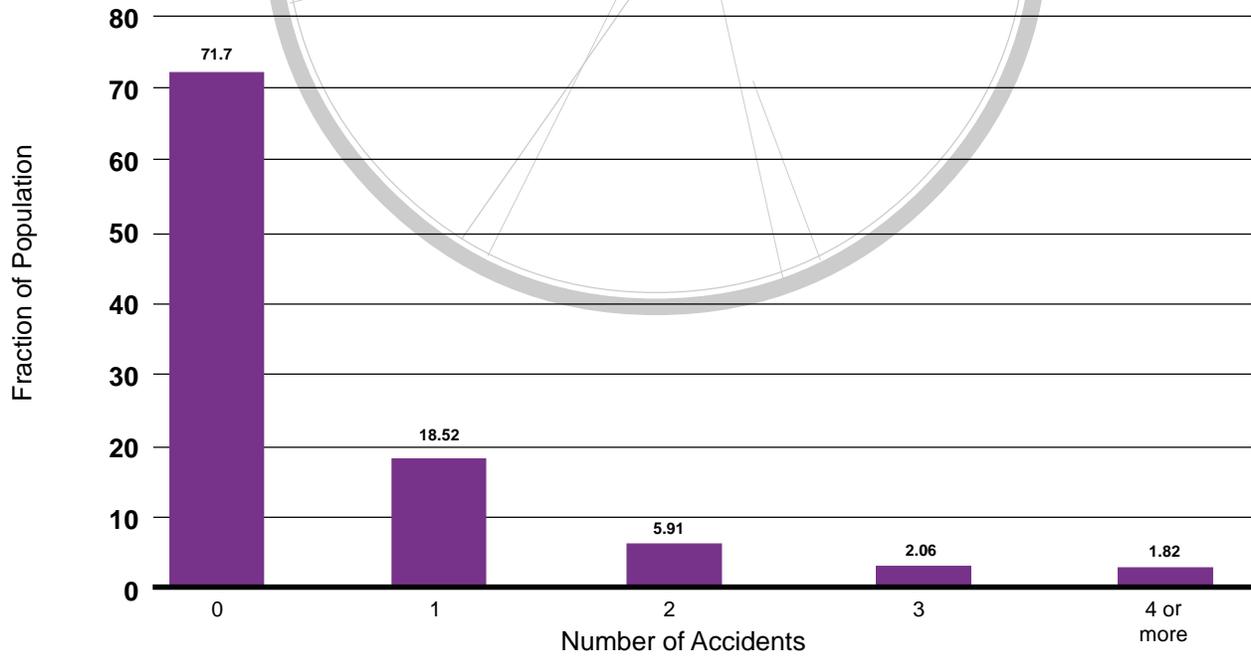


Figure 32
Severity of Injury in Last Bicycle Crash on a Paved Road

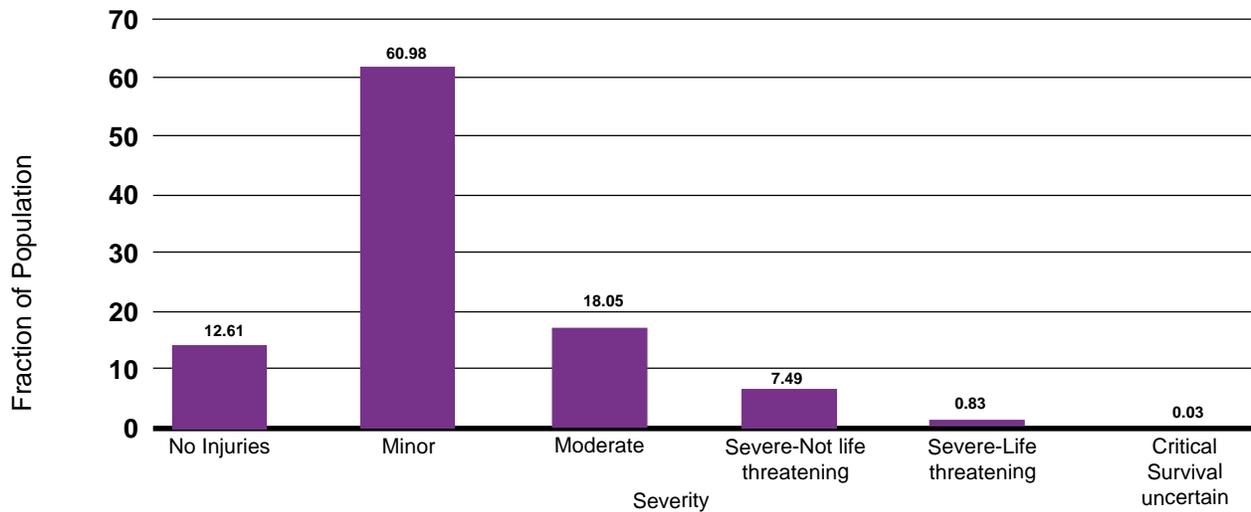


Figure 33
Total Expenses Incurred in Most Recent Bicycle Crash on Paved Road

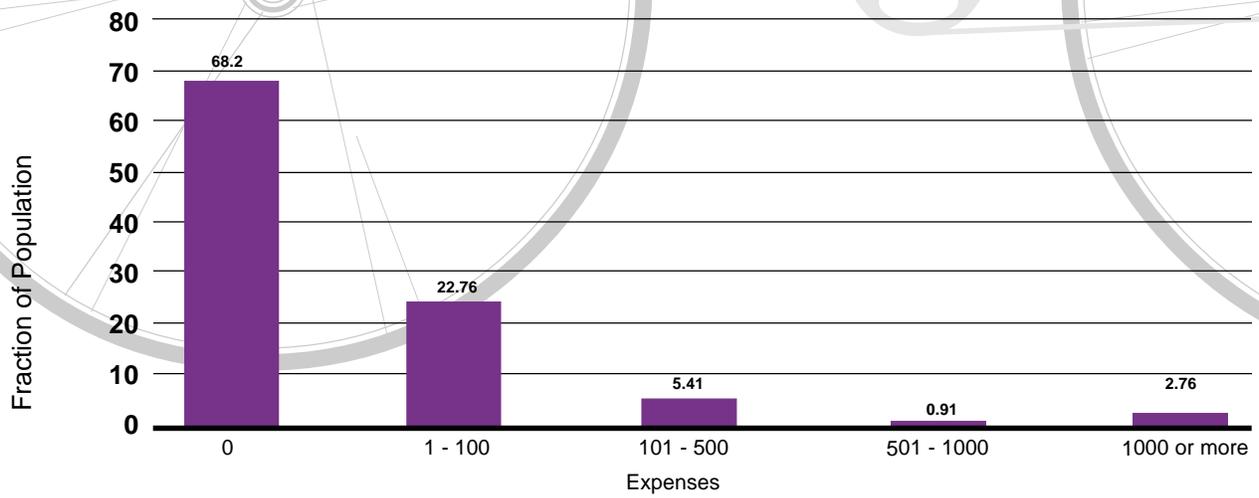


Figure 34
Fraction Reporting the Most Recent Bicycle Crash on a Paved Road by Severity of Injuries

