Georgia Traffic Safety Facts

2019 Data

July 2021

Key Findings

- Motorcycles consistently represent 2 percent of all registered vehicles and 1 percent of all motor vehicle crashes in Georgia; however, motorcycle operators represented 21 percent of all driver fatalities and 11 percent of all traffic fatalities.
- The majority of all motorcycle crashes occur in north Georgia. Generally, there are higher motorcycle crash rates in metro-Atlanta and in the rural counties in the northeast Georgia-Tennessee border.
- More than half (51 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.
- Motorcyclists aged 25-to-34 years had the greatest proportion of EMS transports (25%), emergency room only visits (27%), and hospitalizations (24%) compared to other age groups.
- The total motor vehicle traffic-related hospitalization and emergency room charges among motorcyclists in Georgia was $221 million.
- Helmet use (88%) among Georgia motorcyclists involved in a crash resulted in an estimated 91 lives saved.

Governor's Office of Highway Safety

7 M.L.K. Jr Dr SE
Suite #643
Atlanta, GA 30334

(404) 656-6996
www.gahighwaysafety.org

Motorcycles

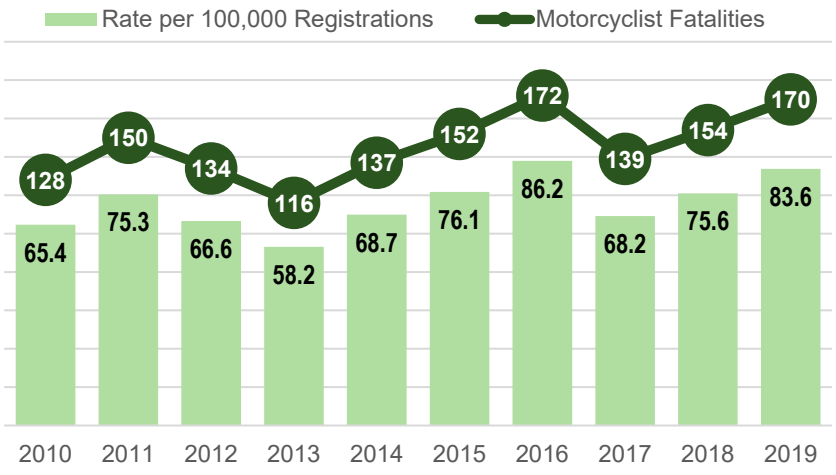
As defined for this fact sheet, motorcyclists is a general term to refer to either the rider (motorcycle operator) or passenger. A motorcycle includes two or three-wheeled motorcycles, off-road motorcycles, moped, motor scooters, minibikes, and pocket bikes.

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. Refer to the 'Data Considerations' section regarding the data and information presented at the end of this publication.

Motorcyclist Fatalities and Fatality Rates

In 2019, there were 170 motorcyclists fatally injured in motor vehicle traffic crashes in the state of Georgia (Figure 1). The number of motorcyclist fatalities in traffic crashes increased by 22 percent, from 139 motorcyclist fatalities in 2017 to 170 in 2019. There were approximately 84 motorcyclist fatalities for every 100,000 motorcycle registrations in 2019. Figure 1 shows the rate and number of motorcyclist fatalities for the past decade.

Figure 1: **Rate and Percent of Motorcyclist Fatalities, 2010-2019**



Source: Fatality Analysis Reporting System (FARS) 2010–2019; FY2014-FY2019 Department of Revenue Annual Reports; DOR 2019

Although motorcyclists represented less than one percent of all persons involved in motor vehicle crashes (0.4 percent), they accounted for 11 percent of all traffic fatalities.

Table 1 presents the number of total traffic fatalities, Georgia motorcycle registrations, and motorcyclist fatalities from 2010 to 2019.

- The number of total traffic fatalities increased by 20 percent from 1,247 to 1,491.
- The number of motorcyclist fatalities increased by 33 percent from 128 to 170.
- The number of motorcycle registrations increased by 4 percent from 195,647 to 203,343.
- The rate of motorcycle fatalities increased by 28 percent from 65.4 to 83.6 motorcycle fatalities per 100,000 motorcycle registrations.

Table 1: **Rate and Percent of Motorcyclist Traffic Fatalities, 2010-2019**

Year	Total Traffic Fatalities	Registered Motorcycles	Motorcyclist Fatalities		
			Number	Percent of All Traffic Fatalities	Rate per 100,000 Registrations
2010	1,247	195,647	128	10%	65.4
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

Note: Motorcycle registrations include commercial and non-commercial motorcycles.
Source: Fatality Analysis Reporting System (FARS) 2010–2019; FY2014-FY2020 DOR Annual Reports; DOR 2019.

Urban vs. Rural[1] Motorcycle Crashes

In 2019, there were 1,941.5 motorcycle crashes for every 100,000 motorcycle registrations statewide (Table 2). Motorcycle crashes are more frequent in urban areas than rural areas.

- The Atlanta Region accounted for 42 percent (1,655 out of 3,948) of all motorcycle crashes and 33 percent of all motorcycle registrations.
- Other urban counties accounted for 39 percent (1,530 out of 3,948) of all motorcycle crashes and 41 percent of all motorcycle registrations.

Table 2: **Motorcycle Crashes, Motorcycle Registrations, and Motorcycle Crash Rate by Region Type, 2019**

Region	Motorcycle Crashes		Registered Motorcycles		Motorcycle Crash Rate
	Number	Percent	Number	Percent	per 100,000 Registrations
Atlanta Region[2] (10 counites)	1,655	**42%**	67,555	33%	2,449.9
Other Urban (31 counties)	1,530	39%	82,381	**41%**	1,857.2
Rural Counties (118 counties)	763	19%	53,407	26%	1,428.7
Statewide	**3,948**	**100%**	**203,343**	**100%**	**1,941.5**

Source: CODES 2019, DOR 2019

[1] 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.
[2] 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 2 shows the motorcycle crash rate for counties with more than ten motorcycle crashes in 2019 and their deviation from the statewide percent of motorcycle crash rate (1,941.5 motorcycle crashes for every 100,000 motorcycle registrations).

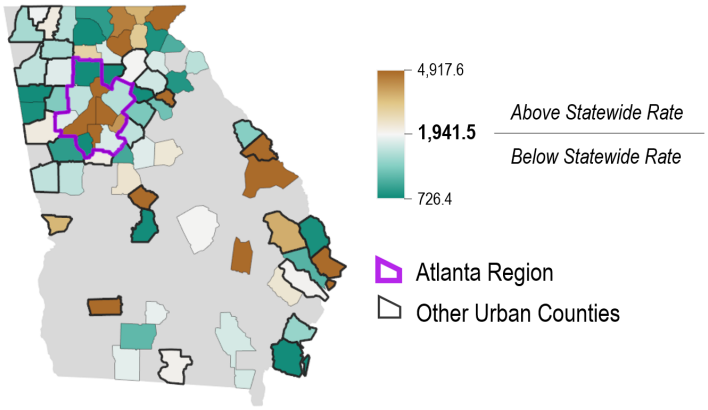
The majority of all motorcycle crashes occur in north Georgia. Generally, there are higher motorcycle crash rates in metro-Atlanta and in the rural counties in the northeast area, Georgia-North and South Carolina border. Nine percent of all motorcycle operators involved in Georgia traffic crashes had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

- Four out of the ten counties within the Atlanta Region had a higher motorcycle crash rate compared to the statewide rate. Combined, Fulton and Dekalb represent 19 percent of all motorcycle crashes statewide:
  - Fulton (510 crashes and 4,918 crash rate)
  - Dekalb (250 crashes and 3,578 crash rate)

- Ten out of the 20 rural counties that experience more than ten motorcycle crashes had a higher crash rate compared to the statewide rate. The top three rural counties with the highest crash rate are located in northeast Georgia:
  - Lumpkin (52 crashes and 4,270 crash rate)
  - Union (35 crashes and 2,754 crash rate)
  - Rabun (27 crashes and 4,569 crash rate)

In 2019, the counties with the highest number of motorcyclist fatalities were: Fulton (22 motorcyclist fatalities), DeKalb (12), Gwinnett (10), Cobb (8), and Bibb (8). Table 3 shows the motorcycle crashes, motorcyclist suspected serious injuries, and fatalities in these five counties. One-third of all motorcycle crashes (1,301 out of 3,948) and 32 percent of all motorcyclist serious injuries and fatalities (279 out of 875) occurred within these five counties alone.

Figure 2: **Motorcycle (MC) Crashes per 100,000 MC Registrations and Deviation from the Statewide MC Crash Rate for Counties with 10+ MC Crashes, 2019**



Source: CODES 2019, DOR 2019
Note: The map only shows counties with 10 or more motorcycle crashes in 2019. Counties that are light to dark green have a lower motorcycle crash rate compared to the statewide rate. Counties that are light to dark brown have a higher motorcycle crash rate compared to the statewide rate.

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.

Table 3: **Motorcycle Crashes and Motorcyclist Suspected Serious Injuries and Fatalities by Top Counties with Highest Fatalities, 2019**

Counties with at Least One Motorcycle Crash	Motorcycle Crashes		Motorcyclist Suspected Serious Injuries and Fatalities	
	Number	Percent of all Crashes	Number	Percent of all Serious Injuries and Fatalities
Top Counties	**1,301**	**33%**	**279**	**32%**
Fulton	*510*	*13%*	*115*	*13%*
DeKalb	*250*	*6%*	*42*	*5%*
Gwinnett	*230*	*6%*	*52*	*6%*
Cobb	*237*	*6%*	*50*	*6%*
Bibb	*74*	*2%*	*20*	*2%*
Other Counties (136 Counties)	**2,642**	**67%**	**595**	**68%**
Total (141 Counties)	**3,948**	**100%**	**875**	**100%**

Source: CODES 2019
Note: The five (5) motorcycle crashes and one (1) suspected serious injury that occurred in unknown counties are included in the total. Eighteen (18) counties did not experience a motorcycle crash in 2019.

Table 4 below shows the percent of motorcycle crashes by region and roadway classification in 2019.

- Forty-one percent of *all motorcycle* crashes occurred within the Atlanta Region – compared to 55 percent of *all traffic* crashes in this region.
- Twenty-six percent of all motorcycle crashes occurred on minor arterial roads (other multilane roads that supplement highways) statewide – the Atlanta Region and other urban counties experience more crashes on this roadway type.
- The majority of motorcycle crashes in rural counties occurred on collector roads (roads that connect local roads and streets).
  - Thirteen percent of all traffic crashes and 20 percent of all motorcycle crashes were in rural counties.
  - Three percent of all traffic crashes and 6 percent of all motorcycle crashes were on collectors in rural counties.

Table 4: **Motorcycle Traffic Crashes by Region and Roadway Classification, 2019**

Roadway Classification	Atlanta Region (10 counties)	Other Urban Counties (31 counties)	Rural Counties (118 counties)	Statewide
Interstate	5%	2%	1%	**7%**
Principal Arterial	9%	10%	5%	**24%**
Minor Arterial	12%	11%	3%	**26%**
Collectors	4%	6%	6%	**16%**
Local	9%	10%	5%	**24%**
Ramps	2%	1%	0%	**3%**
Total	**41%**	**39%**	**20%**	**100%**

Source: Numetric 2019
Note: The sum of the individual cells may not equal row or column totals due to rounding error.
Principal arterials include freeways, multilane highways (e.g., Buford Highway and Hawkinsville Road). Minor arterials are other important multilane roadways that supplement the highways (e.g., Spring Street and U.S. Route 41). Collector roads connect local roads and streets with arterials (e.g., McAfee Road and McCall Road).

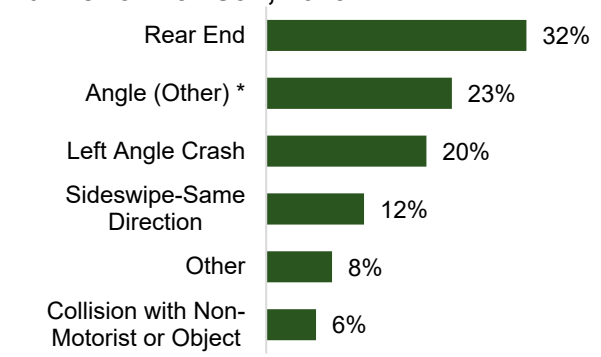
Manner of Collison in Multi-Vehicle[3] Crashes

Sixty-three percent of all motorcycle crashes involved more than one vehicle – 37 percent were single-vehicle motorcycle crashes. Passenger vehicles[4] were the most common vehicle involved in crashes with motorcyclists – 93 percent.

The most common manner of collision involving motorcycles in multi-vehicle crashes were rear end collisions (32 percent). The manner of collision is not vehicle specific and does not identify which vehicle or driver was at fault.

Sixty percent of all motorcyclist serious injuries and 70 percent of all motorcyclist fatalities occurred in multiple-vehicle crashes.

Figure 3: **Multi-Vehicle Motorcycle Crashes by Manner of Collison, 2019**



Source: Numetric 2019, CODES 2019
Note: Angle (Other) includes other unknown angle crashes and right-angle crashes (2%). Other includes 'head on' and 'sideswipe-opposite direction'.

[3] Multi-vehicle crashes may include another motorcycle
[4] Passenger vehicles include passenger cars, pickup trucks, vans, and sport utility vehicles (SUVs).

Environmental Characteristics

Table 5 shows information on environmental characteristics (location of crash, land use, and light conditions) describing where and when motorcycle crashes, suspected serious injuries, and fatalities occurred in 2019. More motorcycle crashes, serious injuries, and fatalities occurred during daylight, but not at an intersection.

- **63 percent** of all motorcycle crashes, 62 percent of all motorcyclist serious injuries, and 59 percent of all motorcyclists fatalities did not occur at an intersection (see data considerations).
- **70 percent** of all motorcycle crashes, 60 percent of all motorcyclist serious injuries, and 54 percent of all motorcyclist fatalities occurred in the daylight.
- **92 percent** of all motorcycle crashes occurred on dry roads (not shown).

Table 5: **Motorcycle Crashes and Motorcyclists Injuries by Environmental Characteristics, 2019**

Environmental Characteristics	Crashes		Suspected Serious Injuries		Fatalities	
	Number	Percent	Number	Percent	Number	Percent
Location*						
Not at Intersection	2,470	**63%**	437	**62%**	101	**59%**
At Intersection or Intersection Related	1,447	37%	263	37%	68	40%
Not Reported	31	1%	5	1%	1	1%
Light Conditions						
Dark	1,057	27%	246	35%	70	41%
Daylight	2,755	**70%**	426	**60%**	92	**54%**
Dawn	38	1%	9	1%	1	1%
Dusk	64	2%	18	3%	6	4%
Not Reported	34	1%	6	1%	1	1%

Source: FARS 2019, CODES 2019

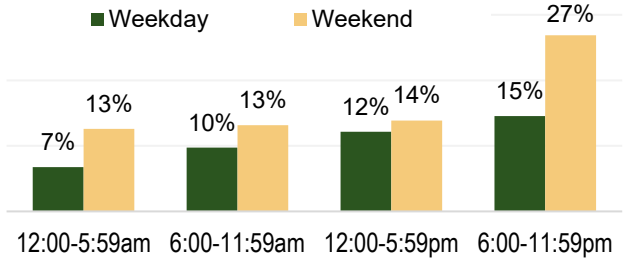
Time of Day and Day of Week

Forty-three percent of all weekday motorcyclist fatalities occurred between 12:00 p.m. and 5:59 p.m., and 49 percent of all weekend motorcyclist fatalities occurred between 6:00 p.m. and 11:59 p.m.

Figure 4 shows the percent of all motor vehicle traffic fatalities that were motorcyclists by the time of day and day of the week in 2019.

- **27 percent** of all traffic fatalities that occurred on the weekend between 6:00 p.m. and 11:59 p.m. were motorcyclists (43 out of the 160 total traffic fatalities that occurred during that period).

Figure 4: **Percent of <u>All</u> Traffic Fatalities that were Motorcyclists, by Time of Day and Day of Week, 2019**



Weekday: 6 a.m. Monday to 5:59 p.m. Friday
Weekend: 6 p.m. Friday to 5:59 a.m. Monday
Source: FARS 2019

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. According to the Department of Driver Services (DDS), approximately 6,500 individuals completed the Georgia Motorcycle Safety Program in FY2019. These programs teach crash-avoidance skills to motorcycle riders of various experience levels.

Although motorcycles consistently represent two percent of all registered vehicles and one percent of all motor vehicle crashes in Georgia, motorcycle operators represented 21 percent of all driver fatalities in 2019. From 2010 to 2019:

- The number of motorcycle operator fatalities increased by 34 percent from 122 to 164.
- The number of motorcycle crashes increased by 6 percent from 3,708 to 3,948.
- The number of motorcyclists with a valid license increased by 20 percent from 421,016 to 505,068.
- The number of registered motorcycles increased by 4 percent from 195,647 to 203,343.

Table 6: **Motorcycle Operator Fatalities, Motorcycle Crashes, Licensed Motorcyclists with a Class M or MP License, and Motorcycle Registrations, 2010-2019**

Year	Motorcycle Operator Fatalities		Motorcycle Crashes		Licensed Motorcyclists with a Class M or Class MP License		Motorcycle Registrations	
	Number	% of all Driver Fatalities	Number	% of all Crashes	Number	% of all Licensed Drivers	Number	% of all Vehicle Registrations
2010	122	18%	3,708**	1%	421,016	5%	195,647	2%
2011	143	20%	4,084*	1%	442,924	5%	199,253	2%
2012	130	20%	4,286*	1%	453,055	6%	201,206	2%
2013	113	19%	4,023	1%	455,959	6%	199,287	2%
2014	133	20%	4,112	1%	465,739	6%	199,445	2%
2015	145	18%	4,170	1%	478,915	6%	199,796	2%
2016	167	19%	4,498	1%	492,888	6%	199,504	2%
2017	135	15%	4,158	1%	497,092	6%	203,783	2%
2018	148	18%	3,049	1%	501,169	6%	203,639	2%
2019	164	21%	3,948	1%	505,068	6%	203,343	2%

Source: FARS 2010-2019, FFY2011 & FFY2012 Georgia Highway Safety Plan, CODES 2013-2019, DDS 2010-2019, FY2014-FY2020 DOR Annual Reports, DOR 2019

Notes: The crash datasets for 2010-2012 were compiled using both paper and electronic crash reports and were not verified. As such,
* 2011 and 2013 motorcycle crash values were obtained from the FFY2011 & FFY2012 Georgia Highway Safety Plans
** 2010 motorcycle crash value was not available in the Highway Safety Plans; therefore, it was calculated assuming that motorcycle crashes represented 1% of all motor vehicle crashes (consistent with 2011-2019 years).

Sex

In 2019, 88 percent (3,542 out of 4,029) of the motorcycle operators involved in all crashes were male, and six percent (246 out of 4,029) were female. Seventy-seven percent (184 out of 240) of the motorcycle passengers involved in crashes were female.

Age

In 2019, half (51 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 (2,060 out of 4,029 motorcycle operators).

- **44 percent** were operating a motorcycle without a valid license designation (1,757 out of 4,029 motorcycle operators); and
- **7 percent** were operating a motorcycle without any type of license (303 out of 4,029 motorcycle operators); therefore, 42 percent of motorcyclists without a license (127 out of 303) also had an unknown or unreported age.

While drivers aged **25-to-34** years represent 12 percent of all riders with a valid Class M or MP license, compared to drivers in other age groups, they also represented:

- **23 percent** of all motorcyclist operator fatalities;
- **25 percent** of all motorcyclist operators involved in a crash; and
- **41 percent** of all motorcyclists with invalid or no license credentials involved in a crash.

Older persons within the **55-to-64** age group represented 14 percent of all traffic fatalities (212 out of 1,491). Eight percent of all motor vehicle traffic fatalities within the 55-to-64 age group were motorcyclists (18 out of 212). Older drivers aged 55-to-64 years represent 26 percent of all riders with a valid Class M or MP license. This age group also represented:

- **11 percent** of all motorcyclist operator fatalities;
- **13 percent** of all motorcyclist operators involved in a crash; and
- **16 percent** of all motorcyclists with invalid or no license credentials involved in a crash.

Table 7: **Percent of Motorcycle Operator Fatalities, Motorcycle Operators Involved in Crashes, Licensed Motorcyclists, and Motorcycle Registrations by Age Group, 2019**

Age Group (Years)	Motorcyclist Operators Fatalities	Motorcyclist Operators Involved in a Crash	License Type of Motorcyclist Operator in Crash			Class M or MP Licenses
			Class M / MP	Other Classes (Invalid)	None	
Children (≤ 14)	-	1%	-	0.2%	6%	0%
15-20	5%	7%	5%	8%	10%	1%
21-24	9%	11%	11%	13%	5%	2%
25-34	**23%**	**25%**	25%	**27%**	**14%**	**12%**
35-44	20%	17%	17%	19%	9%	15%
45-54	21%	16%	18%	16%	7%	22%
55-64	11%	13%	16%	10%	6%	**26%**
65-74	12%	6%	7%	4%	2%	16%
75+	5%	0%	0.8%	0.3%	0.3%	6%
Unknown	-	**4%**	0.8%	0.7%	**42%**	0%
TOTAL	**164** (100%)	**4,029** (100%)	**1,969** (100%)	**1,757** (100%)	**303** (100%)	**369,871** (100%)

Source: FARS 2019, CODES 2019, DDS 2019

Motorcyclist Injuries

The following section describes various responses to serious injuries experienced by motorcyclists involved in motor vehicle traffic crashes and non-traffic crash incidents. Injured motorcyclists can be counted multiple times for each response (e.g., an injured person may be counted as an emergency room visit, hospitalization, and/or trauma center patient). The various responses to injuries are described below.

Suspected Serious Crash Injuries are reported by law enforcement responding to a motor vehicle crash scene. Suspected serious injury is 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.

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. Participating hospitals (voluntary) are designated or verified as trauma centers Level I, II, III or IV. Level I and II facilities are able to treat the most critical patients.

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.

Suspected Serious Crash Injuries

According to the police crash reports, there were 3,948 motorcycle crashes, 4,269 motorcyclists involved in motor vehicle traffic crashes, and 705 suspected serious injuries among motorcyclists in 2019 statewide.

Table 8 shows the number of motorcycle crashes, motorcyclists involved in crashes, and suspected serious injuries between 2015-2019.

Table 8: **Motorcyclist Crashes and Suspected Serious Injuries, 2015-2019**

Year	Crashes	Motorcyclists Involved	Suspected Serious Injuries
2015	4,170	5,552	917
2016	4,498	4,899	1,022
2017	4,158	4,551	961
2018	3,049	3,391	591
2019	3,948	4,269	705

Source: CODES 2015-2019
Note: There can be multiple motorcyclists (operators and passengers) involved in a single motor vehicle crash.

Emergency Medical Services

In 2019, the Emergency Medical Services (EMS) transported a total of 2,069 motorcyclists involved in motor vehicle traffic crashes to a hospital facility (Table 9). Compared to other age groups:

- Injured motorcyclists ages 25-to-34 years had the highest proportions of EMS transports – 25 percent of all male motorcyclists and 22 percent of all female motorcyclists transported by EMS.
- Injured male motorcyclists aged 21-to-24 years had the highest rate of motorcyclist EMS transports per 100,000 population – 63.3.

In 2019, the counties with the highest number of motorcyclist transports by EMS were Fulton (386 EMS transports), Cobb (130), Gwinnett (74), Chatham (62), and Bibb (59).

Table 9: **Motorcyclists with Traffic-Related Injuries Transported by Emergency Medical Services by Sex and Age Group, 2019**

Age Group	Male			Female		
	Number	Percent	Rate per 100,000 population	Number	Percent	Rate per 100,000 population
Children (≤ 14)	34	2%	3.2	21	5%	2.1
15-20	108	6%	24.0	32	8%	7.4
21-24	181	11%	**63.3**	36	9%	**12.9**
25-34	425	**25%**	57.3	84	**22%**	11.2
35-44	281	17%	42.2	55	14%	7.7
45-54	295	18%	43.5	67	17%	9.3
55-64	221	13%	35.5	62	16%	9.0
65-74	98	6%	23.3	18	5%	3.6
75+	21	1%	8.7	7	2%	2.0
Unknown	6	<1%	--	1	<1%	--
Total	**1,670**	**100%**	**32.4**	**383**	**100%**	**7.0**

Note: Tables do not show 16 motorcyclists transported by EMS of unknown sex and/or age.
Source: Georgia Emergency Medical Services Information System (GEMSIS) 2019

Emergency Room Visits & Hospitalizations

In 2019, there were a total of 4,362 motor vehicle traffic-related emergency room visits and hospitalizations[5] involving motorcyclists. Motorcyclists aged 25-to-34 years had the highest rate of emergency room visits and hospitalizations compared to other age groups – 60.7 emergency room visits and 16.2 hospitalizations for every 100,000 population.

The total motor vehicle traffic-related hospitalization and emergency room charges among motorcyclists in Georgia was $221 million.

Table 10: **Motorcyclist Traffic-Related Emergency Room Visits and Hospitalizations by Age Group, 2019**

Age Group	Emergency Room Visits			Hospitalizations		
	Number	Percent	Rate per 100,000 population	Number	Percent	Rate per 100,000 population
Children (≤ 14)	155	5%	7.5	--	--	--
15-20	225	7%	25.4	29	3%	3.3
21-24	482	14%	85.4	118	12%	20.9
25-34	**906**	**27%**	**60.7**	**242**	**24%**	**16.2**
35-44	591	18%	42.8	184	18%	13.3
45-54	502	15%	35.9	193	19%	13.8
55-64	337	10%	25.8	177	17%	13.5
65-74	134	4%	14.5	61	6%	6.6
75+	14	<1%	2.4	12	1%	2.0
Total	**3,346**	**100%**	**31.5**	**1,016**	**100%**	**9.6**

Note: The first valid external cause of injury diagnosis was considered. See data considerations for more information.
Source: Georgia Department of Public Health, Office of Health Indicators for Planning (OHIP) Hospital Inpatient Discharge and Emergency Room Visit Data 2019; OASIS 2019 Estimated Population

[5] 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.

Trauma Center Patients

According to the Georgia Trauma Registry data, motor vehicle traffic-related incidents (motor vehicle occupants, motorcyclists, pedestrians, and bicyclists) accounted for 32.4 percent of all injuries treated by designated and non-designated Trauma Centers[6] in 2019 across the state of Georgia. In 2019, there were a total of 1,487 motorcyclists identified as trauma patients treated within Georgia Trauma Centers.

- Twenty-three percent of all trauma center motorcyclist patients were 25-to-34 years of age (Table 12).
- Motorcyclists aged 21-to-24 years had the highest rate of trauma care compared to any other age group – 25.5 trauma patients for every 100,000 population.
- Nearly one out of every three motorcyclists (35 percent) treated at the trauma centers had minor injuries, and 12 percent had very severe injuries.

Table 11: **Motorcyclist Traffic-Related Trauma Center Patients by Age Group, 2019**

Age Group	Number	Percent	Rate per 100,000 population
Children (≤ 14)	47	3%	2.3
15-20	128	9%	14.5
21-24	144	10%	**25.5**
25-34	338	**23%**	22.6
35-44	254	17%	18.4
45-54	262	18%	18.7
55-64	223	15%	17.1
65-74	81	5%	8.7
75+	10	1%	1.7
Total	**1,487**	**100%**	**14.0**

Source: Georgia Trauma Registry 2019

Helmet Use

In 2019, 17 percent of all motorcyclists involved in crashes, 15 percent of all motorcyclists with serious injuries, and 7 percent of motorcyclists fatally injured were un-helmeted (based on reported known helmet use).

Table 12: **Motorcyclists Involved in Crashes, Serious Injuries, and Fatalities by Helmet Use, 2019**

	Total	Helmeted		Un-helmeted		Unknown		Percent Based on Known Helmet Use	
		#	%	#	%	#	%	Helmeted	Un-helmeted
Motorcyclists **involved in crashes**	**4,269**	3,225	76%	642	15%	402	9%	83%	**17%**
Motorcyclists with **serious injuries**	**705**	578	82%	99	14%	28	4%	85%	**15%**
Fatally injured motorcyclists	**170**	149	88%	11	6%	4	2%	93%	**7%**

Source: CODES 2019, FARS 2019
Note: Although not all crashes are survivable, helmet use is still effective in preventing fatalities or serious head injuries.

[6] Not all hospitals are designated as Trauma Centers.

Since 1969, Georgia's universal helmet law[7] has never been repealed or changed compared to most other states that have certain specifications for helmet use or no helmet law in place. Three out of the five bordering states (Tennessee, Alabama, and North Carolina) also have not repealed or changed their helmeted law. As a result, 149 (88 percent) of fatally injured motorcyclists were reported wearing a helmet in the state of Georgia in 2019 – compared to 59 percent nationwide.

Helmet use among Georgia motorcyclists resulted in an estimated 91 lives saved[8]. If all Georgia motorcyclists had worn helmets, an additional six lives would have been saved. Although not all crashes are survivable, helmet use is still effective in preventing fatalities or serious head injuries. According to the National Center for Statistics and Analysis, helmets are estimated to be 37 percent effective in preventing fatalities to motorcycle operators and 41 percent for motorcycle passengers.[9] *"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 2017[10].

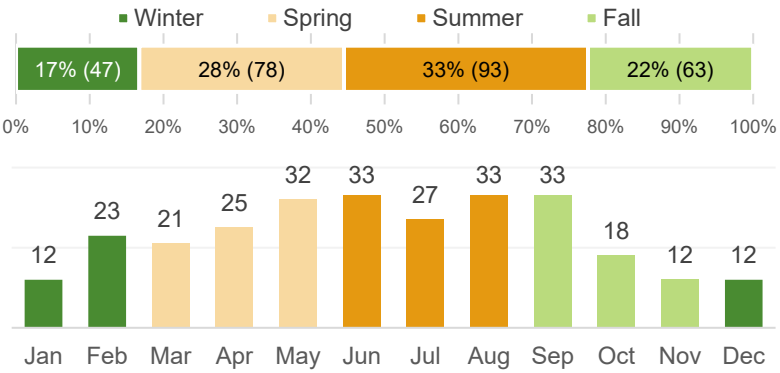
Contributing Circumstances

In 2019, the top contributing factors among motorcycle operators involved in fatal crashes were: (1) following improperly (2) operating vehicle in an erratic, reckless, or negligent manner; and (3) passing with insufficient distance or inadequate visibility or failure to yield to overtaking vehicle. The top contributing factors among motorcycle operators involved in all crashes: (1) driver lost control; (2) following too close; (3) speeding; (4) under the influence of alcohol/drugs; and (5) change lanes improperly. This does not imply that the motorcycle operators caused the crash either by their actions or failure to act.

In 2019, a total of 2,164 motorcycle operators involved in a crash were issued at least one citation and 281 motorcycle operator convictions were reported to DDS. These convictions include the unsafe operation of a motorcycle, improper use of motorcycle equipment, and no proof of insurance.

The summer and spring months had a greater proportion of reported convictions compared to other seasons.

Figure 5: **Motorcycle Operators Convictions Reported to the Department of Driver Services, 2019**



Source: DDS 2019
Note: The convictions reported to DDS may not be the month the violation occurred.

[7] O.C.G.A. 40-6-315
[8] 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.
[9] 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. National Highway Traffic Safety Administration.
[10] 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.

Speeding

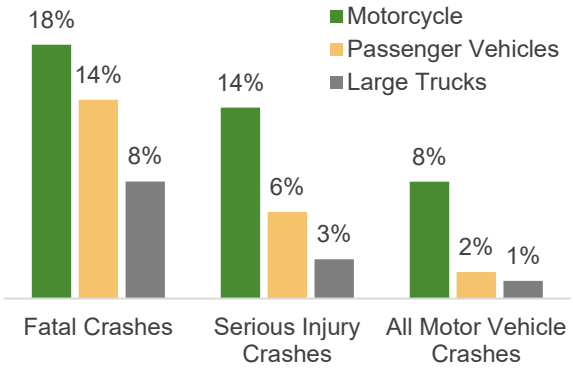
Speed-related crashes are when the investigating police officer reports the driver (or motorcycle operator) exceeding the speed limit, driving too fast for conditions, or racing. In 2019, motorcycle operators represented:

- **11 percent** (35 out of 326) of all speeding drivers involved in fatal crashes;
- **15 percent** (110 out of 751) of all speeding drivers involved in serious injury crashes; and
- **2 percent** (365 out of 1,4645) of all speeding drivers involved in all motor vehicle crashes.

A greater proportion of motorcycle operators involved in fatal, serious injury, or motor vehicle crashes were speeding compared to other vehicle categories (Figure 6). In 2019:

- **18 percent** of all motorcycle operators involved in fatal crashes were speeding – compared to 14 percent for passenger car drivers, and eight percent for large truck drivers.
- **14 percent** of all motorcycle operators involved in serious injury crashes were speeding.
- **8 percent** of all motorcycle operators involved in all motor vehicle crashes were speeding.

Figure 6: **Percent of Drivers or Motorcycle Operators Speeding by Vehicle Category and Crash Type, 2019**



Source: FARS 2019, CODES 2019

Table 13 shows motorcycle operators involved in speed-related crashes by crash type and age group. Compared to other age groups, motorcycle operators 25-to-34 years represented:

- **30 percent** of all motorcycle operators involved in all speed-related crashes.
- **36 percent** of all motorcycle operators involved in speed-related serious injury crashes.
- **57 percent** of all motorcycle operators involved in speed-related fatal crashes.

Table 13: **Motorcycle Operators Involved in Speed-Related Crashes by Crash Type and Age Group, 2019**

Age Group	All Motor Vehicle Crashes			Serious Injury Crashes			Fatal Crashes		
	TOTAL	Speeding		TOTAL	Speeding		TOTAL	Speeding	
		Number	Percent		Number	Percent		Number	Percent
Children (≤ 14)	23	1	0%	3	1	1%	-	-	-
15-20	304	43	12%	52	9	8%	8	1	3%
21-24	510	64	18%	85	15	14%	15	3	9%
25-34	**1,096**	**110**	**30%**	**207**	**40**	**36%**	**51**	**20**	**57%**
35-44	751	61	17%	152	20	18%	39	7	20%
45-54	690	52	14%	142	15	14%	37	2	6%
55-64	524	22	6%	104	6	5%	19	-	-
65-74	250	5	1%	41	3	3%	21	2	6%
Unknown	158	7	2%	8	1	1%	-	-	-
TOTAL	**4,306**	**365**	**100%**	**794**	**110**	**100%**	**190**	**35**	**100%**

Note: Tables do not show 16 motorcyclists transported by EMS of unknown sex and/or age.
Source: Georgia Emergency Medical Services Information System (GEMSIS) 2019

Alcohol Involvement

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. Georgia law also 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. For example, a motorcycle operator whose BAC is not tested and fails a field sobriety test may be charged and convicted of driving under the influence of alcohol.

Of all Georgia motorcycle crashes in 2019, 98 motorcycle operators were confirmed of alcohol impairment, and an additional 122 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.

Table 14 shows motorcycle operators involved in a fatal crash by BAC from 2015-2019. These motorcycle operators may or may not have been fatally injured in the crash. In 2019:

- **34 percent** (62 out of 185) of motorcycle operators had a BAC of 0.00 or no alcohol.
- **2 percent** (4 out of 185) of motorcycle operators had a BAC between 0.01 and 0.07.
- **12 percent** (23 out of 185) of motorcycle operators had a BAC of 0.08 or above.
- **52 percent** (96 out of 185) of motorcycle operators had an unknown or unreported BAC.

Table 14: **Motorcycle Operators Involved in a Fatal Crash by BAC, 2015-2019**

Year	Motorcycle Operators	No Alcohol BAC = 0.00 g/dL		BAC = 0.01 - 0.07 g/dL		Alcohol-Impaired (BAC = 0.08+ g/dL)		Unknown / Unreported	
		Number	Percent	Number	Percent	Number	Percent	Number	Percent
2015	173	62	36%	5	3%	22	13%	84	49%
2016	185	72	39%	5	3%	21	11%	87	47%
2017	148	45	30%	4	3%	20	14%	79	53%
2018	169	57	34%	11	7%	21	12%	80	47%
2019	185	62	34%	4	2%	23	12%	96	52%

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

Source: FARS 2019

For additional information, see the Appendix for the percent of motorcycle operators involved in motor vehicle crashes that were confirmed or suspected of alcohol impairment by county for 2019.

[11] O.C.G.A. § 40-6-391(a)(1)

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, moped, 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 2019 was obtained from the Department of Revenue (DOR) by special request on the calendar year in lieu of 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, prevent 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 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 FARS data system. A multiple imputation methodology is employed to generate specific values of BAC for persons involved in fatal crashes. "No alcohol" refers to a blood alcohol concentration (BAC) of .00 grams per deciliter (g/dL). For motorists and non-motorists involved in a motor vehicle traffic crash that may or may not result in a fatal injury, 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 (O.C.G.A. 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. "Intersection-Related" is used when a person is within the trafficway 50 feet out from the perimeter of an intersection area or if the crash is related to the flow of traffic through 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. "Non-Trafficway Locations" are crashes that occur outside the boundaries of the trafficway (i.e., driveways or parking lots).

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/

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:

Crash Outcomes Data Evaluation System. (2021, July). *Motorcycles: 2019 data.* (Georgia Traffic Safety Facts). Atlanta, GA: Governor's Office of Highway Safety.