

# Georgia Traffic Safety Facts

2021 Data

October 2023

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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.



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## RURAL AND URBAN COMPARISON

It is important to distinguish between rural roads and rural counties. Rural roads are identified by the U.S. Department of Transportation's classifications of roadway segments based on land use classifications at the census tract level (e.g., urban, urbanized, or rural land use). However, rural counties are based on population estimates obtained from the U.S. Census Bureau's 2021 American Community Survey at the county level, not the census tract level. Counties with a population of less than 50,000 (based on the most recent census available<sup>1</sup>) are considered rural counties. As a result of the differences in the definitions, urban roadway segments can be located within rural counties and vice versa (rural roadway segments can be located within urban counties).

*For the purpose of this report and with consideration of the traffic safety practitioners in Georgia, rural areas are defined at the county level based on population estimates and not by land use on the census tract level.*

### 2021 Key Findings

- More than one-third (34 percent) of Georgia's traffic fatalities occurred in rural counties—though only 21 percent of the population lives in rural counties.
- Between 2012 and 2021, traffic fatalities in rural counties increased by 31 percent, the traffic fatality rate per 100,000 population increased by 28 percent, and the traffic fatality rate per 100 million vehicle miles traveled increased by 15 percent.
- The total traffic-related hospitalization and emergency room charges were \$348.0 million for facilities located in rural counties and \$1,604.4 million for facilities located in urban counties. In rural counties, persons 65+ years of age had the highest proportion of hospitalizations compared to other age groups.
- The "Observational Survey of Seat Belt Use in Georgia" also reported that pickup trucks in the rural counties had the lowest restraint use among all PV occupants (75.2 percent) in Georgia. Vans in urban counties had the highest restraint use among all PV occupants (90.5 percent) in Georgia.
- The proportion of crashes that resulted in a fatality on urbanized roadways (defined by land use) in rural counties was 2.2 greater than the proportion of crashes that resulted in a fatality on urbanized roadways in urban counties.

<sup>1</sup> OCGA Section 31-6-2

## Rural vs. Urban Traffic-Related Fatalities and Serious Injuries

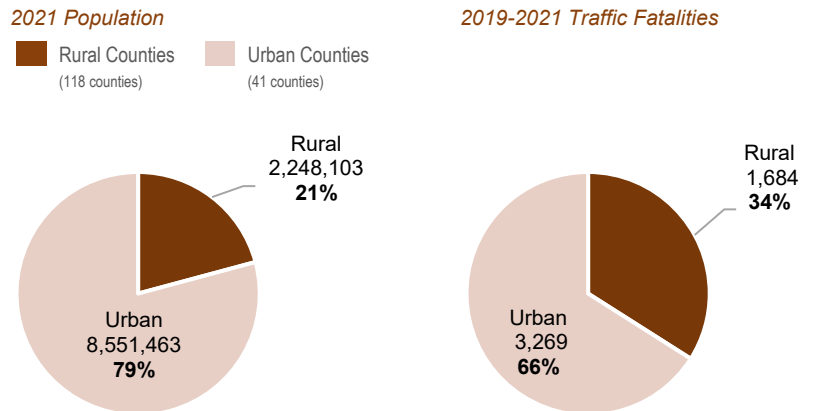
### Traffic Fatalities

More than one-third (34 percent) of Georgia's traffic fatalities occurred in rural counties—though only 21 percent of the population lives in rural counties. Rural counties consistently represented 21 to 22 percent of Georgia's population across the past decade. Between 2019 and 2021, there were 1,684 traffic fatalities across the 118 counties that make up Georgia's rural counties (Figure 1) compared to 3,269 traffic fatalities across Georgia's 41 urban counties. This is an average of 561 per year in rural counties and 1,090 per year in urban counties.

Traffic fatalities in rural counties decreased by 4 percent from 588 in 2020 to 562 in 2021, and in urban counties increased by 15 percent from 1,076 in 2020 to 1,235 in 2021 (Figure 2). Across the decade, rural counties experienced a 3 percent annual increase, compared to urban counties that experienced a 6 percent average annual increase.

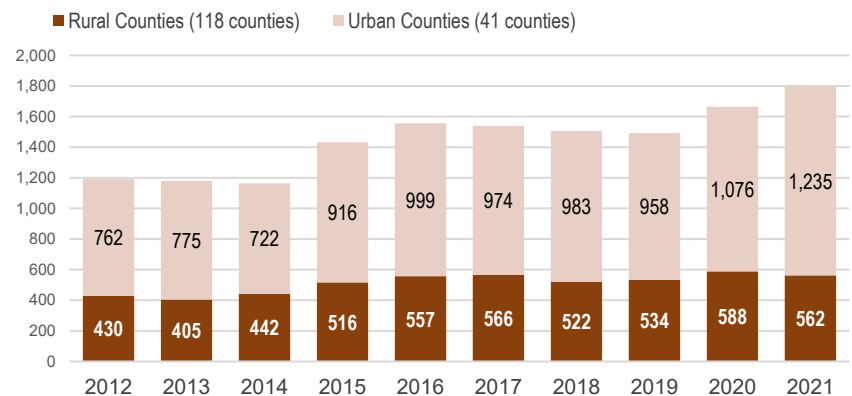
While urban counties have more traffic fatalities, the fatality rate per 100 million vehicles miles traveled (VMT) in 2021 was nearly 1.3 times greater in rural counties (1.82 in rural counties versus 1.37 in urban counties)—the lowest in the past decade. According to the Federal Highway Administration, between 2020 and 2021, vehicle miles traveled in Georgia increased by 3 percent in rural counties and 5 percent in urban counties—returning to the pre-pandemic norms (see *Traffic Safety During the COVID-19 Public Health Emergency*, 2020 Georgia Traffic Safety Facts Issue Brief [\[1\]](#)).

Figure 1. Georgia Population and Traffic Fatalities by Rural/Urban Counties



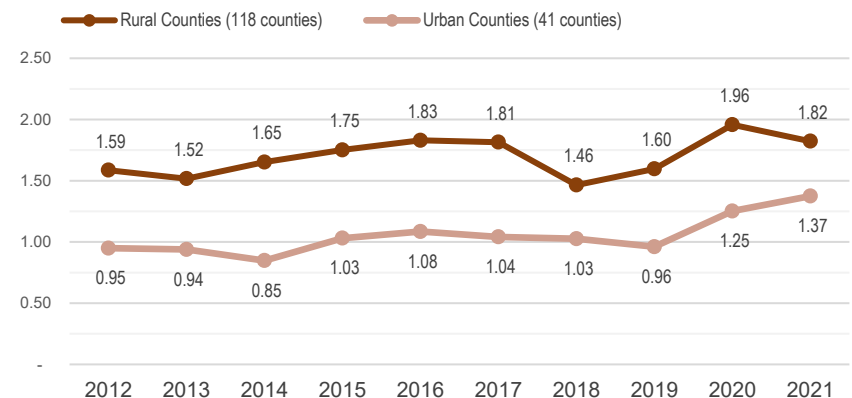
Source: OASIS 2021, FARS 2021. Rural and urban classifications are based on county census population and not on FHWA land use.

Figure 2. Traffic Fatalities by Rural/Urban Counties, 2012-2021



Source: FARS 2012-2021

Figure 3. Fatality Rates per Million VMT by Rural/Urban Counties, 2012-2021



Source: FARS 2012-2021, GDOT Mileage by Route and Road System 445 Reports 2012-2021

Table 1 presents traffic fatalities, fatalities per 100,000 population, and fatality rates per 100 million VMT by rural/urban region in the 10-year period from 2012 to 2021.

- Traffic fatalities in rural counties increased by 31 percent from 430 in 2012 to 562 in 2021—compared to 51 percent in urban areas (from 762 to 1,235).
- The fatality rate per 100,000 population in rural counties increased by 28 percent from 19.6 in 2012 to 25.0 in 2021—compared to 38 percent in urban areas (12.0 to 16.6). The population in rural counties increased by 2 percent between 2012 and 2021—compared to a 9 percent increase in urban counties.
- The fatality rate per 100M VMT in rural counties increased by 14 percent from 1.59 in 2012 to 1.82 in 2021—compared to 44 percent in urban areas (from 0.95 to 1.37). The vehicle miles traveled in rural counties increased by 14 percent between 2012 and 2021—compared to a 12 percent increase in urban counties.

Table 1. **Fatality Rates per Million VMT by Rural/Urban Counties, 2012-2021**

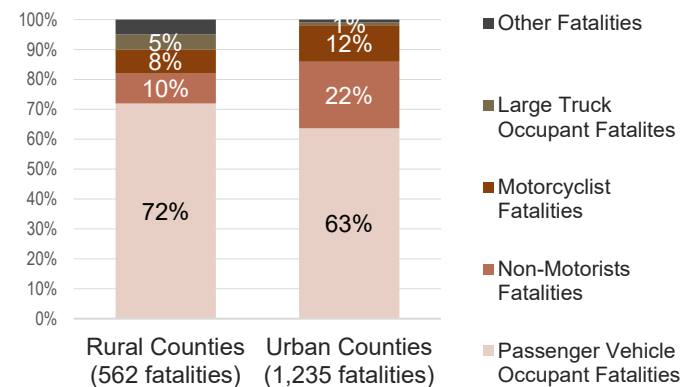
Year	Total Traffic Fatalities	Rural Counties (118 counties)				Urban Counties (41 counties)			
		Fatalities	Percent of all Fatalities	Rate per Population	Rate per VMT	Fatalities	Percent of all Fatalities	Rate per Population	Rate per VMT
2012	1,192	430	36%	19.6	1.59	762	64%	9.9	0.95
2013	1,180	405	34%	18.4	1.52	775	66%	9.9	0.94
2014	1,164	442	38%	20.1	1.65	722	62%	9.1	0.85
2015	1,432	516	36%	23.5	1.75	916	64%	11.4	1.03
2016	1,556	557	36%	25.3	1.83	999	64%	12.3	1.08
2017	1,540	566	37%	25.6	1.81	974	63%	11.9	1.04
2018	1,505	522	35%	23.5	1.46	983	65%	11.8	1.03
2019	1,492	534	36%	23.9	1.60	958	64%	11.4	0.96
2020	1,664	588	35%	26.2	1.96	1,076	65%	12.7	1.25
2021	1,797	562	31%	25.0	1.82	1,235	69%	14.4	1.37

Source: FARS 2012-2021, OASIS 2012-2021, GDOT Mileage by Route and Road System 445 Reports 2012-2021

Figure 4 shows the distribution of fatalities by person type for rural/urban counties.

- Eighty-three percent of all non-motorists (pedestrians and bicyclists) fatalities (276 out of 333) occurred in the 41 urban counties in Georgia. Non-motorists represented 10 percent of all traffic fatalities in rural counties and 22 percent of all traffic fatalities in urban counties.
- Sixty-one percent of all large truck traffic fatalities<sup>2</sup> (29 out of 44) occurred in the 118 rural counties in Georgia. Large truck fatalities represented 5 percent of all rural fatalities and 1 percent of all urban fatalities.

Figure 4. **Traffic Fatalities by Person Type, 2021**



Source: FARS 2021

Note: Non-motorists include pedestrians and bicyclists. Percent totals may not equal 100% due to rounding.

<sup>2</sup> Fatalities among occupants in large trucks.

Table 2 presents the three-year trend of traffic fatalities in rural/urban counties. Between 2019 and 2021, total traffic fatalities increased by 5 percent in rural counties (28 more fatalities) compared to 29 percent in urban counties (277 more fatalities).

Rural counties experienced an increase in pedestrian fatalities and fatalities involving large trucks. During the same period, urban counties experienced increased in fatalities for passenger vehicle occupants, motorcyclists, pedestrians, and persons involved in crashes with large trucks. In the three-year period, rural and urban counties experienced a shared decrease in bicyclist fatalities.

Table 2. **Three-Year Comparison of Traffic Fatalities by Rural/Urban Region, 2019-2021**

Category	Rural Counties (118 counties)					Urban Counties (41 counties)				
	2019	2020	2021	Change (2019-2021)		2019	2020	2021	Change (2019-2021)	
				Number	Percent				Number	Percent
Total Traffic Fatalities	534	588	562	28	▲ 5%	958	1,076	1,235	277	▲ 29%
Passenger Vehicle Occupant Fatalities	409	407	404	-5	▽ -1%	584	666	781	197	▲ 34%
Motorcyclist Fatalities	47	57	45	-2	▽ -4%	123	135	149	26	▲ 21%
Pedestrian Fatalities	30	61	50	20	▲ 67%	206	218	256	50	▲ 24%
Bicyclist Fatalities	6	9	4	-2	▽ -33%	15	23	11	-4	▽ -27%
Fatalities Involving Large Trucks	94	97	100	6	▲ 6%	110	137	144	34	▲ 31%

Source: FARS 2019-2021

### Serious Injuries

The following section describes public safety and medical responses to serious injuries experienced in motor vehicle traffic-related crashes (Table 3). Motor vehicle traffic-related injuries can be counted multiple times for each response (e.g., an injured person may be counted as a hospital and/or trauma center patient).

Table 3. **Description of Traffic Injury Surveillance Data Sources**





Traffic Injury Surveillance Data Sources	
	<b>Suspected Serious Crash Injuries</b> are reported by law enforcement responding to a motor vehicle crash scene.
	<b>Emergency Medical Services</b> include all ground and air transports to an emergency facility for patients who are injured and require medical care in the state of Georgia.
	<b>Trauma Center</b> 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.
	<b>Emergency Room and Hospitalizations</b> 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 4 shows the number and proportion of traffic-related serious injuries for each injury surveillance source by rural/urban counties. Most traffic-related serious injuries occurred in urban areas, and most individuals receiving post-crash treatment were urban county residents.

- 24 percent of police-reported traffic-related serious injuries occurred in rural counties, and 76 percent occurred in urban counties.
- 22 percent of patients receiving post-crash care at an ED and/or hospital were rural county residents, and 78 percent were urban county residents.

Table 4. **Traffic-Related Serious Injuries by Injury Surveillance Source, 2021**

Injury Surveillance Source	Rural Counties (118 counties)		Urban Counties (41 counties)	
	Number	Percent	Number	Percent
Police Crash Reports (crash site)	2,070	24%	6,599	76%
Emergency Medical Services* (crash site)	19,094	20%	74,557	80%
Trauma (residence)	2,189	21%	8,414	79%
Emergency Department** (residence)	19,372	22%	68,105	78%
Hospital (residence)	1,704	22%	6,003	78%

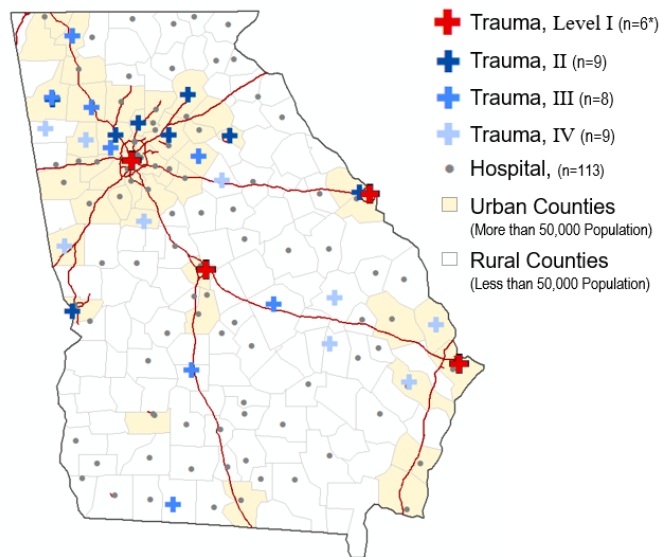
Note: Police crash reports and EMS trip reports are based on the rural/urban crash location. Trauma, Emergency Department, and hospital reported injuries are based on patient's residence. Injuries with unknown patient county residence were not included.  
 \* EMS arrivals to motor vehicle traffic crashes with reported serious injuries and fatalities may or may not have resulted in transport to a medical facility.  
 \*\* All persons involved in a Georgia crash receive care in a Georgia Emergency Department or Hospital, regardless of their state residency.  
 Source: CODES 2020-2021, DPH Hospital Inpatient Discharge and Emergency Room Visit Data 2020-2021, GEMISIS 2020-2021, Georgia Trauma Registry 2020-2021

Figure 5 shows the location of trauma care facilities and hospitals in Georgia as of 2021. More than half (54 percent) of all facilities are located in urban counties, and 46 percent are located in rural counties.

- 22 percent of trauma centers are in rural counties (7 out of 32); all trauma level-I and II are in urban counties.
- 52 percent of non-trauma, post-crash emergency departments and hospitals are in rural counties (59 out of 113).

In 2021, the majority (96 percent) of all post-crash hospitalizations occurred in hospitals located in urban counties.

Figure 5. **Georgia Trauma Center and Hospitals, 2021**



Source: Office of EMS and Trauma, 2021  
 \*Fulton County has three Level I Trauma Centers: Children's Healthcare of Atlanta at Egleston, Grady Memorial Hospital Atlanta, and Atlanta Medical Center.

Table 5 shows the rate (per population) and proportion of traffic-related serious injuries by age group, surveillance system, and rural/urban counties. In 2021, the serious injuries rate among the 21-to-24 age group represented the highest rate of police-reported suspected serious injuries, EMS transports, emergency room visits, and hospitalizations compared to other age groups in rural and urban regions.

- The proportions of injuries in rural counties were highest among the 15-to-24 age group for police-reported suspected serious injuries, EMS transports, and emergency room visits. In rural counties, persons 65+ years of age had the highest proportion of hospitalizations compared to other age groups.
- The proportions of injuries in urban counties were highest among the 25-to-34 age group for police-reported suspected serious injuries, EMS transports, emergency room visits, and hospitalizations.

Table 5. **Traffic-Related Serious Injuries Rate per 100,000 Population and Percent of All Serious Injuries by Age Group, Region Type, and Injury Surveillance Source, 2021**

Age Group	Police-Reported Suspected Serious Crash Injuries				Emergency Medical Services				Emergency Room Visits				Hospitalizations			
	Rural Counties		Urban Counties		Rural Counties		Urban Counties		Rural Counties		Urban Counties		Rural Counties		Urban Counties	
	Rate	Percent	Rate	Percent	Rate	Percent	Rate	Percent	Rate	Percent	Rate	Percent	Rate	Percent	Rate	Percent
<15	20.3	4%	18.7	5%	408.9	9%	306.2	7%	322.9	7%	195.7	5%	4.2	1%	2.0	1%
<b>15-24</b>	157.7	<b>22%</b>	116.3	21%	1,505.9	<b>23%</b>	1341.7	21%	1,590.6	<b>24%</b>	1,324.5	23%	87.9	15%	84.7	17%
15-20	144.6	13%	89.5	10%	1,462.3	14%	1,134.6	11%	1,557.4	14%	1,109.4	12%	69.0	7%	68.2	8%
<b>21-24</b>	<b>179.5</b>	9%	<b>158.1</b>	11%	<b>1,578.4</b>	9%	<b>1,665.4</b>	10%	<b>1,645.9</b>	9%	<b>1,660.6</b>	11%	<b>119.3</b>	8%	<b>110.5</b>	9%
<b>25-34</b>	144.6	19%	133.7	<b>25%</b>	1,262.0	18%	1370.4	<b>22%</b>	1,447.6	21%	1,417.1	<b>25%</b>	104.3	17%	106.0	<b>22%</b>
<b>35-44</b>	113.4	15%	96.0	17%	973.4	14%	1030.2	16%	1,111.7	15%	1,045.6	18%	87.9	14%	86.9	17%
<b>45-54</b>	93.3	13%	77.3	13%	767.5	11%	845.8	13%	864.0	12%	785.4	13%	81.4	13%	76.9	14%
<b>55-64</b>	66.3	10%	59.3	9%	703.0	11%	756.9	11%	700.7	11%	623.2	9%	90.2	16%	75.8	13%
<b>65+</b>	63.3	13%	40.7	7%	553.9	12%	560.0	9%	460.6	10%	376.8	6%	96.7	<b>24%</b>	87.0	17%
<b>All Ages*</b>	<b>92.1</b>	<b>100%</b> (2,070)	<b>77.2</b>	<b>100%</b> (6,599)	<b>849.3</b>	<b>100%</b> (19,094)	<b>871.9</b>	<b>100%</b> (74,557)	<b>861.7</b>	<b>100%</b> (19,372)	<b>796.4</b>	<b>100%</b> (68,108)	<b>75.8</b>	<b>100%</b> (1,704)	<b>70.2</b>	<b>100%</b> (6,003)

\* Includes suspected serious injuries with unknown age

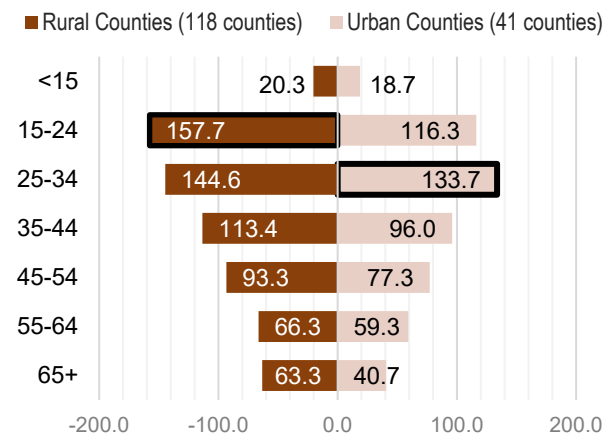
Source: CODES 2021, GEMSIS 2021, Georgia Trauma Registry 2021, DPH-OHIP Hospital Inpatient Discharge and Emergency Room Visit Only Data 2021, OASIS 2021

## Suspected Serious Crash Injuries

According to 2021 police crash reports, there were 2,070 suspected serious injuries in rural counties—a 2 percent increase from 2,035 serious injuries in 2020. Traffic-related serious injuries in urban areas increased by 18 percent from 5,585 in 2020 to 6,599 in 2021.

In rural counties, individuals in the 15-to-24 year age group had the highest rate of traffic-related injuries compared to other age groups—157.7 serious injuries for every 100,000 Georgia rural residents aged 15 to 24 years. In urban counties, individuals in the 25-to-34 years age group had the highest rate of traffic-related injuries compared to other age groups—133.7 serious injuries for every 100,000 Georgia urban residents aged 25 to 34 years.

Figure 6. **Traffic-Related Serious Injuries Rate per 100,000 Population by Rural/Urban Counties**



Source: CODES 2021, OASIS 2021

## Emergency Medical Services

In 2021, the Emergency Medical Services (EMS) treated and transported 93,651 persons involved in motor vehicle traffic crashes to an ED and/or hospital facility. In 2021, 20 percent of all EMS transports originated in rural counties and 80 percent originated in urban counties.

According to the Georgia Traffic Safety Facts study called *"Examining Crashes and Drivers in Rural Areas"* (Georgia Crash Outcomes Data Evaluation System, 2023 [\[1\]](#)), the EMS times from rural county crash site to post-crash care facility were similar to the times from urban county crash site to post-crash care facility—an average of 34 minutes from rural crash sites compared to 36 minutes in urban crash sites. The EMS distance to care from the rural county crash site to the post-crash care facility was farther from urban county crash site to the post-crash care facility—an average of 21 miles from rural crash sites compared to 12 miles in urban crash sites.

See the *"Examining Crashes and Drivers in Rural Areas"* Georgia Traffic Safety Facts Issue Brief for more information on the differences in post-crash care and expenses in rural and urban counties.

## Trauma Centers

According to the Georgia Trauma Registry data, motor vehicle traffic-related incidents accounted for 26 percent of all injuries treated by designated and non-designated Trauma Centers in 2021 across the state of Georgia. In 2021, 21 percent of patients receiving post-crash care at trauma centers were rural county residents, and 79 percent were urban county residents.

In 2021, 4 percent of all rural traffic-related trauma patients were non-motorists and 11 percent of all urban traffic-related trauma patients were non-motorists. Additionally, individuals in the 15-to-24 years age group had the highest rate of traffic-related trauma care injuries compared to other age groups in

rural counties and the 25-to-34 years age group had the highest rate of traffic-related trauma care injuries in urban counties—146.6 trauma care injuries for every 100,000 Georgia *rural* residents aged 15 to 24 years and 174.2 trauma care injuries for every 100,000 *urban* residents aged 25 to 34 years.

### Emergency Room Visits & Hospitalizations

There were 87,477 motor vehicle traffic-related emergency room visits and 7,707 hospitalizations<sup>3</sup> statewide in 2021. Twenty-two percent of patients receiving post-crash care at an ED and/or hospital were rural county residents, and 78 percent were urban county residents. Compared to the previous year, motor vehicle traffic-related ED visits and hospitalizations increased in both rural and urban counties.

- In *rural* counties, ED visits increased by 2 percent, and hospitalizations increased by 9 percent. The total traffic-related hospitalization and emergency room charges were \$348.0 million for facilities located in rural counties. This equates to an average of \$7,200 per patient for ED charges and \$122,000 per patient for hospitalization charges for hospitals in rural counties.
- In *urban* counties, ED visits increased by 3 percent, and hospitalizations increased by 14 percent. The total traffic-related hospitalization and emergency room charges were \$1,604.4 million for facilities located in urban counties. This equates to an average of \$9,100 per patient for ED charges and \$164,100 per patient for hospitalization charges for hospitals in urban counties.

### *Fatality and Serious Injury Rates by Rural/Urban County*

Figure 7 shows the ratio of the county to statewide fatality and serious injury rate per 100 million VMT and rate 100,000 population. In 2021, the statewide rates were 8.62 fatalities and serious injuries per 100M VMT and 1,431.78 fatalities and serious injuries per 100,000 population.

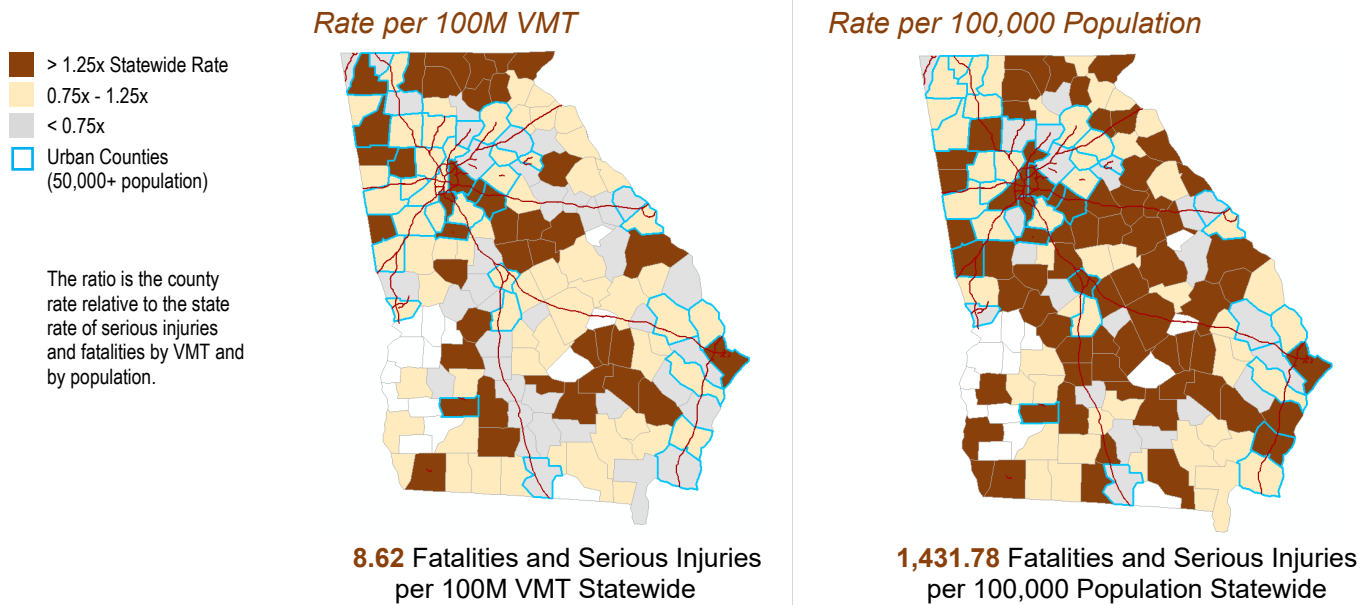
- Among the rural counties, Baldwin County had the second highest number of serious injury and fatal crashes and the highest rate of serious injury crashes and fatalities per 100M VMT— 21.81 serious injury crashes and fatalities per 100M VMT, 2.5 times more than the statewide rate. Taliaferro County (a rural county) had the highest rate of serious injury crashes and fatalities per 100,000 population.
- Among the urban counties, Fulton County had the highest number of serious injury and fatal crashes, Newton County and the highest rate of serious injury crashes and fatalities per 100M VMT, and Troup County had the highest rate of serious injury crashes and fatalities per 100,000 population in 2021 (Table 6).

See *Appendix* that includes the following information by county: Total Crashes • Percent of Crashes that were Serious Injury or Fatal • Fatalities or Serious Injuries • Fatal and Serious Injuries per 100M VMT • Fatal and Serious Injuries per 100,000 Population

<sup>3</sup> 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 county residents only. Fatalities, however, can include persons from another state or persons that reside in another Georgia county.



Figure 7. **Ratio of County to Statewide Fatality and Serious Injury Rate per 100 Million VMT and Rate 100,000 Population, 2021**



Source: CODES 2021, FARS 2021, GDOT Mileage by Route and Road System 445 Reports 2021, OASIS 2021  
 Note: Rates were not calculated for counties with fewer than five (5) fatalities and serious injuries combined.

Table 6. **Top Five Rural/Urban Counties with the Highest Fatalities and Serious Injuries, Fatalities and Serious Injuries Rate per 100M VMT, and Fatalities and Serious Injuries Rate per 100,000 Population, 2021**

Rank	Fatalities and Serious Injuries				Fatalities and Serious Injuries Rate per 100M VMT				Fatalities and Serious Injuries Rate per 100,000 Population			
	Rural		Urban		Rural		Urban		Rural		Urban	
	County	Count	County	Count	County	Rate	County	Rate	County	Rate	County	Rate
1	Coffee	72	Fulton	1,319	Baldwin	21.81	Newton	15.55	Taliaferro	7,317.1	Troup	1,967.8
2	Baldwin	70	Dekalb	924	Oglethorpe	18.88	Dougherty	14.74	Twiggs	4,741.4	Dekalb	1,742.7
3	Laurens	69	Cobb	547	Gilmer	18.26	Clayton	13.88	McIntosh	3,764.3	Spalding	1,686.5
4	Polk	64	Clayton	445	Upson	16.67	Rockdale	11.98	Gilmer	3,387.1	Clayton	1,686.5
5	Gilmer	63	Chatham	386	Coffee	16.22	Spalding	11.87	Hancock	3,048.8	Newton	1,655.7

Source: CODES 2021, FARS 2021, GDOT Mileage by Route and Road System 445 Reports 2021, OASIS 2021

## Crash Characteristics

### Crash Types

Table 7 displays the number of rural/urban fatal crashes by crash type and the number of vehicles involved in fatal crashes for 2021. Multi-vehicle fatal crashes represented 46 percent of all fatal crashes statewide, and within both rural and urban counties. The number of fatal crashes in rural counties decreased by 5 percent from 547 in 2020 to 521 in 2021; however, the number of multi-vehicle fatal crashes in rural counties increased by 14 percent, from 208 fatal crashes in 2020 to 238 fatal crashes in 2021.

- A greater proportion of multi-vehicle fatal crashes were among intersection (or intersection-related) fatal crashes and fatal crashes involving large trucks in rural counties, urban counties, and statewide. In 2021, 20 percent of fatal crashes in rural counties (105 out of 521) were

intersection-related. Eighty-two percent of all intersection-related crashes in rural areas were multi-vehicle (84 out of 105). Eighteen percent of all fatal crashes in rural counties (92 out of 521) involved a large truck. Eighty-five percent of all intersection-related fatal crashes in rural areas were multi-vehicle (78 out of 92).

- The most common type of fatal crashes in rural counties were roadway departure crashes (313 out of 521, 60 percent) and crashes involving rollover (175 out of 521, 34 percent). Seventy-two percent of all roadway departure crashes in rural counties and 73 percent of all rollover fatal crashes in rural counties were single-vehicle crashes.

Table 7. Rural/Urban Fatal Traffic Crashes by Crash Type and Number of Vehicles Involved, 2021

Fatal Crash Types	Rural Counties (118 counties)			Urban Counties (41 counties)			Statewide		
	Total Fatal Crashes	Single Vehicle	Multi-Vehicle	Total Fatal Crashes	Single Vehicle	Multi-Vehicle	Total Fatal Crashes	Single Vehicle	Multi-Vehicle
Fatal Crashes	521	54%	46%	1,149	54%	46%	1,670	54%	46%
Roadway Departure	313	72%	28%	549	68%	32%	862	70%	30%
Involving Rollover	175	73%	27%	211	64%	36%	386	68%	32%
Intersection (or Intersection-Related)	102	18%	82%	254	25%	75%	356	23%	77%
Involving Large Trucks	92	15%	85%	130	14%	86%	222	14%	86%
Involving Pedestrian	50	86%	14%	250	87%	13%	250	87%	13%
Animal-Related	4	100%	--	1	100%	--	5	100%	--

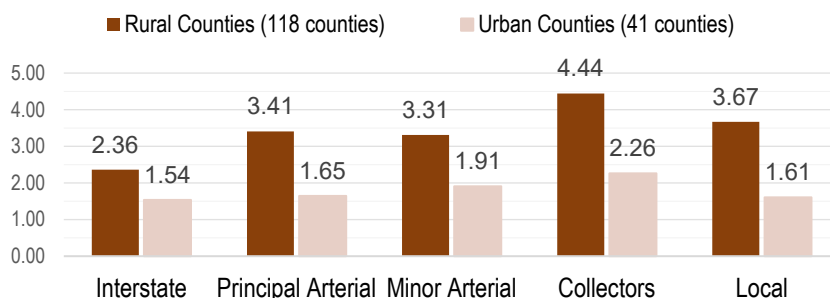
Source: FARS 2021

### Roadway Function Class & Land Use

In 2021, 14 percent of traffic-related crashes in Georgia occurred in 118 rural counties, and 86 percent of crashes occurred in 41 urban counties. Across all roadway functions, rural counties have a higher proportion of fatal and serious injury crashes compared to urban counties (Figure 4). One percent of rural crashes were fatal crashes and 3 percent of rural crashes were serious injury crashes—compared to the 0.3 percent of urban crashes that were fatal and the 1 percent of urban crashes that were serious injury crashes (Table 8).

Roadways that function as collectors have the highest occurrence of fatalities and serious injuries in both rural and urban counties compared to other roadway function classes.

Figure 4. Percent of Traffic-Related Crashes that were Fatal and Serious Injury Crash by Rural/Urban Counties and Roadway Function\*, 2021



Source: FARS 2021, CODES 2021

\*Principal arterials include freeways, and multilane highways (e.g., Buford Highway in DeKalb County and SR-520 & US-82 in Atkinson County). Minor arterials are other important multilane roadways that supplement the highways (e.g., Spring Street in Fulton County and SR-56 in Richmond County). Collector roads are roads that connect local roads and streets with arterials.

Table 8. **Rural/Urban Traffic-Related Crashes Rate by Injury Severity and Roadway Function\*, 2021**

Roadway Function Class*	Rural Counties (118 counties)					Urban Counties (41 counties)				
	Fatal	Serious Injury	Other Injury	No Injury	All Crashes+	Fatal	Serious Injury	Other Injury	No Injury	All Crashes+
Interstate	23	87	942	3,602	4,654	120	763	12,313	44,279	57,475
	0.49%	1.87%	20%	77%	100%	0.21%	1.33%	21%	77%	100%
Principal Arterial	161	455	4,201	13,257	18,074	394	1,367	23,261	81,987	107,009
	0.89%	2.52%	23%	73%	100%	0.37%	1.28%	22%	77%	100%
Minor Arterial	117	365	3,435	10,644	14,561	371	1,774	25,321	84,889	112,355
	0.80%	2.51%	24%	73%	100%	0.33%	1.58%	23%	76%	100%
Collectors	143	483	3,322	10,139	14,087	134	659	8,169	26,115	35,077
	1.02%	3.43%	24%	72%	100%	0.38%	1.88%	23%	74%	100%
Local	77	348	2,388	8,775	11,588	130	870	11,858	49,316	62,174
	0.66%	3.00%	21%	76%	100%	0.21%	1.40%	19%	79%	100%
All Roadways+	521	1,738	14,288	46,417	62,964	1,149	5,433	80,922	286,586	374,090
	1%	3%	23%	74%	100%	<1%	1%	22%	77%	100%

Source: CODES 2021, FARS 2021

\*\*All Roadways" totals included crashes with unknown roadway function class. "All Crashes" total includes crashes with unknown injury types.

\*Principal arterials include freeways, and multilane highways (e.g., Buford Highway in DeKalb County and SR-520 & US-82 in Atkinson County). Minor arterials are other important multilane roadways that supplement the highways (e.g., Spring Street in Fulton County and SR-56 in Richmond County). Collector roads are roads that connect local roads and streets with arterials.

Rural roads are identified by the U.S. Department of Transportation's classifications of roadway segments based on land use classifications at the census tract level (e.g., urban, urbanized, or rural land use). However, rural counties are based on population estimates obtained from the U.S. Census Bureau's 2021 American Community Survey at the county level, not the census tract level. Rural counties can have roadway segments at the census tract level that are used for urban or small urbanized land use. An example of urban roadways segment in rural counties can be edge communities (i.e., communities located at the edge of metropolitan statistical areas, college campuses, or military areas). Urban counties can also have roadway segments that are used for rural land use.

According to GDOT's 2021 Mileage by Route and Road System Report, 27 percent of the vehicle miles traveled in rural counties were designated for urbanized land use, and 8 percent of the vehicle miles traveled in urban counties were designated for rural land use (Table 9).

Table 9. **Proportion of Rural/Urban Vehicle Miles Traveled by Roadway Land Use, 2021**

Roadway Land Use	Rural Counties (118 counties)	Urban Counties (41 counties)	Statewide
Rural Road Land Use	73%	8%	25%
Urban Road Land Use	27%	92%	75%
All roadways	100%	100%	100%

Source: GDOT Mileage by Route and Road System 445 Reports 2021

*Rural counties can have roadway segments at the census tract level that are used for urban or small urbanized land use. An example of urban roadways segment in rural counties can be edge communities (i.e., communities located at the edge of metropolitan statistical areas, college campuses, or military areas). Urban counties can also have rural roadways segments.*

Table 10 shows the relative crash rate in rural counties to urban counties by crash injury severity, roadway land use, and function class.

- In 2021, the proportion of crashes that resulted in a fatality on urbanized roadways (defined by land use) in rural counties was 2.2 times the proportion of crashes that resulted in a fatality on urbanized roadways in urban counties—0.6 percent of all crashes on urbanized roadways in rural counties resulted in traffic fatalities compared to 0.3 percent of all crashes on urbanized roadways in urban counties resulted in traffic fatalities.
- The occurrence of **fatal** crashes on urbanized interstates in rural counties is 10.9 times the occurrence of fatal crashes on urbanized interstates in urban counties. In 2021, 1.8 percent of all crashes on urbanized interstates in rural counties resulted in traffic fatalities compared to 0.2 percent of all crashes on urbanized interstates in urban counties resulting in traffic fatalities.
- The occurrence of **serious injury** crashes on urbanized local roadways in rural counties is 1.6 times the occurrence of serious injury crashes on urbanized local roadways in urban counties. In 2021, 2.0 percent of all crashes on urbanized local roadways in rural counties resulted in traffic fatalities compared to 0.4 percent of all crashes on urbanized local roadways in urban counties resulting in serious injuries.
- The proportion of non-fatal, non-serious, or no-injury crashes was nearly the same for all urbanized and rural roadways in both rural and urban counties across all function classes.

Table 10. **Ratio of the Percent of Rural Crashes to the Percent of Urban Crashes by Crash Severity, Roadway Land Use, and Function Class, 2021**

Roadway Land Use / Function Class		Percent of All Rural County Crashes / Percent of All Urban County Crashes			
		Fatal	Serious Injury	Other Injury	No Injury
Rural Road Land Use	Interstate	0.2x	0.8x	1.0x	1.0x
	Principal Arterial	0.8x	1.3x	1.0x	1.0x
	Minor Arterial	0.7x	1.1x	1.0x	1.0x
	Collectors	1.2x	1.1x	0.9x	1.0x
	Local	1.2x	1.0x	0.9x	1.0x
	All Rural Roadways	<b>0.9x</b> 1.0% of all rural crashes 1.1% of all urban crashes	<b>1.1x</b> 3.3% of all rural crashes 3.0% of all urban crashes	<b>1.0x</b> 23.0% of all rural crashes 23.6% of all urban crashes	<b>1.0x</b> 72.8 rural county rate 72.3 urban county rate
Urban Road Land Use	Interstate	10.9x	1.0x	0.8x	1.0x
	Principal Arterial	1.8x	1.6x	1.0x	1.0x
	Minor Arterial	1.5x	1.1x	1.0x	1.0x
	Collectors	2.3x	1.2x	1.0x	1.0x
	Local	2.1x	1.6x	1.0x	1.0x
	All Urbanized Roadways	<b>2.2x</b> 0.6% of all rural crashes 0.3% of all urban crashes	<b>1.4x</b> 2.7% of all rural crashes 1.4% of all urban crashes	<b>1.0x</b> 21.0% of all rural crashes 20.8% of all urban crashes	<b>1.0x</b> 76.6 rural county rate 77.6 urban county rate
<b>All Roadways</b>		<b>2.7x</b> 0.8% of all rural crashes 0.3% of all urban crashes	<b>1.9x</b> 2.7% of all rural crashes 1.4% of all urban crashes	<b>1.1x</b> 22.1% of all rural crashes 20.9% of all urban crashes	<b>1.0x</b> 74.5% of all rural crashes 77.5% of all urban crashes

Source: CODES 2021, FARS 2021

### Environmental Characteristics

Table 11 shows the information on environmental characteristics (location of impact, hit and run status, animal-related status, light conditions, and time of day) describing where and when fatal and serious injury crashes occurred in 2021.

- Forty-two percent of all rural county fatal and serious injury crashes occurred *off-roadway*—compared to 25 percent of fatal and serious injury crashes occurring *off-roadway* in urban counties.
- Three percent of all fatal and serious injury crashes in rural counties were *hit-and-run*, compared to 8 percent in urban counties.
- Very few fatal and serious injury crashes in both rural and urban counties were *animal-related*—1 percent in rural counties and less than 1 percent in urban counties.
- Fifty-eight percent of fatal and serious injury crashes in rural counties occurred in the *daytime* hours (6:00 a.m. to 5:59 p.m.), compared to 42 percent in urban counties.

Table 11. Rural/Urban Fatal and Serious Injury Crashes by Environmental Characteristic, 2021

Environmental Characteristics	Rural Counties (118 Counties)		Urban Counties (41 Counties)	
	Number	Percent	Number	Percent
<b>Location of Impact</b>				
<b>On Roadway</b>	<b>1,315</b>	<b>57%</b>	<b>4,960</b>	<b>74%</b>
<b>Off Roadway</b>	<b>959</b>	<b>42%</b>	<b>1,691</b>	<b>25%</b>
Roadside	766	33%	1,149	17%
Median	137	6%	270	4%
Shoulder	19	1%	87	1%
Other	37	2%	185	3%
<b>Unknown</b>	<b>16</b>	<b>1%</b>	<b>20</b>	<b>0%</b>
<b>Hit and Run</b>				
No	2,229	97%	6,111	92%
Yes	65	3%	510	8%
<b>Animal-Related</b>				
No	2,274	99%	8,417	100%
Yes	16	1%	23	<1%
<b>Light Conditions</b>				
Dark	836	37%	2,943	44%
Daylight	1,383	60%	3,494	52%
Dawn	20	1%	85	1%
Dusk	35	2%	131	2%
<b>Time of Day</b>				
Daytime	1,324	58%	3,243	49%
Nighttime	965	42%	3,426	51%
<b>Day of Week / Time of Day</b>				
<b>Weekday</b>	<b>1,413</b>	<b>62%</b>	<b>3,965</b>	<b>59%</b>
Daytime	969	42%	2,337	35%
Nighttime	443	19%	1,628	24%
<b>Weekend</b>	<b>877</b>	<b>38%</b>	<b>2,706</b>	<b>41%</b>
Daytime	355	16%	906	14%
Nighttime	522	23%	1,798	27%

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.

Source: CODES 2021, FARS 2021

## Contributing Circumstances

Key Findings from Issue Brief:

### EXAMINING CRASHES AND DRIVERS IN RURAL AREAS

This issue brief examines differences in crashes, driving behavior, and post-crash care in Georgia's rural and urban counties by 2019-2021 Georgia crash data, 2019-2021 linked Georgia Crash-EMS-Hospital data, and the Centers for Disease Control and Prevention (CDC) 2020 Social Vulnerability Index (SVI). The goal of this investigation was to: (1) examine the difference in risky driving behaviors between local and non-local drivers involved in fatal and serious injury crashes (KA crashes) in rural and urban counties; (2) compare the differences in restraint use (seatbelt and child safety systems) among passenger vehicle occupants in rural and urban counties and, (3) describe the differences in post-crash care and expenses in rural and urban counties. The results showed that there was a greater proportion of non-interstate traffic crashes in rural counties result in serious injuries or fatalities than non-interstate traffic crashes in urban counties. Higher proportions of unrestraint, speeding, alcohol impairment, and distracted driving was found among drivers in rural crashes. Most notably, local rural drivers were more likely to have unrestrained passenger vehicle occupants with KA injuries compared to non-local rural drivers and all urban drivers. There was also a positive association between SVI and not using safety belt systems— percent of unrestrained KA injuries increases with community social vulnerability. Although the median distance from a rural county crash site for all injuries to a post-crash care facility was significantly longer than from an urban crash site, the median EMS travel times were the same.

#### *Unrestrained Passenger Vehicle Occupants*

The Injury Prevention Research Center at Emory University conducted a roadside observational survey of front seat belt use. According to the "Observational Survey of Seat Belt Use in Georgia" report, rural counties had the lowest seat belt usage rates compared to urban counties. In 2022, seat belt rates were highest in counties in the urban counties—Atlanta Metropolitan Statistical Area (90.3 percent), followed by counties in other Metropolitan Statistical Areas (87.5 percent). During the same year, the seat belt usage rate was lowest in the rural counties (81.7 percent).

Table 12 shows the percentage and number of unrestrained passenger vehicle<sup>4</sup> occupants fatally injured in traffic crashes by rural/urban counties. In 2021, there were 562 traffic fatalities in rural counties, of which 404 (72 percent) were occupants of passenger vehicles. Of the 404 passenger vehicle occupants fatally injured, 52 percent were unrestrained, 43 percent were restrained, and 5 percent were reported with unknown restraint use at the time of the crash. Based on known restraint use, the percentage of unrestrained passenger vehicle fatalities in rural counties increased by six percentage points, from 49 percent in 2020 to 55 percent in 2021.

In the same year, there were 1,235 traffic fatalities in urban counties, of which 781 (63 percent) were occupants of passenger vehicles. Of the 781 passenger vehicle occupants fatally injured, 45 percent were unrestrained, 44 percent were restrained, and 12 percent were reported with unknown restraint use at the time of the crash. Based on known restraint use, the percentage of unrestrained passenger vehicle fatalities in urban counties increased by three percentage points, from 47 percent in 2020 to 50 percent in 2021.

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<sup>4</sup> The number of total passenger vehicle occupant fatalities may be different than the values reported by FARS due to the definitions and classifications of passenger vehicles. See 'Data Considerations' for more information.

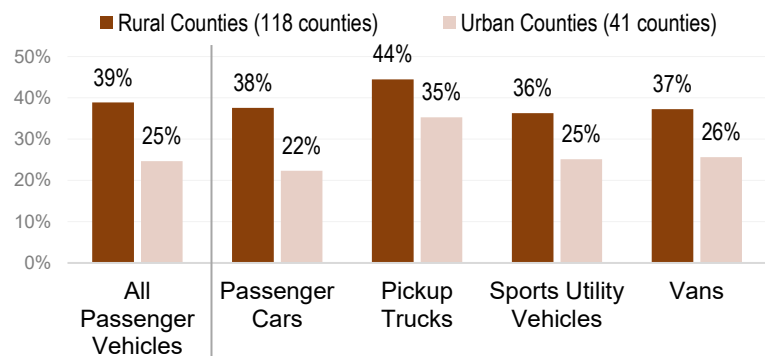
Table 12. **Passenger Vehicle Occupants by Restraint Use, Injury Type, and Region Type, 2021**

Restraint Use by Injury Type		Rural Counties (118 counties)		Urban (41 counties)		Statewide	
		Number	Percent	Number	Percent	Number	Percent
Fatally Injured	Restrained	174	43%	341	44%	515	43%
	Unrestrained	210	52%	348	45%	558	47%
	Unknown	20	5%	92	12%	112	9%
	<b>Total</b>	<b>404</b>	<b>100%</b>	<b>781</b>	<b>100%</b>	<b>1,185</b>	<b>100%</b>
Suspected Serious Injuries	Restrained	925	58%	3,131	63%	4,056	62%
	Unrestrained	489	31%	789	16%	1,278	19%
	Unknown	186	12%	1,068	21%	1,254	19%
	<b>Total</b>	<b>1,600</b>	<b>100%</b>	<b>4,988</b>	<b>100%</b>	<b>6,588</b>	<b>100%</b>

Note: Percent totals may not equal 100 percent due to rounding.  
Source: CODES 2021, FARS 2021

The percentage of unrestrained passenger vehicle occupant fatalities and serious injuries is higher in rural counties compared to urban counties (Figure 5)—39 percent in rural counties compared to 25 percent in urban counties. Pickup trucks have the highest rate of unrestrained, fatally and seriously injured passenger vehicle occupants compared to all other vehicle types in both rural and urban counties—44 percent in rural counties and 35 percent in urban counties. The “Observational Survey of Seat Belt Use in Georgia” also reported that pickup trucks in the rural counties had the lowest restraint use among all PV occupants (75.2 percent) in Georgia. Vans in urban counties had the highest restraint use among all PV occupants (90.5 percent) in Georgia.

Figure 5. **Rural/Urban Percentages of Unrestrained\* Passenger Vehicle Occupant Fatalities and Serious Injuries in Traffic Crashes by Vehicle Type, 2021**



\*Based on known restraint use  
Source: FARS 2021, CODES 2021

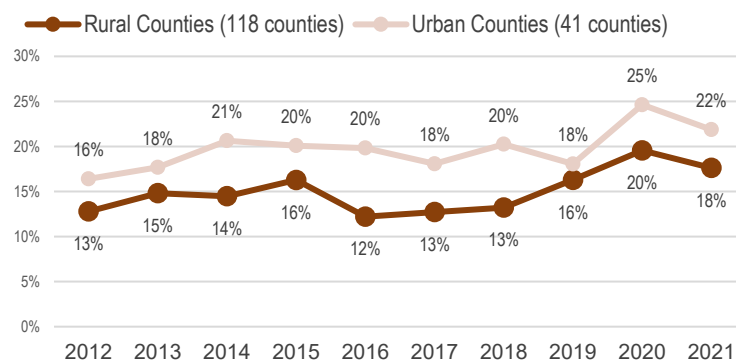
According to the Georgia Traffic Safety Facts study, "*Examining Crashes and Drivers in Rural Areas*" (Georgia Crash Outcomes Data Evaluation System, 2023), there is a positive correlation between vulnerable census tracts<sup>5</sup> in Georgia and the proportion of unrestrained passenger vehicle fatalities and serious injuries in both rural counties and urban counties (including the Atlanta Region). In other words, **the more vulnerable a community is, the higher the proportion of unrestrained traffic-related fatalities and serious injuries that occur in that area.**

<sup>5</sup> Vulnerable census tracts are determined by the Centers for Disease Control and Prevention (CDC)'s Social Vulnerability Index (SVI).

## Speeding

A ten-year trend shows that speeding-related fatalities more than doubled in both rural and urban counties (Table 13). Between 2012 and 2021, urban counties had a greater proportion of speeding-related fatalities compared to rural counties. In 2021, 18 percent of all traffic fatalities (99 out of 562) were speeding-related in rural counties, compared to 22 percent (270 out of 1,235) in urban counties. The percentage of speeding-related fatalities in rural counties increased by five percentage points, from 13 percent in 2012 to 18 percent in 2021—compared to six percentage point increase in urban counties (from 16 percent in 2012 to 22 percent in 2021).

Figure 6. **Percent of Traffic Fatalities that are Speeding-Related by Region, 2012-2021**



Source: FARS 2012-2021

Table 13. **Rural/Urban Speeding-Related Traffic Fatalities, 2012-2021**

Year	Rural Counties (118 counties)					Urban Counties (41 counties)				
	Total Fatalities	Speeding-Related Fatalities		Not Speeding-Related Fatalities		Total Fatalities	Speeding-Related Fatalities		Not Speeding-Related Fatalities	
		Number	Percent	Number	Percent		Number	Percent	Number	Percent
2012	430	55	13%	375	87%	762	125	16%	637	84%
2013	405	60	15%	345	85%	775	137	18%	638	82%
2014	442	64	14%	378	86%	722	149	21%	573	79%
2015	516	84	16%	432	84%	916	184	20%	732	80%
2016	557	68	12%	489	88%	999	198	20%	801	80%
2017	566	72	13%	494	87%	974	176	18%	798	82%
2018	522	69	13%	453	87%	983	199	20%	784	80%
2019	534	87	16%	447	84%	958	173	18%	785	82%
2020	588	115	20%	473	80%	1,076	265	25%	811	75%
2021	562	99	18%	463	82%	1,235	270	22%	965	78%

Source: FARS 2021

Table 14 shows the percent of speeding-related fatal crashes by region type and roadway classification in 2021 for rural/urban counties.

- 36 percent of all rural speeding-related fatal crashes occurred on collector roadways, resulting in a rate of 0.56 speeding-related fatal crashes per 100M vehicle miles traveled on rural collector roadways.
- 31 percent of all urban speeding-related fatal crashes occurred on principal arterial roadways; however, urban collectors had the highest speeding-related fatal crash rate in urban counties (0.48 crashes per 100M VMT on urban collector roadways).

Table 14. **Speeding-Related Fatal Crashes and Speeding-Related Fatal Crash Rate (per 100M VMT) by Roadway Function Class and Region, 2021**

Roadway Function Class*	Rural Counties (118 counties)		Urban Counties (41 counties)		Statewide	
	Number (%)	Rate per 100M VMT	Number (%)	Rate per 100M VMT	Number (%)	Rate per 100M VMT
Interstate	4 (4%)	0.06	27 (11%)	0.10	31 (9%)	0.09
Principal Arterial	17 (19%)	0.22	75 (31%)	0.40	92 (28%)	0.35
Minor Arterial	12 (13%)	0.21	72 (30%)	0.41	84 (25%)	0.36
Collector	33 (36%)	0.56	35 (14%)	0.48	68 (20%)	0.52
Local	25 (27%)	0.50	34 (14%)	0.17	59 (18%)	0.24
<b>All Roadways</b>	<b>91 (100%)</b>	<b>0.30</b>	<b>243 (100%)</b>	<b>0.27</b>	<b>334 (100%)</b>	<b>0.28</b>

\*Principal arterials include freeways, and multilane highways (e.g., Buford Highway in DeKalb County and SR-520 & US-82 in Atkinson County). Minor arterials are other important multilane roadways that supplement the highways (e.g., Spring Street in Fulton County and SR-56 in Richmond County). Collector roads are roads that connect local roads and streets with arterials.

Source: FARS 2021, Adjusted GDOT Mileage by Route and Road System 445 Reports 2021



## Alcohol Involvement

Drivers are considered alcohol-impaired when their blood alcohol concentration (BAC) is 0.08 grams per deciliter (g/dL) or higher. Seventy-one percent of all alcohol-related fatal crashes in Georgia occurred in the urban counties (41 counties), and 29 percent occurred in rural counties (118 counties). During the 5-year period (2017-2021), the number of alcohol-related fatalities decreased by 3 percent in rural counties and increased by 21 percent in urban counties; however, the proportion of alcohol-related fatalities in urban counties are slightly higher compared to rural counties. In 2021, rural counties, 21 percent of all traffic fatalities (116 out of 562) were alcohol-related, compared to 22 percent (276 out of 1,235) in urban counties.

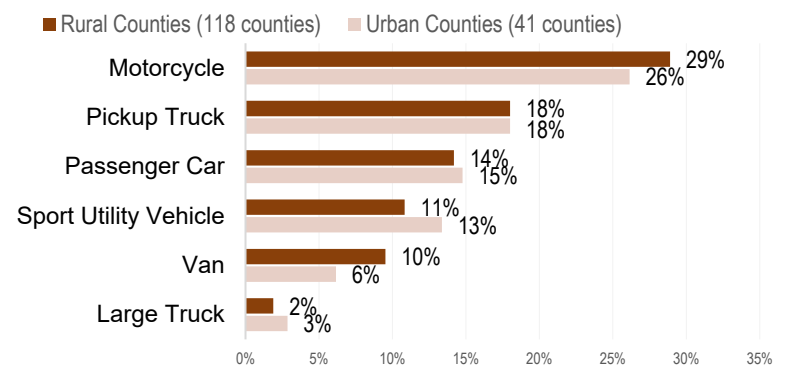
Table 15. **Rural/Urban Alcohol-Related Traffic Fatalities, 2017-2021**

Year	Rural Counties (118 counties)					Urban Counties (41 counties)				
	Total Fatalities	Alcohol-Impaired-Related		Not Alcohol-Impaired-Related		Total Fatalities	Alcohol-Impaired-Related		Not Alcohol-Impaired-Related	
		Number	Percent	Number	Percent		Number	Percent	Number	Percent
2017	566	120	21%	446	79%	974	229	24%	745	76%
2018	522	131	25%	391	75%	983	246	25%	737	75%
2019	534	123	23%	411	77%	958	248	26%	710	74%
2020	588	125	21%	463	79%	1,076	258	24%	818	76%
2021	562	116	21%	446	79%	1,235	276	22%	959	78%

Note: NHTSA estimates Blood alcohol content (BAC) when alcohol test results are unknown. BAC imputation and estimates may differ on at county-level compared to aggregated reported statewide. Source: FARS 2021

In 2021, 796 rural drivers were involved in fatal crashes of which 14 percent were reported alcohol-impaired with a reported BAC at or over 0.08 g/dL—compared to 1,821 urban drivers involved in fatal crashes of which 15 percent were alcohol-impaired. The percentages of alcohol-impaired drivers involved in fatal crashes were higher in urban counties for all vehicle types except motorcycle operators and van drivers. In 2021, 29 percent of rural motorcycle operators involved in a fatal crash were alcohol-impaired compared to 26 percent of urban motorcycle operators involved in fatal crashes.

Figure 7. **Percent of Total Drivers that are Alcohol-Impaired by Vehicle Type and Rural/Urban County, 2021**



Source: FARS 2021

Table 16. **Total Rural/Urban Drivers in Fatal Crashes, by Alcohol Involvement and Vehicle Type, 2021**

Vehicle Body Type	Rural Counties (118 counties)			Urban Counties (41 counties)			Statewide		
	Total Drivers	Alcohol-Impaired Driver		Total Drivers	Alcohol-Impaired Driver		Total Drivers	Alcohol-Impaired Driver	
		Number	Percent		Number	Percent		Number	Percent
Passenger Car	268	38	14%	799	118	15%	1,067	156	15%
Light Truck	336	50	15%	688	98	14%	1,024	148	14%
<i>Pickup Truck</i>	195	35	18%	249	44	18%	444	79	18%
<i>Sport Utility Vehicle</i>	120	13	11%	374	50	13%	494	63	13%
<i>Van</i>	21	2	10%	65	4	6%	86	6	7%
Motorcycle	45	13	29%	153	40	26%	198	53	27%
Large Truck	106	2	2%	140	4	3%	246	6	2%
Bus	1	--	--	4	--	--	5	--	--
Other Unknown Vehicle	40	6	15%	37	13	35%	77	19	25%
<b>All Drivers</b>	<b>796</b>	<b>109</b>	<b>14%</b>	<b>1,821</b>	<b>273</b>	<b>15%</b>	<b>2,617</b>	<b>382</b>	<b>15%</b>

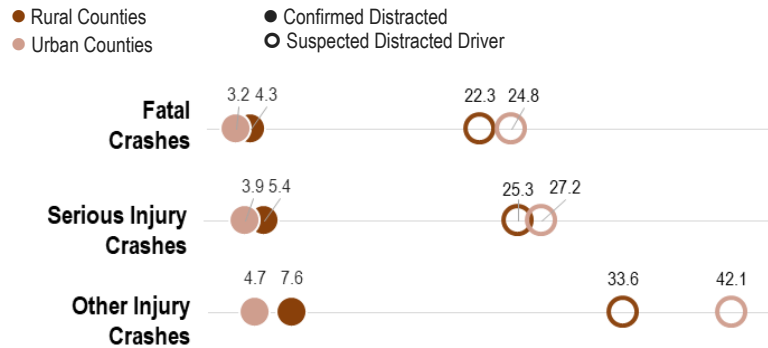
Note: NHTSA estimates BACs when alcohol test results are unknown. Source: FARS 2021

## Distracted Driving

In 2021, 54 percent of motor vehicle traffic crashes fit the criteria of having at least one confirmed or suspected distracted driver.<sup>6</sup> Figure 8 shows the proportion of motor vehicle crashes that were distraction-related by rural/urban county, crash severity, and driver confirmed or suspected of distracted driving. Drivers involved in crashes in rural counties have a higher proportion of confirmed distracted drivers compared to drivers in urban counties. Conversely, drivers involved in crashes in rural counties have lower proportion of confirmed suspected distracted drivers compared to drivers in urban counties.

Among the drivers involved in fatal crashes in rural counties, 4.3 percent were confirmed distracted and 22.3 percent were suspected of distraction—compared to 3.2 percent of confirmed distracted drivers and 24.8 percent of suspected distracted drivers in urban county fatal crashes (Table 17).

Figure 8: **Percent of Distraction-Related Traffic Crashes by Crash Severity and Region, 2021**



Source: CODES 2021

See the “**Distracted Driving**” and “**Risky Driving**” Georgia Traffic Safety Facts for more information regarding distracted-related crashes.

Table 17. **Percent of Distraction-Related Traffic Crashes by Crash Severity and Region, 2021**

Crash Severity	Rural Counties (118 counties)			Urban Counties (41 counties)			Statewide		
	Confirmed Distraction	Suspected Distraction	No Distraction	Confirmed Distraction	Suspected Distraction	No Distraction	Confirmed Distraction	Suspected Distraction	No Distraction
Fatal Crashes	4.3	22.3	73.4	3.2	24.8	72.2	3.4	24.1	72.6
Serious Injury Crashes	5.4	25.3	69.3	3.9	27.2	68.9	4.3	26.7	69.0
Other Injury Crashes	7.6	33.6	58.9	4.7	42.1	53.2	4.2	26.4	69.4
No Injury Crashes	5.2	49.5	45.3	3.7	53.3	43.0	3.9	52.8	43.3
<b>All Crashes</b>	<b>5.8</b>	<b>44.8</b>	<b>49.4</b>	<b>3.9</b>	<b>50.2</b>	<b>45.9</b>	<b>4.2</b>	<b>49.4</b>	<b>46.4</b>

Source: CODES 2021

<sup>6</sup> Although it is challenging for law enforcement to determine whether distraction is a contributing factor in a fatal crash, the police crash report may be the only source available for this information. Therefore, the number of confirmed distraction-related fatal crashes is underreported.

## Drowsy Driving

A drowsy-driving crash is a crash in which the driver was reported as drowsy or sleepy based on the police accident report. Underreporting of the occurrence of drowsy driving is most likely due to a lack of firm evidence of such involvement since the investigation was done after the crash. Table 18 shows the three-year total and average number of drowsy-related traffic crashes by injury. Between 2019 and 2020, there were 14 drowsy-related traffic fatalities in rural counties, compared to 33 drowsy-related traffic fatalities in urban counties.

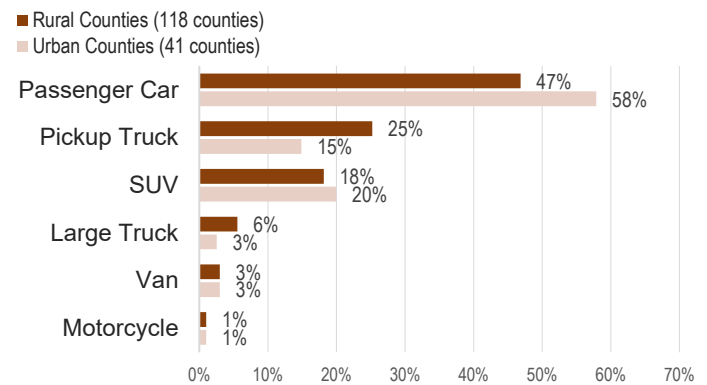
In rural and urban counties, a higher proportion of drowsy drivers involved in traffic crashes operated passenger cars compared to other vehicle types. In 2021, 47 percent of all rural drowsy drivers involved in crashes were operating passenger cars, and 25 percent were operating pickup trucks.

Table 18. **Drowsy-Related Injuries in Traffic Crashes, 2019-2021**

Region	Injuries in Crashes	3-Year Total	3-Year Average
Rural Counties (118 counties)	Fatalities	14	5
	Serious Injuries	125	42
	All Crashes	2,971	990
Urban Counties (41 counties)	Fatalities	33	11
	Serious Injuries	139	46
	All Crashes	2,793	931

Source: CODES 2021, FARS 2021

Figure 9. **Vehicle Types of Drowsy Drivers Involved in Traffic Crashes, 2019-2021**



Source: CODES 2021

\* Large trucks include commercial and non-commercial vehicles with a gross vehicle weight rating greater than 10,000 pounds.

## Demographics

In 2021, 79 percent of all Georgia drivers lived in urban counties and 21 percent lived in rural counties. Just under half of all licensed drivers in rural and urban counties were male—49 percent of all rural licensed drivers and 48 percent of all urban licensed drivers. Male drivers are disproportionately represented in motor vehicle traffic crashes, serious injury crashes, and fatal crashes in both rural and urban counties.

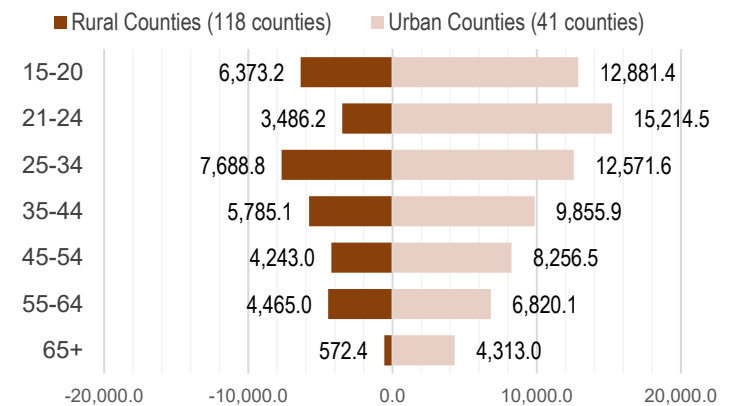
- 57 percent of all rural drivers involved in traffic crashes and 56 percent of all urban drivers involved in traffic crashes were male.
- 66 percent of all rural drivers involved in serious injury crashes and 63 percent of all urban drivers involved in serious injury crashes were male.
- 73 percent of all rural drivers involved in fatal crashes and 71 percent of all urban drivers involved in fatal crashes were male.

The rate of *urban drivers* involved in *urban crashes* per (100,000 urban licensed drivers) is higher than that of *rural drivers* involved in *rural crashes* for all age groups (Figure 10). In urban counties, urban drivers aged 21 to 24 had the highest rate of involvement in urban crashes compared to other age groups (7,688.8 crashes per 100,000 license drivers). In rural counties, urban drivers aged 21 to 24 had the highest rate of involvement in urban crashes compared to other age groups (15,214.5 crashes per 100,000 license drivers).

In 2021, 3.8 percent of rural drivers were involved in traffic crashes that resulted in either a fatality or serious injury. Rural drivers aged 65+ years had the highest proportion of involvement in crashes that resulted in a fatality or serious injury compared to other age groups—4.5 percent of all crashes that involved drivers 65+ year in rural counties resulted in a fatal or serious injury.

In the same year, 1.9 percent of traffic crashes that involve urban drivers of all ages resulted in fatality or serious injury. Drivers aged 25 to 35 had the highest percentage of involvement in urban crashes that resulted in fatality or serious injury compared to other age groups (2.1 percent).

Figure 10. **Rate of Drivers Involved in Traffic Crashes Per 100,000 Licensed Drivers by Age Group and Urban/Rural County, 2021**



Source: CODES 2021, DDS 2021

Note: License driver rural/urban groupings were based on the county of driver's license.

Table 19. **Rate of Drivers Involved in Traffic-Crashes Per 100,000 Licensed Drivers and Drivers involved in Fatal or Serious Injury Crashes by Age Group and Urban/Rural County, 2021**

Age Groups	Rural Counties (118 counties)			Urban Counties (41 counties)		
	Crashes per 100,000 Licensed Drivers	Drivers Involved in Fatal or Serious Injury Crashes	Percent of Crashes that were Fatal or Serious Injury	Crashes per 100,000 Licensed Drivers	Drivers Involved in Fatal or Serious Injury Crashes	Percent of Crashes that were Fatal or Serious Injury
15-20	6,373.2	380	3.2 %	12,881.4	1,088	1.7 %
15-17	5,308.4	132	3.2 %	8,784.1	270	1.5 %
18-20	7,138.9	248	3.2 %	15,654.4	818	1.8 %
21-24	3,486.2	331	3.8 %	<b>15,214.5</b>	1,274	1.9 %
25-34	<b>7,688.8</b>	713	3.8 %	12,571.6	3,059	<b>2.1 %</b>
35-44	5,785.1	583	3.9 %	9,855.9	2,145	2.0 %
45-54	4,243.0	516	4.1 %	8,256.5	1,730	2.0 %
55-64	4,465.0	455	4.1 %	6,820.1	1,273	1.9 %
65+	572.4	481	<b>4.5 %</b>	4,313.0	967	2.0 %
65-74	5,522.9	303	4.2 %	4,910.7	671	2.0 %
75-84	8,340.8	148	5.0 %	3,558.8	236	2.0 %
85+	33.7	30	5.2 %	2,471.8	60	2.7 %
<b>All Drivers</b>	<b>2,722.5</b>	<b>3,554</b>	<b>3.8 %</b>	<b>9,887.9</b>	<b>11,972</b>	<b>1.9 %</b>

Source: CODES 2021, DDS 2021

## Data Definitions and Considerations:

Rural counties have a population of less than 50,000 according to the United States decennial census of 2020 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. Georgia Department of Transportation determines roadway land use and function class (which is approved by the Federal Highway Administration) for urban boundaries and the areas outside of those boundaries are described as rural. GDOT's roadway classification can be found in the GDOT Mileage by Route and Road System 445 Reports.

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 traffic way, 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 involving a motor vehicle traveling on a traffic way customarily open to the public and resulting in the death of a motorist or a non-motorist within 30 days of the crash.

Suspected serious injuries are 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 Department of Driver Services licensing database is a live database system and represents the information at a point-in-time on the date of extraction.

Passenger vehicles are defined as motor vehicles with gross vehicle weight ratings of 10,000 pounds or less and include passenger cars and light trucks (SUVs, pickups, vans, and other light trucks). These are vehicle body type codes 1-40 listed in the 2019 FARS Analytical Reference Guide. In the GDOT crash report, passenger vehicles are considered: passenger cars (1), pickup trucks (2), vans (10), and sports utility vehicles (11).

Passenger vehicle occupants are drivers and passengers in a vehicle that is in transport. Persons in vehicles that are not in transport are not considered passenger vehicle occupants.

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. Drivers operating the following vehicle types were excluded from the speeding analyses: pedalcycles/bicycles, all-terrain vehicles, golf carts/go carts, and farm/construction equipment.

For fatal crashes only, Blood Alcohol Concentration (BAC) values are imputed to address 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.

The National Highway Traffic Safety Administration (NHTSA) defines confirmed distraction-related activities as anything that takes a driver's eyes off the road (visual distraction), mind off the road (cognitive distraction), or hands off the wheel (manual distraction).

Police crash reports are reviewed in a post hoc analysis by the Governor's Office of Highway Safety, Georgia Department of Public Health, and the Georgia Department of Transportation using a jointly developed definition of suspected distracted driving based on multiple factors. The imputation of suspected distracted drivers includes drivers that indicate emotional distress and evidence of driver inattention and distraction. The imputation removes driver contributing factors that include drug/alcohol impairment, sleepiness/drowsiness, aggressive/reckless driving, and speeding. The definition also excludes roadway and vehicle contributing factors. The CODES Analytical Reference Guide is available upon request.

*Additional Information:* Other fact sheets available at the Governor's Office of Highway Safety and Crash Outcomes Data Evaluation Systems (CODES) are: Issue Brief-Examining Crashes and Drivers in Rural Areas, Older Drivers, Young Drivers, Motorcycles, Non-Motorists (Pedestrians & Bicyclists), Occupant Protection, Risky Driving, and Distracted Driving

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# APPENDIX

## RURAL VS. URBAN

### GEORGIA TRAFFIC SAFETY FACTS (2021)

This document is the appendix for the **2021 Rural vs. Urban Georgia Traffic Safety Facts**.  
 Visit <https://www.gahighwaysafety.org/highway-safety/shsp/> to access the full report.

#### Data Considerations:

- **Suspected Serious Injuries:** Suspected serious injuries are 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.
- **Rural counties:** Rural counties are counties that have a population of less than 50,000 according to the United States decennial census of 2020 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.

#### Traffic Crashes, Serious Injury or Fatal Crashes, and Fatality and Serious Injury Rates by County, 2021

County Name ● Urban County Rural County (unmarked)	Traffic Crashes (Crash-Level)		Fatalities and Serious Injuries (Person-Level)		
	Total Crashes	Percent of Crashes that were Serious Injury or Fatal	Fatalities or Serious Injuries	Fatal and Serious Injuries per 100M VMT	Fatal and Serious Injuries per 100,000 Population
● All Urban Counties	328,447	2.0 (6,671)	7,834	8.72	1,075.5
All Rural Counties	57,505	4.0 (2,290)	2,632	8.53	1,464.0
Appling	610	4.1	32	11.27	2,259.9
Atkinson	143	4.2	6	4.88	824.2
Bacon	200	3.5	7	5.47	761.7
Baker	88	3.4	**	**	**
Baldwin	1,899	2.9	70	21.81	1,212.1
Banks	354	6.2	25	8.04	1,778.1
● Barrow	3,085	1.9	74	8.03	1,072.3
● Bartow	4,179	2.8	138	7.06	1,615.0
Ben Hill	472	3.0	20	12.74	1,469.5
Berrien	458	2.6	12	6.06	828.7
● Bibb	7,231	2.8	225	10.74	1,617.9
Bleckley	229	3.1	8	4.94	469.8
Brantley	231	5.6	17	8.67	1,214.3
Brooks	373	4.6	19	9.36	1,714.8
Bryan	1,300	2.2	33	4.20	817.8
● Bulloch	2,627	2.9	89	9.18	676.3
Burke	736	4.9	44	12.09	2,196.7
Butts	864	3.8	38	9.57	1,996.8
Calhoun	53	1.9	**	**	**
● Camden	698	4.7	44	4.69	1,014.8
Candler	307	3.3	10	3.76	1,095.3
● Carroll	4,238	2.8	144	10.10	1,161.6
● Catoosa	2,181	1.9	47	5.61	891.5
Charlton	179	3.4	7	4.73	928.4
● Chatham	14,533	2.3	386	11.37	1,581.1

*Traffic Crashes, Serious Injury or Fatal Crashes, and Fatality and Serious Injury Rates by County, 2021  
(con't)*

County Name ● Urban County Rural County (unmarked)	Traffic Crashes (Crash-Level)		Fatalities and Serious Injuries (Person-Level)		
	Total Crashes	Percent of Crashes that were Serious Injury or Fatal	Fatalities or Serious Injuries	Fatal and Serious Injuries per 100M VMT	Fatal and Serious Injuries per 100,000 Population
Chattahoochee	42	9.5	**	**	**
Chattooga	434	3.5	18	7.29	996.7
● Cherokee	6,549	1.8	143	6.59	638.2
● Clarke	5,014	1.6	86	7.88	455.6
Clay	68	7.4	**	**	**
● Clayton	15,509	2.4	445	13.88	1,686.5
Clinch	126	5.6	11	10.00	1,996.4
● Cobb	27,362	1.7	547	7.41	888.9
Coffee	1,056	5.8	72	16.22	1,975.3
Colquitt	1,192	4.1	53	11.80	1,406.2
● Columbia	4,673	0.9	53	4.01	418.6
Cook	595	3.4	24	4.29	1,707.0
● Coweta	4,712	2.4	120	6.76	1,006.2
Crawford	274	2.6	7	6.36	828.4
Crisp	827	3.5	31	5.87	1,979.6
Dade	274	3.6	11	3.26	703.8
Dawson	996	1.7	18	6.08	945.9
Decatur	631	5.9	40	11.36	1,697.8
● DeKalb	38,277	2.0	924	11.69	1,742.7
Dodge	365	5.8	22	10.23	1,544.9
Dooly	296	4.1	14	2.95	1,920.4
● Dougherty	3,789	2.9	125	14.74	1,519.4
● Douglas	6,150	1.9	135	8.70	1,028.8
Early	274	5.1	15	9.55	1,702.6
Echols	41	4.9	**	**	**
● Effingham	1,426	3.2	50	8.50	921.1
Elbert	333	6.3	22	10.33	1,650.4
Emanuel	429	5.8	29	7.13	1,527.9
Evans	146	7.5	11	9.17	1,155.5
Fannin	652	5.2	38	13.87	2,624.3
● Fayette	3,674	2.1	85	7.23	797.9
● Floyd	3,499	2.7	114	10.80	1,273.3
● Forsyth	6,101	1.4	95	4.81	416.9
Franklin	969	4.3	45	7.89	2,191.9
● Fulton	58,105	2.0	1319	10.53	1,539.0
Gilmer	830	6.4	63	18.26	3,387.1
GlascocK	23	8.7	**	**	**
● Glynn	2,648	3.2	100	8.76	1,607.5
● Gordon	1,872	2.7	62	6.47	1,286.6
Grady	369	5.7	24	8.60	1,164.5
Greene	689	2.8	20	5.19	1,838.2
● Gwinnett	27,351	1.1	358	4.20	412.4
Habersham	1,262	3.2	53	9.60	1,389.3
● Hall	7,708	2.0	177	7.99	999.4
Hancock	57	21.1	15	15.46	3,048.8
Haralson	581	5.7	43	9.91	1,846.3

*Traffic Crashes, Serious Injury or Fatal Crashes, and Fatality and Serious Injury Rates by County, 2021  
(con't)*

County Name ● Urban County Rural County (unmarked)	Traffic Crashes (Crash-Level)		Fatalities and Serious Injuries (Person-Level)		
	Total Crashes	Percent of Crashes that were Serious Injury or Fatal	Fatalities or Serious Injuries	Fatal and Serious Injuries per 100M VMT	Fatal and Serious Injuries per 100,000 Population
Harris	513	4.3	26	5.24	972.3
Hart	816	2.5	23	7.85	1,237.2
Heard	178	8.4	16	13.11	1,812.0
● Henry	11,056	1.7	200	7.11	867.4
● Houston	4,453	2.3	128	9.76	959.3
Irwin	172	4.1	7	5.00	965.5
● Jackson	2,761	2.0	59	4.57	934.3
Jasper	414	3.9	17	10.97	1,444.4
Jeff Davis	287	5.6	19	12.58	1,506.7
Jefferson	225	4.0	10	4.15	847.5
Jenkins	128	7.8	12	9.84	1,837.7
Johnson	84	7.1	6	6.67	996.7
Jones	634	4.7	32	11.43	1,351.4
Lamar	540	3.7	25	10.20	1,121.1
Lanier	165	4.8	9	10.71	1,176.5
Laurens	1,315	4.0	69	8.36	1,766.5
Lee	612	3.9	29	10.25	984.1
● Liberty	1,812	2.9	63	7.35	1,177.6
Lincoln	41	17.1	8	10.00	1,834.9
Long	229	4.4	10	5.65	740.2
● Lowndes	4,067	1.3	65	4.32	501.4
Lumpkin	974	3.5	37	13.81	820.6
Macon	173	8.7	20	13.07	2,460.0
Madison	717	2.9	21	6.46	928.0
Marion	99	3.0	**	**	**
McDuffie	709	1.3	10	2.77	599.9
McIntosh	119	17.6	23	4.10	3,764.3
Meriwether	467	6.6	33	10.41	2,219.2
Miller	95	5.3	**	**	**
Mitchell	580	2.8	20	7.02	1,263.4
Monroe	1,343	2.5	39	6.03	1,859.8
Montgomery	178	8.4	16	15.38	1,977.8
Morgan	878	3.5	40	6.99	2,549.4
Murray	791	4.8	45	15.85	1,352.6
● Muscogee	7,353	1.6	130	7.51	795.3
● Newton	3,656	4.0	184	15.55	1,655.7
Oconee	1,598	1.4	28	4.81	723.0
Oglethorpe	399	6.0	27	18.88	2,556.8
● Paulding	4,147	2.7	136	11.35	913.4
Peach	1,142	2.6	34	5.64	1,050.4
Pickens	953	3.6	42	10.40	1,808.8
Pierce	380	4.2	16	7.84	1,026.3
Pike	327	2.4	14	7.29	856.8
Polk	1,126	5.2	64	14.13	1,832.8
Pulaski	140	5.0	10	9.01	1,555.2
Putnam	700	4.6	39	12.70	2,695.2



*Traffic Crashes, Serious Injury or Fatal Crashes, and Fatality and Serious Injury Rates by County, 2021  
(con't)*

County Name ● Urban County Rural County (unmarked)	Traffic Crashes (Crash-Level)		Fatalities and Serious Injuries (Person-Level)		
	Total Crashes	Percent of Crashes that were Serious Injury or Fatal	Fatalities or Serious Injuries	Fatal and Serious Injuries per 100M VMT	Fatal and Serious Injuries per 100,000 Population
Quitman	18	11.1	**	**	**
Rabun	503	5.4	29	14.80	2,879.8
Randolph	82	8.5	7	7.53	1,443.3
● Richmond	9,569	1.7	185	8.33	1,055.5
● Rockdale	3,472	3.0	135	11.98	1,638.5
Schley	59	6.8	**	**	**
Screven	184	6.5	12	6.38	1,234.6
Seminole	106	5.7	11	10.48	1,676.8
● Spalding	2,195	3.3	85	11.87	1,686.5
Stephens	626	3.0	21	7.64	966.4
Stewart	97	3.1	**	**	**
Sumter	797	3.8	35	12.15	1,179.6
Talbot	145	6.2	9	7.89	2,528.1
Taliaferro	137	3.6	6	4.62	7,317.1
Tattnall	375	5.3	23	10.13	1,352.1
Taylor	125	6.4	8	5.63	1,436.3
Telfair	145	2.1	**	**	**
Terrell	156	4.5	7	4.29	1,040.1
Thomas	1,664	2.0	41	7.93	1,186.7
Tift	1,513	2.4	39	5.07	953.1
Toombs	1,031	3.2	37	12.21	1,666.7
Towns	236	5.9	14	11.20	968.2
Treutlen	200	2.5	**	**	**
● Troup	3,312	2.6	115	10.57	1,967.8
Turner	260	1.9	6	1.59	826.4
Twiggs	521	4.2	22	6.65	4,741.4
Union	726	5.0	40	16.19	2,855.1
Upton	501	7.2	39	16.67	1,963.7
● Walker	1,247	4.4	64	11.70	1,334.4
● Walton	2,604	2.6	77	7.91	942.8
Ware	1,191	2.6	37	8.39	1,335.3
Warren	192	3.1	7	3.30	1,971.8
Washington	523	4.2	23	9.66	1,599.4
Wayne	639	5.3	41	11.92	1,815.8
Webster	35	5.7	**	**	**
Wheeler	96	10.4	11	14.47	2,182.5
White	821	4.5	39	15.73	1,641.4
● Whitfield	3,552	3.0	123	9.33	1,327.9
Wilcox	123	7.3	9	10.71	1,502.5
Wilkes	132	6.8	9	7.56	1,355.4
Wilkinson	281	4.3	13	7.83	1,952.0
Worth	697	5.5	45	13.39	3,020.1