

Florida Motorcycle Strategic Safety Plan

Florida Department of Transportation

March 2009

Table of Contents

1.0	Introduction	1-5
1.1	Florida Strategic Highway Safety Plan.....	1-5
1.2	Florida’s Challenge.....	1-5
1.3	Purpose of the MSSP	1-4
1.4	MSSP Development Process.....	1-5
1.5	Motorcycle Safety Stakeholders.....	1-6
2.0	Motorcycle Crash Factors	2-1
2.1	Age.....	2-1
2.2	Residence	2-3
2.3	Location.....	2-4
2.4	Registrations and Endorsements	2-7
2.5	Helmet Use	2-10
2.6	Alcohol Involvement.....	2-10
2.7	Time of Year and Day of Week.....	2-11
2.8	Vehicle Maneuver	2-11
2.9	Body Region and Nature of Injury	2-11
3.0	Motorcycle Strategic Safety Plan	3-2
3.1	Vision.....	3-2
3.2	Mission	3-2
3.3	Goal.....	3-2
3.4	Emphasis Areas.....	3-2
3.5	Data Analysis	3-3
3.6	Program Management and Evaluation	3-4
3.7	Personal Protective Equipment	3-5
3.8	Operator Licensing	3-6
3.9	Rider Education and Training	3-7
3.10	Rider Impairment and Speeding	3-8
3.11	Legislation and Regulations.....	3-9
3.12	Law Enforcement and Emergency Services.....	3-9
3.13	Roadway Engineering.....	3-10
3.14	Rider Conspicuity and Motorist Awareness.....	3-11
3.15	Communications.....	3-12
3.16	Conclusion	3-13

4.0 Appendix.....4-1

List of Tables

Table 2.1	Motorcycle Fatality History By County	2-5
Table 2.2	Motorcycle Injury History By County	2-6
Table 2.3	Florida Motorcycle Registrations	2-7
Table 2.4	Florida Motorcycle Endorsements	2-7
Table 2.5	Motorcycle Registrations by County	2-8
Table 2.6	Motorcycle Endorsements by County	2-9
Table 2.7	Motorcycle Traffic Fatalities in Florida by Body Region Injured (2005-2007)	2-1
Table 2.8	Motorcycle Traffic Fatalities in Florida by Nature of Injury (2005-2007).....	2-1
Table 2.9	Hospitalizations in Florida for Non-Fatal Injuries Sustained in Motorcycle Traffic Crashes by Body Region Injured	2-2
Table 2.10	Hospitalizations in Florida for Non-Fatal Injuries Sustained in Motorcycle Traffic Crashes by Nature of Injury	2-3
Table 2.11	Emergency Department Visits in Florida for Non-Fatal Injuries Sustained in Motorcycle Traffic Crashes by Body Region Injured.....	2-4
Table 2.12	Emergency Department Visits in Florida for Non-Fatal Injuries Sustained in Motorcycle Traffic Crashes by Nature of Injury	2-4
Table 4.1	Motorcycle Safety Coalition Membership	4-2

List of Figures

Figure 1.1 Florida Motorcycle Crashes and Injuries	1-5
Figure 1.2 Florida Motorcycle Fatalities	1-6
Figure 1.3 Percentage of Traffic Fatalities Involving Motorcycles.....	1-6
Figure 1.4 Motorcycle Traffic Crash Injuries in Florida, by Year	1-1
Figure 1.5 2007 Hospitalizations in Florida for Non-Fatal Injuries Sustained in Motorcycle Traffic Crashes by Payer Source	1-2
Figure 1.6 2006 Emergency Department Visits in Florida for Non-Fatal Injuries Sustained in Motorcycle Traffic Crashes by Payer Source	1-3
Figure 2.1 Motorcycle Traffic Fatalities in Florida, by Age and Year.....	2-1
Figure 2.2 Hospitalizations in Florida for Non-Fatal Injuries Sustained in Motorcycle Traffic Crashes by Age and Year.....	2-2
Figure 2.3 Emergency Department Visits in Florida for Non-Fatal Injuries Sustained in Motorcycle Traffic Crashes by Age and Year	2-3
Figure 2.4 Motorcycle Traffic Injuries in Florida, by Florida Residency.....	2-4

1.0 Introduction

1.1 FLORIDA STRATEGIC HIGHWAY SAFETY PLAN

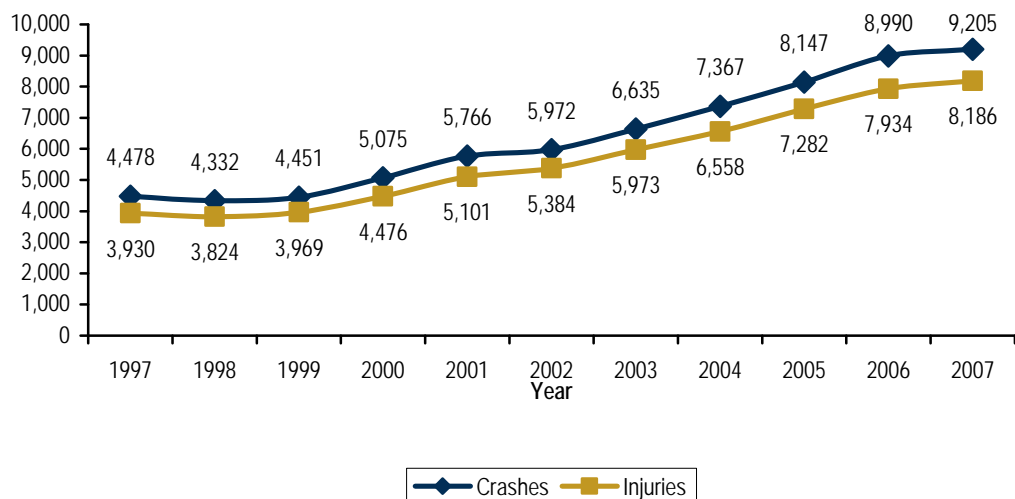
The Florida Strategic Highway Safety Plan (SHSP) is designed to improve road safety for residents and visitors. The SHSP identifies strategic safety priorities in both public and private agencies and organizations at the national, state, regional, and local levels. It addresses motorcycle safety issues in the Vulnerable Road Users emphasis area where objectives and strategies are identified to reduce the number of motorcycle fatalities, injuries, and crashes. The Motorcycle Safety Strategic Plan (MSSP) supplements and expands on the SHSP by providing more detailed strategies and action steps to improve motorcycle safety in Florida.

1.2 FLORIDA’S CHALLENGE

Motorcycle crashes pose a serious concern because of the health, economic, and social issues they raise. Florida’s sunny weather, beautiful beaches, and scenic highways make it a popular place for motorcycle enthusiasts. The state also is host to popular motorcycle rallies such as Biketoberfest and Daytona Bike Week. Florida’s growing population and popularity with motorcycle enthusiasts, make motorcycle safety an important issue. The number of motorcycle crashes, fatalities, and injuries in the United States shows a steady increase in recent years, and Florida experienced the same trend.

Florida motorcycle crashes and injuries have steadily increased for more than eight years. Figure 1.1 illustrates this trend.

Figure 1.1 Florida Motorcycle Crashes and Injuries



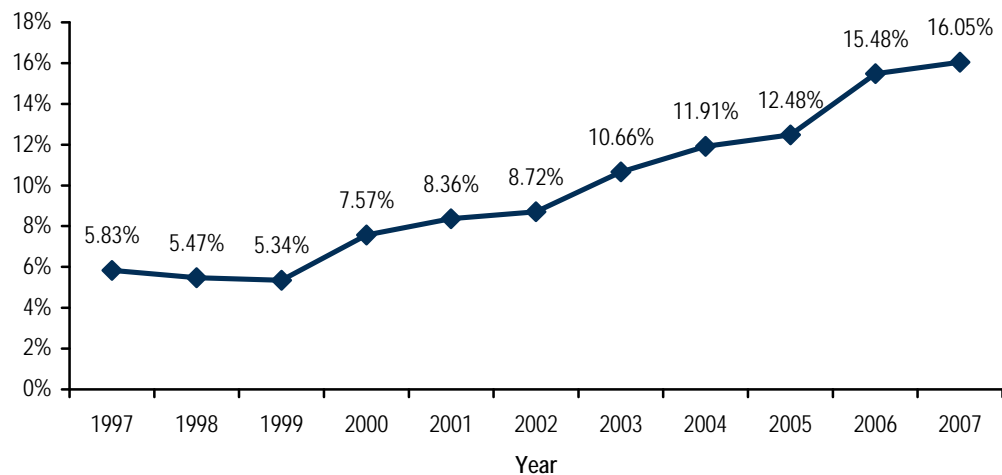
However, as is shown in Figure 1.2 motorcycle fatalities showed a slight decrease from 2006 to 2007. It is too soon to tell whether this is a trend or an anomaly.

Figure 1.2 Florida Motorcycle Fatalities



Motorcycle crashes, injuries, and fatalities are increasing at a sharper rate than other types of motor vehicle crashes as shown in Figure 1.3. In 1997, motorcycle fatalities accounted for five percent of all traffic fatalities in the State, but by 2007 the percentage had increased to approximately 16 percent. Figure 1.3 shows the percentage of traffic fatalities that involve motorcycles for the period from 1997 to 2007.

Figure 1.3 Percentage of Traffic Fatalities Involving Motorcycles

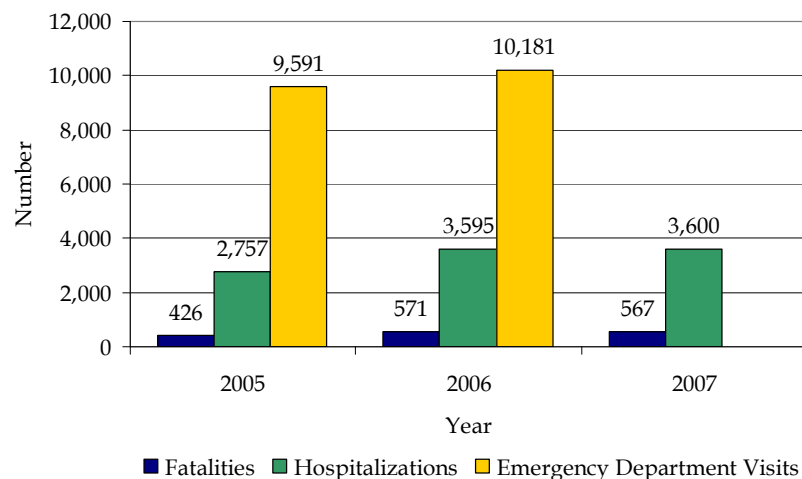


Hospitalizations and Emergency Department Visits¹

Motorcycle traffic crashes often result in fatal or serious injuries requiring inpatient or outpatient hospital care and treatment. Fatal injuries, though the most severe, account for only a small portion of the overall injury burden among motorcyclists. In fact, over six times more non-fatal injury hospitalizations and over 17 times more emergency department (ED) visits occur for non-fatal injuries. Figure 1.4 shows motorcycle fatalities, hospitalizations, and emergency department visits from 2005 to 2007.

Figure 1.4 Motorcycle Traffic Crash Injuries in Florida, by Year

Fatalities, Non-Fatal Hospitalizations and Emergency Department Visits, 2005-2006; Fatalities and Non-Fatal Hospitalizations, 2007

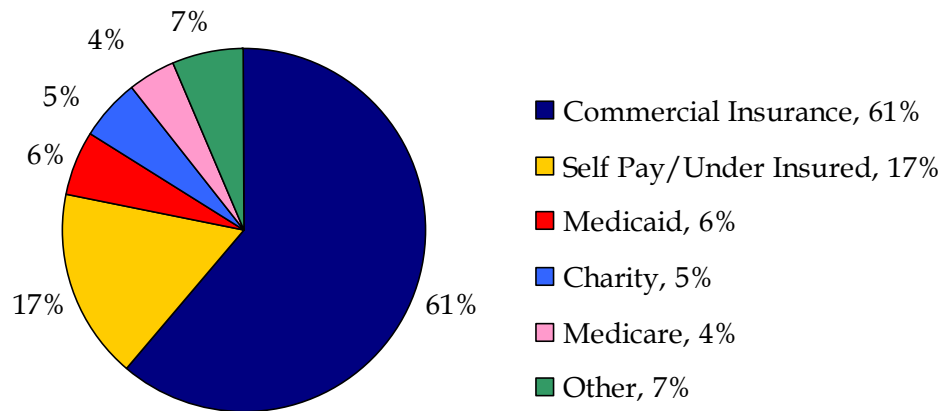


In 2005, injuries from motorcycle traffic crashes in Florida were responsible for 426 fatalities, 2,757 non-fatal hospitalizations, and 9,591 non-fatal emergency department visits. From 2005-2006, fatalities increased 34 percent to 571, hospitalizations increased 30 percent to 3,595, while ED visits increased 6 percent to 10,181. From 2006-2007 fatalities decreased 1 percent to 567 while hospitalizations remained nearly unchanged at 3,600. Data on emergency department visits became available in 2005 and is one year behind data on fatalities and hospitalizations.

¹ The injury data presented in this report is based on the analysis of motorcycles traffic crashes. Motorcycles are defined as a two-wheeled motor vehicle with one or two riding saddles and sometimes a third wheel for the support of a sidecar. This category includes mopeds, motor scooters, motorized bicycles, speed-limited motor-driven cycles and excludes motor-driven tricycles. Traffic crashes are defined as vehicle accidents occurring on the public highway. Off-road motor vehicles are excluded.

In 2007, the median hospital charge for motorcyclists admitted to an acute care hospital in Florida for non-fatal injuries sustained in traffic crashes was \$42,983.² The median length of stay was four days and total hospital charges amounted to more than \$300 million. Figure 2.5 shows reimbursement sources for hospitalizations by commercial insurance (61%), self-pay or underinsured (17%), Medicaid (6%) and Medicare (4%).

Figure 1.5 2007 Hospitalizations in Florida for Non-Fatal Injuries Sustained in Motorcycle Traffic Crashes by Payer Source

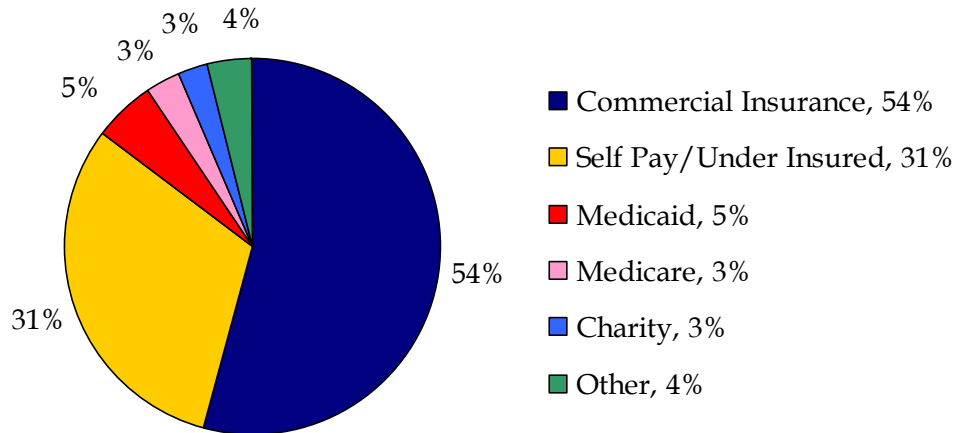


In 2006, the median hospital charge for motorcyclists treated and released from an emergency department in Florida for non-fatal injuries sustained in traffic crashes was \$1,935; total hospital charges amounted to nearly \$38 million.³ Figure 1.6 shows reimbursement sources for emergency department visits by commercial insurance (54%), self-pay or underinsured (31%), and Medicaid (5%).

² Data Source: Hospital Discharge Data, Florida Agency for Health Care Administration, Case Definition: Injury Primary Diagnosis and Motorcycle Traffic Crash External Cause of Injury ICD-9 CM E810-E819 (.2,.3) External Cause of Injury Code Completeness: 2005 85.1%, 2006 94.6%, 2007 95.3%

³ Data Source: Emergency Department Discharge Data, Florida Agency for Health Care Administration, Case Definition: Motorcycle Traffic Crash External Cause of Injury ICD-9 CM E810-E819 (.2,.3) External Cause of Injury Code Completeness: 2005 90.4%, 2006 90.8%

Figure 1.6 2006 Emergency Department Visits in Florida for Non-Fatal Injuries Sustained in Motorcycle Traffic Crashes by Payer Source



Motorcycle crashes result in fatalities, non-fatal hospitalizations, and emergency department visits that require inpatient or outpatient hospital care and treatment. Reducing motorcycle-related crashes will save lives and reduce demand for emergency services resources.

Rider Characteristics

FDOT conducted motorcycle rider surveys to investigate six major areas: 1) rider characteristics; 2) risk factors, including speeding, and helmet use; 3) alcohol impaired driving; 4) rider opinions regarding the safety of Florida roads; 5) internet usage; and 6) television viewing habits. The survey was conducted by the Public Opinion Research Laboratory at the University of North Florida. Interviews were conducted in English and Spanish.

Survey Methodology

The Florida Department of Highway Safety and Motor Vehicles (DHSMV) provided information on all individuals within the state who possess a motorcycle endorsement. A random sample of the telephone numbers was selected using statistical software. Interviews with 502 motorcycle riders over the age of 18 were conducted. Broward, Hillsborough, Miami-Dade, and Volusia counties (hotspot counties) were over sampled because these counties had the highest number of motorcycle deaths in 2006.

Results

The survey results indicated the following:

- In terms of perceived safety of Florida roads, fewer than half of all respondents view Florida's roads as safe for motorcyclists. Just eight percent reported roads as being "very safe."
- The average Florida rider has owned a motorcycle for several years. Over seven out of ten respondents report owning a motorcycle for more than seven years.
- Fifty-five percent of the sample reported riding motorcycles either every day or more than once per week. Saturday and Sunday were the most commonly reported riding days.
- More than three quarters of the survey participants reported riding on surface streets as opposed to expressways.
- Respondents in hotspot counties reported driving on expressways at a significantly higher level than respondents in other counties.
- Approximately 10 percent of respondents in the overall sample and 12 percent of respondents in hotspot counties reported they never wear a helmet.
- About 30 percent of respondents in the overall sample and 32 percent of respondents in hotspot counties reported riding at speeds in excess of 110 miles per hour.
- More than forty percent of respondents reported drinking two or more alcoholic beverages in one sitting at least one day per week. Of those respondents that reported drinking alcohol, nearly 16 percent reported they had driven a motorcycle within two hours of drinking in the past 30 days.

The results indicate that helmet use and speeding are substantial problems in Florida. The survey results also indicate hotspot counties yielded statistically significant differences in three areas: more drive on expressways at a higher rate; more participate in large scale gatherings of motorcyclists; and more likely to report driving within the speed limit. The hotspot counties are host to or near many of the large-scale motorcycle enthusiast gatherings.

1.3 PURPOSE OF THE MSSP

The purpose of the MSSP is to focus funding and resources on the areas with the greatest opportunity to reduce motorcycle fatalities, serious injuries, and crashes. The MSSP is designed to provide a comprehensive strategy to address motorcycle safety issues by identifying goals, strategies, action steps, and performance measures for key program areas. The five-year plan provides

guidance to the FDOT Motorcycle Safety Program and key stakeholders concerned with improving motorcycle safety including the Florida Department of Highway Safety and Motor Vehicles (DHSMV), the Florida Department of Health (DOH), law enforcement, local agencies, motorcycle clubs/groups, and dealers.

The Florida Department of Transportation (FDOT) is the designated lead agency for the MSSP and provides funding support.

1.4 MSSP DEVELOPMENT PROCESS

The development of the MSSP spanned a nine-month period between February 2008 and November 2008. The FDOT Safety Office involved a wide range of safety partners throughout the process. The following sections describe the key activities conducted.

Motorcycle Safety Assessment

The National Highway Traffic Safety Administration (NHSTA) assembled a multidisciplinary Technical Assessment Team (TAT) of national experts to conduct a thorough review of the state's motorcycle safety efforts. The Technical Assessment was conducted in Tallahassee during February 25-29, 2008. Arrangements were made for state program experts and key individuals to deliver briefings and provide support materials to the TAT over a three-day period. Based on the assessment results, the TAT provided recommendations for improvement. The recommendations played an integral role in the development of the MSSP. The plan outlines strategies to accomplish the recommendations and action steps desired by stakeholders.

Motorcycle Safety Statewide Meetings

FDOT sponsored a series of roundtable discussions to gain stakeholder input on the MSSP; learn what strategies are being used to combat the motorcycle safety problem; hear thoughts about effective programs, regulations, and other opportunities to improve motorcycle safety; and identify a core group of persons committed to motorcycle safety improvement to serve on a coalition. Roundtable discussions were held at the following locations and dates:

- FDOT District 3 Office, Chipley, Florida: April 28, 2008
- FDOT District 5 Maintenance Office, Deland, Florida: April 29, 2008
- FDOT District 4 Office, Ft. Lauderdale, Florida: April 30, 2008
- Suncoast Safety Council, Clearwater, Florida: May 1, 2008

The roundtable discussions allowed participants to offer recommendations for improving the MSSP and recruited their participation and commitment to help implement the plan.

Motorcycle Safety Coalition Meetings

The SHSO facilitated the establishment of a Motorcycle Safety Coalition to help implement the strategies and action steps set forth in the MSSP. The coalition includes representatives from the FDOT, DHSMV, DOH, state and local law enforcement, emergency management, motorcycle safety interest groups, and motorcycle dealers. The coalition assisted with prioritizing the action steps identified in the MSSP. A list of the current coalition membership is provided in the Appendix.

1.5 MOTORCYCLE SAFETY STAKEHOLDERS

Many agencies, organizations, and groups have responsibilities and interests in motorcycle safety issues. NHTSA identified the programs and activities that make up a comprehensive motorcycle safety program. The MSSP provides a plan for the implementation process.

Public Agencies

Several state agencies play key roles in the motorcycle safety planning process. FDOT houses several offices key to motorcycle safety. The State Safety Office manages the Motorcycle Safety Program. The Office of Design, State Traffic Engineering and Operations Office, Office of Maintenance, Office of Construction, and Office of Materials provide transportation services that must integrate motorcycle safety in their work.

DHSMV houses the Florida Highway Patrol (FHP), the Division of Drivers Licenses, and the Division of Motor Vehicles. Each of these divisions provides key input into the motorcycle safety planning process because of its enforcement, licensing, and vehicle registration responsibilities.

The Florida Rider Training Program (FRTP) is administered by DHSMV. FRTP grants certification for Sponsors to operate training sites and Rider Coaches to provide instruction. The program uses the Motorcycle Safety Foundation (MSF) Basic Rider Course (BRC). The MSF Experienced Rider Course (ERC) is also available for experienced riders who have a motorcycle endorsement but want to refresh or enhance their skills.

DOH's Division of Emergency Medical Operations is responsible for oversight of emergency medical services, emergency operations, public health preparedness, injury prevention, trauma, and brain and spinal cord injury.

Local agencies are key players in the implementation of motorcycle safety strategies. Local law enforcement agencies, planning and engineering

departments, and public health agencies are responsible for implementing programs to reduce motorcycle crashes and educate the public.

Private Organizations

Motorcycle dealers and motorcycle rights and safety organizations also are involved in the motorcycle safety planning process. These organizations advocate for safe conditions for motorcyclists and may provide motorcycle safety information to the motorcycling community and the general public.

Citizens

Motorcycle enthusiasts/groups participate in planning activities related to motorcycle safety. These groups generally provide a public viewpoint on legislation, enforcement activities, and proposed strategies to improve motorcycle safety.

2.0 Motorcycle Crash Factors

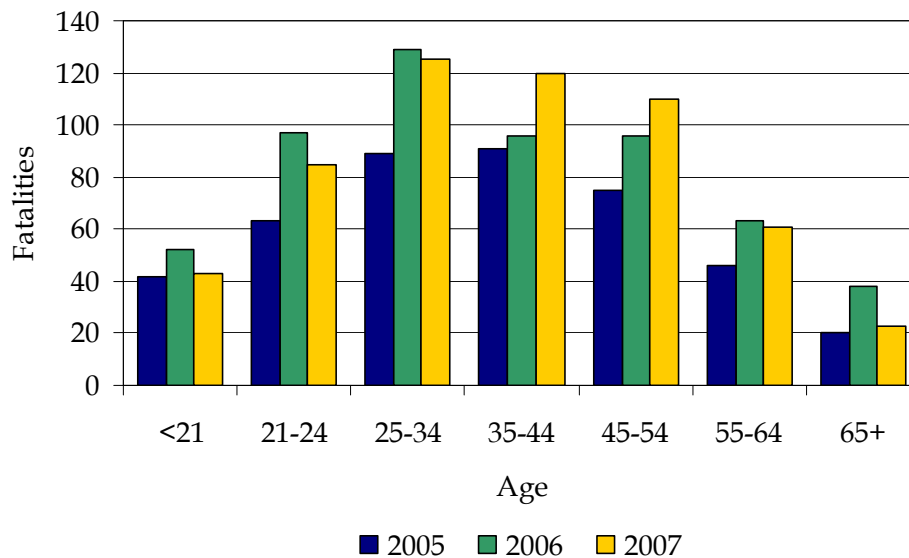
A number of factors are associated with motorcycle crashes. Understanding these factors allows planners, engineers, decision makers, and safety stakeholders to identify goals and strategies to address motorcycle safety issues. The following sections identify factors that uniquely contribute to motorcycle crashes in Florida.

2.1 AGE

Figure 2.1 shows motorcycle traffic fatalities in Florida by age group and year. In the three year period from 2005-2007:

- More riders ages 25-34 were fatally injured in motorcycle traffic crashes in Florida than any other age group, followed by riders ages 35-44;
- The median age of fatally injured riders was 36 years; and
- The largest overall increase in motorcycle fatalities was among riders ages 45-54, which increased 47 percent from 2005 to 2007.

Figure 2.1 Motorcycle Traffic Fatalities in Florida, by Age and Year
2005-2007

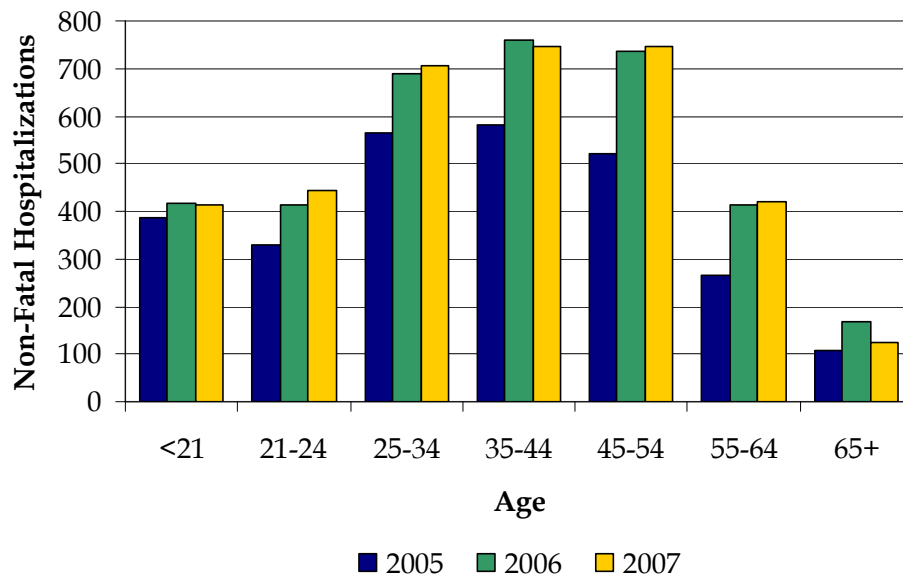


From 2005 to 2006, each of the seven age groups experienced an increase in the number of fatalities. From 2006-2007, five age groups experienced a decrease in the number of fatalities while the age groups 35-44 and 45-54 experienced an increase.

Figure 2.2 shows the hospitalizations in Florida for non-fatal injuries sustained in motorcycle crashes. In the three year period from 2005-2007:

- More riders ages 35-44 were hospitalized in Florida for non-fatal injuries than any other age group followed closely by riders ages 45-54;
- The median age of hospitalized riders was 57 years; and
- Riders ages 55-64 experienced the largest overall increase in hospitalizations for non-fatal injuries, 58 percent.

Figure 2.2 Hospitalizations in Florida for Non-Fatal Injuries Sustained in Motorcycle Traffic Crashes by Age and Year
2005-2007



From 2005 to 2006, each of the seven age groups experienced an increase in the number of hospitalizations. However, from 2006-2007 four age groups experienced increases while three age groups experienced decreases.

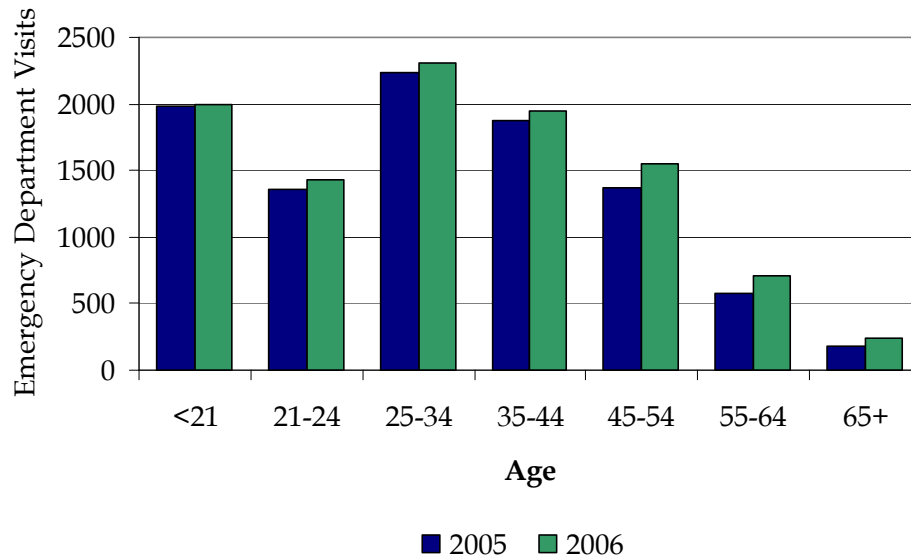
Figure 2.3 shows emergency department visits in Florida for non-fatal injuries sustained in motorcycle traffic crashes by age group. From 2005 to 2006, each of the seven age groups experienced an increase in the number of emergency department visits. In the two year period from 2005-2006:

- More riders ages 25-34 visited an emergency department in Florida for non-fatal injuries sustained in motorcycle traffic crashes than any other age group followed by riders under age 21;

- The median age of riders with non-fatal injuries treated in emergency departments was 32 years; and
- Riders ages 65 and older experienced the largest overall increase in emergency department visits for non-fatal injuries (27 percent).

Figure 2.3 Emergency Department Visits in Florida for Non-Fatal Injuries Sustained in Motorcycle Traffic Crashes by Age and Year

2005-2006

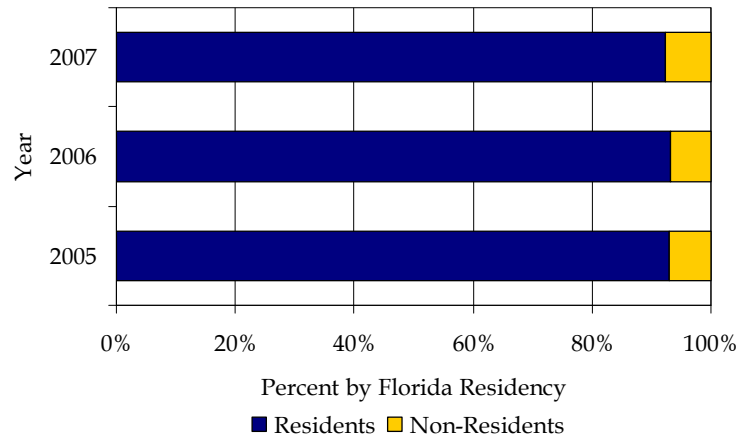


More motorcycle riders age 25-34 were fatally injured in crashes and accounted for the more ED visits for non fatal injuries than any other age group. Riders age 35-44 were more often hospitalized for non-fatal injuries. Emergency department visits for riders over the age of 65 increased in recent years. Older drivers are more likely to be hurt in crashes of equal severity. These statistics suggest that some age groups are more likely to exhibit high risk behavior or that some age groups are more prone to certain types of injuries.

2.2 RESIDENCE

Florida is a popular tourist destination and host to a number of motorcycle enthusiast events. As shown in Figure 2.4, the vast majority (<90 percent) of riders injured in motorcycle traffic crashes in Florida are residents of the state of Florida.

Figure 2.4 Motorcycle Traffic Injuries in Florida, by Florida Residency
Fatalities, Non-Fatal Hospitalizations and ED Visits, 2005-2006;
Fatalities and Non-Fatal Hospitalizations, 2007



2.3 LOCATION

Motorcycle crashes and fatalities occur at greater frequencies in some locations. Factors such as population and proximity to motorcycle rallies play a role. Motorcycle fatality and injury history for Florida’s 67 counties is shown in Tables 2.1 and 2.2. Volusia, Palm Beach, Orange, Miami-Dade, Broward, Brevard, Duval, and Hillsborough Counties account for the largest number of motorcycle fatalities.

Table 2.1 Motorcycle Fatality History By County

County	2002	2003	2004	2005	2006	2007	County	2002	2003	2004	2005	2006	2007
Alachua	1	2	2	1	3	7	Lee	9	17	14	13	18	23
Baker	0	0	0	1	2	2	Leon	2	4	1	3	7	3
Bay	2	4	4	2	11	4	Levy	0	0	2	3	4	1
Bradford	0	1	1	0	2	4	Liberty	1	0	0	0	0	1
Brevard	7	10	12	13	25	18	Madison	0	0	0	0	1	1
Broward	29	23	30	41	44	52	Manatee	4	8	7	10	8	9
Calhoun	0	0	1	0	1	0	Marion	5	14	9	14	8	10
Charlotte	3	4	4	13	5	4	Martin	3	2	6	2	7	1
Citrus	3	5	5	2	3	7	Miami-Dade	27	43	42	45	61	52
Clay	2	5	5	5	4	1	Monroe	1	2	6	2	3	5
Collier	4	6	2	2	6	3	Nassau	1	2	0	0	0	4
Columbia	0	0	4	0	3	1	Okaloosa	3	2	1	4	3	2
De Soto	0	1	0	0	1	0	Okeechobee	1	3	2	1	0	3
Dixie	0	0	2	0	1	1	Orange	13	16	27	21	32	31
Duval	12	16	15	23	22	30	Osceola	2	5	5	5	11	9
Escambia	5	6	8	9	4	9	Palm Beach	23	16	21	24	28	31
Flagler	4	2	3	3	11	4	Pasco	9	9	6	12	13	18
Franklin	0	2	0	0	0	0	Pinellas	12	22	17	17	24	26
Gadsden	0	1	3	0	0	1	Polk	6	8	17	14	21	14
Gilchrist	0	0	0	1	0	0	Putnam	3	1	1	2	0	5
Glades	1	0	0	0	0	1	St. Johns	5	5	5	7	1	8
Gulf	0	0	0	1	0	0	St. Lucie	7	1	3	6	3	4
Hamilton	0	1	0	0	0	0	Santa Rosa	2	2	1	4	2	4
Hardee	1	0	0	0	0	1	Sarasota	3	13	9	6	5	11
Hendry	0	0	1	1	2	0	Seminole	3	3	8	6	8	9
Hernando	2	4	6	4	4	8	Sumter	0	0	1	1	3	3
Highlands	2	1	4	3	5	3	Suwannee	1	1	1	0	2	2
Hillsborough	22	24	18	42	37	27	Taylor	0	0	0	0	0	0
Holmes	0	0	1	1	1	0	Union	0	0	1	1	0	0
Indian River	2	0	2	3	1	3	Volusia	21	16	32	33	34	23
Jackson	0	1	0	1	0	2	Wakulla	0	1	0	1	1	0
Jefferson	0	0	0	0	1	0	Walton	0	0	2	2	2	2
Lafayette	0	0	0	0	0	0	Washington	0	0	1	1	1	1
Lake	5	4	7	9	11	8	Unknown	0	0	0	0	0	0

Source: Florida Traffic Crash Statistics Report 20

Table 2.2 Motorcycle Injury History By County

County	2002	2003	2004	2005	2006	2007	County	2002	2003	2004	2005	2006	2007
Alachua	73	76	78	63	101	119	Lee	139	145	178	193	180	223
Baker	1	2	5	8	2	9	Leon	74	83	101	90	88	104
Bay	84	69	101	100	137	93	Levy	9	14	9	8	17	25
Bradford	9	7	8	7	12	8	Liberty	1	3	4	1	1	2
Brevard	155	220	230	228	262	246	Madison	1	2	2	7	3	5
Broward	453	513	578	593	616	646	Manatee	76	94	128	99	131	116
Calhoun	4	3	5	3	2	3	Marion	82	99	88	133	188	194
Charlotte	40	44	54	82	84	87	Martin	42	53	59	44	77	52
Citrus	35	36	44	52	67	72	Miami-Dade	622	715	753	818	712	904
Clay	46	53	70	67	52	50	Monroe	227	209	223	221	202	189
Collier	65	60	53	94	79	60	Nassau	17	11	16	15	37	37
Columbia	24	18	19	18	26	24	Okaloosa	49	52	66	64	59	83
De Soto	7	7	12	7	15	7	Okeechobee	9	18	6	10	17	21
Dixie	3	6	3	3	3	4	Orange	312	357	422	472	507	531
Duval	319	351	327	328	395	384	Osceola	61	48	84	84	113	125
Escambia	78	100	102	141	155	155	Palm Beach	298	341	353	388	330	408
Flagler	34	26	32	48	72	61	Pasco	99	139	174	226	253	251
Franklin	4	6	5	3	0	3	Pinellas	317	337	346	420	465	449
Gadsden	11	10	17	11	15	7	Polk	161	153	176	214	263	259
Gilchrist	6	3	3	6	5	5	Putnam	15	23	23	37	39	55
Glades	2	4	4	3	4	3	St. Johns	76	86	60	84	78	122
Gulf	1	2	1	2	1	3	St. Lucie	23	51	66	86	106	83
Hamilton	4	0	3	3	10	3	Santa Rosa	22	32	47	42	67	59
Hardee	5	3	6	13	10	12	Sarasota	94	87	88	128	125	130
Hendry	6	7	10	12	11	13	Seminole	97	93	121	131	148	135
Hernando	45	47	60	71	100	99	Sumter	10	13	17	19	33	34
Highlands	19	16	20	27	43	35	Suwannee	6	7	5	6	10	11
Hillsborough	346	435	439	503	616	588	Taylor	6	2	5	4	5	9
Holmes	2	4	7	5	5	5	Union	0	1	3	1	2	1
Indian River	25	33	31	36	48	46	Volusia	437	435	461	519	538	517
Jackson	4	7	6	20	16	13	Wakulla	5	10	5	14	9	7
Jefferson	3	1	6	1	2	1	Walton	14	15	14	28	27	30
Lafayette	2	1	1	1	0	1	Washington	6	7	7	4	7	5
Lake	62	68	108	113	129	143	Unknown	0	0	0	0	2	2

Source: Florida Traffic Crash Statistics Report

2.4 REGISTRATIONS AND ENDORSEMENTS

Florida requires all two- and three- wheeled motor vehicle operators to obtain a license or endorsement to operate the vehicles. A motorcycle endorsement is issued to current license holders, while a “Motorcycle Only License” is issued to motorcycle riders that do not hold a Class E driver’s license. Under section 322.01(25), Florida Statutes, a motorcycle is defined as “a motor vehicle powered by a motor with a displacement of more than 50 cubic centimeters, having a seat or saddle for the use of the rider, and designed to travel on not more than three wheels in contact with the ground, but excluding a tractor or moped”.

In 2007, motorcycle registrations increased eight percent. Table 2.3 shows registrations from 2005 to 2007.

Table 2.3 Florida Motorcycle Registrations

Year	Registrations	% Change
2005	569,664	14.2%
2006	605,947	6.4%
2007	654,316	8.0%

Source: Florida Department of Highway Safety and Motor Vehicles

Motorcycle endorsements increased by nearly three percent in 2007. Table 2.4 shows endorsements from 2005 to 2007. By 2007, Florida had issued 863,831 motorcycle endorsements.

Table 2.4 Florida Motorcycle Endorsements

Year	Endorsements	% Change
2005	818,912	N/A
2006	841,371	2.7%
2007	863,831	2.7%

Source: Florida Department of Highway Safety and Motor Vehicles

Tables 2.5 and 2.6 show 2005, 2006, and 2007 motorcycle registrations and endorsements for each county. The counties with the largest percentage of registered motorcycles also account for the largest share of endorsements.

Table 2.5 Motorcycle Registrations by County

County	2005	2006	2007	County	2005	2006	2007
Alachua	8,267	9,136	10,360	Lee	20,703	21,913	23,051
Baker	711	775	923	Leon	6,239	6,514	7,091
Bay	7,580	7,796	8,499	Levy	1,294	1,442	1,651
Bradford	702	770	905	Liberty	161	174	197
Brevard	24,390	26,060	28,368	Madison	367	393	463
Broward	40,321	41,636	44,349	Manatee	7,957	8,568	9,356
Calhoun	275	321	349	Marion	12,612	13,913	14,957
Charlotte	6,987	7,302	8,021	Martin	6,600	6,817	7,164
Citrus	6,849	7,679	8,581	Miami-Dade	51,636	51,884	55,478
Clay	7,227	7,435	8,360	Monroe	10,474	10,050	10,371
Collier	9,753	10,280	10,737	Nassau	2,621	3,050	3,510
Columbia	2,042	2,381	2,773	Okaloosa	7,910	8,596	9,814
De Soto	630	706	763	Okeechobee	1,704	1,651	1,716
Dixie	375	442	490	Orange	26,872	28,947	30,898
Duval	24,600	27,282	29,813	Osceola	9,234	9,798	10,284
Escambia	8,356	8,885	9,602	Palm Beach	28,768	30,565	30,990
Flagler	4,245	5,267	6,017	Pasco	16,696	17,597	19,765
Franklin	414	430	451	Pinellas	31,108	33,142	35,970
Gadsden	585	696	765	Polk	16,090	17,690	19,617
Gilchrist	442	516	656	Putnam	2,406	2,664	2,984
Glades	177	173	204	St. Johns	7,966	8,694	9,905
Gulf	440	453	534	St. Lucie	7,997	8,656	9,233
Hamilton	175	198	245	Santa Rosa	4,595	5,010	5,801
Hardee	436	469	512	Sarasota	12,772	13,396	14,397
Hendry	773	967	1,100	Seminole	15,839	15,867	16,459
Hernando	6,215	7,073	7,540	Sumter	1,996	2,419	2,766
Highlands	3,515	3,781	3,971	Suwannee	899	1,014	1,222
Hillsborough	28,682	30,759	32,336	Taylor	427	459	505
Holmes	510	509	565	Union	326	356	392
Indian River	4,564	5,046	5,442	Volusia	35,179	38,010	41,361
Jackson	1,052	1,170	1,324	Wakulla	865	912	1,048
Jefferson	295	366	435	Walton	1,477	1,647	1,810
Lafayette	113	128	154	Washington	518	558	615
Lake	13,093	14,073	14,944	Unknown	2,565	2,621	3,478

Source: Department of Highway Safety and Motor Vehicles

Table 2.6 Motorcycle Endorsements by County

County	2005	2006	2007	County	2005	2006	2007
Alachua	9,248	9,596	9,944	Lee	28,847	30,380	31,913
Baker	990	1,051	1,112	Leon	7,899	8,194	8,489
Bay	9,546	9,909	10,266	Levy	2,234	2,371	2,508
Bradford	1,008	1,101	1,194	Liberty	201	232	262
Brevard	35,051	36,112	37,172	Madison	647	662	678
Broward	59,606	59,488	59,369	Manatee	14,131	14,354	14,577
Calhoun	462	502	541	Marion	17,537	18,594	19,651
Charlotte	10,662	10,998	11,334	Martin	8,695	8,794	8,894
Citrus	10,154	10,756	11,404	Miami-Dade	43,011	45,304	47,598
Clay	10,114	10,759	11,404	Monroe	9,795	9,550	9,305
Collier	14,007	14,822	15,636	Nassau	3,717	3,990	4,264
Columbia	2,839	2,998	3,156	Okaloosa	11,437	12,044	12,651
De Soto	1,125	1,174	1,224	Okeechobee	2,013	2,062	2,111
Dixie	700	724	748	Orange	40,710	41,898	43,086
Duval	32,996	33,878	34,759	Osceola	10,478	11,366	12,255
Escambia	12,043	12,602	13,162	Palm Beach	44,295	44,554	44,812
Flagler	6,353	7,108	7,864	Pasco	23,505	24,864	26,222
Franklin	456	482	509	Pinellas	44,256	44,520	44,784
Gadsden	1,223	1,266	1,308	Polk	25,011	26,194	27,376
Gilchrist	849	823	797	Putnam	2,822	3,844	3,866
Glades	458	438	419	St. Johns	9,048	9,808	10,568
Gulf	665	702	739	St. Lucie	12,503	13,072	13,641
Hamilton	342	372	402	Santa Rosa	7,826	8,518	9,168
Hardee	753	748	744	Sarasota	19,204	19,691	20,178
Hendry	1,098	1,138	1,177	Seminole	20,939	21,352	21,766
Hernando	9,394	9,963	10,532	Sumter	3,380	3,884	4,387
Highlands	4,787	5,002	5,216	Suwannee	1,678	1,773	1,868
Hillsborough	38,485	39,793	41,104	Taylor	717	749	781
Holmes	820	858	897	Union	477	498	520
Indian River	6,468	6,792	7,116	Volusia	46,367	47,050	47,732
Jackson	1,444	1,560	1,675	Wakulla	1,239	1,355	1,471
Jefferson	486	520	555	Walton	2,246	2,450	2,655
Lafayette	160	189	218	Washington	963	1,003	1,043
Lake	16,597	17,648	18,698	Unknown	13,985	9,351	4,717

Source: Department of Highway Safety and Motor Vehicles

2.5 HELMET USE

FARS data show Florida operator helmet use in fatal crashes fluctuated between 82 and 89 percent between 1991 and 1999; however, use rates in fatal crashes fell to 71 percent in 2000, and 45 percent in 2001. In 2006, 39 percent of motorcyclists and their passengers killed were not wearing helmets.

In 2000, Florida became one of five states to repeal or amend motorcycle helmet use laws. The helmet law change became effective on July 1, 2000, and permitted Florida motorcyclists over 21 years of age to ride without a helmet provided they carry at least \$10,000 in medical insurance to cover injury costs as a result of a crash.

The Center for Urban Transportation Research (CUTR) at the University of South Florida (USF) conducted a helmet use observational study in 2002 for FDOT to determine motorcycle helmet use rates on Florida roadways. Helmet use in Florida was observed at 52.7 percent. Corresponding with the drop in observed helmet use was an 86 percent decline in observed novelty helmet use. The survey also concluded that sport bike riders were among the most likely to be helmeted (79.7 percent) while non-helmet use was typically associated with riders on cruiser-style motorcycles.

The CUTR study looked at trend changes 18 months before and 18 months after the Florida helmet law amendment. The results indicate helmet use rates among fatally injured motorcycle operators declined significantly following the helmet law change. Declines in observed helmet use in Florida are comparable to other states with recently amended universal helmet laws.

The number of motorcycle fatalities increased significantly following the helmet law change. Fatal motorcycle crashes increased by 43.8 percent in the 18 months following the helmet repeal. After accounting for the increasing number of motorcycle registrations and vehicle miles traveled over the study period, the number of fatal crashes per 10,000 registered motorcycles increased by 20.8 percent. The CUTR Helmet Use Observational Study suggests motorcyclists without helmets are more likely to suffer serious and fatal injuries.

2.6 ALCOHOL INVOLVEMENT

Alcohol-related motorcycle crashes accounted for ten percent of all motorcycle crashes in 2005 and nine percent in 2006; however, 27 percent and 20 percent of fatal motorcycle crashes involved alcohol in 2005 and 2006 respectively⁴. These statistics suggest motorcycle crashes involving alcohol are more likely to result in fatalities.

⁴ Fatality Analysis Reporting System (FARS)

2.7 TIME OF YEAR AND DAY OF WEEK

From 2005 to 2007, thirty-one percent of fatal motorcycle crashes occurred during the months of March, April, and May. The largest percentage of fatalities occurred in March (12 percent). Popular bike rallies take place during these months. For example, Daytona Beach Bike Week is usually held in March. Approximately 44 percent of fatal crashes occurred on Saturdays and Sundays.

2.8 VEHICLE MANEUVER

The vehicle maneuver most commonly executed just prior to a fatal crash situation other than going straight was negotiating a curve. Approximately 10 percent of fatal crashes from 2005 to 2007 involved curves. Passing or overtaking a vehicle and changing lanes or merging each accounted for three percent of the fatalities.

2.9 BODY REGION AND NATURE OF INJURY

Fatalities⁵

According to information available on 2005-2007 death certificates combined (Table 2.7), 38.2 percent of motorcycle traffic fatalities were associated with a traumatic injury, 31.8 percent with injuries to multiple body regions, 30.6 percent with injuries to an unspecified body region, and 10.9 percent with injuries to the thorax.

⁵ Data Source: DeathMaster Database, Office of Vital Statistics, Florida Department of Health, 10/29/08 Case Definition: Injury State= Florida and Underlying Cause of Death ICD-10 V20-V28 (.3-.9), V29 (.4-.9)

Table 2.7 Motorcycle Traffic Fatalities in Florida by Body Region Injured (2005-2007)

Body Region	Percent (%)	Body Region	Percent (%)	Body Region	Percent (%)
Traumatic Brain Injury	38.2	Neck	5.4	Spinal Cord	1.2
Multiple Body Regions	31.8	Abdomen, Lower Back, & Pelvis	3.5	Extremities	<1
Unspecified Region	30.6	Vertebral Column	2.3	Other Head	<1
Thorax	10.9	System Wide	1.9	Pelvis & Lower Back	<1
Other Trunk	8.5	Abdomen	1.7	Head & Neck	0

Unfortunately, death certificates provide limited information about the nature of injuries contributing to motorcycle traffic fatalities from 2005-2007. According to Table 2.8, nearly 100 percent of certificates cited at least one unspecified injury as an immediate or contributing cause of death, internal organ injuries were implicated in 15.2 percent, and fractures in 10.4 percent of fatalities.

Table 2.8 Motorcycle Traffic Fatalities in Florida by Nature of Injury (2005-2007)

Nature of Injury	Percent (%)	Nature of Injury	Percent (%)	Nature of Injury	Percent (%)
Unspecified Injury	97.8	Amputation	<1	Open Wound	<1
Internal Organ	15.2	Burn	<1	Other Effects	<1
Fracture	10.4	Crush	<1	Superficial Wound, Bruise	<1
Blood Vessel	3.4	Effect of Foreign Body	<1	Toxic Effects	<1
Dislocation	1.8	Multiple Injuries	<1	Poisoning	0

Overall, the most common nature and body region of injury combination implicated in fatal motorcycle traffic crashes in Florida from 2005-2007 was an unspecified injury to an unspecified location found in 30.4 percent of fatalities, followed by an internal organ injury to the brain (12.4 percent).

Hospitalizations⁶

The types of non-fatal injuries responsible for hospitalizations of motorcycle riders injured in traffic crashes vary, but they are usually severe. Though many injuries may be involved in a single hospitalization, the principal diagnosis identifies the one injury primarily responsible for a rider’s hospitalization and treatment.

The body regions injured in hospitalizations for non-fatal injuries sustained in motorcycle traffic crashes are shown in Table 2.9. From 2005-2007, injuries to the body’s lower extremities were responsible for the highest percentage of hospitalizations in Florida for non-fatal injuries among motorcycle riders, 35.5 percent. Traumatic brain injuries were second (19.9 percent), followed closely by injuries to the torso (19.5 percent).

Table 2.9 Hospitalizations in Florida for Non-Fatal Injuries Sustained in Motorcycle Traffic Crashes by Body Region Injured

According to Principal Diagnosis, 2005-2007

Body Region	Percent (%)	Body Region	Percent (%)
Lower Extremity	35.5	Vertebral Column	4.1
Traumatic Brain Injury	19.9	Spinal Cord	1.4
Torso	19.5	Other & Unspecified	<1
Upper Extremity	14.3	System Wide & Late Effects	<1
Other Head, Face, Neck	4.6		

Table 2.10 shows the nature of injuries sustained in hospitalizations for motorcycle traffic crashes. From 2005-2007, fractures of any body region were responsible for the majority of hospitalizations in Florida for non-fatal injuries among motorcycle riders (66.1 percent). Internal organ injuries were responsible for 22.7 percent. Less severe injuries such as open wounds, superficial wounds, bruises, and dislocations combined were responsible for another 7.7 percent of hospitalizations.

⁶ Data Source: Hospital Discharge Data, Florida Agency for Health Care Administration, Case Definition: Injury Primary Diagnosis and Motorcycle Traffic Crash External Cause of Injury ICD-9 CM E810-E819 (.2,.3) External Cause of Injury Code Completeness: 2005 85.1%, 2006 94.6%, 2007 95.3%

Table 2.10 Hospitalizations in Florida for Non-Fatal Injuries Sustained in Motorcycle Traffic Crashes by Nature of Injury

According to Principal Diagnosis, 2005-2007

Nature of Injury	Percent (%)	Nature of Injury	Percent (%)	Nature of Injury	Percent (%)
Fracture	66.1	Amputation	<1	Sprains & Strains	<1
Internal Organ	22.7	Blood Vessel	<1	System Wide & Late Effects	<1
Open Wound	4.6	Burn	<1	Unspecified	<1
Superficial Wound, Bruise	1.8	Crushing	<1		
Dislocation	1.3	Nerves	<1		

Overall, the most common nature and body region of injury combination responsible for these hospitalizations was a fracture of the lower leg or ankle (20.1 percent of hospitalizations), followed by an internal organ injury to the brain (11.8 percent).

Emergency Department Visits⁷

The body region and nature, or type, of non-fatal injuries of motorcycle riders injured in traffic crashes treated in an emergency department varies, but are less severe than injuries requiring hospital admission. While many injuries may be involved in a single visit, the principal diagnosis identifies the injury primarily responsible for a rider’s visit and treatment.

Table 2.11 summarizes the body region injured in emergency department visits for non-fatal injuries sustained in motorcycle crashes. From 2005-2006, injuries to the body’s upper extremities were responsible for the highest percentage of emergency department visits for non-fatal injuries among motorcycle riders (30.4 percent), followed closely by lower extremity injuries (25.4 percent). Injuries to the head, face, and neck (excluding traumatic brain injuries) were also common and responsible for 13.4 percent of visits.

⁷ Data Source: Emergency Department Discharge Data, Florida Agency for Health Care Administration, Case Definition: Motorcycle Traffic Crash External Cause of Injury ICD-9 CM E810-E819 (.2,.3) External Cause of Injury Code Completeness: 2005 90.4%, 2006 90.8%

Table 2.11 Emergency Department Visits in Florida for Non-Fatal Injuries Sustained in Motorcycle Traffic Crashes by Body Region Injured

According to Principal Diagnosis, 2005-2006

Body Region Injured	Percent (%)	Body Region Injured	Percent (%)
Upper Extremity	30.4	Non-Injury Principal Diagnosis	5.9
Lower Extremity	25.4	Vertebral Column	5.9
Other Head, Face, Neck	13.4	Traumatic Brain Injury	2.9
Torso	8.8	Spinal Cord	<1
Other & Unspecified	7.2	System Wide & Late Effects	<1

The nature of injuries in Florida emergency department visits for non-fatal motorcycle injuries is shown in Table 2.12. From 2005-2006, superficial wounds and bruises were responsible for the highest percentage of emergency department visits in Florida for non-fatal injuries among motorcycle riders (32.9 percent). Fractures were the second most common and responsible for 23.5 percent of visits.

Table 2.12 Emergency Department Visits in Florida for Non-Fatal Injuries Sustained in Motorcycle Traffic Crashes by Nature of Injury

According to Principal Diagnosis, 2005-2006

Nature of Injury	Percent (%)	Nature of Injury	Percent (%)	Nature of Injury	Percent (%)
Superficial Wound, Bruise	32.9	Unspecified	4.8	Crushing	<1
Fracture	23.5	Internal Organ	2.9	Nerves	<1
Sprains & Strains	13.5	Dislocation	2.4	System Wide & Late Effects	<1
Open Wound	13.1	Amputation	<1	Blood Vessel	0
Non-Injury Principal Diagnosis	5.9	Burn	<1		

Overall, the most common nature and body region of injury combination responsible for these ED visits was a fracture of the shoulder or upper arm, 6.6 percent of visits, followed closely by a superficial wound or bruise to an unspecified body region, 6.4 percent.

3.0 Motorcycle Strategic Safety Plan

3.1 VISION

Provide a safe transportation system for motorcyclists and the motoring public.

3.2 MISSION

The State of Florida will focus resources where opportunities for motorcycle safety improvements are greatest.

3.3 GOAL

To improve motorcycle safety in Florida by achieving a reduction in the number of motorcycle fatalities, serious injuries, and crashes beginning in 2009.

3.4 EMPHASIS AREAS

NHTSA identified eleven focus areas for each state to develop and implement a comprehensive motorcycle safety program. The MSSP identifies goals, strategies, and action steps to implement improvements in the program areas. The eleven program areas are as follows:

- Data and Analysis;
- Program Management and Evaluation;
- Personal Protective Equipment;
- Operator Licensing;
- Rider Education and Training;
- Rider Impairment and Speeding⁸
- Legislation and Regulations;
- Law Enforcement and Emergency Services;
- Roadway Engineering;

⁸ FDOT added speeding to the Rider Impairment emphasis area due to a great need to address speeding issues.

- Rider Conspicuity and Motorist Awareness; and
- Communications.

3.5 DATA ANALYSIS

Goal

Collect and analyze data on motorcycle crashes, injuries, and fatalities and provide local and state agencies with the best available data to make appropriate and timely decisions that improve motorcycle safety in Florida.

Strategy 1

Identify potential data sources and the agencies responsible for collecting, maintaining, and disseminating motorcycle-related crash data.

- List all agencies that compile motorcycle related data, the lag time in compiling the data, and how the data are used.
- Develop partnerships with trauma centers, insurance agencies, and dealerships for data sharing.
- Identify motorcycle specific information to be added to the Florida vehicle registration form and the Florida traffic crash report.

Strategy 2

Identify and prioritize the state's motorcycle safety problem locations and behaviors.

- Conduct a "deep dive" into the data to determine locations and other contributing factors in Florida's motorcycle crashes.
- Continue the data strategy to track and evaluate the effectiveness of the MSSP strategies and actions.
- Support Community Traffic Safety Teams (CTSTs) by sharing information.
- Conduct a study to determine the unendorsed rider population in Florida.
- Conduct a study to evaluate the crash experience of individuals obtaining a motorcycle endorsement through the new rider training waiver⁹.

⁹ As of July 1, 2008, everyone registering a motorcycle or seeking a motorcycle endorsement in Florida is required to complete an approved rider training course. The DHSMV no longer issues learner's permits and no longer administers licensing tests.

Strategy 3

Promote inter- and intra-agency efforts to link crash, injury, licensing, violation, training, and registration records.

- Support efforts to promote data linkage.
- Add endorsement and training data to driver license records.

Strategy 4

Disseminate information and data to stakeholders and partners.

- Develop channels to disseminate data to motorcycle riders and riding trainees.

3.6 PROGRAM MANAGEMENT AND EVALUATION

Goal

Manage motorcycle safety activities in Florida as part of a comprehensive plan that includes centralized program planning, implementation, coordination, and evaluation to maximize the effectiveness of programs and reduce duplication of effort.

Strategy 1

Develop programs and initiatives to improve motorcycle safety based on problem areas identified by data analysis.

- Maintain a comprehensive list of motorcycle safety programs around the state and promote new programs that address identified problems that are not being adequately impacted by current activities.
- Identify model state programs from the literature and a peer exchange program.

Strategy 2

Promote multidisciplinary involvement of agencies and organizations responsible for or impacted by motorcycle safety issues in Florida's motorcycle safety programs.

- Develop and facilitate a Motorcycle Safety Coalition.
- Develop roles, responsibilities, and expectations of the Motorcycle Safety Coalition.
- Reach out to external partners including insurance agencies, trauma centers, military, dealerships, rider groups, etc.

- Work with NHTSA to incorporate motorcycles in existing and future nationwide high visibility enforcement and education campaigns.

Strategy 3

Explore methods for improving and sustaining funding for motorcycle safety programs.

- Assist with identifying funding sources and resources for state and local motorcycle safety programs.
- Develop objective evaluation tools that may be used to determine the impact of projects on reducing motorcycle crashes, injuries, and fatalities.
- Monitor the effectiveness of the annual funding provided to the Florida Rider Training Program (FRTP) to determine the most effective use of funds.

3.7 PERSONAL PROTECTIVE EQUIPMENT

Goal

Promote personal protective gear and its value in reducing motorcyclist injury levels and increasing rider conspicuity.

Strategy 1

Communicate the importance of wearing helmet and protective gear with all stakeholders.

- Develop and promote educational programs, public service announcements, educational materials, and promotional items that support injury prevention.

Strategy 2

Educate riders on types of protective gear currently available.

- Provide education on the types and importance of wearing personal protective gear.

Strategy 3

Encourage partners in the motorcycle safety field to lead by example.

- Amend contracts with FRTP sponsors to include a commitment that all instructors wear personal protective equipment at all times when riding and that all sponsors have a quality assurance program in place.
- Regularly conduct quality assurance assessments of FRTP trainers.

3.8 OPERATOR LICENSING

Goal

Ensure persons operating a motorcycle on public roadways hold an endorsement specifically authorizing motorcycle operation.

Strategy 1

Reduce the number of unendorsed riders.

- Encourage the use of scholarship and tuition assistance programs to provide BRC training to those unable to afford the training tuition.
- Continue distribution of information encouraging proper licensure to registered motorcycle owners who do not have valid motorcycle endorsements or licenses.
- Conduct a study to determine the effect of the new mandatory training law.
- Encourage universities to implement endorsement requirements before issuing parking permits for motorcycles.

Strategy 2

Promote distribution of materials supporting the need for proper licensing through dealerships and other partners.

- Educate dealerships and insurance agents on their responsibility to inform buyers of motorcycle licensing requirements.
- Develop materials that can be distributed via motorcycle dealerships, insurance companies, and other partners.
- Develop licensing information to distribute each time a motorcycle is registered.

Strategy 3

Implement steps to ensure the integrity of the FRTP testing program.

- Evaluate knowledge and skills tests used for the rider training end-of-course test to ensure they are valid as licensing tests to support the motorcycle licensing process.
- Conduct quality assurance examinations of FRTP sponsored programs.
- Evaluate language and content of contracts with rider training providers to identify the responsibilities and penalties for fraudulent activities.

Strategy 4

Assess the risk of new riders being involved in a crash.

- Evaluate the potential for an intermediate motorcycle endorsement period for new riders with restrictions (e.g., prohibitions during the intermediate period on passengers, night riding, freeway riding, zero tolerance on blood alcohol content, and riding without a helmet.)

3.9 RIDER EDUCATION AND TRAINING

Goal

Promote adequate rider training and preparation to new and experienced motorcycle riders by qualified instructors at state-approved training centers.

Strategy 1

Conduct oversight of rider training to ensure it meets the needs of Florida's motorcycling environment.

- Provide the FRTP with updates and supplemental materials on Florida specific issues for use in training courses.
- Evaluate the FRTP quality assurance program.
- Review the rider training provider contract to determine additional commitments needed to ensure safe and compliant training centers.
- Recommend and provide input to policies and procedures for the FRTP to be evaluated on an annual basis and for on-site administrative audits to be conducted at least annually.

Strategy 2

Increase the availability of rider training.

- Promote additional training schools in underserved areas.
- Promote additional rider coach training.
- Develop resources for FRTP sponsors including an experienced sponsor mentoring program.

Strategy 3

Promote additional training for experienced riders.

- Encourage training by those who never took the BRC.
- Encourage riders to enhance their skills with the ERC.

Strategy 4

Communicate the advantages of adequate training.

- Add a motorcycle component to driver education curriculums.
- Add a motorcycle component to the Drug and Alcohol Traffic Education (DATE) course.
- Promote rider training opportunities through coalition partners.

3.10 RIDER IMPAIRMENT AND SPEEDING

Goal

Reduce the number of alcohol, drug, and speed-related motorcycle crashes in Florida.

Strategy 1

Expand existing impaired driver programs to include motorcyclists and motorcycle events.

- Address motorcyclists in all statewide impaired driving campaigns.
- Use motorcycle-specific messaging as part of larger enforcement waves and communication efforts.
- Distribute the alcohol/drug detection cues pamphlet and video to targeted law enforcement personnel who have completed Standard Field Sobriety Test (SFST) training.

Strategy 2

Identify impaired riding and speed related trends and allocate funds to appropriately support impairment and speed programs.

- Conduct a study to compare motorcycle DUI and speed citations, convictions, and crashes with those of all drivers.
- Develop a media campaign to address the problems identified in the DUI and speed study.

Strategy 3

Develop partnerships.

- Partner with bar owners to implement and advertise DUI/speed programs.
- Partner with rider groups, motorcycle dealerships, manufacturers, and insurance companies to promote safe riding habits.

- Promote judicial and prosecutor education and partnerships to increase effective adjudication practices.

3.11 LEGISLATION AND REGULATIONS

Goal

Support legislative initiatives that promote motorcycle-related traffic laws and regulations.

Strategy 1

Educate the legislature and support legislative initiatives to improve motorcycle safety.

- Support legislative initiatives for reducing motorist distraction towards motorcyclists while driving.
- Support legislation to increase safe operation of motorcycles.
- Support legislation requiring personal protective gear.
- Evaluate the potential for a graduated licensing program requiring helmet use and prohibiting passengers for beginning riders.

3.12 LAW ENFORCEMENT AND EMERGENCY SERVICES

Goal

Ensure state and local motorcycle safety programs include law enforcement and emergency services components.

Strategy 1

Encourage all law enforcement agencies to develop agency goals specific to motorcycle safety.

- Develop a database of agencies that currently have goals specific to motorcycle safety.
- Increase the number of agencies with goals specific to motorcycle safety.

Strategy 2

Incorporate motorcycle safety into law enforcement education.

- Utilize “pre-packaged” training for law enforcement.
- Create a quick reference guide specific to motorcycles with statute references.

Strategy 3

Incorporate a motorcycle enforcement component into relevant education and enforcement campaigns.

- Include a motorcycle component in all relevant enforcement campaigns both at the state and local levels.
- Conduct high visibility enforcement through sobriety checkpoints and saturation patrols in locations where motorcycle fatalities and injuries are over-represented.

Strategy 4

Partner with emergency services and trauma centers to provide public education on motorcycle safety.

- Identify an EMS spokesperson to promote partnerships.
- Identify a medical expert(s) to discuss the risks associated with motorcycle riding.

3.13 ROADWAY ENGINEERING

Goal

Incorporate motorcycle-friendly policies and practices into roadway design, traffic control, construction, operation, and maintenance.

Strategy 1

Utilize ongoing resources and best practices provided by the FHWA Motorcycle Advisory Council and other states.

- Establish a process for the periodic review of other state programs (state and non-state roads), procedures, and best practices to improve roadway engineering design related to motorcycle safety.
- Examine current practices for maintaining state and local roadway construction, maintenance project areas, permit work, and utility accommodation to ensure they are continuously free of debris and surface hazards that may be hazardous to motorcycles.
- Review motorcyclist-specific signage and pavement that alerts motorcycle riders to dangerous areas for motorcycles.

Strategy 2

Provide a mechanism for sharing information on crash locations and roadway conditions that present potential problems to motorcyclists with highway agencies.

- Examine crash data to identify and correct crash contributing factors involving motorcycles and roadway design, maintenance, or treatments.
- Incorporate motorcycle safety considerations into road safety inspections or audits.

Strategy 3

Educate the highway engineering and maintenance workforce on roadway conditions that may be hazardous to motorcycles.

- Include periodic motorcycle safety design criteria updates in continuing education for engineers.
- Include a motorcycle component in the Maintenance of Traffic (MOT) Training for contractors, designers, and engineers.

Strategy 4

Consider motorcycles and their unique handling characteristics when designing and improving highways and structures.

- Encourage the use of advance warning signs (specific to motorcycles) and pavement markings to warn motorcyclists of pavement changes in construction zones.
- Continue to monitor/evaluate pavement heights and bridge connections with respect to motorcycle safety.
- Promote removal of roadway debris that may be hazardous for motorcyclists from the roadway and roadside.
- Encourage the use of high-traction pavement markings and surface materials for motorcycles during construction.

3.14 RIDER CONSPICUITY AND MOTORIST AWARENESS

Goal

Increase the visibility of motorcyclists by emphasizing rider conspicuity and motorist awareness of motorcycles.

Strategy 1

Develop a statewide, comprehensive master plan of all rider conspicuity and motorist awareness efforts to reduce overlap and expand coverage of messages statewide.

- Review other states' efforts and implement an improved rider communications program.

- Implement effective campaign programs that provide education components addressing driving maneuvers and behaviors to improve motorcycle safety.

Strategy 2

Educate motorists on their responsibility to share the road with motorcycles.

- Aggressively market the “Look Twice. Save a Life. Watch for motorcycles.” campaign.
- Educate and remind motorists and motorcyclists of the “No Zone” concept.

Strategy 3

Promote new high-visibility technologies and equipment.

- Investigate and evaluate the use of modulating lights and high intensity lights. Publish the results.
- Create and implement a survey to measure motorcyclist acceptance of different types of reflective materials.

3.15 COMMUNICATIONS

Goal

Develop and implement communications strategies that target high-risk populations and improve public awareness of motorcycle crash problems and programs.

Strategy 1

Develop a master plan that identifies specific goals, measurable objectives, and evaluation plans for all communications projects dedicated to motorcycle safety.

- Develop and annually update a comprehensive plan for motorcycle safety campaigns.
- Develop internet resources to promote motorcycle safety.
- Conduct the rider phone survey annually and adapt it to trends and recent FDOT, DHSMV, and law enforcement activities.
- Develop and implement motorcycle safety awareness campaigns and events throughout the year.
- Review the list of approved variable message board messages and recommend additional messages related to motorcycle safety.

Strategy 2

Establish strategic alliances with motorcycle safety stakeholders to enhance and broaden communications efforts.

- Partner with the Florida Motorcycle Dealers Association, motorcycle manufacturers, and rider groups to educate motorcyclists and the public on motorcycle safety issues.
- Partner with schools and universities to educate students on motorcycle safety.

Strategy 3

Coordinate communications efforts in impaired riding and speeding with statewide high visibility enforcement efforts.

- Devote paid media funding related to motorcycles for statewide impaired and speeding saturation enforcement messages.
- Integrate variable message sign campaigns and free equipment inspection programs with Florida bike events, e.g. Bike Week.
- Develop educational tools and materials for social marketing.

3.16 CONCLUSION

Florida's safety community is dedicated to improving the safety of the state's transportation system for motorcyclists and the general public. The overall goal of the MSSP is to reduce the number of motorcycle related crashes, injuries, and fatalities on Florida's roadways. The goals, strategies, and action steps set forth in this plan identify Florida's motorcycle safety priorities. The plan provides a roadmap for state and local agencies and private organizations committed to improving motorcycle safety.

4.0 Appendix

Table 4.1 Motorcycle Safety Coalition Membership

Name	Agency
Al Roop	Institute of Police Technology and Management
Al Wofford	Florida Highway Patrol
Andy Dawson	Leon County Sheriff's Office
Barbara Lauer	DHSMV
Barry Wall	FDOT District 5
Blair Fox	U.S. Insurance Services
Charlie Ferandez	Motorcycle Safety Foundation
Charles Moreland	Jacksonville Fire Rescue
Cory Richter	Indian River Fire and Rescue
Danena Gaines	Cambridge Systematics
Fred Heery	FDOT
Gary Tait	Hillsborough County Public Works
Kim Jowell	Suncoast Safety Council
Kim Miller	Florida Highway Patrol
Kyla Shelton	Department of Health
Larry Hagen	Hagen Consulting Services
Lisa Walker	Department of Health
Marianne Trussell	FDOT
Mark Wilson	FDOT
Matt Olszewski	Florida Prosecuting Attorneys Association
Michelle Sullivan	Orlando Harley Davidson/Riders Edge
Randall Smith	FDOT
Sandy Richardson	National Highway Traffic Safety Administration
Patrick Thomason	Florida Highway Patrol
Susan Herbel	Cambridge Systematics
Susan McDevitt	Department of Health
Trenda McPherson	FDOT
Winn Peebles	Florida Motorcycle Dealers Association/ Motorcycle Industry Council