

Georgia Traffic Safety Facts

2020 Data

June 2022

In this fact sheet, information is presented as follows.

- [Motorcyclist Fatalities and Serious Injuries](#)
 - [Motorcyclists Fatalities](#)
 - [Motorcyclists Serious Injuries](#)
 - [Helmet Use](#)
- [Crash Characteristics](#)
 - [Urban vs. Rural](#)
 - [Environmental Characteristics](#)
- [Contributing Circumstances](#)
 - [Speeding](#)
 - [Alcohol Involvement](#)
- [Motorcycle Licensure & Vehicle Registration](#)
- [Demographics](#)

This fact sheet contains information from the Fatality Analysis Reporting System (FARS), Georgia Department of Transportation (GDOT) crash data modified by Crash Outcomes Data Evaluation System (CODES) at the Department of Public Health (DPH), Georgia Department of Driver Services (DDS), Georgia Department of Revenue (DOR), Georgia Emergency Medical Services Information System (GEMSIS), Hospital Discharge Data, Emergency Room Data, and the Georgia Trauma Registry.



GOVERNOR'S OFFICE OF HIGHWAY SAFETY

7 MLK, Jr Dr SE
Suite #643
Atlanta, GA 30334

(404) 656-6996
www.gahighwaysafety.org

MOTORCYCLES

As defined in this fact sheet, a motorcyclist is a general term to refer to either the rider (motorcycle operator) or passenger. A motorcycle includes two- or three-wheeled motorcycles, off-road motorcycles, mopeds, motor scooters, minibikes, and pocket bikes.

2020 Key Findings

- There were 192 motorcyclist fatalities that occurred in motor vehicle traffic crashes on Georgia roadways – the largest number of motorcyclist fatalities experienced in the past decade.
- Motorcycles consistently represent 2 percent of all registered vehicles and are involved in 1 percent of all motor vehicle crashes in Georgia. Motorcycle operators also represent 6 percent of all licensed drivers, but 21 percent of all driver fatalities.
- Among all the traffic-related fatalities and serious injuries involving motorcyclists, 97 percent were riding on a motorcycle, and 3 percent were occupants of other vehicles or non-motorists.
- Helmet use (90%) among Georgia motorcyclists involved in a crash resulted in an estimated 103 lives saved.
- The majority of all motorcycle crashes occur in north Georgia. Generally, there are higher motorcycle crash rates in Atlanta Region and rural counties in the northeast along the North Carolina, South Carolina, and Alabama borders.
- Nearly half (46 percent) of motorcycle operators involved in crashes were riding without a valid motorcycle designation (Class M or MP) on their driver's license at the time of the crash.
- Motorcycle operators losing control is the top contributing factor among motorcyclists involved in single-vehicle crashes—53 percent of operators lost control of their motorcycle moments before colliding with another object that was not another vehicle.
- The total motorcycle-related hospitalization and emergency room charges in Georgia was \$230.5 million.
- Motorcyclists aged 25-to-34 years have the highest proportions and rates (per 100,000 population) of police-reported suspected serious injuries, EMS transports, trauma care, emergency room visits, and hospitalizations compared to motorcyclists in other age groups.

Motorcyclist Fatalities and Serious Injuries

Motorcyclist Fatalities

In 2020, there were 1,664 fatalities that occurred in motor vehicle traffic crashes on Georgia roadways – the largest number of traffic fatalities since 2006. The 192 motorcyclist fatalities that occurred in 2020 represented 12 percent of all traffic fatalities (Figure 1) and is the highest number of motorcyclist fatalities experienced in the past decade. Between 2019 and 2020:

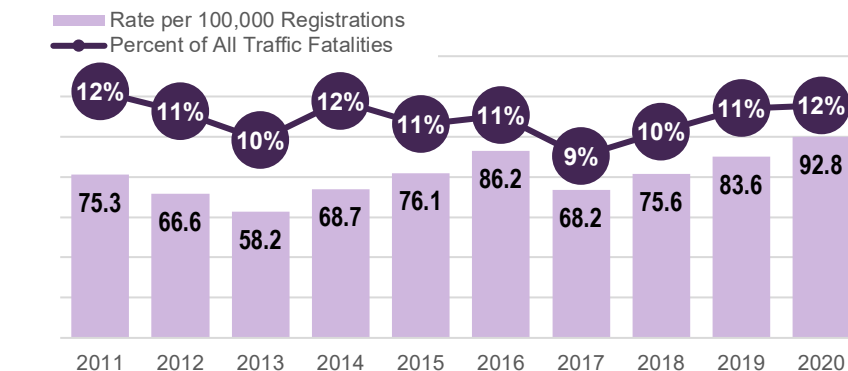
- Motorcycle registrations increased by 2 percent, from 203,343 to 206,834.
- Motorcyclist fatalities increased by 13 percent, from 170 to 192.
- The rate of motorcycle fatalities increased by 11 percent, from 83.6 to 92.8 motorcycle fatalities per 100,000 motorcycle registrations.

Table 1 presents the number of total traffic fatalities, Georgia motorcycle registrations, and motorcyclist fatalities from 2011 to 2020.

Motorcyclist Injuries

The following section describes various responses to serious injuries experienced by motorcyclists involved in motor vehicle traffic crashes. Injured motorcyclists can be counted multiple times for each response (e.g., an injured person may be counted as a hospital and/or trauma center patient). The various responses to injuries are described in Table 2.

Figure 1. **Rate and Percent of Motorcyclist Fatalities, 2011-2020**



Source: FARS 2011–2020; FY2014–FY2019 DOR Annual Reports; DOR 2019–2020

Table 1. **Rate and Percent of Motorcyclist Traffic Fatalities, 2011-2020**

Year	Total Traffic Fatalities	Registered Motorcycles	Motorcyclist Fatalities		
			Number	Percent of All Traffic Fatalities	Rate per 100,000 Registrations
2011	1,226	199,253	150	12%	75.3
2012	1,192	201,206	134	11%	66.6
2013	1,180	199,287	116	10%	58.2
2014	1,164	199,445	137	12%	68.7
2015	1,432	199,796	152	11%	76.1
2016	1,556	199,504	172	11%	86.2
2017	1,540	203,783	139	9%	68.2
2018	1,504	203,639	154	10%	75.6
2019	1,491	203,343	170	11%	83.6
2020	1,664	206,834	192	12%	92.8

Note: Motorcycle registrations include commercial and non-commercial motorcycles.
Source: FARS 2011–2020; FY2014–FY2019 DOR Annual Reports; DOR 2019–2020

Table 2. **Description of Traffic Injury Surveillance Data Sources**





Traffic Injury Surveillance Data Sources	
	Suspected Serious Crash Injuries are reported by law enforcement responding to a motor vehicle crash scene.
	Emergency Medical Services include all ground and air transports to an emergency facility for patients who are injured and require medical care in the state of Georgia.
	Trauma Center patients are identified as those with serious injuries that meet specific criteria. The State of Georgia follows the identification and treatment guidelines established by the American College of Surgeons along with the Centers of Disease Control and Prevention (CDC) Field Triage Criteria.
	Emergency Room and Hospitalizations include Georgia resident discharges from Georgia non-federal acute care hospitals. Emergency room (ER) visits include individuals who were discharged directly from the ER. Hospitalizations include individuals who may have visited the emergency room.

Table 3 shows the number and percent change of motorcycle traffic-related serious injuries for each injury surveillance source. Most surveillance sources show an increase in motorcyclists with serious injuries. Between 2019 and 2020:

- Police-reported motorcyclists suspected injuries increased by 5 percent.
- The number of motorcyclists transported to a hospital facility by the Emergency Medical Services (EMS) increased by 11 percent.
- Motor vehicle traffic-related emergency room only visits involving motorcyclists decreased by 3 percent and hospitalizations increased 9 percent.
- Motorcyclist injuries treated by designated and non-designated Trauma Centers decreased by 8 percent.

Motorcyclists aged 25-to-34 years have the highest proportions and rates (per 100,000 population) of police-reported suspected serious injuries, EMS transports, trauma care, emergency room visits, and hospitalizations compared to motorcyclists in other age groups. Young motorcyclists ages 21-to-24 years have the highest rate of police-reported suspected serious injuries, EMS transports, and emergency room visits compared to other age groups.

Table 3. **Motorcyclists Traffic-Related Serious Injuries by Injury Surveillance Source, 2019-2020**

Injury Surveillance Source	2019	2020	2019-2020 Percent Change
Police Crash Reports	793	834	▲ + 5%
Emergency Medical Services	2,069	2,300	▲ +11%
Trauma	1,487	1,374	▼ - 8%
Emergency Department	3,346	3,229	▼ -3%
Hospital	1,016	1,105	▲ 9%

Note: All persons involved in a Georgia crash receive care in a Georgia Emergency Department or Hospital regardless of their state residency. EMS arrivals to motor vehicle traffic crashes with reported serious injuries and fatalities may or may not have resulted in transport to a medical facility.

Source: CODES 2019- 2020, DPH Hospital Inpatient Discharge and Emergency Room Visit Data 2019-2020, GEMSIS 2019-2020, Georgia Trauma Registry 2019-2020

Table 4. **Motorcyclists Traffic-Related Serious Injuries, Percent of Total Serious Injuries, and Rate per 100,000 Population by Age Group and by Injury Surveillance Source, 2020**

Age Group	Police-Reported Suspected Serious Crash Injuries			Emergency Medical Services			Trauma Center			Emergency Room			Hospitalizations		
	#	%	Rate	#	%	Rate	#	%	Rate	#	%	Rate	#	%	Rate
<15	12	1%	0.6	46	2%	2.2	15	1%	0.7	135	4%	6.6	3	0%	0.2
15-24	142	17%	9.7	433	19%	29.7	219	16%	15.0	681	21%	46.7	142	13%	9.7
15-20	54	6%	6.1	188	8%	21.2	98	7%	11.1	306	9%	34.5	53	5%	6.0
21-24	88	11%	15.4	245	11%	42.9	121	9%	21.2	375	12%	65.6	89	8%	15.6
25-34	217	26%	14.4	628	27%	41.7	361	26%	24.0	885	27%	58.8	283	26%	18.8
35-44	160	19%	11.5	398	17%	28.5	251	18%	18.0	585	18%	41.9	215	19%	15.4
45-54	153	18%	11.0	379	16%	27.2	251	18%	18.0	494	15%	35.5	216	20%	15.5
55-64	93	11%	7.0	279	12%	21.1	191	14%	14.4	320	10%	24.2	166	15%	12.6
65+	45	5%	2.9	133	6%	8.4	86	6%	5.5	129	4%	8.2	80	7%	5.1
Total	834*	100%	7.8	2,300	100%	21.5	1,374	100%	12.8	3,229	100%	30.2	1,105	100%	10.3

*Includes twelve suspected serious injuries with unknown age

Source: CODES 2020, DPH-OHIP Hospital Inpatient Discharge and Emergency Room Visit Only Data 2020, GEMSIS 2020, Georgia Trauma Registry 2020

Suspected Serious Crash Injuries

According to 2020 police crash reports, 4,138 motorcyclists (3,876 operators and 262 passengers) were involved in motor vehicle traffic crashes, and there were 834 suspected serious injuries among motorcyclists. In 2020, motorcyclists with police-reported suspected serious injuries increased by 18 percent from the 705 serious injuries in 2019.

Out of the 3,786 crashes that involved motorcyclists, 58 percent were multi-vehicle crashes (involving other vehicles that were not a motorcycle vehicle body type), 40 percent were single vehicles (involving only one motorcyclist), and 2 percent were crashes involved two or more motorcycles. Sixty-two percent of motorcyclist serious injuries and 66 percent of all motorcyclist fatalities occurred in multiple-vehicle crashes.

Figure 2 shows the percent of fatalities or serious injuries among all persons involved in crashes with at least one motorcyclist in 2020. Among all the serious injuries involving motorcyclists:

- 97 percent rode on a motorcycle (represented by purple in Figure 4).
 - 91 percent were the motorcyclist operator
 - 6 percent were motorcycle passengers
- 3 percent were occupants of other vehicles or non-motorists (represented by blue in Figure 4).
 - 2 percent were occupants of vehicles that were *not* a motorcycle vehicle body type.
 - 1 percent were non-motorists (i.e., pedestrians or bicyclists).

In 2020, 11 percent (89 out of 841) of all motorcycle vehicles involved in serious injury crashes were multi-occupant motorcycles (had at least two occupants—operators and passengers—riding on a motorcycle). Passengers of motorcyclists are likely to obtain the same injuries as the motorcycle operators when they are involved in a traffic crash. This risk of a motorcycle operator obtaining a fatal or serious injury (0.70) was not statistically different from the risk of a motorcycle passenger obtaining a fatal injury (0.64).¹

Nearly three-quarters of all passengers on motorcycles involved in traffic crashes or serious injury crashes were female—most were in the 25-to-34 age group. Thirteen out of the 14 motorcycle passengers involved in fatal crashes were female. See *Demographics* section on page 14 for operator information.

Figure 2. **Percent of Persons Fatally or Seriously Injured in Crashes Involving Motorcyclists by Person Type, 2020**

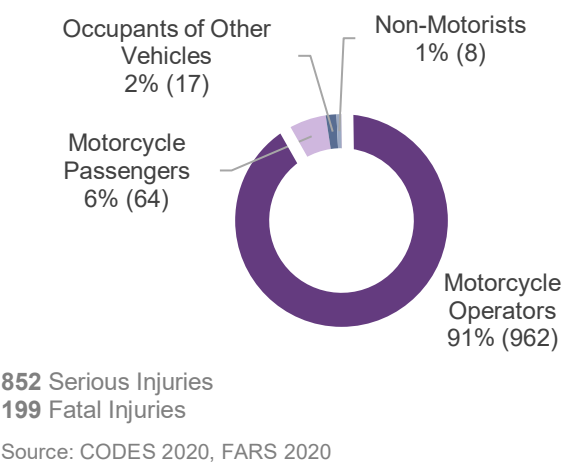


Table 5. **Serious and Fatal Injuries among Multi-Occupant Motorcycles by Person Type, 2020**

Person Type	Fatal or Serious Injury	No Injuries	Total
Motorcycle Passenger	64 (64%)	36 (36%)	100
Motorcycle Operator	71 (70%)	31 (30%)	102

Source: CODES 2020, FARS 2020

¹ The relative risk of motorcycle passengers on multi-occupant motorcycles and involved in serious injury crashes obtaining a serious or fatal injury compared to motorcycle operators is 0.92 (CI:0.75-1.11)—statistically insignificant.

Emergency Medical Services

In 2020, the Emergency Medical Services (EMS) transported 2,300 motorcyclists involved in motor vehicle traffic crashes to a hospital facility—an 11 percent increase compared to 2,069 in 2019. Six percent of all motor vehicle traffic-related EMS transports involved motorcyclists.

In 2020, 84 percent (1,929 out of 2,300) of the motorcyclists transported by EMS were male. The rate of EMS transports per 100,000 population was 37.1 for male motorcyclists and 7.8 for female motorcyclists. Male motorcyclists in the 21-to-24 and 25-to-34 age groups had the highest rate of EMS transports compared to other age groups. The EMS transport rate for male motorcyclists was 72.2 for the 21-to-24 age group and 71.5 for the 25-to-34 age group.

Trauma Center Patients

According to the Georgia Trauma Registry data, motor vehicle traffic-related incidents (motor vehicle occupants, motorcyclists, pedestrians, and bicyclists) accounted for nearly one-third of all injuries treated by designated and non-designated Georgia Trauma Centers² in 2020. In 2020, there were a total of 1,374 motorcyclists identified as trauma patients treated within Georgia Trauma Centers—an 8 percent decrease compared to 1,487 in 2019. Nearly one out of every three motorcyclists (31 percent) treated at the trauma centers had minor injuries, and 12 percent had very severe injuries.

Emergency Room Visits & Hospitalizations

In 2020, there were 4,335 motor vehicle traffic-related emergency room visits and hospitalizations³ involving motorcyclists—a 1 percent decrease compared to 4,362 in 2019. Motorcyclists aged 25-to-34 years had the highest rate of emergency room visits and hospitalizations compared to other age groups – 58.8 emergency room visits and 18.8 hospitalizations for every 100,000 population. The total motorcycle-related hospitalization and emergency room charges in Georgia was \$230.5 million.

In 2020, the total **motorcycle-related** hospitalization and emergency room charges in Georgia was
\$230.5 M

Helmet Use

Since 1969, Georgia's universal helmet law⁴ has never been repealed or changed. Three of the five bordering states (Tennessee, Alabama, and North Carolina) have also not repealed or changed their helmet law. Most other states have certain specifications for helmet use or no helmet law. The stability of Georgia's universal helmet law may contribute to the high helmet usage rate—estimated to be 97.8 percent across the state in 2021.

In 2020, nearly 9 out of 10 fatally injured motorcyclists in Georgia (87 percent) were reported wearing a helmet— compared to 57 percent nationwide. Based on reported known helmet use, 17 percent of motorcyclists involved in crashes, 15 percent of motorcyclists with serious injuries, and 10 percent of motorcyclists fatally injured were un-helmeted.

² Not all hospitals are designated as Trauma Centers.

³ Some hospitalizations may include emergency room visit information if the individuals were admitted into the same facility. Emergency room visits only include individuals who were discharged directly from the ER. Hospitalizations and emergency room visits include Georgia residents only, while fatalities can be a person out-of-state.

⁴ O.C.G.A. 40-6-315

Table 6. **Motorcyclists Involved in Crashes, Serious Injuries, and Fatalities by Helmet Use, 2020**

	Total	Helmeted		Un-helmeted		Unknown		Percent Based on Known Helmet Use	
		#	%	#	%	#	%	Helmeted	Un-helmeted
Motorcyclists involved in crashes	4,138	3,220	78%	637	15%	281	7%	83%	17%
Motorcyclists with serious injuries	834	678	81%	121	15%	35	4%	85%	15%
Fatally injured motorcyclists	192	167	87%	18	9%	7	4%	90%	10%

Source: CODES 2020, FARS 2020

Helmet use among Georgia motorcyclists resulted in an estimated 103 lives saved⁵. If all Georgia motorcyclists had worn helmets, an additional seven lives would have been saved. **Although not all crashes are survivable, helmet use is still an effective means of preventing fatalities.**

According to the National Center for Statistics and Analysis, helmets are estimated to be 37 percent effective in preventing fatalities for motorcycle operators and 41 percent for motorcycle passengers.⁶ *"In other words, for every 100 motorcycle [operators] killed in crashes while not wearing helmets, 37 of them could have been saved had all 100 worn helmets."* NHTSA estimates that Georgia saved \$116 million in economic costs because of helmet use in 2017⁷.

Helmet use among Georgia motorcyclists resulted in an estimated 103 lives saved. Although not all crashes are survivable, helmet use is still an effective means of preventing fatalities. An additional 37 for every 100 motorcyclists fatally injured could have been saved if they had all worn helmets.

Crash Characteristics

According to the police crash reports, there were 3,786 motor vehicle traffic crashes that involved at least one motorcycle in 2020—a 4 percent decrease compared to 3,948 motorcycle crashes that occurred in 2019. Despite the decrease in motorcycle crashes, the number of crashes where a motorcyclist was seriously or fatally injured increased by 18 percent and 10 percent, respectively. Table 8 shows the number of motorcyclist traffic crashes, serious injury crashes, and fatal crashes between 2016 and 2020.

Table 7. **Motorcycle (MC) Traffic Crashes, Serious Injury Crashes, and Fatal Crashes, 2016-2020**

Year	MC Fatal Crashes	MC Serious Injury Crashes	MC Crashes
2016	167	1,020	4,498
2017	138	955	4,158
2018	151	573	3,121
2019	168	686	3,948
2020	185	808	3,786

Source: CODES 2016- 2020, FARS 2016-2020

⁵ National Center for Statistics and Analysis (2011, March). Determining Estimates of Lives and Costs Saved by Motorcycle Helmets. (DOT HS 811 433). Washington, DC: National Highway Traffic Safety Administration.

⁶ National Center for Statistics and Analysis. (2020, June). Motorcycle helmet use in 2019 – Overall results (DOT HS 812 936). Washington, DC: National Highway Traffic Safety Administration.

⁷ National Center for Statistics and Analysis (2019, December). Lives and Costs Saved by Motorcycle Helmets. (DOT HS 812 867). Washington, DC: National Highway Traffic Safety Administration.

Urban vs. Rural⁸

In 2020, there were 1,830.5 motorcycle crashes for every 100,000 motorcycle registrations statewide (Table 8). Motorcycle crashes are more frequent in urban areas than in rural areas.

- The Atlanta Region accounted for 37 percent (1,407 out of 3,786) of all motorcycle crashes and 33 percent of all motorcycle registrations.
- Other urban counties accounted for 40 percent (1,517 out of 3,786) of all motorcycle crashes and 40 percent of all motorcycle registrations.

Table 8. **Motorcycle Crashes, Motorcycle Registrations, and Motorcycle Crash Rate by Region Type, 2020**

Region	Motorcycle Crashes		Registered Motorcycles		Motorcycle Crash Rate
	Number	Percent	Number	Percent	per 100,000 Registrations
Atlanta Region ⁹ (10 counties)	1,407	37%	68,314	33%	2,059.6
Other Urban (31 counties)	1,517	40%	83,365	40%	1,819.7
Rural Counties (118 counties)	862	23%	55,155	27%	1,562.9
Statewide	3,786	100%	206,834	100%	1,830.5

Source: CODES 2020, DOR 2020

Table 9 below shows the percent of motorcycle crashes by region and roadway classification in 2020. Most motorcycle crashes statewide occurred on minor arterial roadways (27 percent) and local roadways (24 percent).

- The Atlanta Region experienced more motorcycle crashes on minor arterial roadways (11 percent) compared to any other roadways classification in the region.
- Other urban counties experienced more motorcycle crashes on minor arterial roadways (11 percent) and local roads (11 percent).
- Rural counties experienced more motorcycle crashes on collector roads (roads that connect local roads and streets)—7 percent. Three percent of all traffic crashes and 7 percent of motorcycle crashes were on collectors in rural counties.

Table 9. **Motor Vehicle Traffic Crashes Involving Non-Motorists by Region and Roadway Classification, 2020**

Roadway Classification	Atlanta Region	Other Urban Counties	Rural Counties	Statewide
Interstate	4%	2%	1%	7%
Principal Arterial	7%	10%	5%	22%
Minor Arterial	11%	11%	5%	27%
Collectors	4%	6%	7%	17%
Local	9%	11%	5%	24%
Other	1%	--	--	1%
All Roadways	37%	40%	23%	100%

Note: The sum of the individual cells may not equal row or column totals due to rounding error. Totals include MC crashes with unknown roadway classification Source: Numetric 2020

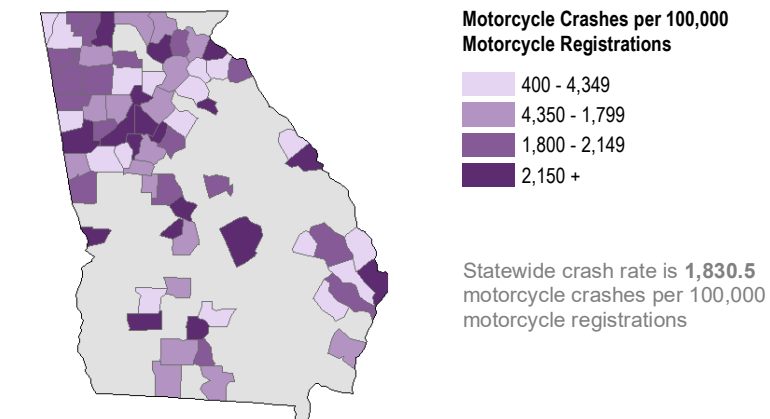
⁸ Rural counties are counties that have a residential population less than 50,000 persons. This is different than roadway classifications where urban road systems can be located in urban clusters (or metropolitan areas) of at least 2,500 persons within the rural counties.

⁹ The Atlanta Region includes the ten counties that are defined by the Atlanta Regional Commission (ARC): Cherokee, Clayton, Cobb, DeKalb, Douglas, Fayette, Fulton, Gwinnett, Henry, and Rockdale counties.

Figure 3 shows the motorcycle crash rate for counties with ten or more motorcycle crashes in 2020 and their deviation from the statewide percent of motorcycle crash rate (1,830.5 motorcycle crashes for every 100,000 motorcycle registrations).

The majority of all motorcycle crashes occur in north Georgia. Generally, there are higher motorcycle crash rates in Atlanta Region and rural counties in the northeast along the North Carolina, South Carolina, and Alabama border. Nine percent of all motorcycle operators involved in Georgia traffic crashes had a license from another state – five percent were licensed from a bordering state (Alabama, Florida, North Carolina, South Carolina, or Tennessee).

Figure 3. **Motorcycle (MC) Crashes per 100,000 MC Registrations for Counties with 10+ MC Crashes, 2020**



Source: CODES 2020

The most motorcycle serious injury and fatal crashes occurred within the four counties of the Atlanta Region – Fulton, Cobb, Dekalb, and Gwinnett counties. However, Lumpkin County has the highest motorcycle serious injury and fatal crashes per 100,000 motorcycle registrations. Rural counties have the highest rate of motorcycle crashes for every 1,000 motor vehicle crashes that occur in the county—particularly in Clay, Charlton, Franklin, and Irwin counties.

Table 10. **Top Counties with 10+ MC Crashes and the Highest Motorcyclists Serious Injury and Fatal Crashes and Motorcycle Crash Rate, 2020**

Rank	Motorcyclist Serious Injuries and Fatalities Crashes				All Motorcycle Crashes			
	Count		Rate		Rate		Rate	
	County	Number	County	Rate	County	Rate	County	Rate
1	Fulton	85	Laurens	1,283.5	Lumpkin	4,357.0	Lumpkin	73.6
2	Cobb	63	Murray	1,037.5	Bibb	3,981.1	Lincoln	55.6
3	Dekalb	61	Crisp	1,034.5	Chatham	3,745.9	Towns	51.0
4	Gwinnett	58	Clayton	1,000.0	Rabun	3,511.5	Rabun	46.5
5	Chatham	41	Bibb	995.3	Peach	3,376.2	Pulaski	44.2

Source: CODES 2020; OASIS 2020 ; FARS 2020

See the "Additional Information" to access the **Appendix** for this document. The Appendix includes the following information by county: Motorcycle Crashes • Motorcycle Registrations • Motorcycle Licensed Operators • Suspected Serious Injuries and Fatalities • Suspected and Confirmed Motorcycle Operator Alcohol Involvement.

Environmental Characteristics

Table 11 summarizes the environmental characteristics of where and when motorcycle fatal crashes and traffic crashes occurred in 2020. Most motorcycle fatal crashes and traffic crashes occurred in non-intersection areas of the roadway and in clear weather conditions. However, there are differences in other environmental characteristics between motorcyclist *fatal* crashes and motorcycle *traffic* crashes that may or may not have injured persons.

- **45 percent** of all motorcycle fatal crashes occur in dark conditions, whereas **71 percent** of all motorcycle crashes occur in daylight conditions.
- **30 percent** of all motorcycle fatal crashes occur during the nighttime hours (6:00 p.m. to 5:59 a.m.) during the weekend, whereas **37 percent** of all motorcycle crashes occur during the daytime hours (6:00 a.m. to 5:59 p.m.) on the weekday.
- **33 percent** of all fatal crashes occur during the fall season, whereas **31 percent** of all crashes occur during the summer season.

Table 11. **Motor Vehicle Crashes Involving Motorcyclists by Environmental Characteristics, 2020**

Environmental Characteristics	Motorcycle Fatal Crashes		Motorcycle Traffic Crashes	
	Number	Percent	Number	Percent
Location *				
Intersection (or related)	77	42%	1,381	36%
Non-Intersection	108	58%	1,764	47%
Other	--	--	641	17%
Light Conditions				
Dark	83	45%	953	25%
Daylight	91	49%	2,685	71%
Dawn	4	2%	48	1%
Dusk	7	4%	81	2%
Day of Week / Time of Day *				
Weekday	92	50%	2,121	56%
Nighttime	41	22%	710	19%
Daytime	51	28%	1,411	37%
Weekend	93	50%	1,665	44%
Nighttime	56	30%	778	21%
Daytime	37	20%	887	23%
Weather Conditions				
Clear	141	76%	2,991	79%
Cloudy	35	19%	632	17%
Rain	8	4%	130	3%
Other	1	1%	33	1%
Season				
Winter	29	16%	510	13%
Spring	46	25%	1,007	27%
Summer	49	26%	1,167	31%
Fall	61	33%	1,102	29%

Weekday – 6:00 a.m. Monday to 5:59 p.m. Friday

Weekend – 6:00 p.m. Friday to 5:59 a.m. Monday

Daytime – 6:00 a.m. to 5:59 p.m.

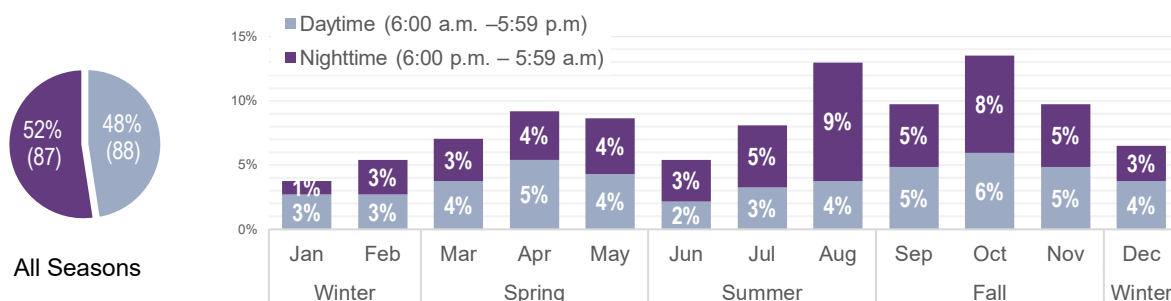
Nighttime – 6:00 p.m. to 5:59 a.m.

*See data considerations for definitions of intersection and non-intersection locations

Source: CODES 2020, FARS 2020

In 2020, more motorcyclist fatal crashes occurred in the October and August months. Figure 4 shows the percentage of motorcyclist fatal crashes by season, month, and time of day.

Figure 4. **Motorcyclist Fatal Crashes by Season, Month, and Time of Day, 2020**



Note: Nighttime and daytime groupings are based on the time of day in hours. The time-groupings do not consider the change in lighting conditions associated with the seasons (i.e., extended or longer daylight hours in the summer).

Source: FARS 2020

Contributing Circumstances

In 2020, 60 percent of all motorcycle crashes involved two or more vehicles (multi-vehicle crashes), and 40 percent were single-vehicle motorcycle crashes. The most harmful event in motorcycle crashes was collisions with other motor vehicles in transport for multi-vehicle crashes and the overturn of the motorcycle (non-collision related) for single-vehicle crashes.

Passenger vehicles¹⁰ were more frequently involved in crashes with motorcyclists compared to other vehicle types. The most common manner of collision in multi-vehicle crashes involving motorcycles were angle and rear-end crashes. The manner of collision is not vehicle specific and does not identify which vehicle or driver was at fault. Table 5 below shows the highest rank manner of collision for multi-vehicle traffic crashes, injury crashes, and fatal crashes that involve a motorcyclist.

Table 12. **Highest Rank Manner of Collision for Multi-Vehicle Crashes involving Motorcyclist by Crash Type, 2020**

Rank	Fatal Crashes		Serious Injury Crashes		Traffic Crashes	
	Manner of Collision	% of crashes	Manner of Collision	% of crashes	Manner of Collision	% of crashes
1	Angle	61%	Angle	56%	Angle	41%
2	Rear end (Front-to-rear)	16%	Rear end (Front-to-rear)	17%	Rear end (Front-to-rear)	31%
3	Head on (Front-to-front)	9%	Head on (Front-to-front)	10%	Sideswipe same direction	14%
4	Not a collision with a motor vehicle	6%	Sideswipe same direction	8%	Not a collision with a motor vehicle	6%

Source: CODES 2020; FARS 2020

Motorcycle operators losing control is the top contributing factor among motorcyclists involved in single-vehicle crashes. In 2020, 53 percent of operators lost control of their motorcycle moments before they collided with another object that was not another vehicle. The top contributing factors among motorcycle operators involved in multi-vehicle crashes were following too closely (15 percent) and risky/aggressive driving (12 percent). The top factors for other drivers involved in multi-vehicle crashes with motorcyclists were failure to yield (25 percent) and following too closely (9 percent). This does not imply that the motorcycle operators or other drivers caused the crash either by their actions or failure to act.

Table 13. **Top Contributing Factors with Crashes involving Motorcyclists by Number of Vehicles Involved and Person Type, 2020**

Rank	Single Vehicle Crashes		Two-Vehicle Crashes			
	Motorcyclists		Motorcyclists		Other Driver	
	Description	% of all operators	Description	% of all operators	Description	% of all drivers
1	Operator lost control	53%	Following too close	15%	Failed to yield	25%
2	Speeding	19%	Risky/aggressive driving	12%	Following too close	9%
3	Risky/aggressive driving	8%	Speeding	8%	Risky/aggressive driving	8%
4	Under the influence of alcohol and/or drug	8%	Driver lost control	6%	Improper Turn	4%

Source: CODES 2020; FARS 2020

¹⁰ Passenger vehicles include passenger cars, pickup trucks, vans, and sport utility vehicles (SUVs).

SPEEDING MOTORCYCLISTS

Drivers are considered to be speeding if they were charged with a speeding-related offense or if a police officer indicated that racing, driving too fast for conditions, exceeding the posted speed limit, or evading police was a contributing factor in the crash. In 2020:

- **31 percent** of all motorcyclists involved in *fatal* crashes were speeding;
- **16 percent** of all motorcyclists involved in *serious injury* crashes were speeding; and,
- **12 percent** of all motorcyclists involved in *motor vehicle traffic* crashes were speeding.

A greater proportion of motorcycle operators involved in fatal, serious injury, or motor vehicle crashes were speeding compared to other vehicle categories (Figure 5). In 2020:

- **31 percent** of all motorcycle operators involved in *fatal* crashes were speeding – compared to 22 percent for passenger car drivers, and 8 percent for large-truck drivers.
- **16 percent** of all motorcycle operators involved in *serious injury* crashes were speeding.
- **12 percent** of all motorcycle operators involved in *motor vehicle traffic* crashes were speeding.

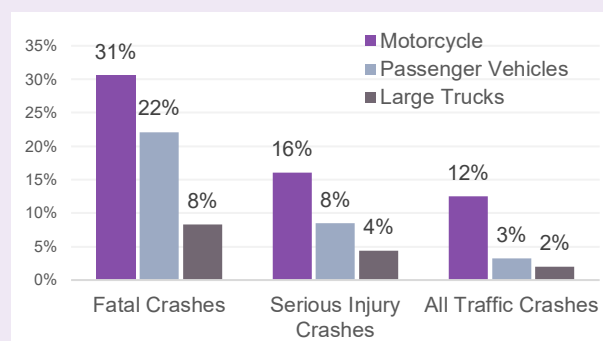
Moreover, compared to other age groups, motorcycle operators 25-to-34 years represented a greater proportion of motorcycle operators involved in speed-related crashes, speed-related serious injury crashes, and speed-related fatal crashes compared to other age groups.

Table 14. **Number of Motorcycle Operators and Drivers Involved in Speeding-Related Crashes by Vehicle Category and Crash Type, 2020**

Vehicle Type	Fatal Crashes		Serious Injury Crashes		All Traffic Crashes	
	#	%	#	%	#	%
Motorcycles	196	100%	840	100%	3,876	100%
Speeding	60	31%	135	16%	484	12%
Not-Speeding	136	69%	705	84%	3,392	88%
Other Vehicles	2,169	100%	10,210	100%	598,987	100%
Speeding	448	21%	799	8%	17,886	3%
Not-Speeding	1,721	79%	9,411	92%	581,101	97%
TOTAL	2,365		11,050		602,863	

Source: CODES 2020, FARS 2020

Figure 5. **Percent of Drivers or Motorcycle Operators Speeding by Vehicle Category and Crash Type, 2020**



Source: FARS 2020, CODES 2020

ALCOHOL INVOLVEMENT AMONG MOTORCYCLISTS

Alcohol involvement is defined as whether alcohol was consumed by the motorcycle operator before the crash; the presence of alcohol may or may not be a contributing factor in the crash. Under Georgia law it is a rebuttable presumed criminal offense to operate a motor vehicle at or above a 0.08 grams per deciliter (g/dL) blood alcohol concentration (BAC) tested via blood, breath, or urine. However, impairment occurs when the driver's ability to safely operate a motor vehicle is compromised—this can be above or below the Georgia legal limit of .08 g/dL. Georgia law states drivers cannot operate a moving vehicle while under the influence of alcohol to the extent that it is less safe to drive.¹¹ Under this law, drivers can be cited and convicted of impaired driving even with a BAC below 0.08 g/dL.

Across the 3,876 Georgia motorcyclists involved in crashes in 2020, less than 5 percent were either confirmed or suspected of alcohol impairment— 81 motorcycle operators were confirmed of alcohol impairment, and an additional 100 motorcycle operators were suspected of alcohol impairment. Of those motorcycle operators suspected of alcohol impairment, many did not have a BAC value reported in the police crash report; however, they were administered an alcohol test.

The number of motorcycle operators involved in a fatal crash with a positive BAC (0.01+ g/dL) increased by 38 percent, from 26 in 2019 to 36 in 2020. These motorcycle operators may or may not have been fatally injured in the crash. Table 14 shows motorcycle operators involved in a fatal crash by BAC from 2016-2020. In 2020:

- **23 percent** of motorcycle operators had a BAC of 0.00 or no alcohol.
- **6 percent** of motorcycle operators had a BAC between 0.01 and 0.07.
- **13 percent** of motorcycle operators had a BAC of 0.08 or above.
- **59 percent** of motorcycle operators had an unknown or unreported BAC.

Table 15. **Motorcycle Operators Involved in a Fatal Crash by BAC, 2016-2020**

Year	Motorcycle Operators	BAC .00 g/dL		BAC .01-.07 g/dL		BAC .08+ g/dL		Unknown / Unreported	
		Number	Percent	Number	Percent	Number	Percent	Number	Percent
2016	174	71	41%	4	2%	22	13%	77	44%
2017	142	43	30%	4	3%	19	13%	76	54%
2018	158	54	34%	10	6%	22	14%	72	46%
2019	174	61	35%	4	2%	22	13%	87	50%
2020	196	45	23%	11	6%	25	13%	115	59%

Note: Motorcycle operators may or may not have been fatally injured in the crash.

BAC .00 g/dL means no alcohol present. BAC .01- .07 g/dL means some alcohol is present, and the driver is *below* the Georgia legal limit. BAC .08+ g/dL means alcohol is present, and the driver is *above* the Georgia legal limit.

Source: FARS 2020

For additional information, see the Appendix for the percentage of motorcycle operators involved in motor vehicle crashes confirmed or suspected of alcohol impairment by county for 2020.

¹¹ O.C.G.A. § 40-6-391(a)(1)

Motorcycle Licensure & Vehicle Registration

Motorcycle operators with a Class M license or a Class M Instructional Permit (MP) have a valid license to operate a motorcycle or motor-driven cycle in Georgia legally. Across the decade, drivers with a Class M license only, Class MP license only, or had a Class M status assigned to another license type consistently represented about 6 percent of all licensed drivers. Between 2019 and 2020:

- Licenses with Class M designations (Class M only or Class M with other licenses classes) increased by 9 percent
- Licenses with Class MP designations increased by 19 percent

According to the Department of Driver Services (DDS), approximately 5,700 individuals completed the Georgia Motorcycle Safety Program in FY2020. The program teaches crash-avoidance skills to motorcycle riders of various experience levels. Despite the statewide reach of the Motorcycle Safety Program, 46 percent of motorcycle operators involved in a traffic crash in 2020 were either unlicensed or did not have a valid designation on their driver's license—a net 5-point increase compared to 2019.

Motorcycles consistently represent two percent of all registered vehicles in Georgia. According to the Department of Revenue 2021 vehicle registration, the most common motorcycles registered in Georgia were manufactured by Harley-Davidson Motor Company (39 percent of all registered motorcycles), Suzuki Motor of America (9 percent), and Yamaha Motor Company (9 percent). Among the motorcycle body classifications identified by NHTSA vPIC, motorcyclist fatalities were more frequent on sports motorcycles (38 percent), followed by touring motorcycles (19 percent), custom motorcycles (16 percent), and cruisers (12 percent).

Table 16., **2019-2020 Percent Change in Motorcycle Licensure, License Status for Motorcyclists Involved in Crashes, and Motorcycle Registration**

Measure	2019-2020 Percent Change	
All Georgia Licensed Drivers / Operators		
Total Class M / MP	▲	10%
Class M	▲	9%
Class MP	▲	19%
Other License Class	▲	11%
Motorcyclist Operator involved in Crashes		
Total Class M / MP	▼	-12%
Class M	▼	-10%
Class MP	▼	-27%
Other license Class not valid to operate a motorcycle	▲	6%
No license present or licensure status unknown	▲	35%
Registered Motorcycles		
All Engine Sizes	▲	2%

Despite the statewide reach of the Motorcycle Safety Program, **46 percent** of motorcycle operators involved in a traffic crash in 2020 were either unlicensed or did not have a valid designation on their driver's license.

Demographics

Age

While older persons within the **55-to-64** age group have the highest proportion of properly licensed motorcyclists and motorcycle registrants, motorcyclists in the 25-to-34 age group have the highest involvement in crashes and receive a greater proportion of motorcycle-related convictions. Motorcycle operators aged **25-to-34** years represent 11 percent of all riders with a valid Class M or MP license compared to drivers in other age groups; however, they also represented:

- **28 percent** of motorcycle operators who sustained *fatal and serious injuries*;
- **26 percent** of motorcycle operators *involved in a traffic crash*;
- **30 percent** of motorcycle operators with *invalid or no license credentials* involved in a crash; and
- **38 percent** of motorcycle operators with convictions reported to the Georgia Department of Driver Services.

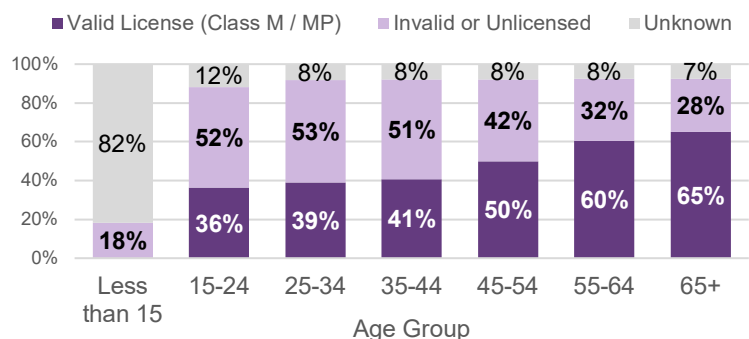
Table 17. **Motorcycle Operator Fatalities, Motorcycle Crashes, Licensed Motorcyclists with a Class M or MP License, and Motorcycle Registrations, 2020**

Age Group	Motorcyclists Fatalities and Serious Injuries		Motorcyclist Operator Involved in Crashes	Motorcyclist Operator Convictions	Licensed Motorcyclists Class M/ MP	Motorcycle Registrants (2021)
	Operator	Passenger				
Children (less than 15)	1%	9%	1%	1%	--	--
15-24	16%	14%	18%	28%	2%	3%
15-20	6%	8%	8%	14%	1%	1%
21-24	10%	6%	10%	14%	2%	2%
25-34	28%	19%	26%	38%	11%	11%
35-44	19%	19%	17%	16%	15%	15%
45-54	19%	14%	17%	11%	22%	24%
55-64	12%	8%	12%	7%	27%	28%
65+	5%	9%	5%	--	23%	17%
Unknown	1%	8%	4%	--	--	1%
TOTAL	962	64	4,138	281	466,646	212,788
	100%	100%	100%	100%	100%	100%

Source: FARS 2020, CODES 2020, DDS 2020, DOR 2020

The proportion of motorcycle operators involved in traffic crashes that are unlicensed or did not have the valid Class M/MP designation on their license decreases as the age group increases. Among motorcycle operators in the 25-to-34 age group, only 39 percent had a valid Class M/MP license, 50 percent did not have the Class M/MP designation, 3 percent had a suspended or revoked license, and 8 percent were reported as unknown.

Figure 6. **Licensing Status of Motorcycle Operators involved in Traffic Crashes by Age Group, 2020**



Source: CODES 2020

Sex & Race/Ethnicity

In 2020, 92 percent (3,552 out of 3,876) of the motorcycle *operators* involved in crashes were male, and five percent (205 out of 3,876) were female, and three percent were unknown or unreported (119 out of 3,876). Seventy-four percent (195 out of 262) of the motorcycle *passengers* involved in crashes were female.

White, Non-Hispanic motorcyclists represent the largest proportion of motorcycle operator fatalities (64 percent), hospital visits (59 percent), and emergency room visits (63 percent) compared to other racial/ethnic groups. Despite the differences in proportions, the total hospital and emergency room rates per 100,000 population among White, non-Hispanic and Black non-Hispanic are nearly the same—41.8 for White, non-Hispanic and 39.0 for Black, non-Hispanic. The motorcycle operator fatality rate per population is also similar—1.8 for White, non-Hispanic and 1.5 for Black, non-Hispanic.

Data Definitions and Considerations:

This fact sheet defines motorcyclists as either the rider (motorcycle operator) or passenger. A motorcycle includes two- or three-wheeled motorcycles, off-road motorcycles, mopeds, motor scooters, minibikes, and pocket bikes. A large truck is any medium or heavy truck, excluding buses and motor homes, and can include commercial and non-commercial vehicles. Passenger vehicles include passenger cars, pickup trucks, vans, and sport utility vehicles (SUVs).

Motorcycle registration data for 2020 was obtained from the Department of Revenue (DOR) by special request on the calendar year in lieu of the state fiscal year. Although motorcycle registrations may use the terminology All-Terrain Vehicle (ATV) to describe off-road motorcycles, this fact sheet only considers any motorcycle involved in a crash on public roadways. Additionally, motorcycle registrations include commercial and non-commercial motorcycles. Commercial motorcycles include motorcycles owned by dealers or manufacturers.

A traffic crash is defined as an incident that involved one or more motor vehicles where at least one vehicle was in transport, and the crash originated on a public trafficway, such as a road or highway. Crashes that occurred on private property, including parking lots and driveways, are excluded.

Fatal crashes are defined as crashes that involve a motor vehicle traveling on a trafficway customarily open to the public and that resulted in the death of a motorist or a non-motorist within 30 days of the crash.

Serious injuries are those suspected serious injuries reported by law enforcement and used when any injury, other than fatal injury, prevents the injured person from walking, driving, or normally continuing the activities the person was capable of before the injury occurred.

The National Center for Health Statistics (NCHS), the Federal agency responsible for the use of the International Statistical Classification of Diseases and Related Health Problems, 10th revision (ICD-10) in the United States, has developed a clinical modification (CM) of the classification for morbidity (EMS, trauma, hospital, and ER data) purposes. ICD-10 Codes used were—V20-V28 (.3 - .9), V29 (.4 - .9).

For fatal crashes only, Blood Alcohol Concentration (BAC) values are imputed to address the problem of missing blood alcohol test results in the FARS data system. A multiple imputation methodology is employed to generate specific values of BAC for persons involved in fatal crashes. Many drivers confirmed or suspected of alcohol impairment will not have a BAC value reported in the police crash report. Drivers suspected of alcohol may have an alcohol test administered; however, the results or findings were not validated or included in the final police crash report.

Contributing circumstances capture the precrash elements or improper actions of persons (motorcycle operators, pedestrians, bicyclists, and other motorists) that may have caused the crash. Contributing factors in fatal and nonfatal crashes are often underreported in the datasets. There is at least one record per person involved in a fatal crash (FARS Data) and some missing records for persons involved in motor vehicle traffic crashes (Crash Data).

Rural counties are counties that have a population of less than 50,000 according to the United States decennial census of 2010 or any future such census (OCGA Section 31-6-2). This is different than roadway classifications, where urban road systems can be located in urban clusters (or metropolitan areas) of at least 2,500 persons within the rural counties.

"At Intersection" is used when a person is on a roadway either (1) in the intersection, (2) in the area between a crosswalk and the perimeter of the intersection, or (3) in a crosswalk (marked or unmarked) adjacent to an intersection. "Not at Intersection" is when the person is more than 50 feet out from the perimeter of an intersection and the crash is not identified as related to the movement of vehicles through an intersection.

Additional Information:

Other general information on motorcycle safety and traffic safety facts may be accessed at:

- [Appendix: Motorcycles Georgia Traffic Safety Facts](#)
- <https://www.gahighwaysafety.org/highway-safety/shsp/>

Other traffic safety facts are available online at the Georgia Governor's Office of Highway Safety and Crash Outcomes Data Evaluation Systems (CODES): Risky Driving, Traffic Safety During the COVID-19 Public Health Emergency, Distracted Drivers, Occupant Protection, Non-Motorist (Pedestrians and Bicyclists), Motorcycle Safety, Young Adult Drivers, and Older Drivers.

References:

- National Center for Statistics and Analysis. (2020, June). Motorcycle helmet use in 2019 – Overall results Traffic Safety Fact Research Note. (DOT HS 812 936). Washington, DC: National Highway Traffic Safety Administration. Available at <https://crashstats.nhtsa.dot.gov/Api/Public/ViewPublication/812936>
- National Center for Statistics and Analysis (2011, March). *Determining Estimates of Lives and Costs Saved by Motorcycle Helmets*. (DOT HS 811 433). Washington, DC: National Highway Traffic Safety Administration. Available at <https://crashstats.nhtsa.dot.gov/Api/Public/ViewPublication/811433>
- National Center for Statistics and Analysis (2019, December). *Lives and Costs Saved by Motorcycle Helmets*. (DOT HS 812 867). Washington, DC: National Highway Traffic Safety Administration. Available at <https://crashstats.nhtsa.dot.gov/Api/Public/ViewPublication/812867>

The suggested APA format citation for this document is:

Georgia Crash Outcomes Data Evaluation System. (2022, June). *Motorcycles: 2020 data*. (Georgia Traffic Safety Facts). Atlanta, GA: Governor's Office of Highway Safety.