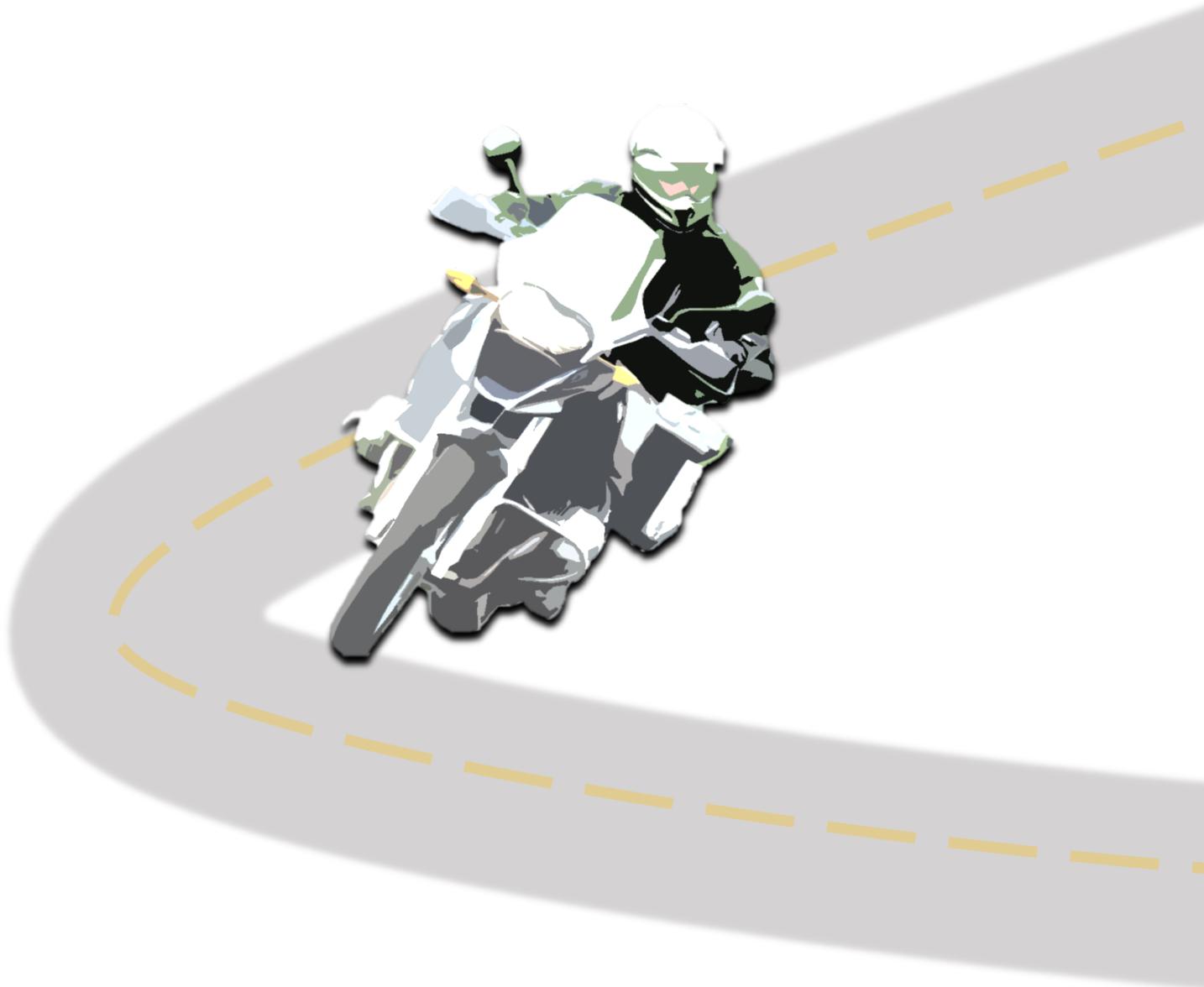


# SURVIVE THE RIDE

## 2017 MOTORCYCLE AND SCOOTER LEGISLATION HANDOUT



## About the Presenters

### Patricia M. Byers, MD, FACS



Patricia M. Byers, MD, FACS is a Professor of Surgery at the University of Miami Miller School of Medicine and is a faculty member in the Division of Trauma Surgery and Surgical Critical Care. Dr. Byers has over thirty years' experience as a trauma surgeon at Ryder Trauma Center at Jackson South/Memorial Hospital in Miami, Florida – a Level 1 trauma center in Miami-Dade County and one of the busiest trauma centers in the country. She is currently the principle investigator of the Motorcycle Education and Injury Prevention Program: *Survive the Ride*, a trauma center-based program with secondary and tertiary prevention strategies. She is also the present Chief of Surgical Nutrition. Dr. Byers strongly emphasizes injury prevention and has served as both the

Florida State Trauma Medical Director and a past Chairperson of the American College of Surgeons Florida Committee on Trauma. In June of 2016, Dr. Byers was awarded the prestigious Raymond H. Alexander Award in recognition of her outstanding dedication and service to the medical profession in the field of surgery and injury prevention.

### Alejandro D. Badilla

Alejandro D. Badilla is a researcher and student who is pursuing a graduate degree at the University of Miami in Programs in Biological Sciences and works as a Research Coordinator in association with Ryder Trauma Center in Miami, FL. Alejandro joined the *Survive the Ride* project under Dr. Patricia Byers in 2014 with the shared interest of minimizing motorcycle and scooter crashes and fatalities while educating riders and EMS personnel to spread the message of safe and smart riding. He is a member of the Florida Department of Transportation's Motorcycle Safety Coalition where he and Dr. Byers serve as medical/EMS advisors in crash fatality and injury analysis. Alejandro is returning to Lifesavers as a second year recipient of the Lifesavers Scholar Award.

# SURVIVE THE RIDE



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## Motorcycle Education and Injury Prevention Program

*Funded by the Florida Department of Transportation*

Patricia M. Byers, M.D., F.A.C.S.

University of Miami Miller School of Medicine, Ryder Trauma Center



The *Survive the Ride* educational program provides prevention efforts for patients of motorcycle crashes, their families, and medical personnel involved with motorcycle crash victims.

### Contact Us

Email: [survivetheride@miami.edu](mailto:survivetheride@miami.edu)

Phone: 305-355-4971



<https://www.facebook.com/survive.theride.3>



## TERTIARY PREVENTION PROGRAMS: Medical Education

Our goal is to deliver an informative and educational training program to pre-hospital and hospital-based health care providers, featuring the latest, state-of-the-art knowledge regarding effective transport, triage, and treatment of motorcycle crash victims, in an effort to reduce fatalities and mitigate injuries.



## Pre-Hospital Staff Motorcycle Crash Safety Education Program

We teach *Pre-Hospital Staff*: Paramedics, Emergency Medical Technicians, Dispatch, and Air Rescue throughout Florida. This program focuses on treatment, field assessment, and triage for motorcycle crash victims.



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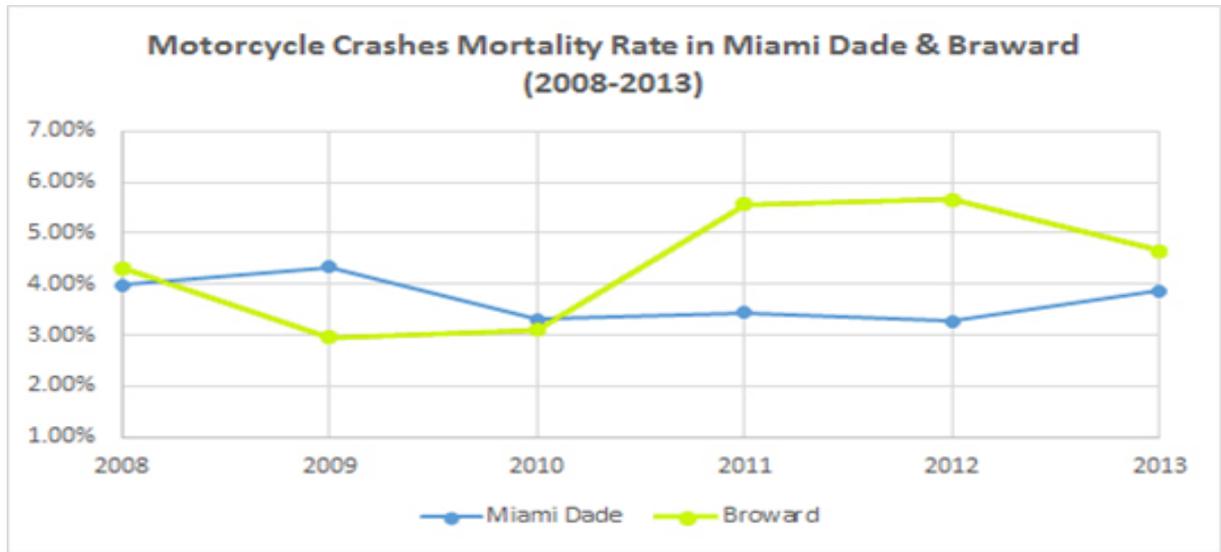
## Hospital Staff Motorcycle Crash Safety Education Program

We teach *Hospital Staff*: Trauma surgeons, Emergency Room staff, including Doctors, Nurses, and Medical Students – Early recognition of motorcycle crash injuries with optimization of care.



We provide a brief intervention with surveys and educational lectures to *motorcycle crash victims* in order to prevent future crashes. We provide a safety-related, educational presentation where we teach pre-hospital and emergency/trauma center providers. Our courses are focused on motorcycle crash related injury identification, triage, stabilization, and definite care to help decrease motorcycle crash injuries.

## MOTORCYCLE INJURY BURDEN



### CRASHES RESULT IN SERIOUS INJURY:

While 20% of passenger vehicle crashes result in injury or death, an astounding 80% of motorcycle crashes result in injury or death (NHTSA). Licensed motorcyclists accounted for just over 3% of Florida's motoring public, but motorcyclists and their passengers represented 19% of all fatalities on Florida's roadways.

### HEALTH CARE COSTS FOR ACUTE CARE ARE HIGH, BUT ONLY A FRACTION OF TOTAL COSTS.

### MOTORCYCLE RIDERS ARE NOT REQUIRED TO CARRY INSURANCE.

**Not taken into account:**  
Years of life lost, pre-hospital expenses, rehabilitation, long term care costs.

Over 50% of motorcyclist hospitalizations and emergency department visits were not covered by commercial insurance.

17-30% of patients are under-insured or self-pay.

### Motorcycle Crash Injuries in Florida Non-Fatal Hospitalizations and ER Visits, 2013

Median Admission Charge

**\$77,391**

Total Admission Charges

**\$534,152,069**

Hospitalizations

Median Visit Charge

**\$4,425**

Total Visit Charges

**\$91,792,856**

ER Visits

# Motorcycle Crash Safety Educational Programs

## Did You Know?

- ...The median age of fatally injured riders was 41 years old in 2013 in Florida.
- ...30% of motorcyclist fatalities were related to traumatic brain injuries (2013).
- ...92% of motorcyclists fatally injured in Florida were Florida residents (2013).
- ...1 drink makes you 5 times more likely to crash.

## Patient Education Program

**Goal:** To deliver an effective motorcycle safety education program to consenting motorcycle crash victims treated in participating hospitals.

Research has shown that motorcycle riders with a history of major injury are less likely to wear helmets when compared to people without a history of major injury (Mangus et al., 2004). We are implementing this program during a *teachable moment* (soon after a crash) in an effort to improve crash victim's safety knowledge to prevent future crashes and injuries.

As of April 2015, one-third of patients we met at Ryder Trauma Center have been in a prior motorcycle or scooter crash, and 86% of these prior crashes required hospitalization. We hope to help decrease these numbers over time. In our patient program:

1. Patients are asked to complete a pre-test in order to establish baseline knowledge and to evaluate riding attitudes and habits.
2. Patients are given an educational module to encourage safe rider habits, and we evaluate this knowledge acquisition with a post-test.
3. The patient is contacted in 3 months to assess knowledge retention and potential changes in habits.
4. At the end the patient is given the opportunity to complete a session on the Honda SMARTrainer.



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PALM BEACH COUNTY



Memorial  
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Helmets would be required for motorcyclists under proposed bill

## Helmet Legislation

### Florida House Bill 6009: Motorcycle Safety

Submitted by Representative Don Hahnfeldt (R) – Florida House of Representatives

District 33: Parts of Sumter and Ocala County; The Villages, FL

Website: <http://tinyurl.com/hoz9wmd>

**Capitol Office**

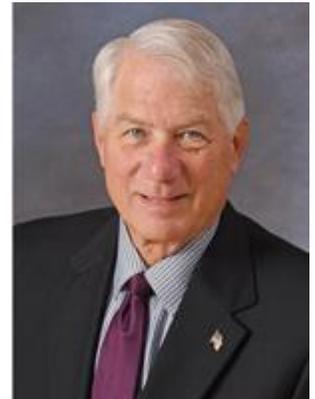
Phone: (850) 717-5033

**District Office**

Phone: (352) 315-4445

**Legislative Assistants**

Dawn Faherty



This bill proposes to remove provisions authorizing certain persons over 21 years of age to operate/ride motorcycle without wearing protective headgear; provides penalties.

**Current Status of Bill:**

- Filed 12/19/2016; if passed in effect 7/1/2017
- 1/9/17 – Referred to Transportation and Infrastructure Subcommittee –HJ 245
- 3/7/17 – Introduced HJ 245
- Amends Florida Statute Title XXIII, Chapter 316, §211
  - <https://www.flsenate.gov/Laws/statutes/2016/316.21>

## Motorcycle and Scooter Helmet Fact Sheet

**\*Presented to Miami-Dade Legislation Delegation Public Hearing\***

### Crash Facts:

1. A motorcycle crash victim has an 80% chance of being injured or killed.
2. The current law requiring those > 18 years old to buy insurance if they do not wear a helmet is unenforceable.
3. Lower speed MC and scooter riders are most likely to benefit from a helmet, but least likely to wear one.
4. 40% of motorcycle injury health care costs are uncovered due to lack of insurance or being underinsured with state Medicaid.

**Motorcycles and scooters make up 3% of all registered vehicles in Florida, but account for 19% of fatalities as of 2016!**

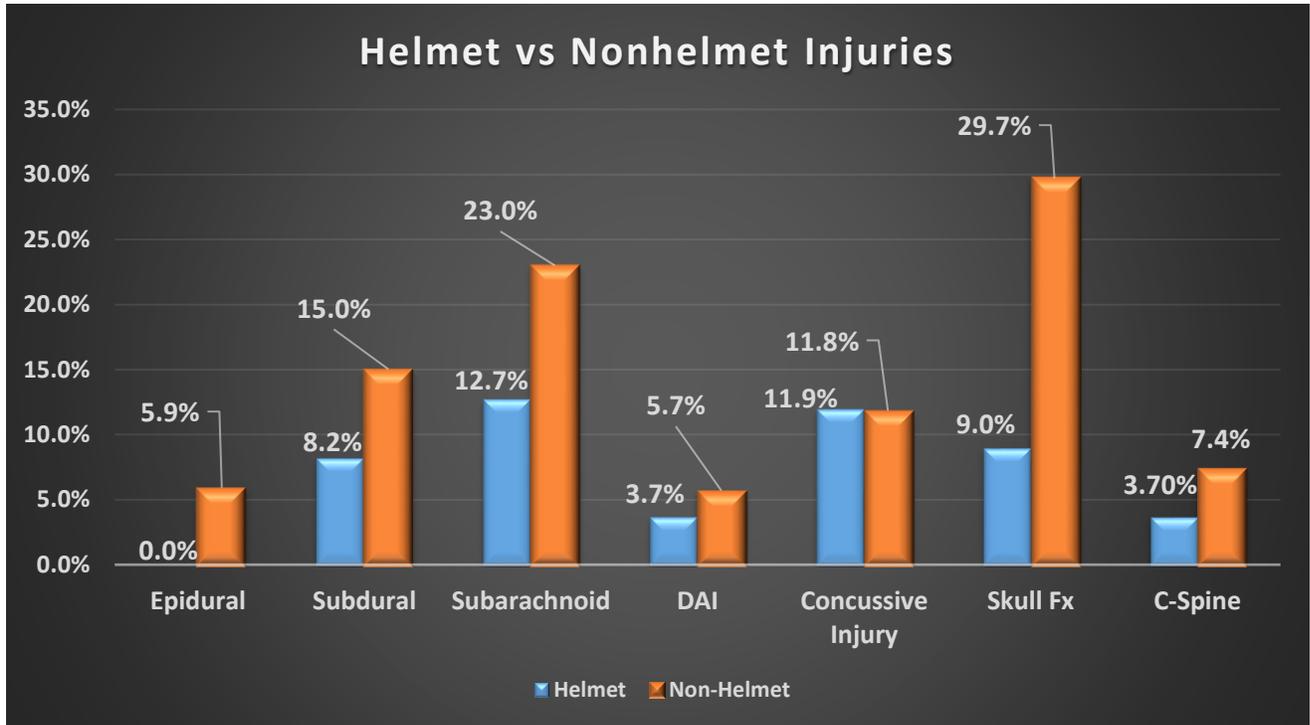
**2015 Miami-Dade County MC Fatalities: 65**

**2015 Florida MC Fatalities: 546**

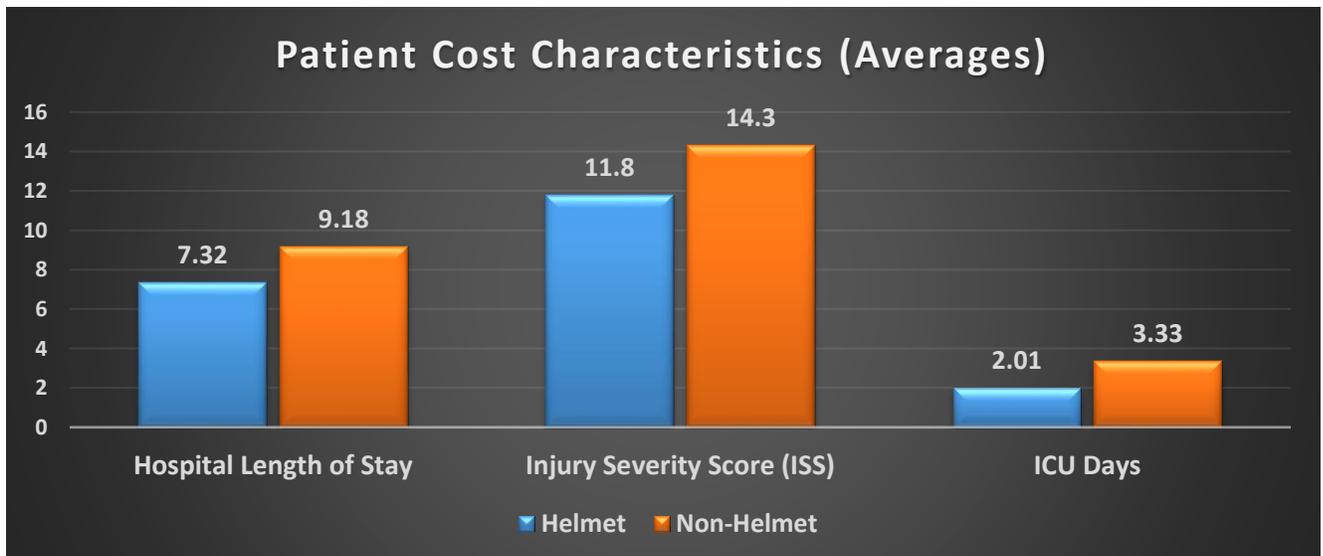
### 2015 Motorcycle Safety Report Snapshot – Florida ACHA and Vital Statistics Database Report

The median age of motorcyclists fatally injured in Florida.	<b>39</b>
The percent of motorcyclist fatalities related to traumatic brain injuries.	<b>33%</b>
The percent of motorcyclists fatally injured in Florida who are Florida residents.	<b>93%</b>
The number of non-fatal hospitalizations for every motorcyclist fatality.	<b>6</b>
The number of non-fatal ED visits for every motorcyclist fatality.	<b>20</b>
The percent of motorcyclist hospitalizations and ED visits not covered by commercial insurance.	<b>50%</b>
The median hospital charge for motorcyclists treated and released from a Florida ED for treatment of traffic crash injuries.	<b>\$ 5,294.50</b>
The median hospital charge for motorcyclists admitted to a Florida hospital for the treatment of traffic crash injuries.	<b>\$ 83,676.00</b>
The total hospital charges for motorcyclists treated in a Florida ED or hospital that were injured in a traffic crash.	<b>\$ 675,674,964.00</b>

The following graphs represent recent data (2013-2016) of motorcycle and scooter trauma patients at Ryder Trauma Center. Being one of the primary Level I trauma center in South Florida, particularly Miami-Dade County, you can see a true representation Florida residents and the problem that exists with unsafe riding behaviors.



The graph above demonstrates significant increases in traumatic brain injuries (TBIs) resulting from riders not wearing helmets.



The graph above shows an average increase in hospital length of stay (in days) as well as intensive care unit (ICU) days. This, coupled with an average increase of injury severity, results in an increased cost burden for patients, hospitals, and the state.

## Current Florida Statute regarding motorcycle helmets

### 316.211 Equipment for motorcycle and moped riders.—

(1) A person may not operate or ride upon a motorcycle unless the person is properly wearing protective headgear securely fastened upon his or her head which complies with Federal Motorcycle Vehicle Safety Standard 218 promulgated by the United States Department of Transportation. The Department of Highway Safety and Motor Vehicles shall adopt this standard by agency rule.

(2) A person may not operate a motorcycle unless the person is wearing an eye-protective device over his or her eyes of a type approved by the department.

(3)(a) This section does not apply to persons riding within an enclosed cab or to any person 16 years of age or older who is operating or riding upon a motorcycle powered by a motor with a displacement of 50 cubic centimeters or less or is rated not in excess of 2 brake horsepower and which is not capable of propelling such motorcycle at a speed greater than 30 miles per hour on level ground.

(b) Notwithstanding subsection (1), a person over 21 years of age may operate or ride upon a motorcycle without wearing protective headgear securely fastened upon his or her head if such person is covered by an insurance policy providing for at least \$10,000 in medical benefits for injuries incurred as a result of a crash while operating or riding on a motorcycle.

(4) A person under 16 years of age may not operate or ride upon a moped unless the person is properly wearing protective headgear securely fastened upon his or her head which complies with Federal Motorcycle Vehicle Safety Standard 218 promulgated by the United States Department of Transportation.

(5) The department shall make available a list of protective headgear approved in this section, and the list shall be provided on request.

(6) Each motorcycle registered to a person under 21 years of age must display a license plate that is unique in design and color.

(7) A violation of this section is a noncriminal traffic infraction, punishable as a nonmoving violation as provided in chapter 318.

**History.**—s. 1, ch. 71-135; s. 1, ch. 76-31; s. 1, ch. 85-329; s. 23, ch. 87-161; s. 2, ch. 88-405; s. 321, ch. 95-148; ss. 4, 167, ch. 99-248; s. 6, ch. 2000-313; s. 13, ch. 2006-290.

**Note.**—Former s. 316.287.

# LEGISLATIVE PROPOSAL SUMMARIES





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## Age range restrictions to Improve Child Safety

**Problem:** Language in Florida Statutes regarding children and the use of motorcycles is insufficient. Currently, a person of any age, even a young child, may ride as a passenger on a motorcycle or moped or may operate a motorcycle or moped with a motor that has 150 or less cubic centimeters (cc) displacement. [316.2085 Riding on motorcycles or mopeds](#).

### Background:

- Over the last 11 years, 713 children age 10 or younger were injured or killed as passengers in motorcycle crashes in Florida (2005-2015).
- Florida Statute does not set minimum age requirements for motorcycle or moped passengers or for operators of motorcycles or mopeds with 150 or fewer cc displacement.
  - Motorcycles or mopeds with 50 cc can achieve speeds up to 30 mph, can be involved in serious traffic crashes and, therefore, should be subject to the same restrictions as motorcycles or moped with 150 cc or greater displacement.
- Motorcyclist fatalities occur up to 26 times more frequently than passenger car occupant fatalities in traffic crashes per vehicle mile traveled, yet there is no child motorcycle passenger protection law in Florida.

### Solution:

- All passengers of 2- or 3-wheeled motorized vehicles without pedals for street use must:
  - Adhere to helmet laws that currently govern motorcycles
  - Be at least 8 years of age
- All operators of 2- or 3-wheeled motorized vehicles without pedals for street use must:
  - Have an endorsement and formal training
  - Adhere to helmet laws that currently govern motorcycles
- Motorcycle safety laws in six states and Puerto Rico specify minimum age or height requirements for motorcycle passengers.
  - Florida Statute 316.2085 should specify that a child age 10 or younger may not ride as a passenger on any motorcycle or moped.
  - Further, 316.2085 (6) (a) should state "A person under 16 years of age may not operate a motorcycle or moped that has a motor with more than 49 cubic centimeters displacement".



**RIDE SMART FLORIDA**



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## Update to Florida Motorcycle Insurance Statute

**Problem:** Language in Florida Statutes regulating insurance coverage of unhelmeted motorcycle riders is vague and difficult for law enforcement to confirm. The current \$10,000.00 minimum is inadequate by today's standards. §316.211 Fla. Stat. 'Equipment for motorcycles and moped riders'

### Background:

- 1999 – Florida amended its motorcycle helmet law to allow operators 21 and older to ride without a helmet while carrying at least \$10,000 in “medical benefits”
- “Medical benefits” is an ambiguous term and makes it impossible for law enforcement to determine if a rider has adequate coverage as intended by the statute.
- Now, 17 years after the amendment, the required \$10,000 is economically insufficient
- The vagueness of Statute language, combined with inadequate insurance coverage, means many riders are financially deficient having insufficient or no medical care
- Medical providers, taxpayers, and the State absorb the cost of this deficit
- Motorcycle riders who choose to ride unhelmeted must be held more financially responsible

### Solution:

- “Medical benefits” should be rewritten to “medical payments on your motorcycle insurance”
  - Rider's coverage would be displayed on motorcycle insurance
  - Allows law enforcement to confirm adequate coverage
- Required medical coverage should be increased to \$20,000 to account for current costs, the same as has been done by other states with optional helmet laws (e.g. Michigan)
- Amend current statute by removing Section 316.211(3)(a), which excludes users of scooters under 50cc from helmet requirements
  - Ensures scooter riders have the same rights and protections as motorcyclists

### Call to Action and Support:

- Supported by riding instructors, law enforcement, physicians, medical associations, along with insurance industry



## Define Scooters as Motorcycles for License Endorsement and Helmet Use

**Problem:** Motorcycles and scooters are defined differently in Florida Statutes as they pertain to operator licensing, training, and laws governing helmet use.

### Background:

- “Motor Vehicle” is defined as “An automobile, motorcycle... or any other vehicle operated on the roads... to transport persons or property, and propelled by power other than muscular power...”
- “Motorcycle” is defined as “any motor vehicle 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..”
- MC riders are required to have an endorsement on their license and complete formal training to ride on public roads.
- Riders ages 16-20 required to use a helmet.
- Scooters have no current in Florida Statute Title XXIII – Motor Vehicles
- Current statutes have exceptions: mopeds and scooters based on engine size (under 50cc) and speed (max 30 MPH)
- Modern scooters under 50cc are capable of speeds greater than 30 MPH
- Currently, anyone can ride a scooter without a license, prior training, or helmet even if rider is under 21.
- Scooters are significantly increasing as a mode of transportation, particularly on college campuses because of low cost and parking flexibility.
- Regardless of engine size, scooter population face the same dangers and traffic injuries as motorcycle riders riding without any training or education.
- Inconsistent public policy between motorcycles and scooters, despite the vast similarities

### Solution:

- All operators of 2- or 3-wheeled motorized vehicles without pedals for street use must:
  - have an endorsement and formal training
  - Adhere to helmet laws that currently govern motorcycles
  - Amend Florida Statutes § 316.003(41), 316.211(3)(a), and 322.01(26) by eliminating the scooter exception based on size and speed

### Call to Action and Support:

- Support from law enforcement, colleges/universities, physicians, medical associations, and researchers

# SUPPLEMENTARY INFORMATION



## ALL-RIDER MOTORCYCLE HELMET LAWS

According to NHTSA, motorcycles are the most hazardous form of motor vehicle transportation. 4,976 motorcyclists were killed in 2015, an increase of more than 8% from the previous year. Additionally, 88,000 motorcyclists were injured on our nation's roads in 2015. The number of motorcycle crash fatalities has more than doubled since a low of 2,116 in 1997.

In 2015, where helmet use was known, 40% of all motorcyclists killed were not wearing a helmet. However, more than half (58%) of the fatally injured motorcycle riders were not wearing a helmet in states without all-rider helmet laws, compared to only 8% of fatally injured riders in states with an all-rider helmet law. NHTSA estimates that helmets saved the lives of 1,772 motorcyclists in 2015 and that 740 more lives in all states could have been saved if all motorcyclists had worn helmets. All-rider helmet laws increase motorcycle helmet use, decrease deaths and injuries, and save taxpayer dollars.

<b>States Without All-Rider Motorcycle Helmet Laws &amp; Lives that Could Have Been Saved in 2015 by 100 Percent Helmet Use (NHTSA, 2016)</b>	<b>AK</b>	2	<b>ID</b>	8	<b>MN</b>	16	<b>RI</b>	1
	<b>AZ</b>	29	<b>IL</b>	40	<b>MT</b>	7	<b>SC</b>	48
	<b>AR</b>	18	<b>IN</b>	33	<b>NH</b>	6	<b>SD</b>	8
	<b>CO</b>	25	<b>IA</b>	12	<b>NM</b>	7	<b>TX</b>	88
	<b>CT</b>	12	<b>KS</b>	11	<b>ND</b>	1	<b>UT</b>	7
	<b>DE</b>	2	<b>KY</b>	23	<b>OH</b>	42	<b>WI</b>	24
	<b>FL</b>	108	<b>ME</b>	9	<b>OK</b>	23	<b>WY</b>	6
	<b>HI</b>	6	<b>MI</b>	23	<b>PA</b>	33	Total	678

When crashes occur, motorcyclists need adequate head protection to prevent one of the leading causes of crash death and disability in America - head injuries. Studies have determined that helmets reduce head injuries without increased occurrence of spinal injuries in motorcycle crashes. NHTSA data shows that helmets reduce the chance of fatal injury by 37% for motorcycle operators and 41% for passengers. According to a 2012 GAO report, “laws requiring all motorcyclists to wear helmets are the only strategy proved to be effective in reducing motorcyclist fatalities.”

Today, only 19 states and DC require all motorcycle riders to use a helmet. Twenty-eight states have laws that cover only some riders (i.e., up to age 18 or 21). These age-specific laws are nearly impossible for police officers to enforce and result in much lower rates of helmet use. **Three states (IL, IA and NH) have no motorcycle helmet use law. In 2016, there were attempts in 13 states to repeal existing all-rider helmet laws, all of which were unsuccessful.**

**Courtesy of Advocates for Highway & Auto Safety's 2017  
Roadmap of State Highway Safety Laws (Jan 2017)**

## ALL-RIDER MOTORCYCLE HELMET LAWS



- According to NHTSA, in 2015, there were 11 times as many unhelmeted fatalities (1,777) in states without a universal helmet law compared to the number of fatalities (161) in states with a universal helmet law. These states were nearly equivalent with respect to total resident populations.
- In 2010, the economic cost of motorcycle crashes was \$12.9 billion and the total amount of societal harm was \$66 billion, according to NHTSA. Additionally, helmets are currently saving \$2.7 billion in economic costs and preventing \$17 billion in societal harm annually.
- Per vehicle mile traveled, motorcyclists fatalities occurred almost 27 times more frequently than passenger car occupant fatalities in 2014.
- In 2014, motorcyclists represented 14% of the total traffic fatalities, yet accounted for only 3% of all registered vehicles in the United States.
- Economic benefits of motorcycle helmet use laws are substantial. In states that have an all-rider helmet use law, cost savings to society were \$725 per registered motorcycle, compared to savings of just \$198 per registered motorcycle in states without a mandatory helmet use law, according to the CDC.
- A poll conducted by Lou Harris showed that by an overwhelming majority (80%), Americans favor state laws requiring all motorcyclists to wear helmets.
- Motorcycle helmets reduce the risk of head injury by 69% and reduce the risk of death by 42%.
- A recent study in the American Journal of Surgery reported that after Michigan repealed its all-rider helmet law in 2012, the percentage of non-helmeted crash scene fatalities quadrupled.
- According to the American Academy of Pediatrics, in states with only youth-specific helmet laws, helmet use has decreased and youth mortality has increased. Serious traumatic brain injury among young riders was 38% higher in states with only age-specific laws compared to states with all-rider helmet laws.
- There is no scientific evidence that motorcycle rider training reduces crash risk and is an adequate substitute for an all-rider helmet law. In fact, motorcycle fatalities continued to increase even after a motorcycle education and training grant program included in federal legislation took effect in 2006.

**Courtesy of Advocates for Highway & Auto Safety's 2017  
Roadmap of State Highway Safety Laws (Jan 2017)**