



Tennessee Motorcycle Crash Statistics, CY 2016 – 2021



TITAN Business Unit

October 2022

LIST OF TABLES

| | |
|--|----|
| Table 1: Class M Licenses by County | 3 |
| Table 2: Crashes Involving Motorcycle Units by Year | 6 |
| Table 3: Fatalities by Victim Vehicle Type in Crashes Involving Motorcycles | 7 |
| Table 4: Crashes Involving a Motorcycle Unit by Crash Type | 8 |
| Table 5: Motorcyclist Count by Injury Type | 9 |
| Table 6: Motorcycle Fatalities by Helmet Use | 10 |
| Table 7: Crashes and Crash Rates (per 1000 Class M Endorsements) by County | 11 |
| Table 8: Motorcycle Crashes by Month | 14 |
| Table 9: Motorcycle Rider Fatalities by Month | 15 |
| Table 10: Percentage of Motorcycle Crashes by Month of Incidence | 16 |
| Table 11: Motorcycle Crashes by Day of Week | 17 |
| Table 12: Percentage of Motorcycle Crashes by Day of Week | 18 |
| Table 13: Motorcycle Crashes Occurring by Hour | 19 |
| Table 14: Motorcycle Crashes by Light Condition | 20 |
| Table 15: Motorcycle Drivers in Crashes by Age | 21 |
| Table 16: Percentage of Motorcycle Drivers in Crashes by Age | 22 |
| Table 17: Percent Change Annually of Motorcycle Drivers in Crash by Age | 23 |
| Table 18: Crashes Where Motorcycle was Speeding | 24 |
| Table 19: Crashes Where Alcohol Use was Indicated for a Motorcycle Driver | 25 |
| Table 20: Motorcycle Crashes by Weather Conditions | 26 |
| Table 21: Multiple Vehicle Crashes Involving Motorcycles | 27 |
| Table 22: Intersection Related Crashes Involving Motorcycles | 28 |
| Table 23: Motorcycle Units Involved in a Crash by Motor Vehicle Type | 29 |

Table 1: Class M Licenses by County, CY 2016 – 2021

| County Name | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 | Annual Average | Percent Change | Average Annual Change |
|-------------|--------|--------|--------|--------|--------|--------|----------------|----------------|-----------------------|
| Anderson | 5,708 | 5,917 | 5,934 | 5,879 | 5,928 | 6,112 | 5,913 | 6.6% | 1.3% |
| Bedford | 2,789 | 2,991 | 3,051 | 3,115 | 3,173 | 3,295 | 3,069 | 15.4% | 3.1% |
| Benton | 1,212 | 1,277 | 1,301 | 1,291 | 1,301 | 1,354 | 1,289 | 10.5% | 2.1% |
| Bledsoe | 812 | 855 | 895 | 884 | 915 | 963 | 887 | 15.7% | 3.1% |
| Blount | 10,538 | 11,166 | 11,396 | 11,655 | 11,925 | 12,491 | 11,529 | 15.6% | 3.1% |
| Bradley | 6,827 | 7,204 | 7,303 | 7,388 | 7,402 | 7,631 | 7,293 | 10.5% | 2.1% |
| Campbell | 2,331 | 2,459 | 2,471 | 2,480 | 2,516 | 2,666 | 2,487 | 12.6% | 2.5% |
| Cannon | 843 | 913 | 926 | 945 | 929 | 996 | 925 | 15.4% | 3.1% |
| Carroll | 1,828 | 1,930 | 1,940 | 1,954 | 1,937 | 1,980 | 1,928 | 7.7% | 1.5% |
| Carter | 4,217 | 4,466 | 4,461 | 4,511 | 4,542 | 4,729 | 4,488 | 10.8% | 2.2% |
| Cheatham | 3,359 | 3,533 | 3,557 | 3,631 | 3,682 | 3,822 | 3,597 | 12.1% | 2.4% |
| Chester | 922 | 979 | 996 | 1,023 | 1,037 | 1,056 | 1,002 | 12.7% | 2.5% |
| Claiborne | 1,944 | 2,056 | 2,092 | 2,126 | 2,147 | 2,228 | 2,099 | 12.7% | 2.5% |
| Clay | 506 | 514 | 516 | 520 | 527 | 553 | 523 | 8.5% | 1.7% |
| Cocke | 2,434 | 2,607 | 2,642 | 2,705 | 2,745 | 2,869 | 2,667 | 15.2% | 3.0% |
| Coffee | 3,720 | 3,942 | 4,000 | 4,012 | 4,035 | 4,251 | 3,993 | 12.5% | 2.5% |
| Crockett | 625 | 663 | 639 | 627 | 624 | 641 | 637 | 2.5% | 0.5% |
| Cumberland | 4,544 | 4,878 | 5,031 | 5,210 | 5,431 | 5,781 | 5,146 | 21.4% | 4.3% |
| Davidson | 23,525 | 24,985 | 25,145 | 25,087 | 25,142 | 25,882 | 24,961 | 9.1% | 1.8% |
| Decatur | 736 | 778 | 791 | 814 | 824 | 874 | 803 | 15.8% | 3.2% |
| DeKalb | 1,201 | 1,281 | 1,313 | 1,333 | 1,382 | 1,431 | 1,324 | 16.1% | 3.2% |
| Dickson | 3,548 | 3,757 | 3,822 | 3,907 | 3,972 | 4,117 | 3,854 | 13.8% | 2.8% |
| Dyer | 1,740 | 1,834 | 1,786 | 1,802 | 1,768 | 1,768 | 1,783 | 1.6% | 0.3% |
| Fayette | 2,424 | 2,589 | 2,668 | 2,698 | 2,760 | 2,832 | 2,662 | 14.4% | 2.9% |
| Fentress | 1,120 | 1,202 | 1,248 | 1,284 | 1,340 | 1,438 | 1,272 | 22.1% | 4.4% |
| Franklin | 2,896 | 3,123 | 3,166 | 3,230 | 3,253 | 3,414 | 3,180 | 15.2% | 3.0% |
| Gibson | 2,813 | 2,961 | 2,962 | 2,993 | 2,975 | 3,049 | 2,959 | 7.7% | 1.5% |
| Giles | 2,099 | 2,197 | 2,222 | 2,228 | 2,260 | 2,354 | 2,227 | 10.8% | 2.2% |
| Grainger | 1,703 | 1,813 | 1,842 | 1,881 | 1,915 | 1,980 | 1,856 | 14.0% | 2.8% |
| Greene | 5,558 | 5,883 | 5,955 | 6,025 | 6,135 | 6,424 | 5,997 | 13.5% | 2.7% |
| Grundy | 681 | 742 | 745 | 763 | 776 | 824 | 755 | 17.4% | 3.5% |
| Hamblen | 3,725 | 3,947 | 3,936 | 3,961 | 3,968 | 4,101 | 3,940 | 9.2% | 1.8% |
| Hamilton | 17,983 | 19,125 | 19,398 | 19,552 | 19,691 | 20,513 | 19,377 | 12.3% | 2.5% |
| Hancock | 330 | 342 | 337 | 327 | 335 | 352 | 337 | 6.3% | 1.3% |
| Hardeman | 877 | 905 | 901 | 880 | 882 | 895 | 890 | 2.0% | 0.4% |

| County Name | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 | Annual Average | Percent Change | Average Annual Change |
|-------------|--------|--------|--------|--------|--------|--------|----------------|----------------|-----------------------|
| Hardin | 1,561 | 1,662 | 1,638 | 1,626 | 1,631 | 1,724 | 1,640 | 9.5% | 1.9% |
| Hawkins | 4,788 | 5,090 | 5,121 | 5,206 | 5,273 | 5,501 | 5,163 | 13.0% | 2.6% |
| Haywood | 511 | 530 | 526 | 532 | 532 | 539 | 528 | 5.2% | 1.0% |
| Henderson | 1,506 | 1,560 | 1,576 | 1,573 | 1,575 | 1,617 | 1,568 | 6.9% | 1.4% |
| Henry | 2,426 | 2,581 | 2,602 | 2,640 | 2,691 | 2,839 | 2,630 | 14.5% | 2.9% |
| Hickman | 1,540 | 1,647 | 1,647 | 1,668 | 1,726 | 1,816 | 1,674 | 15.2% | 3.0% |
| Houston | 509 | 535 | 525 | 527 | 532 | 549 | 530 | 7.3% | 1.5% |
| Humphreys | 1,278 | 1,364 | 1,378 | 1,368 | 1,377 | 1,412 | 1,363 | 9.5% | 1.9% |
| Jackson | 845 | 913 | 937 | 950 | 971 | 1,030 | 941 | 18.0% | 3.6% |
| Jefferson | 3,865 | 4,144 | 4,281 | 4,397 | 4,532 | 4,732 | 4,325 | 18.3% | 3.7% |
| Johnson | 1,423 | 1,512 | 1,520 | 1,544 | 1,561 | 1,651 | 1,535 | 13.8% | 2.8% |
| Knox | 23,584 | 24,992 | 25,334 | 25,802 | 26,189 | 27,288 | 25,532 | 13.6% | 2.7% |
| Lake | 203 | 207 | 199 | 198 | 200 | 204 | 202 | 0.5% | 0.1% |
| Lauderdale | 819 | 860 | 844 | 828 | 807 | 813 | 829 | -0.7% | -0.1% |
| Lawrence | 2,706 | 2,827 | 2,839 | 2,827 | 2,835 | 2,959 | 2,832 | 8.6% | 1.7% |
| Lewis | 868 | 907 | 890 | 909 | 925 | 965 | 911 | 10.1% | 2.0% |
| Lincoln | 1,998 | 2,131 | 2,188 | 2,217 | 2,287 | 2,442 | 2,211 | 18.2% | 3.6% |
| Loudon | 4,040 | 4,322 | 4,476 | 4,611 | 4,783 | 5,041 | 4,546 | 19.9% | 4.0% |
| McMinn | 3,727 | 3,917 | 3,976 | 4,047 | 4,102 | 4,310 | 4,013 | 13.5% | 2.7% |
| McNairy | 1,292 | 1,370 | 1,403 | 1,415 | 1,424 | 1,498 | 1,400 | 13.8% | 2.8% |
| Macon | 1,308 | 1,389 | 1,421 | 1,437 | 1,482 | 1,572 | 1,435 | 16.8% | 3.4% |
| Madison | 4,092 | 4,320 | 4,277 | 4,339 | 4,324 | 4,400 | 4,292 | 7.0% | 1.4% |
| Marion | 2,005 | 2,117 | 2,175 | 2,197 | 2,246 | 2,373 | 2,186 | 15.5% | 3.1% |
| Marshall | 2,179 | 2,328 | 2,378 | 2,446 | 2,481 | 2,567 | 2,397 | 15.1% | 3.0% |
| Maury | 6,487 | 6,850 | 6,992 | 7,087 | 7,314 | 7,635 | 7,061 | 15.0% | 3.0% |
| Meigs | 901 | 948 | 961 | 978 | 1,005 | 1,062 | 976 | 15.2% | 3.0% |
| Monroe | 3,219 | 3,415 | 3,485 | 3,640 | 3,735 | 3,955 | 3,575 | 18.6% | 3.7% |
| Montgomery | 14,793 | 16,708 | 16,849 | 17,058 | 17,426 | 18,522 | 16,893 | 20.1% | 4.0% |
| Moore | 484 | 515 | 523 | 528 | 527 | 545 | 520 | 11.2% | 2.2% |
| Morgan | 1,297 | 1,375 | 1,394 | 1,416 | 1,432 | 1,509 | 1,404 | 14.0% | 2.8% |
| Obion | 1,960 | 2,057 | 2,048 | 2,004 | 1,963 | 2,002 | 2,006 | 2.1% | 0.4% |
| Overton | 1,485 | 1,578 | 1,613 | 1,648 | 1,681 | 1,758 | 1,627 | 15.5% | 3.1% |
| Perry | 568 | 594 | 584 | 578 | 579 | 607 | 585 | 6.4% | 1.3% |
| Pickett | 411 | 428 | 447 | 447 | 456 | 470 | 443 | 12.6% | 2.5% |
| Polk | 1,289 | 1,323 | 1,290 | 1,312 | 1,339 | 1,389 | 1,324 | 7.2% | 1.4% |
| Putnam | 5,038 | 5,299 | 5,347 | 5,470 | 5,555 | 5,812 | 5,420 | 13.3% | 2.7% |
| Rhea | 2,156 | 2,283 | 2,298 | 2,332 | 2,364 | 2,469 | 2,317 | 12.7% | 2.5% |
| Roane | 3,957 | 4,164 | 4,213 | 4,353 | 4,464 | 4,651 | 4,300 | 14.9% | 3.0% |
| Robertson | 4,805 | 5,112 | 5,152 | 5,209 | 5,270 | 5,466 | 5,169 | 12.1% | 2.4% |

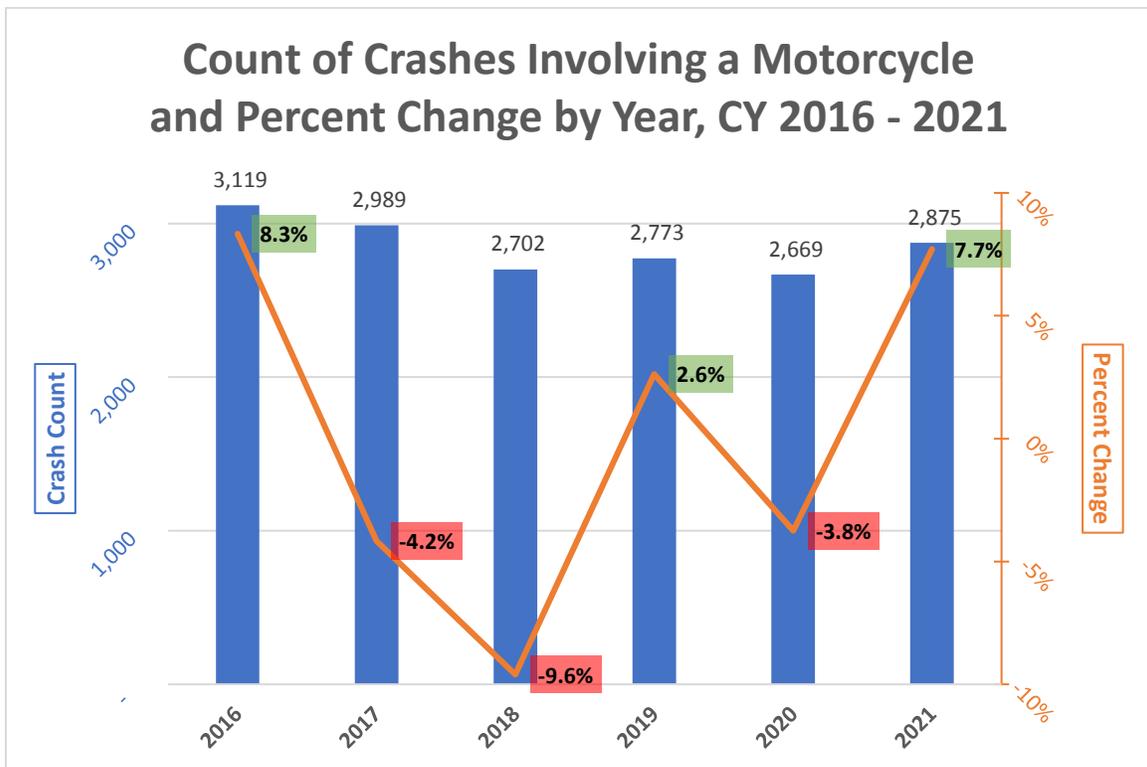
| County Name | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 | Annual Average | Percent Change | Average Annual Change |
|--------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|-----------------------|
| Rutherford | 16,312 | 17,402 | 17,698 | 18,019 | 18,372 | 18,935 | 17,790 | 13.9% | 2.8% |
| Scott | 896 | 982 | 986 | 1,018 | 1,033 | 1,109 | 1,004 | 19.2% | 3.8% |
| Sequatchie | 1,171 | 1,216 | 1,239 | 1,226 | 1,271 | 1,338 | 1,244 | 12.5% | 2.5% |
| Sevier | 7,631 | 8,188 | 8,206 | 8,290 | 8,396 | 8,663 | 8,229 | 11.9% | 2.4% |
| Shelby | 21,440 | 22,774 | 22,878 | 22,925 | 22,706 | 23,125 | 22,641 | 7.3% | 1.5% |
| Smith | 1,257 | 1,340 | 1,374 | 1,393 | 1,431 | 1,489 | 1,381 | 15.6% | 3.1% |
| Stewart | 1,108 | 1,215 | 1,256 | 1,296 | 1,328 | 1,389 | 1,265 | 20.2% | 4.0% |
| Sullivan | 12,693 | 13,379 | 13,432 | 13,569 | 13,629 | 14,035 | 13,456 | 9.6% | 1.9% |
| Sumner | 11,197 | 11,996 | 12,108 | 12,355 | 12,621 | 13,139 | 12,236 | 14.8% | 3.0% |
| Tipton | 3,261 | 3,438 | 3,422 | 3,398 | 3,392 | 3,461 | 3,395 | 5.8% | 1.2% |
| Trousdale | 486 | 534 | 546 | 560 | 580 | 608 | 552 | 20.1% | 4.0% |
| Unicoi | 1,399 | 1,466 | 1,456 | 1,468 | 1,482 | 1,533 | 1,467 | 8.7% | 1.7% |
| Union | 1,254 | 1,352 | 1,418 | 1,472 | 1,505 | 1,561 | 1,427 | 19.7% | 3.9% |
| Van Buren | 425 | 464 | 462 | 477 | 494 | 523 | 474 | 18.7% | 3.7% |
| Warren | 2,389 | 2,473 | 2,524 | 2,548 | 2,578 | 2,676 | 2,531 | 10.7% | 2.1% |
| Washington | 8,388 | 8,851 | 8,948 | 9,046 | 9,141 | 9,583 | 8,993 | 12.5% | 2.5% |
| Wayne | 940 | 994 | 1,001 | 1,005 | 1,002 | 1,032 | 996 | 8.9% | 1.8% |
| Weakley | 1,921 | 1,990 | 1,974 | 1,959 | 1,978 | 2,043 | 1,978 | 6.0% | 1.2% |
| White | 1,858 | 1,995 | 2,035 | 2,081 | 2,131 | 2,227 | 2,055 | 16.6% | 3.3% |
| Williamson | 11,459 | 12,118 | 12,503 | 12,810 | 13,094 | 13,658 | 12,607 | 16.1% | 3.2% |
| Wilson | 9,504 | 10,136 | 10,329 | 10,529 | 10,776 | 11,258 | 10,422 | 15.6% | 3.1% |
| Unknown | - | - | 261 | 235 | 168 | 152 | 204 | N/A | N/A |
| TOTAL | 363,030 | 385,991 | 390,791 | 395,764 | 400,878 | 416,897 | 392,225 | 12.9% | 2.6% |

Source: TN Dept. of Safety and Homeland Security, TITAN Business Unit, 01 Jun 2022 (A-List).

Table 2: Crashes Involving Motorcycle Units by Year, CY 2016 – 2021

| Year | Crashes | Percent Change |
|--------------|---------------|----------------|
| 2016 | 3,119 | 8.3% |
| 2017 | 2,989 | -4.2% |
| 2018 | 2,702 | -9.6% |
| 2019 | 2,773 | 2.6% |
| 2020 | 2,669 | -3.8% |
| 2021 | 2,875 | 7.7% |
| TOTAL | 17,127 | N/A |

Source: TN Dept. of Safety and Homeland Security, TITAN Business Unit, 01 Jun 2022 (Crash).



Motorcycle crash counts have decreased since 2016. This decrease could be the result of the increased education for and awareness of motorcycles on the road. Additionally, COVID-19 may have played a role in changes in behavior that has resulted in a decrease in crashes.

Table 3: Fatalities by Victim Vehicle Type in Crashes Involving Motorcycles, CY 2016 – 2021

| Classification | Year | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 | TOTAL |
|---------------------------------------|---------------------------|------------|------------|------------|------------|------------|------------|------------|
| Motorcycle | ATV | - | - | - | 1 | 1 | - | 2 |
| Motorcycle | Motorcycle | 141 | 130 | 168 | 148 | 143 | 160 | 890 |
| Motorcycle | Moped | 3 | 2 | - | 2 | 4 | 2 | 13 |
| Motorcycle | Other Motorcycle Type | 1 | - | - | 3 | 3 | 2 | 9 |
| Motorcyclist Fatalities Total | | 145 | 132 | 168 | 154 | 151 | 164 | 914 |
| Other | Not Applicable/Pedestrian | 2 | 1 | - | 3 | 3 | 1 | 10 |
| Other | Passenger Car | - | 1 | - | 1 | - | 3 | 5 |
| Other | SUV | 1 | - | 1 | - | - | 1 | 3 |
| Other | Van | - | - | - | - | - | 1 | 1 |
| Other Vehicle Fatalities Total | | 3 | 2 | 1 | 4 | 3 | 6 | 19 |
| All Fatalities Total | | 148 | 134 | 169 | 158 | 154 | 170 | 933 |

Source: TN Dept. of Safety and Homeland Security, TITAN Business Unit, 01 Jun 2022 (FTS).

PLEASE NOTE: Motorcyclist Fatalities Total refers to fatalities where the victim's vehicle is associated with a vehicle classified as a motorcycle.

Table 4: Crashes Involving a Motorcycle Unit by Crash Type, CY 2016 – 2021

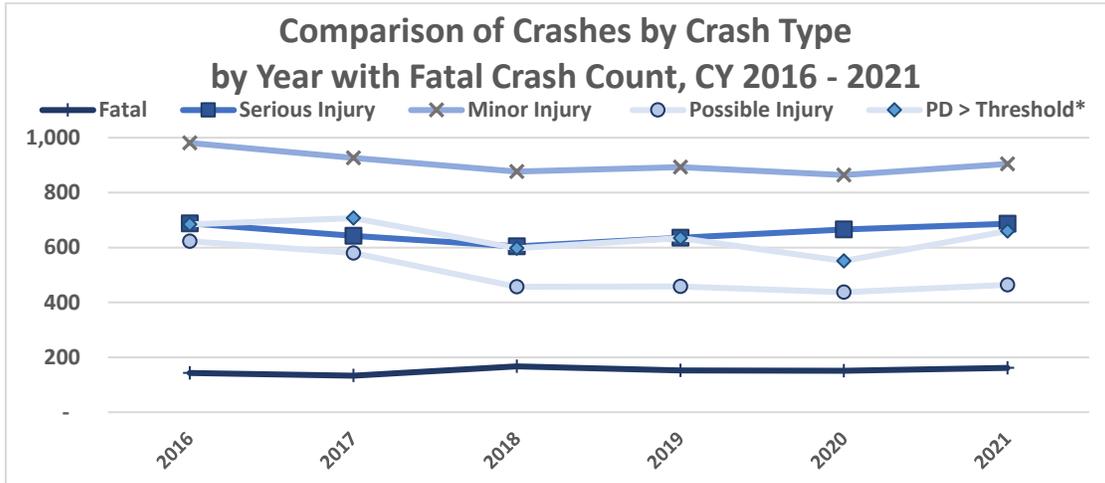
| Year | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 | TOTAL |
|--------------------------------|--------------|--------------|--------------|--------------|--------------|--------------|---------------|
| Fatal Crash | 143 | 133 | 167 | 152 | 151 | 161 | 907 |
| Suspected Serious Injury Crash | 688 | 643 | 604 | 636 | 666 | 686 | 3,923 |
| Suspected Minor Injury Crash | 981 | 926 | 877 | 893 | 864 | 904 | 5,445 |
| Possible Injury Crash | 623 | 580 | 457 | 458 | 437 | 464 | 3,019 |
| PD > Threshold* Crash | 684 | 707 | 597 | 634 | 551 | 660 | 3,833 |
| TOTAL | 3,119 | 2,989 | 2,702 | 2,773 | 2,669 | 2,875 | 17,127 |

Source: TN Dept. of Safety and Homeland Security, TITAN Business Unit, 01 Jun 2022 (Crash).

PLEASE NOTE:

1) The above table count reflects crashes where a motorcycle unit was involved. The type of crash reflects the most severe injury at the crash, not the injury level of the motorcyclist.

2) * denotes that threshold changed from \$400 to \$1,500 during this five-year period. This definition, PD>Threshold, will be used for the remainder of this document and reflects this change in threshold during the five-year period of CY 2016 - 2021.



The graph above shows the frequency of the crash types in motorcycle-involved crashes. The leading crash type is minor injury. Serious injury and property damage over the threshold are second and third, depending on the year.

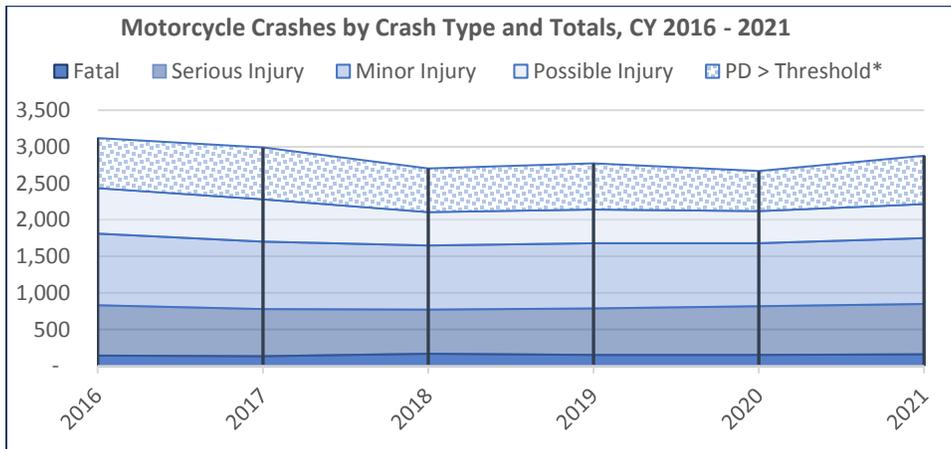


Table 5: Motorcyclist Count by Injury Type, CY 2016 – 2021

| Year | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 | TOTAL |
|---------------------------------|--------------|--------------|--------------|--------------|--------------|--------------|---------------|
| Died Prior To Accident | - | - | - | - | - | 1 | 1 |
| Fatal Injury | 145 | 132 | 168 | 154 | 151 | 164 | 914 |
| Suspected Serious Injury | 743 | 703 | 647 | 688 | 715 | 731 | 4,227 |
| Suspected Minor Injury | 1,081 | 1,027 | 987 | 983 | 959 | 998 | 6,035 |
| Possible Injury | 701 | 635 | 511 | 511 | 497 | 512 | 3,367 |
| No Injury | 750 | 741 | 628 | 660 | 562 | 664 | 4,005 |
| Unknown | 515 | 550 | 489 | 498 | 515 | 507 | 3,074 |
| TOTAL | 3,935 | 3,788 | 3,430 | 3,494 | 3,399 | 3,577 | 21,623 |

Source: TN Dept. of Safety and Homeland Security, TITAN Business Unit, 01 Jun 2022 (Crash).

PLEASE NOTE: Regarding the table above (as per standard crash criteria) the accident where the motorcyclist was deceased prior to the crash will be excluded from fatalities in all further analysis. This means that the total motorcyclists over CY 2016 – 2021 will total 21,622.

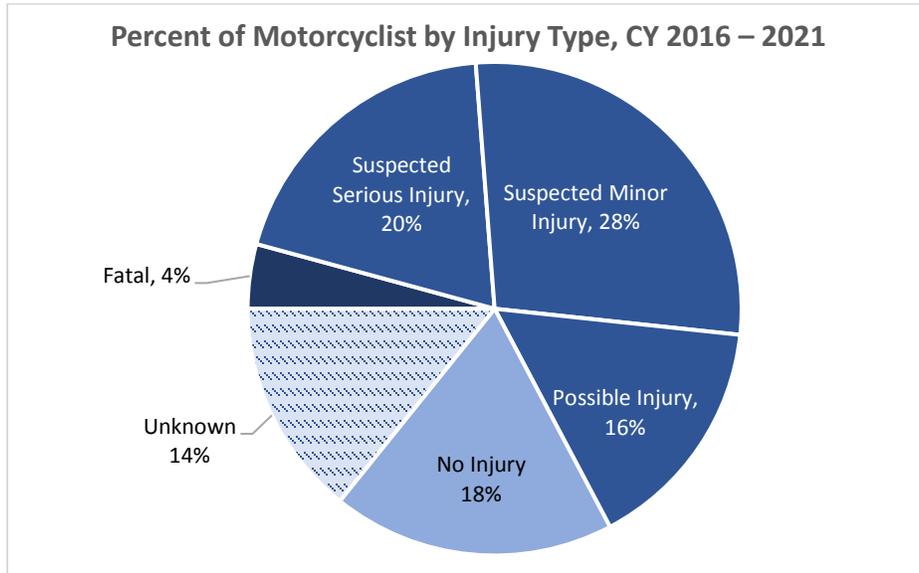


Table 6: Motorcycle Fatalities by Helmet Use, CY 2016 – 2021

| Year | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 | PERCENT |
|--|------------|------------|------------|------------|------------|------------|------------|
| DOT Compliant Motorcycle Helmet | 124 | 108 | 137 | 121 | 125 | 133 | 82% |
| Non-Compliant Motorcycle Helmet | 11 | 12 | 15 | 8 | 8 | 12 | 7% |
| Improper Use of Compliant Motorcycle Helmet | 2 | 2 | 4 | 4 | 2 | 3 | 2% |
| No Helmet Use | 7 | 8 | 9 | 14 | 13 | 10 | 7% |
| Unknown Helmet Use | 1 | 2 | 3 | 7 | 3 | 6 | 2% |
| TOTAL | 145 | 132 | 168 | 154 | 151 | 164 | N/A |

Source: TN Dept. of Safety and Homeland Security, TITAN Business Unit, 01 Jun 2022 (FTS).

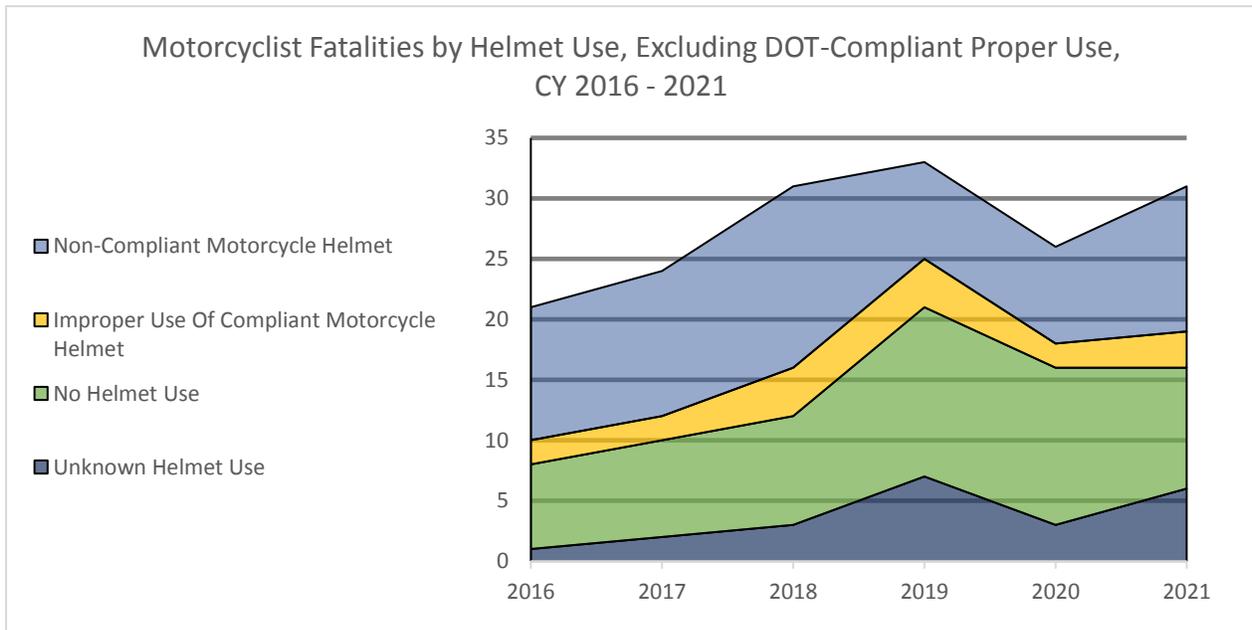
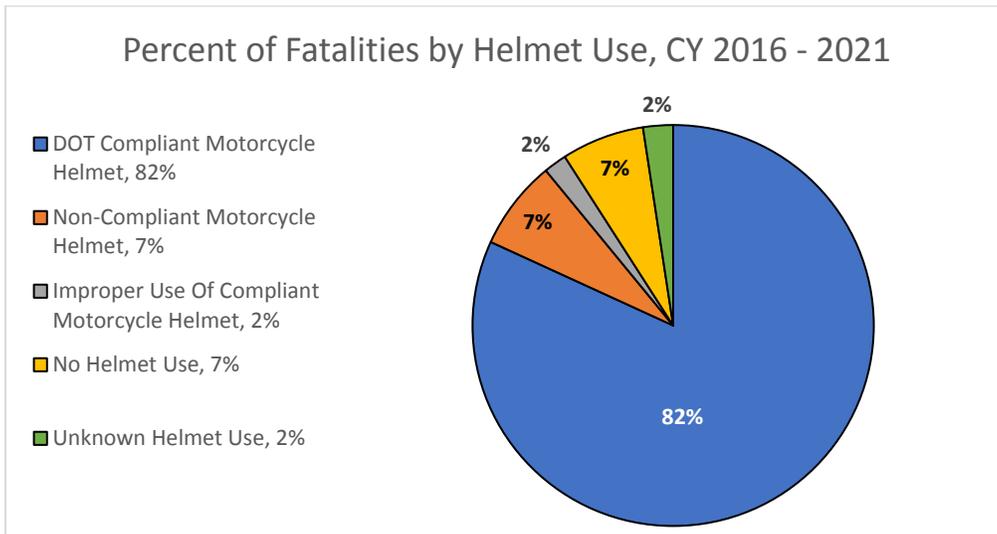


Table 7: Crashes and Crash Rates (per 1000 Class M Endorsements) by County, CY 2016 – 2021

| County Name | 2016 | | 2017 | | 2018 | | 2019 | | 2020 | | 2021 | | TOTAL | | |
|-------------|-------|------|-------|------|-------|------|-------|------|-------|------|-------|------|-------|------|------|
| | Crash | Rate | Rank |
| Anderson | 53 | 9.3 | 36 | 6.1 | 34 | 5.7 | 35 | 6.0 | 34 | 5.7 | 42 | 6.9 | 234 | 6.6 | 31 |
| Bedford | 18 | 6.5 | 17 | 5.7 | 24 | 7.9 | 21 | 6.7 | 17 | 5.4 | 19 | 5.8 | 116 | 6.3 | 38 |
| Benton | 10 | 8.3 | 10 | 7.8 | 11 | 8.5 | 7 | 5.4 | 10 | 7.7 | 6 | 4.4 | 54 | 7.0 | 26 |
| Bledsoe | 4 | 4.9 | 4 | 4.7 | 7 | 7.8 | 2 | 2.3 | 2 | 2.2 | 1 | 1.0 | 20 | 3.8 | 84 |
| Blount | 203 | 19.3 | 152 | 13.6 | 143 | 12.5 | 136 | 11.7 | 141 | 11.8 | 155 | 12.4 | 930 | 13.4 | 1 |
| Bradley | 47 | 6.9 | 54 | 7.5 | 49 | 6.7 | 43 | 5.8 | 55 | 7.4 | 45 | 5.9 | 293 | 6.7 | 30 |
| Campbell | 17 | 7.3 | 14 | 5.7 | 10 | 4.0 | 13 | 5.2 | 13 | 5.2 | 10 | 3.8 | 77 | 5.2 | 58 |
| Cannon | 3 | 3.6 | 9 | 9.9 | 4 | 4.3 | 4 | 4.2 | 9 | 9.7 | 6 | 6.0 | 35 | 6.3 | 37 |
| Carroll | 6 | 3.3 | 8 | 4.1 | 7 | 3.6 | 11 | 5.6 | 10 | 5.2 | 11 | 5.6 | 53 | 4.6 | 73 |
| Carter | 22 | 5.2 | 21 | 4.7 | 24 | 5.4 | 21 | 4.7 | 23 | 5.1 | 30 | 6.3 | 141 | 5.2 | 54 |
| Cheatham | 20 | 6.0 | 19 | 5.4 | 17 | 4.8 | 17 | 4.7 | 19 | 5.2 | 16 | 4.2 | 108 | 5.0 | 62 |
| Chester | 1 | 1.1 | 7 | 7.2 | 3 | 3.0 | 4 | 3.9 | 9 | 8.7 | 8 | 7.6 | 32 | 5.3 | 50 |
| Claiborne | 6 | 3.1 | 5 | 2.4 | 6 | 2.9 | 11 | 5.2 | 9 | 4.2 | 8 | 3.6 | 45 | 3.6 | 87 |
| Clay | 3 | 5.9 | 1 | 1.9 | 5 | 9.7 | 1 | 1.9 | 2 | 3.8 | 0 | 0.0 | 12 | 3.8 | 83 |
| Cocke | 44 | 18.1 | 20 | 7.7 | 20 | 7.6 | 19 | 7.0 | 33 | 12.0 | 27 | 9.4 | 163 | 10.2 | 8 |
| Coffee | 24 | 6.5 | 24 | 6.1 | 16 | 4.0 | 25 | 6.2 | 15 | 3.7 | 21 | 4.9 | 125 | 5.2 | 56 |
| Crockett | 3 | 4.8 | 3 | 4.5 | 2 | 3.1 | 1 | 1.6 | | 0.0 | 3 | 4.7 | 12 | 3.1 | 92 |
| Cumberland | 27 | 5.9 | 14 | 2.9 | 21 | 4.2 | 27 | 5.2 | 21 | 3.9 | 24 | 4.2 | 134 | 4.3 | 76 |
| Davidson | 369 | 15.7 | 357 | 14.3 | 309 | 12.3 | 327 | 13.0 | 265 | 10.5 | 299 | 11.6 | 1926 | 12.9 | 3 |
| Decatur | 3 | 4.1 | 6 | 7.7 | 9 | 11.4 | 4 | 4.9 | 2 | 2.4 | 4 | 4.6 | 28 | 5.8 | 42 |
| DeKalb | 20 | 16.7 | 13 | 10.1 | 11 | 8.4 | 12 | 9.0 | 13 | 9.4 | 13 | 9.1 | 82 | 10.3 | 7 |
| Dickson | 14 | 3.9 | 27 | 7.2 | 17 | 4.4 | 23 | 5.9 | 24 | 6.0 | 18 | 4.4 | 123 | 5.3 | 51 |
| Dyer | 14 | 8.0 | 15 | 8.2 | 12 | 6.7 | 9 | 5.0 | 14 | 7.9 | 22 | 12.4 | 86 | 8.0 | 20 |
| Fayette | 9 | 3.7 | 14 | 5.4 | 7 | 2.6 | 6 | 2.2 | 9 | 3.3 | 11 | 3.9 | 56 | 3.5 | 88 |
| Fentress | 5 | 4.5 | 2 | 1.7 | 4 | 3.2 | 4 | 3.1 | 1 | 0.7 | 6 | 4.2 | 22 | 2.9 | 94 |
| Franklin | 8 | 2.8 | 20 | 6.4 | 10 | 3.2 | 10 | 3.1 | 11 | 3.4 | 18 | 5.3 | 77 | 4.0 | 79 |
| Gibson | 12 | 4.3 | 11 | 3.7 | 7 | 2.4 | 8 | 2.7 | 9 | 3.0 | 15 | 4.9 | 62 | 3.5 | 89 |
| Giles | 8 | 3.8 | 10 | 4.6 | 14 | 6.3 | 16 | 7.2 | 11 | 4.9 | 12 | 5.1 | 71 | 5.3 | 52 |
| Grainger | 5 | 2.9 | 11 | 6.1 | 8 | 4.3 | 8 | 4.3 | 13 | 6.8 | 13 | 6.6 | 58 | 5.2 | 57 |
| Greene | 35 | 6.3 | 32 | 5.4 | 31 | 5.2 | 34 | 5.6 | 34 | 5.5 | 26 | 4.0 | 192 | 5.3 | 48 |
| Grundy | 15 | 22.0 | 3 | 4.0 | 4 | 5.4 | 11 | 14.4 | 6 | 7.7 | 3 | 3.6 | 42 | 9.3 | 12 |
| Hamblen | 25 | 6.7 | 28 | 7.1 | 22 | 5.6 | 30 | 7.6 | 32 | 8.1 | 24 | 5.9 | 161 | 6.8 | 27 |
| Hamilton | 222 | 12.3 | 198 | 10.4 | 176 | 9.1 | 194 | 9.9 | 183 | 9.3 | 199 | 9.7 | 1172 | 10.1 | 9 |
| Hancock | 0 | 0.0 | 0 | 0.0 | 3 | 8.9 | 4 | 12.2 | 1 | 3.0 | 3 | 8.5 | 11 | 5.4 | 44 |
| Hardeman | 2 | 2.3 | 5 | 5.5 | 5 | 5.5 | 3 | 3.4 | 5 | 5.7 | 1 | 1.1 | 21 | 3.9 | 81 |
| Hardin | 9 | 5.8 | 6 | 3.6 | 8 | 4.9 | 15 | 9.2 | 13 | 8.0 | 15 | 8.7 | 66 | 6.7 | 29 |
| Hawkins | 21 | 4.4 | 24 | 4.7 | 18 | 3.5 | 23 | 4.4 | 20 | 3.8 | 22 | 4.0 | 128 | 4.1 | 77 |

| County Name | 2016 | | 2017 | | 2018 | | 2019 | | 2020 | | 2021 | | TOTAL | | |
|-------------|-------|------|-------|------|-------|------|-------|------|-------|------|-------|------|-------|------|------|
| | Crash | Rate | Rank |
| Haywood | 5 | 9.8 | 2 | 3.8 | 4 | 7.6 | 2 | 3.8 | 5 | 9.4 | 8 | 14.8 | 26 | 8.2 | 19 |
| Henderson | 16 | 10.6 | 12 | 7.7 | 16 | 10.2 | 9 | 5.7 | 16 | 10.2 | 10 | 6.2 | 79 | 8.4 | 16 |
| Henry | 13 | 5.4 | 13 | 5.0 | 9 | 3.5 | 18 | 6.8 | 6 | 2.2 | 14 | 4.9 | 73 | 4.6 | 71 |
| Hickman | 8 | 5.2 | 7 | 4.3 | 9 | 5.5 | 8 | 4.8 | 11 | 6.4 | 4 | 2.2 | 47 | 4.7 | 69 |
| Houston | 9 | 17.7 | 4 | 7.5 | 4 | 7.6 | 2 | 3.8 | 5 | 9.4 | 4 | 7.3 | 28 | 8.8 | 14 |
| Humphreys | 7 | 5.5 | 5 | 3.7 | 4 | 2.9 | 6 | 4.4 | 11 | 8.0 | 5 | 3.5 | 38 | 4.6 | 70 |
| Jackson | 4 | 4.7 | 7 | 7.7 | 4 | 4.3 | 3 | 3.2 | 11 | 11.3 | 4 | 3.9 | 33 | 5.8 | 41 |
| Jefferson | 27 | 7.0 | 18 | 4.3 | 19 | 4.4 | 21 | 4.8 | 26 | 5.7 | 25 | 5.3 | 136 | 5.2 | 53 |
| Johnson | 23 | 16.2 | 25 | 16.5 | 17 | 11.2 | 18 | 11.7 | 15 | 9.6 | 24 | 14.5 | 122 | 13.2 | 2 |
| Knox | 152 | 6.4 | 173 | 6.9 | 157 | 6.2 | 176 | 6.8 | 154 | 5.9 | 164 | 6.0 | 976 | 6.4 | 36 |
| Lake | 2 | 9.9 | 3 | 14.5 | 2 | 10.1 | 2 | 10.1 | 2 | 10.0 | 0 | 0.0 | 11 | 9.1 | 13 |
| Lauderdale | 8 | 9.8 | 7 | 8.1 | 2 | 2.4 | 3 | 3.6 | 4 | 5.0 | 3 | 3.7 | 27 | 5.4 | 46 |
| Lawrence | 16 | 5.9 | 18 | 6.4 | 12 | 4.2 | 9 | 3.2 | 15 | 5.3 | 16 | 5.4 | 86 | 5.1 | 60 |
| Lewis | 2 | 2.3 | 2 | 2.2 | 4 | 4.5 | 6 | 6.6 | 1 | 1.1 | 4 | 4.1 | 19 | 3.5 | 90 |
| Lincoln | 13 | 6.5 | 8 | 3.8 | 9 | 4.1 | 15 | 6.8 | 20 | 8.7 | 10 | 4.1 | 75 | 5.7 | 43 |
| Loudon | 20 | 5.0 | 28 | 6.5 | 20 | 4.5 | 16 | 3.5 | 26 | 5.4 | 25 | 5.0 | 135 | 4.9 | 63 |
| McMinn | 17 | 4.6 | 20 | 5.1 | 30 | 7.5 | 28 | 6.9 | 32 | 7.8 | 35 | 8.1 | 162 | 6.7 | 91 |
| McNairy | 14 | 10.8 | 3 | 2.2 | 9 | 6.4 | 10 | 7.1 | 10 | 7.0 | 8 | 5.3 | 54 | 6.4 | 17 |
| Macon | 6 | 4.6 | 3 | 2.2 | 6 | 4.2 | 7 | 4.9 | 5 | 3.4 | 1 | 0.6 | 28 | 3.3 | 33 |
| Madison | 42 | 10.3 | 44 | 10.2 | 30 | 7.0 | 33 | 7.6 | 35 | 8.1 | 32 | 7.3 | 216 | 8.4 | 47 |
| Marion | 20 | 10.0 | 11 | 5.2 | 13 | 6.0 | 16 | 7.3 | 14 | 6.2 | 11 | 4.6 | 85 | 6.5 | 24 |
| Marshall | 7 | 3.2 | 19 | 8.2 | 15 | 6.3 | 17 | 7.0 | 11 | 4.4 | 8 | 3.1 | 77 | 5.4 | 28 |
| Mauzy | 61 | 9.4 | 67 | 9.8 | 44 | 6.3 | 51 | 7.2 | 37 | 5.1 | 47 | 6.2 | 307 | 7.2 | 34 |
| Meigs | 2 | 2.2 | 10 | 10.5 | 5 | 5.2 | 2 | 2.0 | 1 | 1.0 | 7 | 6.6 | 27 | 4.6 | 72 |
| Monroe | 44 | 13.7 | 44 | 12.9 | 35 | 10.0 | 33 | 9.1 | 34 | 9.1 | 39 | 9.9 | 229 | 10.7 | 6 |
| Montgomery | 164 | 11.1 | 165 | 9.9 | 123 | 7.3 | 136 | 8.0 | 134 | 7.7 | 139 | 7.5 | 861 | 8.5 | 15 |
| Moore | 2 | 4.1 | 3 | 5.8 | 2 | 3.8 | 2 | 3.8 | 6 | 11.4 | 5 | 9.2 | 20 | 6.4 | 35 |
| Morgan | 7 | 5.4 | 6 | 4.4 | 5 | 3.6 | 11 | 7.8 | 2 | 1.4 | 10 | 6.6 | 41 | 4.9 | 67 |
| Obion | 15 | 7.7 | 11 | 5.3 | 8 | 3.9 | 10 | 5.0 | 10 | 5.1 | 8 | 4.0 | 62 | 5.2 | 59 |
| Overton | 7 | 4.7 | 7 | 4.4 | 12 | 7.4 | 7 | 4.2 | 7 | 4.2 | 8 | 4.6 | 48 | 4.9 | 64 |
| Perry | 0 | 0.0 | 3 | 5.1 | 2 | 3.4 | 6 | 10.4 | 6 | 10.4 | 6 | 9.9 | 23 | 6.6 | 32 |
| Pickett | 0 | 0.0 | 1 | 2.3 | 2 | 4.5 | 4 | 8.9 | 1 | 2.2 | 0 | 0.0 | 8 | 3.0 | 93 |
| Polk | 17 | 13.2 | 19 | 14.4 | 12 | 9.3 | 17 | 13.0 | 14 | 10.5 | 22 | 15.8 | 101 | 12.7 | 4 |
| Putnam | 45 | 8.9 | 43 | 8.1 | 44 | 8.2 | 31 | 5.7 | 31 | 5.6 | 51 | 8.8 | 245 | 7.5 | 22 |
| Rhea | 7 | 3.2 | 9 | 3.9 | 11 | 4.8 | 8 | 3.4 | 10 | 4.2 | 10 | 4.1 | 55 | 4.0 | 80 |
| Roane | 28 | 7.1 | 18 | 4.3 | 23 | 5.5 | 24 | 5.5 | 21 | 4.7 | 21 | 4.5 | 135 | 5.2 | 55 |
| Robertson | 19 | 4.0 | 25 | 4.9 | 29 | 5.6 | 23 | 4.4 | 26 | 4.9 | 30 | 5.5 | 152 | 4.9 | 65 |
| Rutherford | 151 | 9.3 | 147 | 8.4 | 138 | 7.8 | 122 | 6.8 | 116 | 6.3 | 124 | 6.5 | 798 | 7.5 | 23 |
| Scott | 3 | 3.3 | 1 | 1.0 | 0 | 0.0 | 5 | 4.9 | 1 | 1.0 | 1 | 0.9 | 11 | 1.8 | 95 |

| County Name | 2016 | | 2017 | | 2018 | | 2019 | | 2020 | | 2021 | | TOTAL | | |
|--------------|--------------|------------|--------------|------------|--------------|------------|--------------|------------|--------------|------------|--------------|------------|---------------|-------------|------------|
| | Crash | Rate | Crash | Rate | Rank |
| Sequatchie | 5 | 4.3 | 5 | 4.1 | 7 | 5.6 | 4 | 3.3 | 4 | 3.1 | 8 | 6.0 | 33 | 4.4 | 74 |
| Sevier | 91 | 11.9 | 78 | 9.5 | 58 | 7.1 | 55 | 6.6 | 53 | 6.3 | 70 | 8.1 | 405 | 8.2 | 18 |
| Shelby | 286 | 13.3 | 280 | 12.3 | 297 | 13.0 | 291 | 12.7 | 252 | 11.1 | 258 | 11.2 | 1,664 | 12.2 | 5 |
| Smith | 12 | 9.5 | 8 | 6.0 | 12 | 8.7 | 5 | 3.6 | 8 | 5.6 | 21 | 14.1 | 66 | 8.0 | 21 |
| Stewart | 17 | 15.3 | 10 | 8.2 | 10 | 8.0 | 8 | 6.2 | 19 | 14.3 | 8 | 5.8 | 72 | 9.5 | 11 |
| Sullivan | 89 | 7.0 | 90 | 6.7 | 61 | 4.5 | 71 | 5.2 | 78 | 5.7 | 97 | 6.9 | 486 | 6.0 | 40 |
| Sumner | 74 | 6.6 | 63 | 5.3 | 47 | 3.9 | 62 | 5.0 | 49 | 3.9 | 59 | 4.5 | 354 | 4.8 | 68 |
| Tipton | 15 | 4.6 | 18 | 5.2 | 19 | 5.6 | 9 | 2.6 | 13 | 3.8 | 15 | 4.3 | 89 | 4.4 | 75 |
| Trousdale | 4 | 8.2 | 1 | 1.9 | 6 | 11.0 | 4 | 7.1 | 2 | 3.4 | 3 | 4.9 | 20 | 6.0 | 39 |
| Unicoi | 5 | 3.6 | 5 | 3.4 | 6 | 4.1 | 13 | 8.9 | 6 | 4.0 | 8 | 5.2 | 43 | 4.9 | 66 |
| Union | 10 | 8.0 | 3 | 2.2 | 6 | 4.2 | 5 | 3.4 | 2 | 1.3 | 5 | 3.2 | 31 | 3.6 | 86 |
| Van Buren | 4 | 9.4 | 9 | 19.4 | 3 | 6.5 | 2 | 4.2 | 4 | 8.1 | 6 | 11.5 | 28 | 9.8 | 10 |
| Warren | 14 | 5.9 | 13 | 5.3 | 18 | 7.1 | 12 | 4.7 | 12 | 4.7 | 12 | 4.5 | 81 | 5.3 | 49 |
| Washington | 51 | 6.1 | 63 | 7.1 | 69 | 7.7 | 50 | 5.5 | 70 | 7.7 | 77 | 8.0 | 380 | 7.0 | 25 |
| Wayne | 4 | 4.3 | 7 | 7.0 | 4 | 4.0 | 9 | 9.0 | 3 | 3.0 | 3 | 2.9 | 30 | 5.0 | 61 |
| Weakley | 8 | 4.2 | 8 | 4.0 | 6 | 3.0 | 10 | 5.1 | 6 | 3.0 | 11 | 5.4 | 49 | 4.1 | 78 |
| White | 8 | 4.3 | 8 | 4.0 | 7 | 3.4 | 7 | 3.4 | 10 | 4.7 | 8 | 3.6 | 48 | 3.9 | 82 |
| Williamson | 59 | 5.1 | 53 | 4.4 | 43 | 3.4 | 36 | 2.8 | 48 | 3.7 | 45 | 3.3 | 284 | 3.8 | 85 |
| Wilson | 53 | 5.6 | 56 | 5.5 | 55 | 5.3 | 64 | 6.1 | 50 | 4.6 | 62 | 5.5 | 340 | 5.4 | 45 |
| TOTAL | 3,119 | 8.6 | 2,989 | 7.7 | 2,702 | 6.9 | 2,773 | 7.0 | 2,669 | 6.7 | 2,875 | 6.9 | 17,709 | 16.6 | N/A |

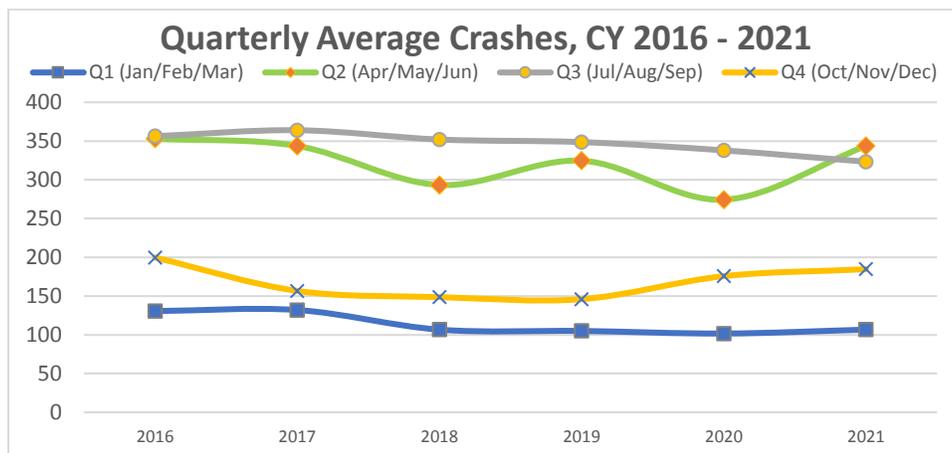
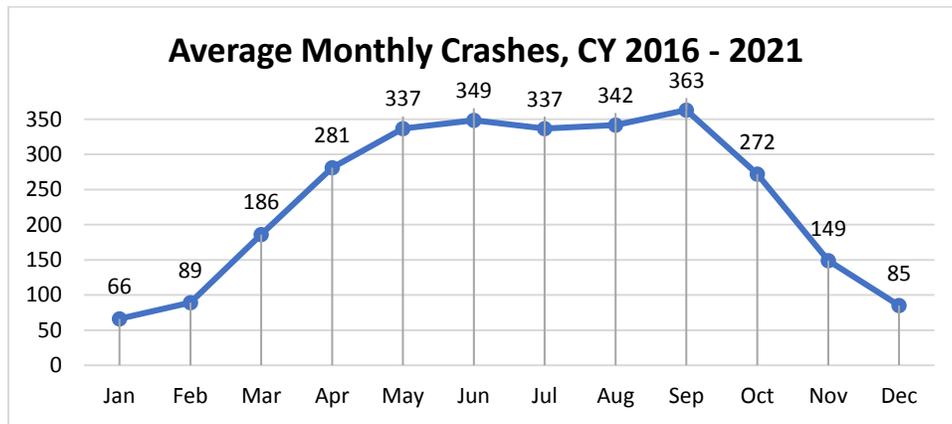
Source: TN Dept. of Safety and Homeland Security, TITAN Business Unit, 01 Jun 2022 (Crash).

Source: TN Dept. of Safety and Homeland Security, TITAN Business Unit, 01 Jun 2022 (A-List).

Table 8: Motorcycle Crashes by Month, CY 2016 – 2021

| Month | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 | TOTAL | AVERAGE |
|--------------|--------------|--------------|--------------|--------------|--------------|--------------|---------------|--------------|
| January | 65 | 75 | 63 | 52 | 69 | 73 | 397 | 66 |
| February | 102 | 127 | 92 | 84 | 75 | 54 | 534 | 89 |
| March | 225 | 194 | 165 | 179 | 161 | 193 | 1,117 | 186 |
| April | 323 | 345 | 241 | 281 | 202 | 294 | 1,686 | 281 |
| May | 348 | 327 | 319 | 356 | 297 | 374 | 2,021 | 337 |
| June | 388 | 359 | 320 | 337 | 324 | 363 | 2,091 | 349 |
| July | 337 | 359 | 367 | 292 | 321 | 343 | 2,019 | 337 |
| August | 340 | 338 | 376 | 345 | 347 | 304 | 2,050 | 342 |
| September | 392 | 395 | 313 | 409 | 346 | 323 | 2,178 | 363 |
| October | 349 | 228 | 268 | 241 | 252 | 293 | 1,631 | 272 |
| November | 174 | 169 | 100 | 99 | 199 | 152 | 893 | 149 |
| December | 76 | 73 | 78 | 98 | 76 | 109 | 510 | 85 |
| TOTAL | 3,119 | 2,989 | 2,702 | 2,773 | 2,669 | 2,875 | 17,127 | 2,855 |

Source: TN Dept. of Safety and Homeland Security, TITAN Business Unit, 01 Jun 2022 (Crash).

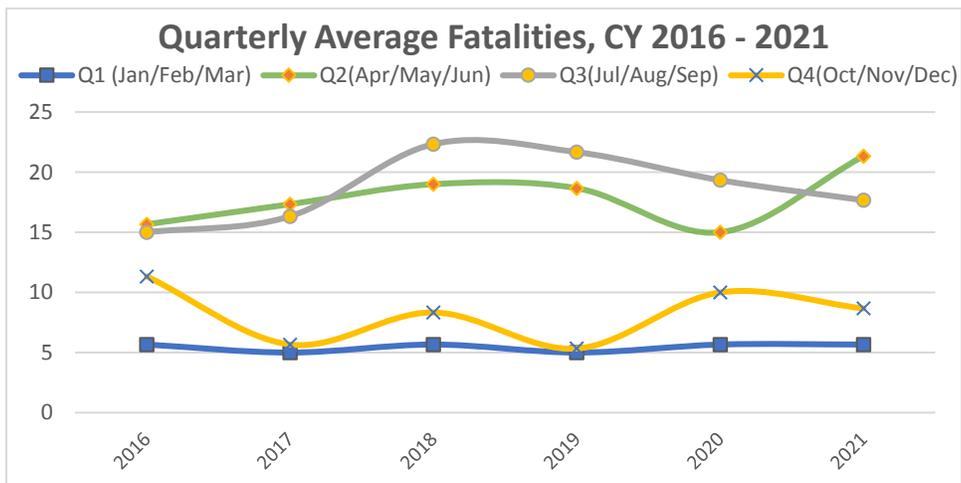
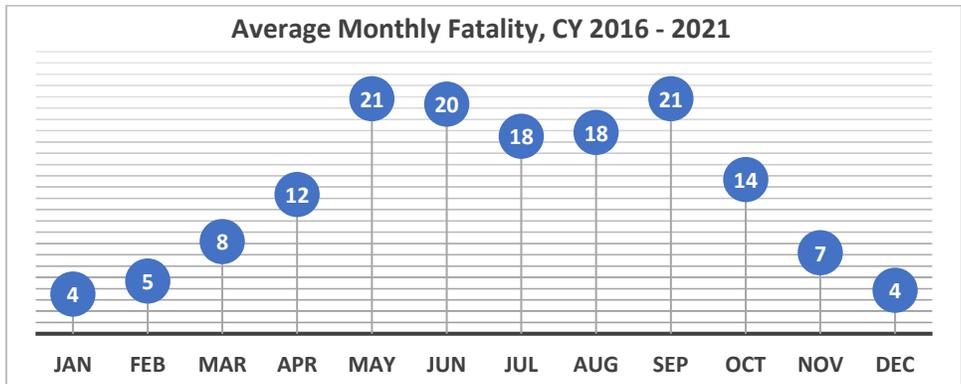


As shown in the graph above, Q2 and Q3 consistently have higher fatalities than Q1 and Q4.

Table 9: Motorcycle Rider Fatalities by Month, CY 2016 – 2021

| Month | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 | Total |
|--------------|------------|------------|------------|------------|------------|------------|------------|
| January | 3 | 4 | 3 | 2 | 4 | 6 | 22 |
| February | 2 | 6 | 8 | 5 | 7 | 3 | 31 |
| March | 14 | 4 | 6 | 10 | 6 | 9 | 49 |
| April | 11 | 20 | 11 | 6 | 13 | 13 | 74 |
| May | 18 | 19 | 24 | 24 | 17 | 23 | 125 |
| June | 18 | 13 | 22 | 26 | 15 | 28 | 122 |
| July | 14 | 16 | 23 | 17 | 18 | 17 | 105 |
| August | 17 | 13 | 23 | 22 | 18 | 14 | 107 |
| September | 14 | 20 | 21 | 26 | 22 | 22 | 125 |
| October | 21 | 10 | 15 | 9 | 14 | 13 | 82 |
| November | 11 | 5 | 7 | 4 | 10 | 8 | 45 |
| December | 2 | 2 | 5 | 3 | 7 | 8 | 27 |
| Total | 145 | 132 | 168 | 154 | 151 | 164 | 914 |

Source: TN Dept. of Safety and Homeland Security, TITAN Business Unit, 01 Jun 2022 (FTS).



As shown in the graph above, Q2 and Q3 consistently have higher fatalities than Q1 and Q4.

Table 10: Percentage of Motorcycle Crashes by Month of Incidence, CY 2016 – 2021

| Month | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 | AVERAGE | By Season |
|-----------|------|------|------|------|------|------|---------|-----------|
| January | 2% | 3% | 2% | 1% | 3% | 4% | 2% | Winter |
| February | 1% | 5% | 5% | 3% | 5% | 2% | 3% | 11% |
| March | 10% | 3% | 4% | 6% | 4% | 5% | 5% | |
| April | 8% | 15% | 7% | 4% | 9% | 8% | 8% | Spring |
| May | 12% | 14% | 14% | 16% | 11% | 14% | 14% | 35% |
| June | 12% | 10% | 13% | 17% | 10% | 17% | 13% | |
| July | 10% | 12% | 14% | 11% | 12% | 10% | 11% | Summer |
| August | 12% | 10% | 14% | 14% | 12% | 9% | 12% | 37% |
| September | 10% | 15% | 13% | 17% | 15% | 13% | 14% | |
| October | 14% | 8% | 9% | 6% | 9% | 8% | 9% | Fall |
| November | 8% | 4% | 4% | 3% | 7% | 5% | 5% | 17% |
| December | 1% | 2% | 3% | 2% | 5% | 5% | 3% | |

Source: TN Dept. of Safety and Homeland Security, TITAN Business Unit, 01 Jun 2022 (Crash).

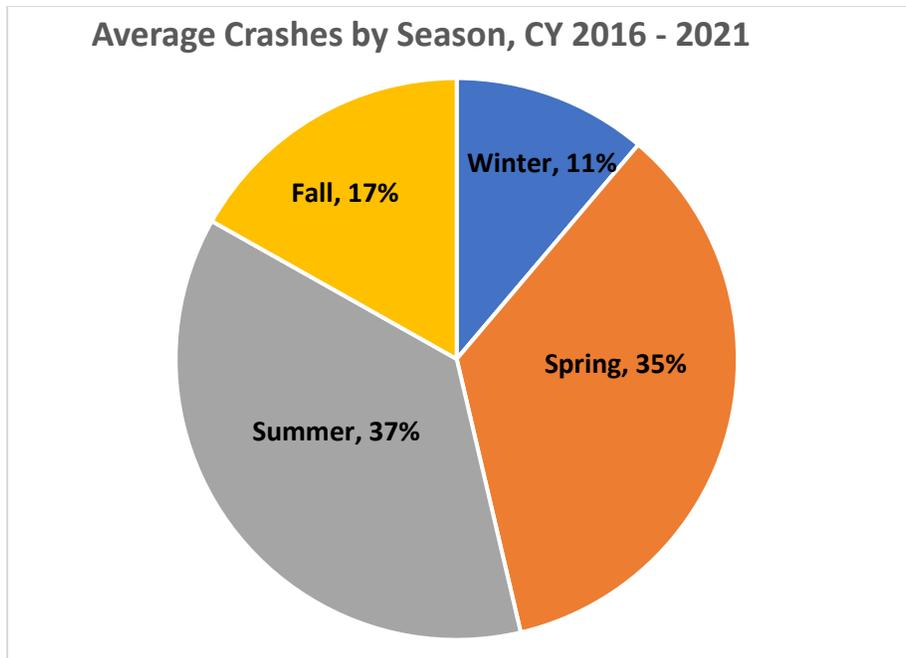


Table 11: Motorcycle Crashes by Day of Week, CY 2016 – 2021

| Day of the Week | Sunday | Monday | Tuesday | Wednesday | Thursday | Friday | Saturday | TOTAL |
|-----------------|------------|------------|------------|------------|------------|------------|------------|--------------|
| 2016 | 542 | 364 | 357 | 383 | 384 | 479 | 610 | 3,119 |
| 2017 | 535 | 313 | 332 | 360 | 359 | 466 | 624 | 2,989 |
| 2018 | 426 | 257 | 350 | 331 | 333 | 472 | 533 | 2,702 |
| 2019 | 462 | 308 | 376 | 402 | 307 | 406 | 512 | 2,773 |
| 2020 | 465 | 307 | 285 | 296 | 347 | 388 | 581 | 2,669 |
| 2021 | 483 | 299 | 326 | 393 | 351 | 452 | 571 | 2,875 |
| AVERAGE | 486 | 308 | 338 | 361 | 347 | 444 | 572 | N/A |

Source: TN Dept. of Safety and Homeland Security, TITAN Business Unit, 01 Jun 2022 (Crash).

Days of the Week are grouped into three color coded groups:

- Saturday is **RED**.
- Sunday and Friday are **ORANGE**
- Weekdays (Monday – Thursday) are **GREY**.

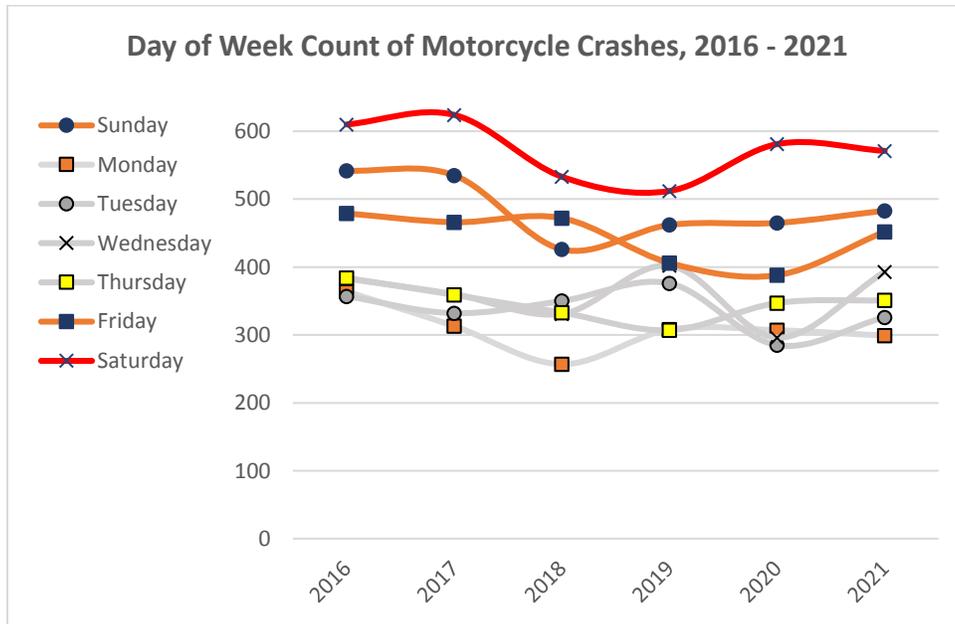


Table 12: Percentage of Motorcycle Crashes by Day of Week, CY 2016 – 2021

| Day of the Week | Sunday | Monday | Tuesday | Wednesday | Thursday | Friday | Saturday |
|-----------------|------------|------------|------------|------------|------------|------------|------------|
| 2016 | 17% | 12% | 11% | 12% | 12% | 15% | 20% |
| 2017 | 18% | 10% | 11% | 12% | 12% | 16% | 21% |
| 2018 | 16% | 10% | 13% | 12% | 12% | 17% | 20% |
| 2019 | 17% | 11% | 14% | 14% | 11% | 15% | 18% |
| 2020 | 17% | 12% | 11% | 11% | 13% | 15% | 22% |
| 2021 | 17% | 10% | 11% | 14% | 12% | 16% | 20% |
| AVERAGE | 17% | 11% | 12% | 13% | 12% | 16% | 20% |

Source: TN Dept. of Safety and Homeland Security, TITAN Business Unit, 01 Jun 2022 (Crash).

Days of the Week are grouped into three color coded groups:

- Saturday is **RED**.
- Sunday and Friday are **ORANGE**
- Weekdays (Monday – Thursday) are **YELLOW**.

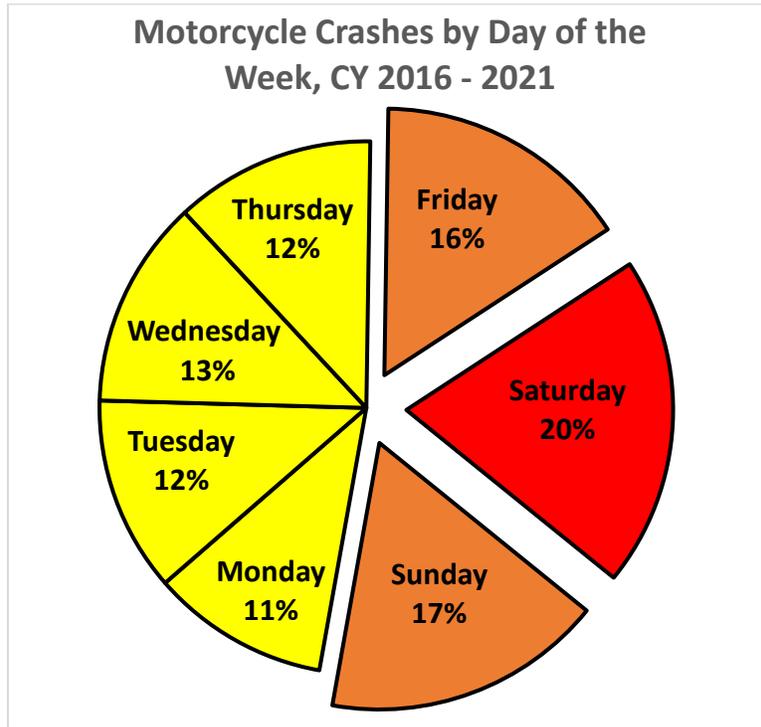


Table 13: Motorcycle Crashes Occurring by Hour, CY 2016 - 2021

| Hour of the Day | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 | Average |
|-----------------|--------------|--------------|--------------|--------------|--------------|--------------|------------|
| 12 AM | 39 | 47 | 40 | 57 | 42 | 37 | 44 |
| 1 AM | 23 | 33 | 25 | 30 | 28 | 42 | 30 |
| 2 AM | 26 | 26 | 23 | 30 | 13 | 27 | 24 |
| 3 AM | 21 | 24 | 15 | 23 | 16 | 19 | 20 |
| 4 AM | 11 | 15 | 10 | 14 | 11 | 16 | 13 |
| 5 AM | 23 | 27 | 32 | 21 | 19 | 24 | 24 |
| 6 AM | 66 | 38 | 45 | 35 | 26 | 36 | 41 |
| 7 AM | 81 | 52 | 66 | 62 | 48 | 42 | 59 |
| 8 AM | 56 | 43 | 53 | 64 | 33 | 51 | 50 |
| 9 AM | 89 | 76 | 70 | 55 | 48 | 58 | 66 |
| 10 AM | 115 | 103 | 92 | 95 | 94 | 102 | 100 |
| 11 AM | 160 | 134 | 123 | 141 | 131 | 137 | 138 |
| 12 AM | 184 | 174 | 166 | 132 | 168 | 169 | 166 |
| 1 PM | 244 | 218 | 180 | 194 | 178 | 162 | 196 |
| 2 PM | 238 | 218 | 197 | 200 | 211 | 229 | 216 |
| 3 PM | 284 | 282 | 238 | 213 | 235 | 239 | 249 |
| 4 PM | 265 | 264 | 225 | 233 | 257 | 279 | 254 |
| 5 PM | 290 | 268 | 271 | 275 | 252 | 266 | 270 |
| 6 PM | 230 | 234 | 175 | 210 | 221 | 231 | 217 |
| 7 PM | 175 | 181 | 149 | 171 | 164 | 161 | 167 |
| 8 PM | 135 | 154 | 140 | 133 | 144 | 155 | 144 |
| 9 PM | 125 | 104 | 128 | 126 | 100 | 124 | 118 |
| 10 PM | 72 | 89 | 72 | 96 | 89 | 78 | 83 |
| 11 PM | 58 | 59 | 56 | 55 | 46 | 66 | 57 |
| Unknown | 109 | 126 | 111 | 108 | 95 | 125 | 112 |
| TOTAL | 3,119 | 2,989 | 2,702 | 2,773 | 2,669 | 2,875 | N/A |

Source: TN Dept. of Safety and Homeland Security, TITAN Business Unit, 01 Jun 2022 (Crash).

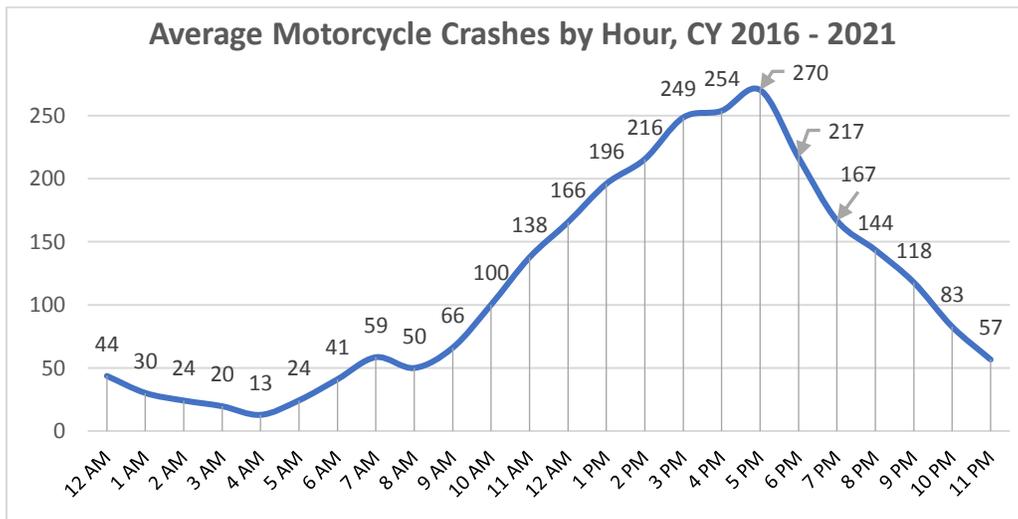


Table 14: Motorcycle Crashes by Light Condition, CY 2016 – 2021

| Light Condition | Daylight | Dark-Not Lighted | Dark-Lighted | Dawn | Dusk | Unknown | TOTAL |
|-----------------|------------|------------------|--------------|-----------|-----------|-----------|--------------|
| 2016 | 2,327 | 314 | 359 | 23 | 75 | 21 | 3,119 |
| 2017 | 2,155 | 319 | 377 | 36 | 66 | 36 | 2,989 |
| 2018 | 1,953 | 282 | 330 | 28 | 78 | 31 | 2,702 |
| 2019 | 1,924 | 345 | 372 | 31 | 64 | 37 | 2,773 |
| 2020 | 1,923 | 282 | 336 | 30 | 74 | 24 | 2,669 |
| 2021 | 2,041 | 323 | 387 | 27 | 69 | 28 | 2,875 |
| PERCENT | 72% | 11% | 13% | 1% | 2% | 1% | N/A |

Source: TN Dept. of Safety and Homeland Security, TITAN Business Unit, 01 Jun 2022 (Crash).

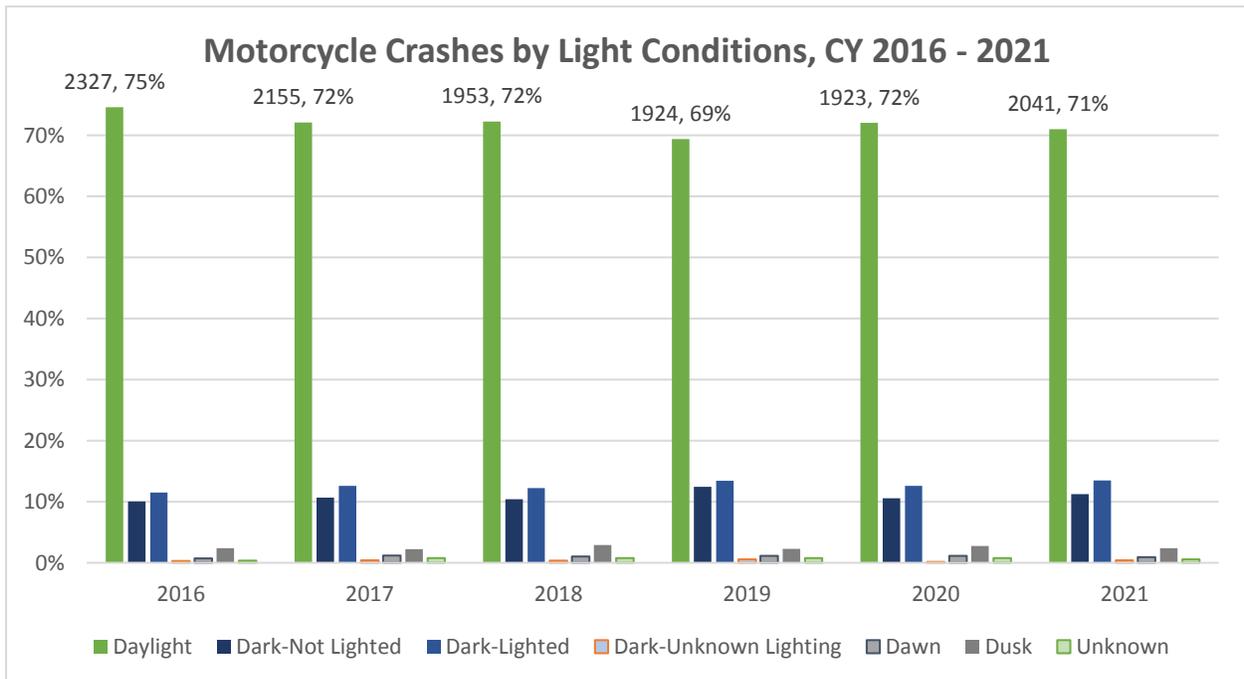


Table 15: Motorcycle Drivers in Crashes by Age, CY 2016 – 2021

| Age Group | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 | TOTAL |
|--------------|--------------|--------------|--------------|--------------|--------------|--------------|---------------|
| Under 15 | 10 | 6 | 15 | 8 | 12 | 7 | 58 |
| 15 to 19 | 151 | 152 | 151 | 128 | 115 | 132 | 829 |
| 20 to 24 | 390 | 412 | 329 | 347 | 328 | 380 | 2,186 |
| 25 to 29 | 383 | 385 | 355 | 344 | 361 | 375 | 2,203 |
| 30 to 34 | 256 | 284 | 287 | 282 | 305 | 357 | 1,771 |
| 35 to 39 | 285 | 242 | 208 | 245 | 240 | 259 | 1,479 |
| 40 to 44 | 268 | 254 | 210 | 227 | 234 | 253 | 1,446 |
| 45 to 49 | 291 | 295 | 295 | 278 | 227 | 245 | 1,631 |
| 50 to 54 | 324 | 278 | 239 | 228 | 237 | 237 | 1,543 |
| 55 to 59 | 306 | 269 | 205 | 229 | 224 | 209 | 1,442 |
| 60 to 64 | 236 | 181 | 178 | 198 | 158 | 175 | 1,126 |
| 65 to 69 | 131 | 118 | 117 | 128 | 123 | 99 | 716 |
| 70 to 74 | 55 | 56 | 66 | 69 | 44 | 72 | 362 |
| 75 and Over | 23 | 27 | 24 | 32 | 22 | 30 | 158 |
| Unknown | 89 | 106 | 82 | 81 | 98 | 107 | 563 |
| TOTAL | 3,198 | 3,065 | 2,761 | 2,824 | 2,728 | 2,937 | 17,513 |

Source: TN Dept. of Safety and Homeland Security, TITAN Business Unit, 01 Jun 2022 (Crash).

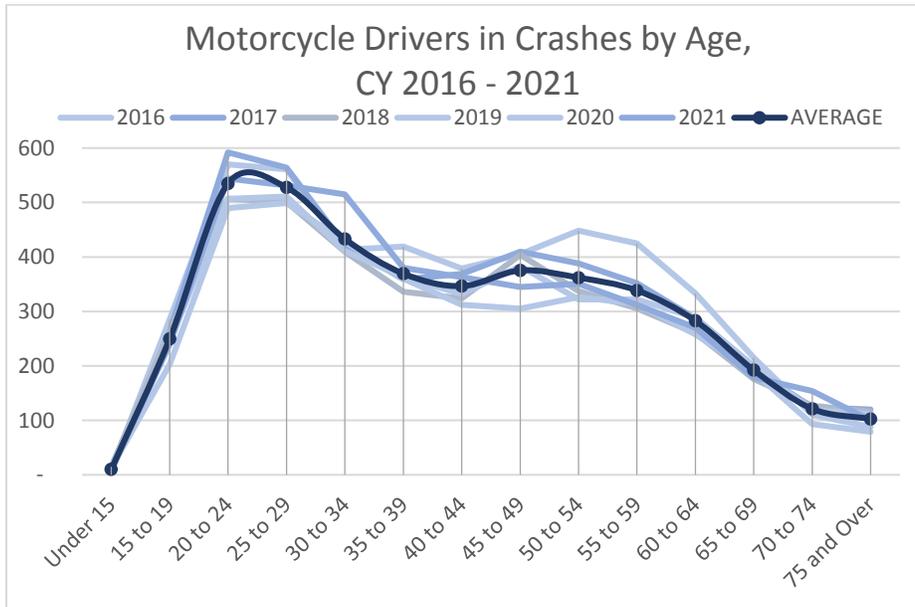


Table 16: Percentage of Motorcycle Drivers in Crashes by Age, CY 2016 – 2021

| Age Group | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 | AVERAGE |
|-------------|-------|-------|-------|-------|-------|-------|--------------|
| Under 15 | 0.3% | 0.2% | 0.5% | 0.3% | 0.4% | 0.2% | 0.3% |
| 15 to 19 | 4.7% | 5.0% | 5.5% | 4.5% | 4.2% | 4.5% | 4.7% |
| 20 to 24 | 12.2% | 13.4% | 11.9% | 12.3% | 12.0% | 12.9% | 12.5% |
| 25 to 29 | 12.0% | 12.6% | 12.9% | 12.2% | 13.2% | 12.8% | 12.6% |
| 30 to 34 | 8.0% | 9.3% | 10.4% | 10.0% | 11.2% | 12.2% | 10.2% |
| 35 to 39 | 8.9% | 7.9% | 7.5% | 8.7% | 8.8% | 8.8% | 8.4% |
| 40 to 44 | 8.4% | 8.3% | 7.6% | 8.0% | 8.6% | 8.6% | 8.3% |
| 45 to 49 | 9.1% | 9.6% | 10.7% | 9.8% | 8.3% | 8.3% | 9.3% |
| 50 to 54 | 10.1% | 9.1% | 8.7% | 8.1% | 8.7% | 8.1% | 8.8% |
| 55 to 59 | 9.6% | 8.8% | 7.4% | 8.1% | 8.2% | 7.1% | 8.2% |
| 60 to 64 | 7.4% | 5.9% | 6.4% | 7.0% | 5.8% | 6.0% | 6.4% |
| 65 to 69 | 4.1% | 3.8% | 4.2% | 4.5% | 4.5% | 3.4% | 4.1% |
| 70 to 74 | 1.7% | 1.8% | 2.4% | 2.4% | 1.6% | 2.5% | 2.1% |
| 75 and Over | 0.7% | 0.9% | 0.9% | 1.1% | 0.8% | 1.0% | 0.9% |
| Unknown | 2.8% | 3.5% | 3.0% | 2.9% | 3.6% | 3.6% | 3.2% |

Source: TN Dept. of Safety and Homeland Security, TITAN Business Unit, 01 Jun 2022 (Crash).

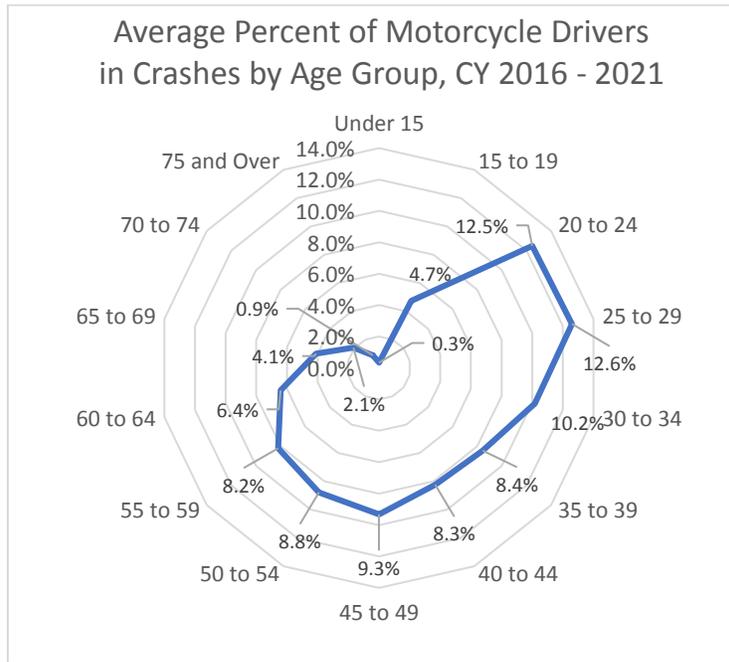


Table 17: Percent Change Annually of Motorcycle Drivers in Crash by Age, CY 2016 – 2021

| Age Group | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 |
|-------------|------|------|------|------|------|------|
| Under 15 | 100% | -40% | 150% | -47% | 50% | -42% |
| 15 to 19 | 17% | 1% | -1% | -15% | -10% | 15% |
| 20 to 24 | 13% | 6% | -20% | 5% | -5% | 16% |
| 25 to 29 | 17% | 1% | -8% | -3% | 5% | 4% |
| 30 to 34 | 3% | 11% | 1% | -2% | 8% | 17% |
| 35 to 39 | 42% | -15% | -14% | 18% | -2% | 8% |
| 40 to 44 | 2% | -5% | -17% | 8% | 3% | 8% |
| 45 to 49 | -4% | 1% | 0% | -6% | -18% | 8% |
| 50 to 54 | -11% | -14% | -14% | -5% | 4% | 0% |
| 55 to 59 | 8% | -12% | -24% | 12% | -2% | -7% |
| 60 to 64 | 20% | -23% | -2% | 11% | -20% | 11% |
| 65 to 69 | 7% | -10% | -1% | 9% | -4% | -20% |
| 70 to 74 | 0% | 2% | 18% | 5% | -36% | 64% |
| 75 and Over | -4% | 17% | -11% | 33% | -31% | 36% |
| Unknown | 27% | 19% | -23% | -1% | 21% | 9% |

Source: TN Dept. of Safety and Homeland Security, TITAN Business Unit, 01 Jun 2022 (Crash).

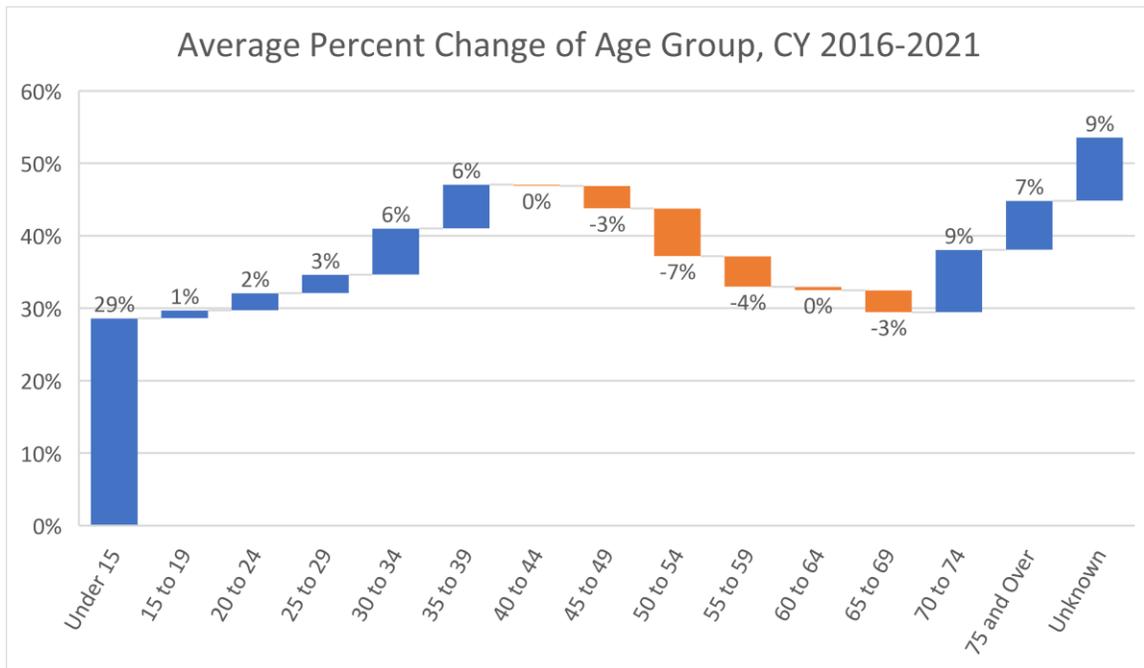
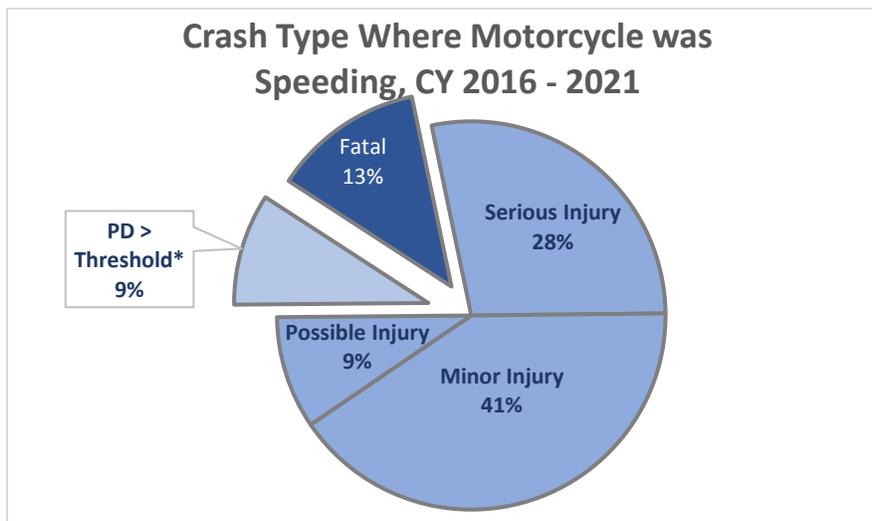
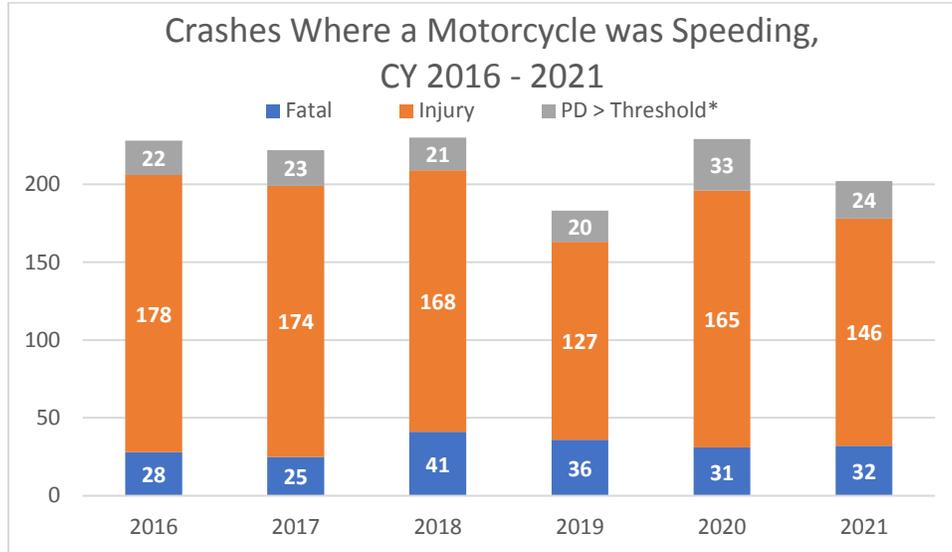


Table 18: Crashes Where Motorcycle was Speeding, CY 2016 – 2021

| Crash Type | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 | TOTAL |
|-----------------|------------|------------|------------|------------|------------|------------|--------------|
| Fatal | 28 | 25 | 41 | 36 | 31 | 32 | 193 |
| Injury | 178 | 174 | 168 | 127 | 165 | 146 | 958 |
| PD > Threshold* | 22 | 23 | 21 | 20 | 33 | 24 | 143 |
| TOTAL | 228 | 222 | 230 | 183 | 229 | 202 | 1,294 |

Source: TN Dept. of Safety and Homeland Security, TITAN Business Unit, 01 Jun 2022 (Crash).

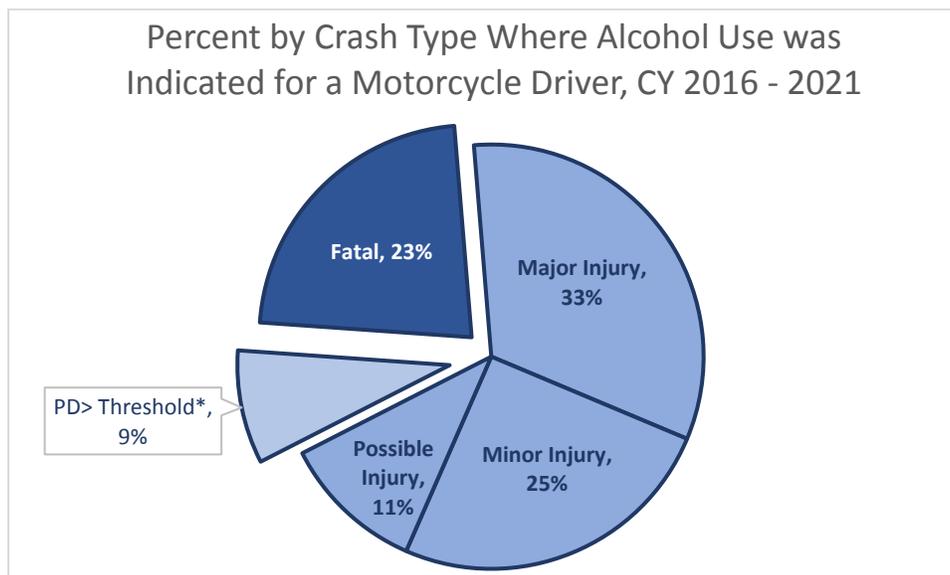
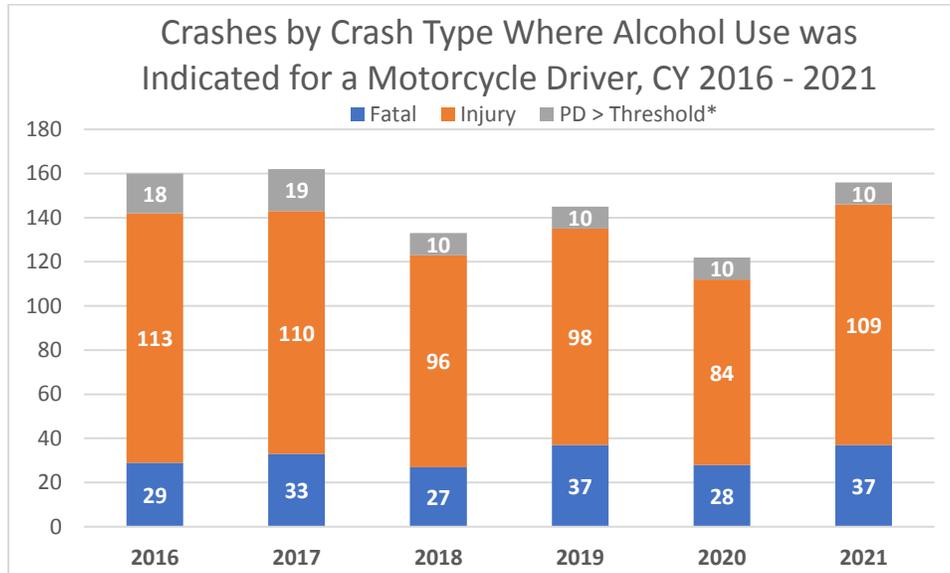


Approximately one out of every four crashes where a motorcycle was speeding had the crash type Serious Injury.

Table 19: Crashes Where Alcohol Use was Indicated for a Motorcycle Driver, CY 2016 – 2021

| Crash Type | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 |
|-----------------|------------|------------|------------|------------|------------|------------|
| Fatal | 29 | 33 | 27 | 37 | 28 | 37 |
| Injury | 113 | 110 | 96 | 98 | 84 | 109 |
| PD > Threshold* | 18 | 19 | 10 | 10 | 10 | 10 |
| TOTAL | 160 | 162 | 133 | 145 | 122 | 156 |

Source: TN Dept. of Safety and Homeland Security, TITAN Business Unit, 01 Jun 2022 (Crash).



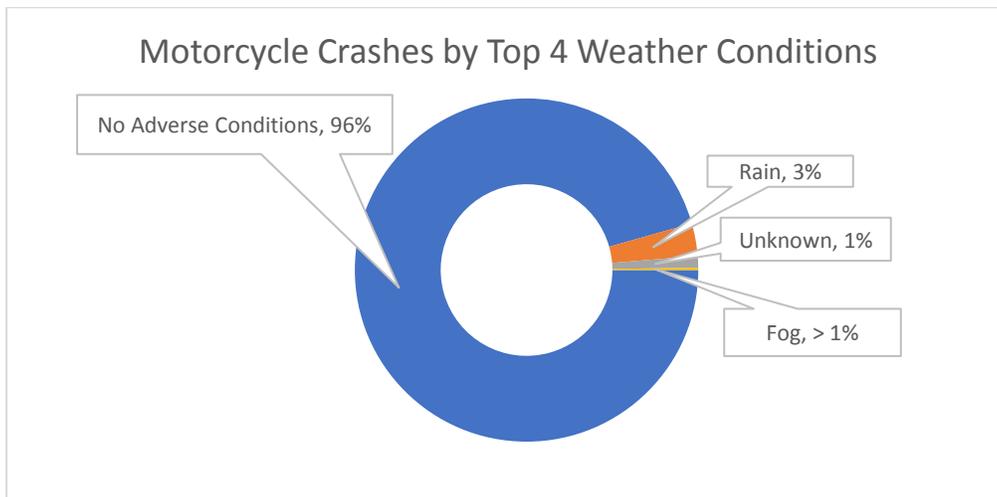
Approximately one out of every four crashes where alcohol use was indicated for a motorcycle driver had the crash type Fatal. Approximately one out of every three crashes where alcohol use was indicated for a motorcycle rider had the crash type Serious Injury.

Table 20: Motorcycle Crashes by Weather Conditions, CY 2016 – 2021

| Weather Conditions | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 | TOTAL | AVERAGE | PERCENT |
|------------------------|--------------|--------------|--------------|--------------|--------------|--------------|---------------|--------------|-------------|
| No Adverse Conditions | 2,997 | 2,868 | 2,566 | 2,683 | 2,504 | 2,678 | 16,296 | 2,716 | 95.1% |
| Rain | 102 | 87 | 118 | 66 | 84 | 112 | 569 | 95 | 3.3% |
| Unknown | 12 | 22 | 9 | 16 | 75 | 71 | 205 | 34 | 1.2% |
| Fog | 4 | 7 | 7 | 6 | 4 | 10 | 38 | 6 | 0.22% |
| Other | 0 | 2 | 0 | 0 | 2 | 1 | 5 | 1 | 0.03% |
| Snow | 2 | 1 | 1 | 0 | 0 | 1 | 5 | 1 | 0.03% |
| Severe Crosswinds | 1 | 0 | 0 | 1 | 0 | 2 | 4 | 1 | 0.02% |
| Smog/Smoke | 0 | 2 | 0 | 1 | 0 | 0 | 3 | 1 | 0.02% |
| Blowing Sand/Soil/Dirt | 1 | 0 | 1 | 0 | 0 | 0 | 2 | 0 | 0.01% |
| TOTAL | 3,119 | 2,989 | 2,702 | 2,773 | 2,669 | 2,875 | 17,127 | 2,855 | 100% |

Source: TN Dept. of Safety and Homeland Security, TITAN Business Unit, 01 Jun 2022 (Crash).

PLEASE NOTE: More than one weather condition can be selected when a crash report is made. To count crashes only once, the more extreme weather condition was used.



Nineteen (19) out of 20 motorcycle crashes occurred during “Clear” or “Cloudy” weather conditions. These two weather conditions were grouped together into “No Adverse Weather Conditions.”

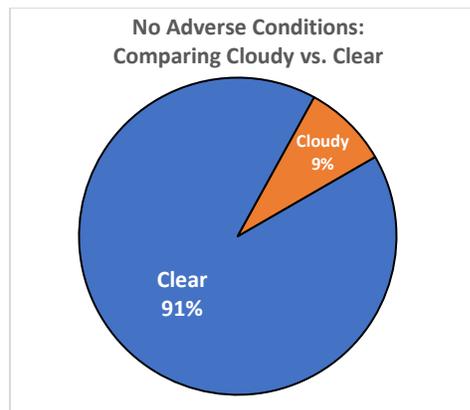


Table 21: Multiple Vehicle Crashes Involving Motorcycles, CY 2016 – 2021

| Number of Vehicles | Single Vehicle Crashes | Percent S.V.C. | Multiple Vehicle Crashes | Percent M.V.C. |
|--------------------|------------------------|----------------|--------------------------|----------------|
| 2015 | 1,362 | 47% | 1,518 | 53% |
| 2016 | 1,397 | 45% | 1,722 | 55% |
| 2017 | 1,340 | 45% | 1,649 | 55% |
| 2018 | 1,188 | 44% | 1,514 | 56% |
| 2019 | 1,253 | 45% | 1,520 | 55% |
| 2020 | 1,275 | 48% | 1,394 | 52% |
| 2021 | 1,260 | 44% | 1,615 | 56% |
| TOTAL | 9,075 | N/A | 10,932 | N/A |

Source: TN Dept. of Safety and Homeland Security, TITAN Business Unit, 01 Jun 2022 (Crash).

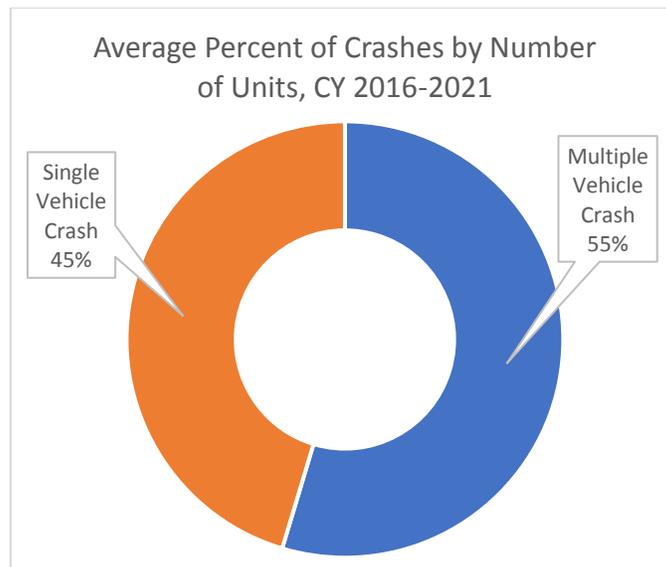


Table 22: Intersection Related Crashes Involving Motorcycles, CY 2016 – 2021

| Crash Year | Intersection Crash Count | Percentage |
|----------------|--------------------------|------------|
| 2016 | 1028 | 33% |
| 2017 | 1000 | 33% |
| 2018 | 836 | 31% |
| 2019 | 858 | 31% |
| 2020 | 843 | 32% |
| 2021 | 897 | 31% |
| TOTAL | 5,462 | N/A |
| AVERAGE | 910 | 32% |

Source: TN Dept. of Safety and Homeland Security, TITAN Business Unit, 01 Jun 2022 (Crash).

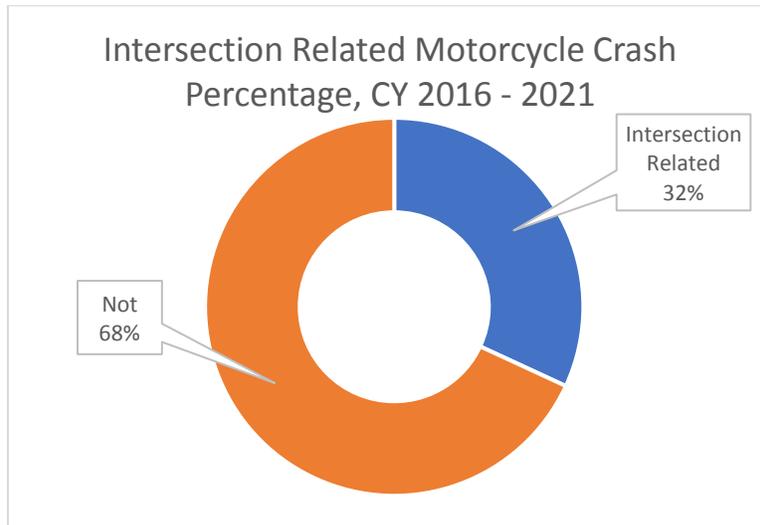


Table 23: Motorcycle Units Involved in a Crash by Motor Vehicle Type, CY 2016 - 2021

| Unit Type | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 | TOTAL | AVERAGE | PERCENT |
|--|--------------|--------------|--------------|--------------|--------------|--------------|---------------|--------------|-------------|
| Motorcycle | 3,010 | 2,888 | 2,579 | 2,628 | 2,540 | 2,747 | 16,392 | 2,732 | 93.6% |
| Moped Motorized Bicycle | 59 | 59 | 48 | 61 | 57 | 51 | 335 | 56 | 1.9% |
| Three-Wheel Motorcycle or Moped, Not-ATV | 41 | 45 | 37 | 42 | 28 | 40 | 233 | 39 | 1.3% |
| Off-Road Motorcycle Two-Wheel | 32 | 32 | 39 | 36 | 51 | 51 | 241 | 40 | 1.4% |
| Other Motored Cycle Type | 44 | 35 | 49 | 52 | 39 | 41 | 260 | 43 | 1.5% |
| Unknown Motored Cycle Type | 12 | 6 | 9 | 5 | 13 | 7 | 52 | 9 | 0.3% |
| TOTAL | 3,198 | 3,065 | 2,761 | 2,824 | 2,728 | 2,937 | 17,513 | 2,919 | 100% |

Source: TN Dept. of Safety and Homeland Security, TITAN Business Unit, 01 Jun 2022 (Crash).

PLEASE NOTE:

1. The above table does not match total counts from crash totals because it counts the number of motorcycle-type units involved in crashes. In cases where multiple motorcycle-type units were involved, a crash will have a unit count higher than one.
2. The below graph shows unit type percentage of all units listed as Moped Motorized Bicycle, Three-Wheel Motorcycle or Moped Not-ATV, Off-Road Motorcycle Two-Wheel, Other Motored Cycle Type, or Unknown Motored Cycle Type. The graph excludes all units with Motorcycle body type. Motorcycle body type was the most frequent body type, representing approximately 19 out of 20 of all crashes included in this report.

