

Thailand Motorcycle Accident Situation

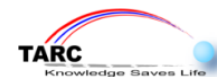


Assoc. Prof. Kunnawee Kanitpong

- Thailand Accident Research Center (TARC)
Asian Institute of Technology (AIT)
- ThaiRoads Foundation

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Presented at the 70th Session of UNECE Road Safety Forum





How many people on this motorcycle?

4..





5+1..

ถ่าย 5 @ Chonburi // Rangsee





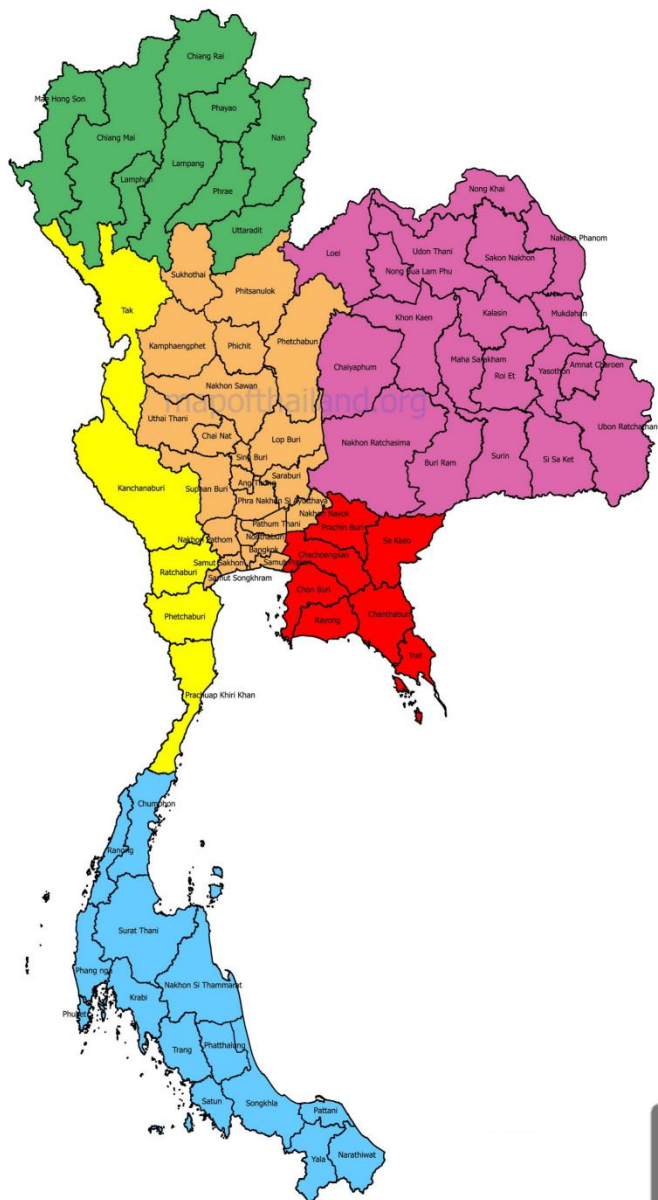
What about this??...
Can you count??



***Motorcycle has been
a family vehicle in
Thailand..***

***How can we use
motorcycle safely?***

Thailand Info...



Population: 64,456,695



Registered Vehicle: 32,476,977



Driver Licenses : 40,366,962

Male: 29,483,525

Female: 10,720,913



Total Road Length : 117,386 km.

National Highways: 68,098 km.

Rural Highways: 49,080 km.

Expressway: 208 km.

VKT National Highways: 213,438 MVKT



GDP : 8,830,957 million-baht

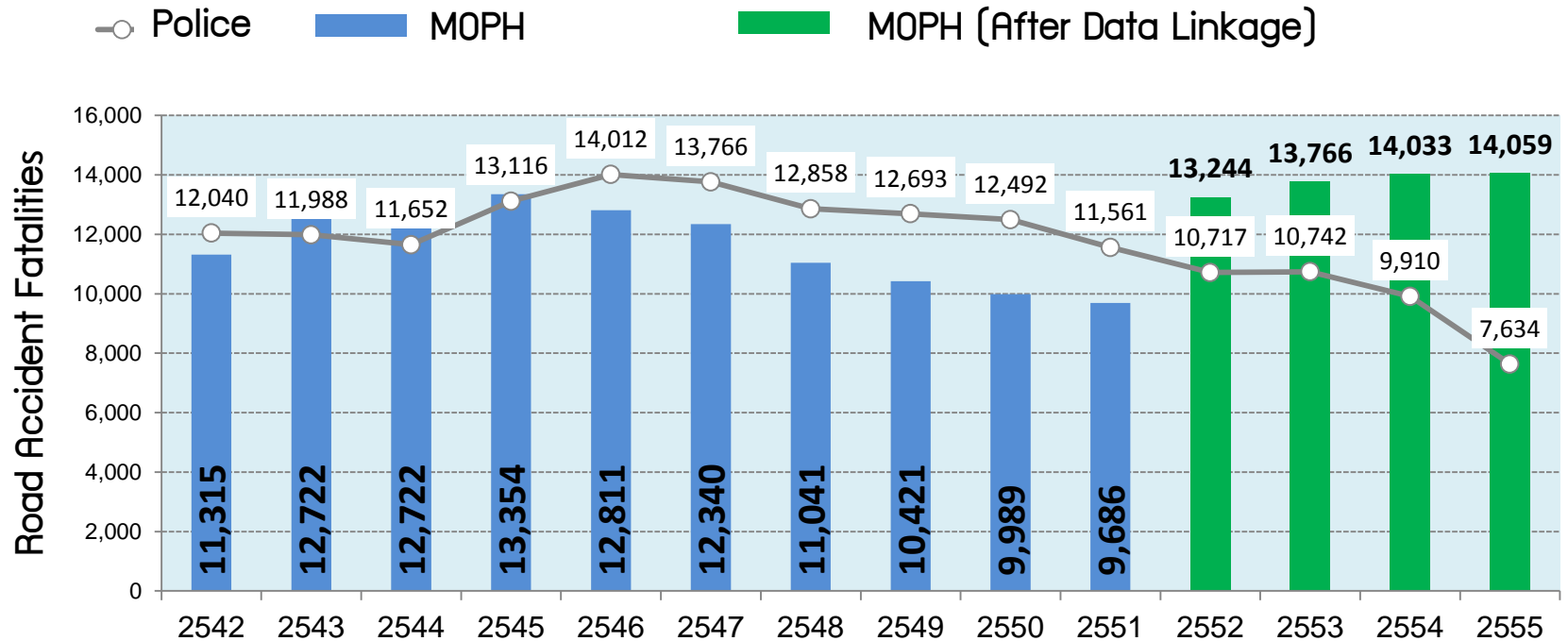
Fuel Consumption in Transportation
: 30,214 million-litre

1

Fatalities and Injuries due to Road Crashes



Road Fatalities from Different Accident Databases



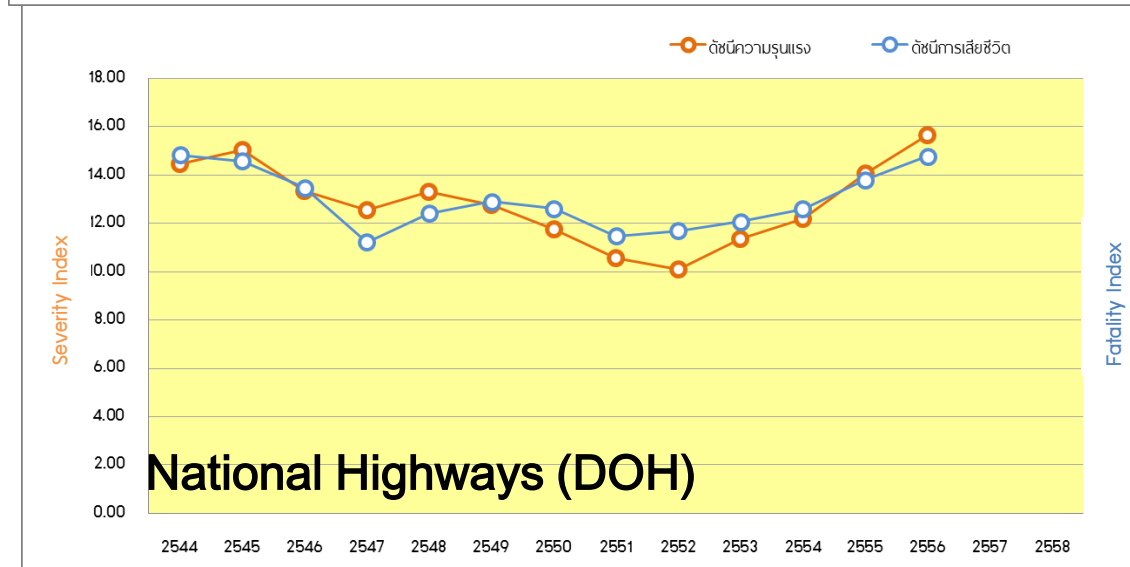
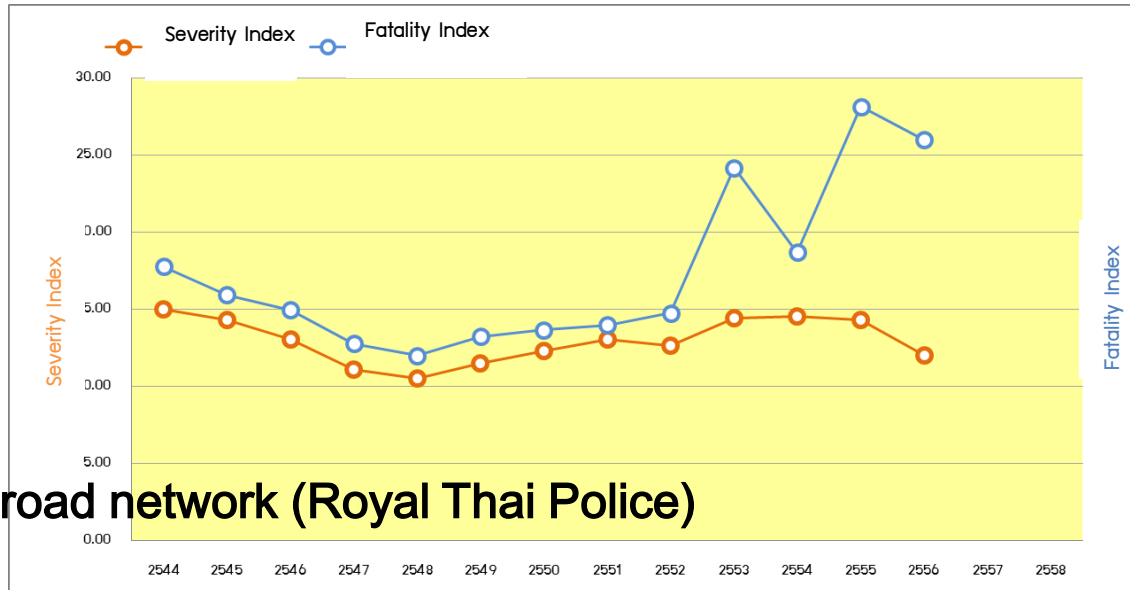
Source: Ministry of Public Health, 2012

Road Crash Severity



Severity Index and Fatality Index from Road Crashes

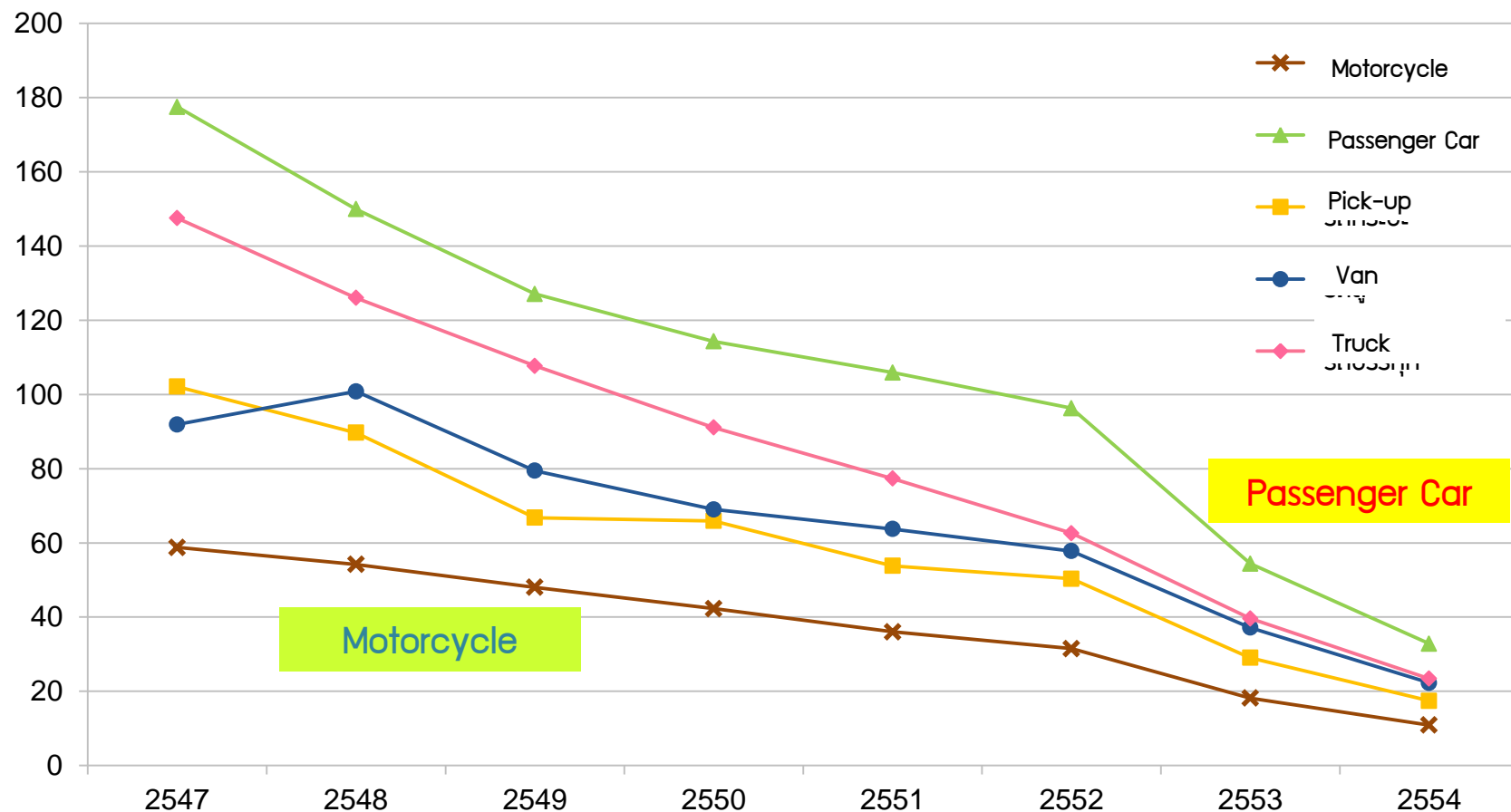
All road network (Royal Thai Police)



Who is at Fatal and Injured Risk?

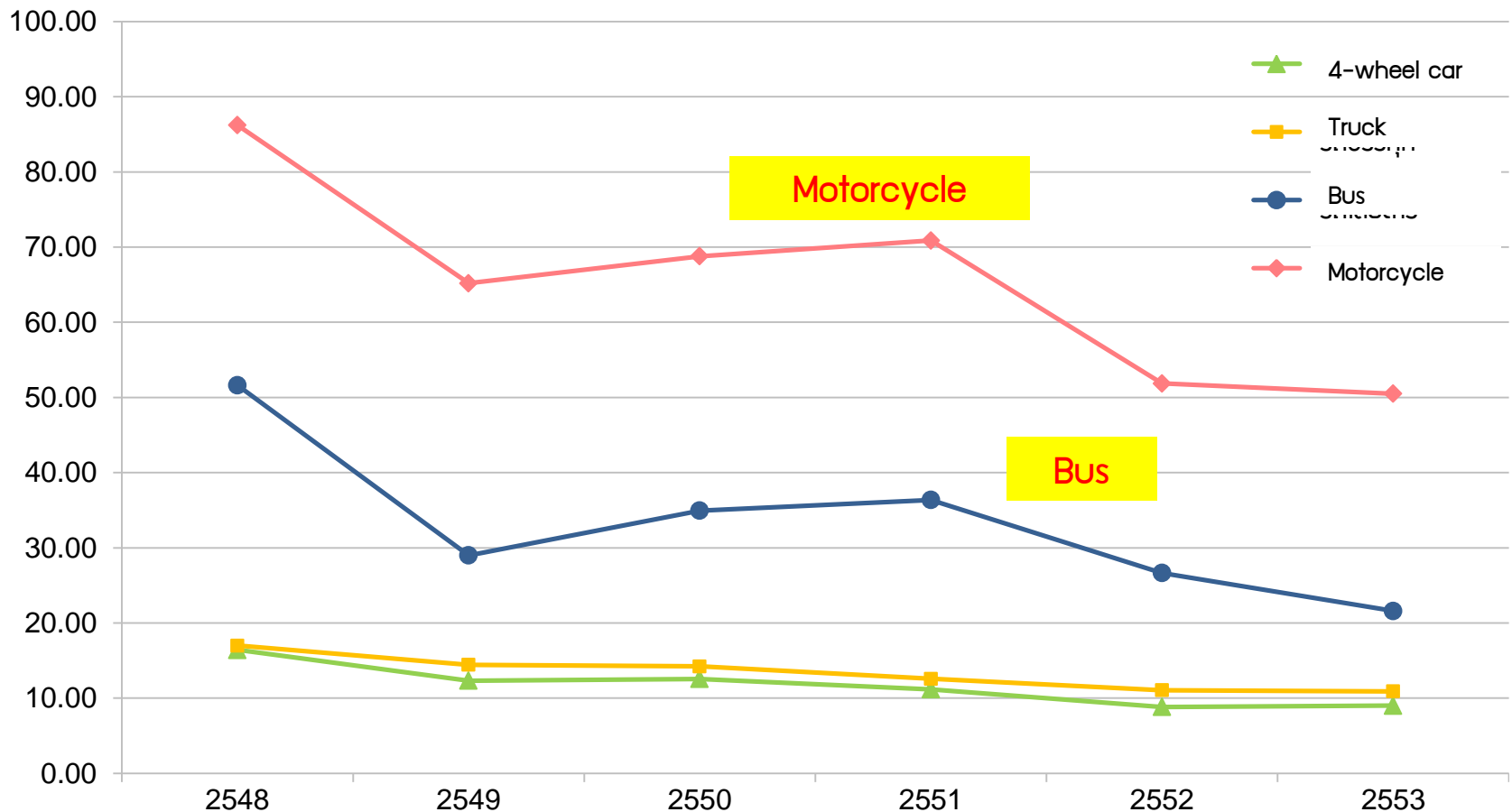


Vehicle Types involved in Road Crashes per 10,000 registered vehicles



Source: Department of Land Transport, Ministry of Transport

Injuries involved in Road Crashes per registered vehicles Classified by Vehicle Types



Source: Ministry of Public Health



Motorcycle Use in Thailand

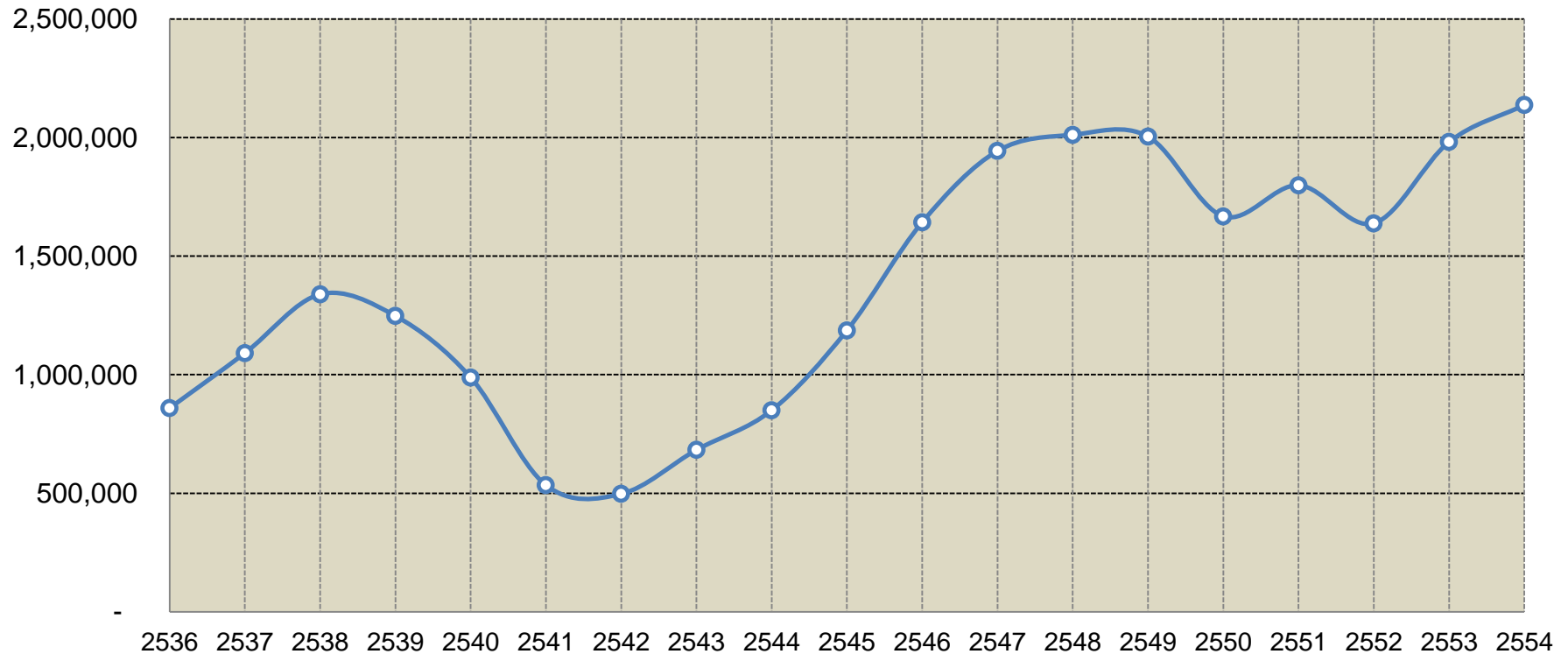
Highest Motorcycle per Capita in 2010

Source: Global Status Report on Road Safety [2013]

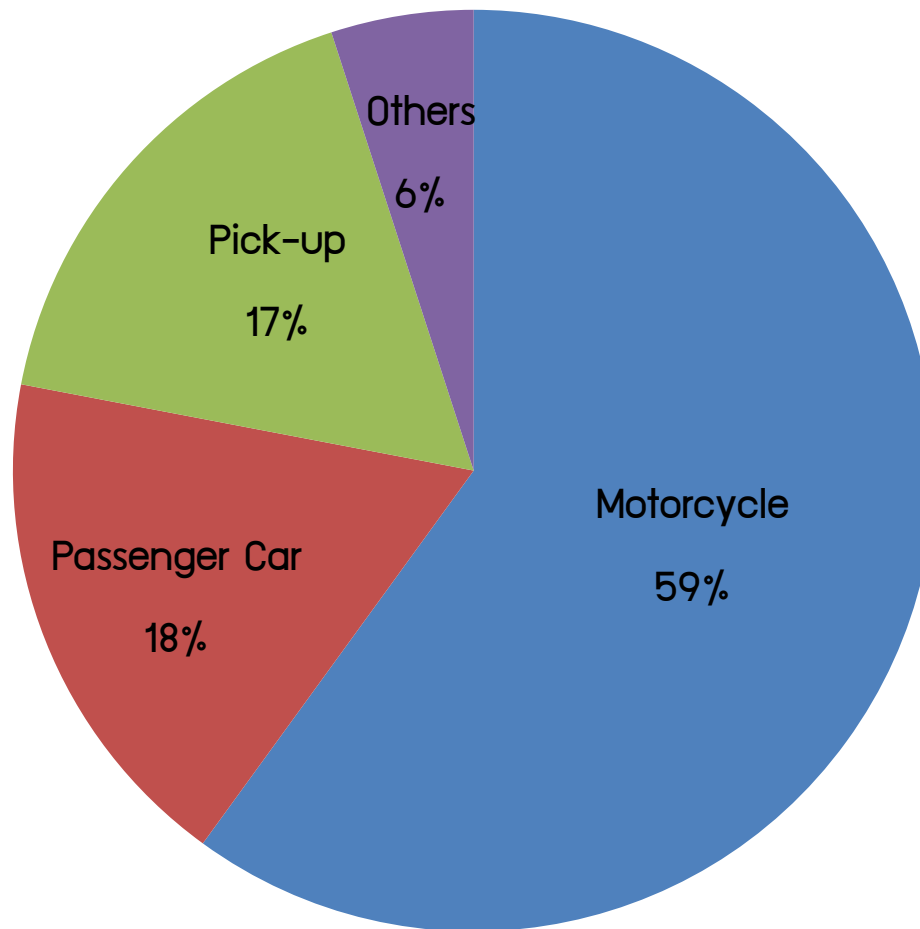
Rank No.	Number of Motorcycle per 1,000 Population
1. Vietnam	358
2. Malaysia	332
3. Thailand	251
4. Indonesia	250
5. Uruguay	182
6. Italy	166
7. Republic of Dominican	136
8. Greece	127
9. Mauritius	123

Number of New Registered Motorcycle , 1993– 2011

Source: Department of Land Transport, Ministry of Transport



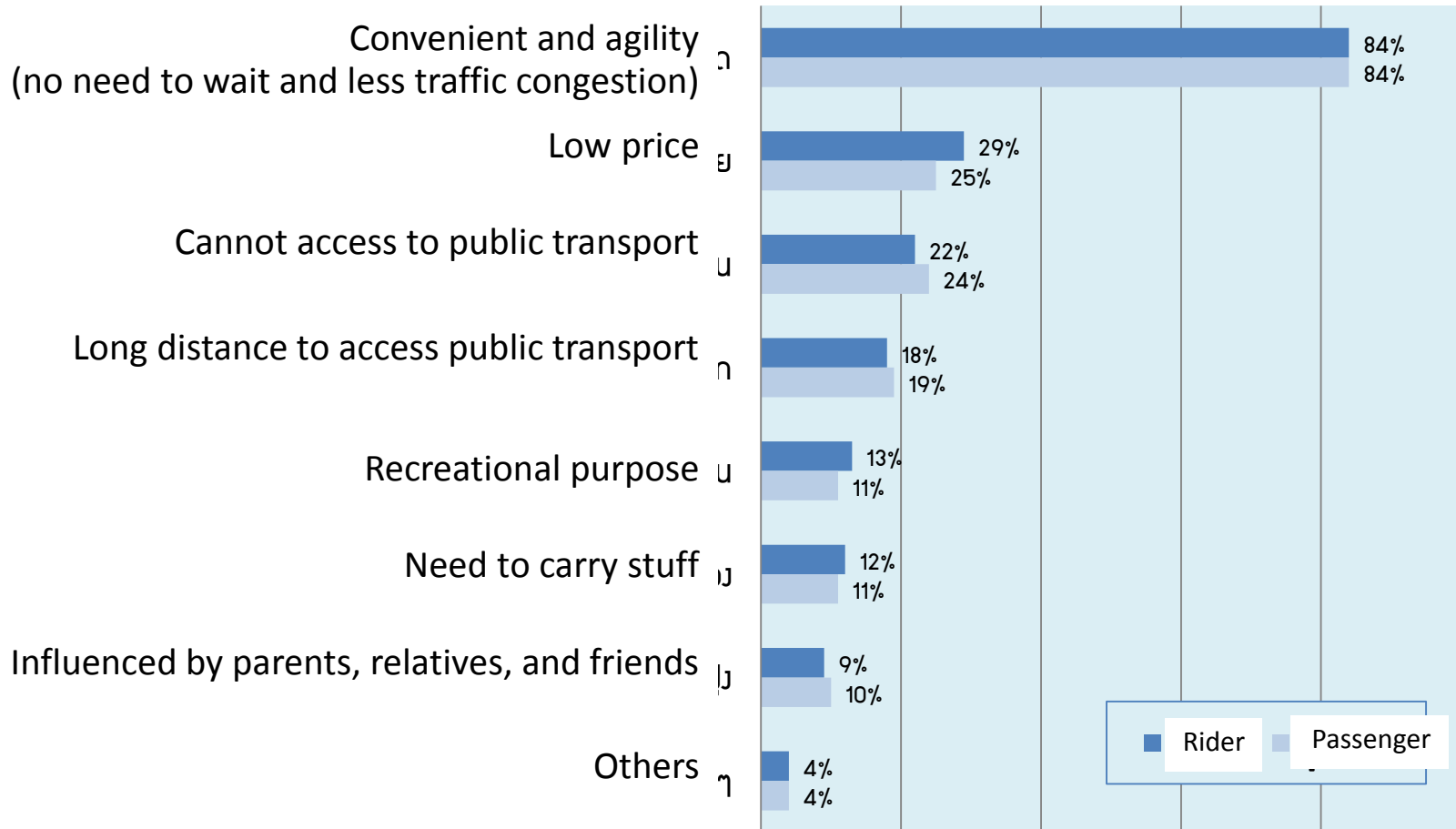
Proportion of Registered Vehicles in 2012 classified by Vehicle Type



Source: Department of Land Transport

Why people choose **motorcycle** for their transportation mode?

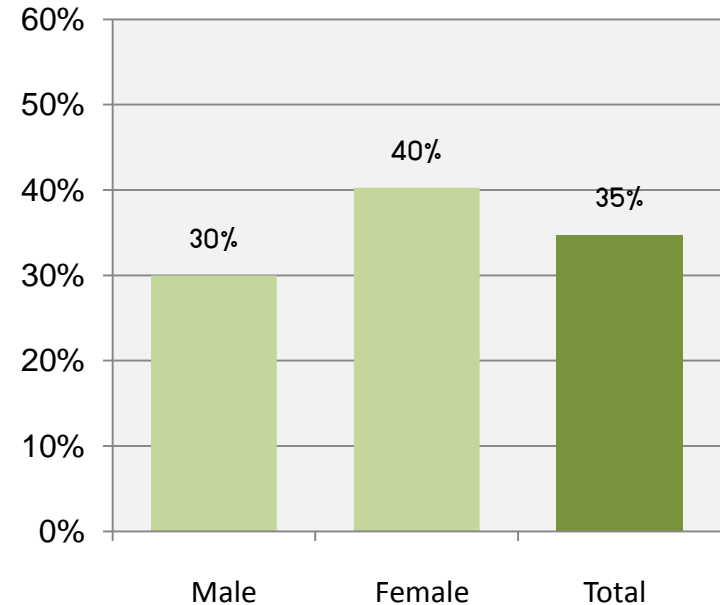
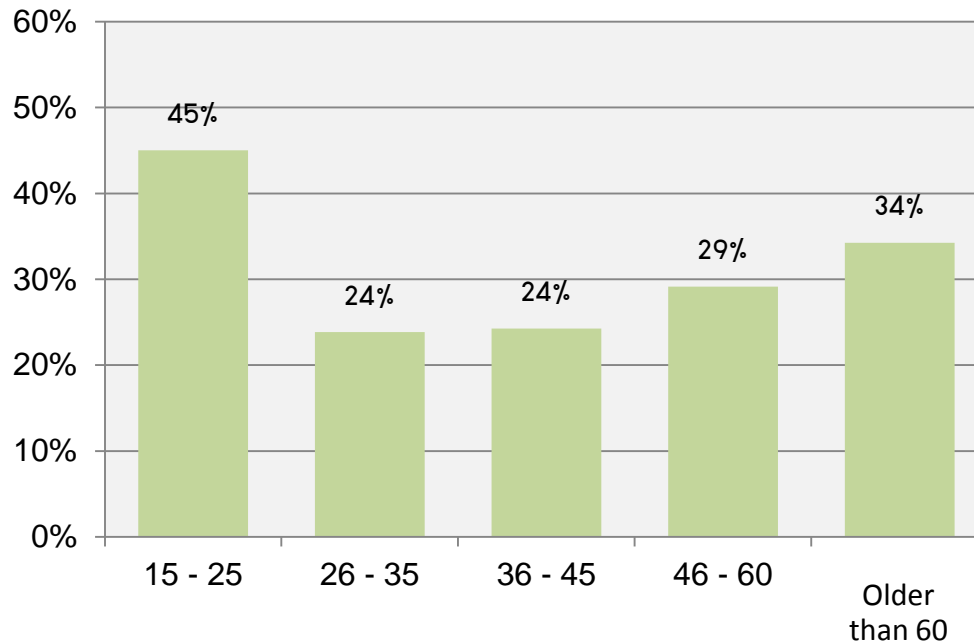
Source: Self-Reported Questionnaire Survey by ThaiRoads Foundation and Road Safety Watch Network (2510)



Proportion of Motorcycle Riders with **No** Driver License

Classified by Age and Gender

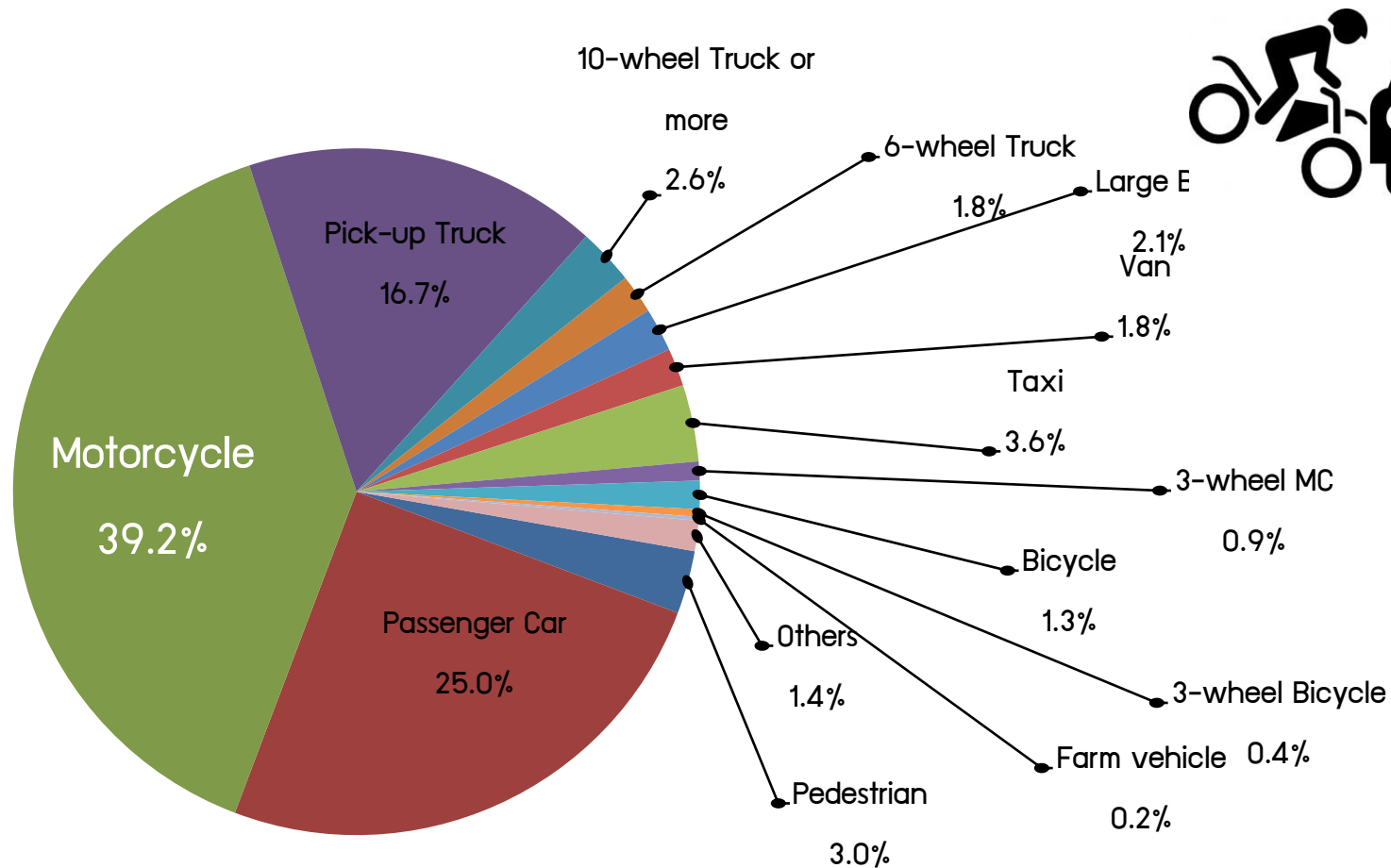
Source: Self-Reported Questionnaire Survey by ThaiRaods Foundation and Road Safety Watch Network (2510)



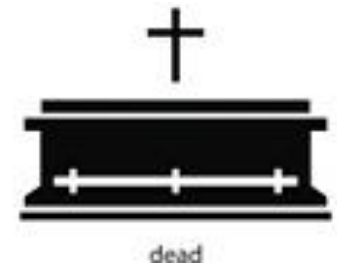
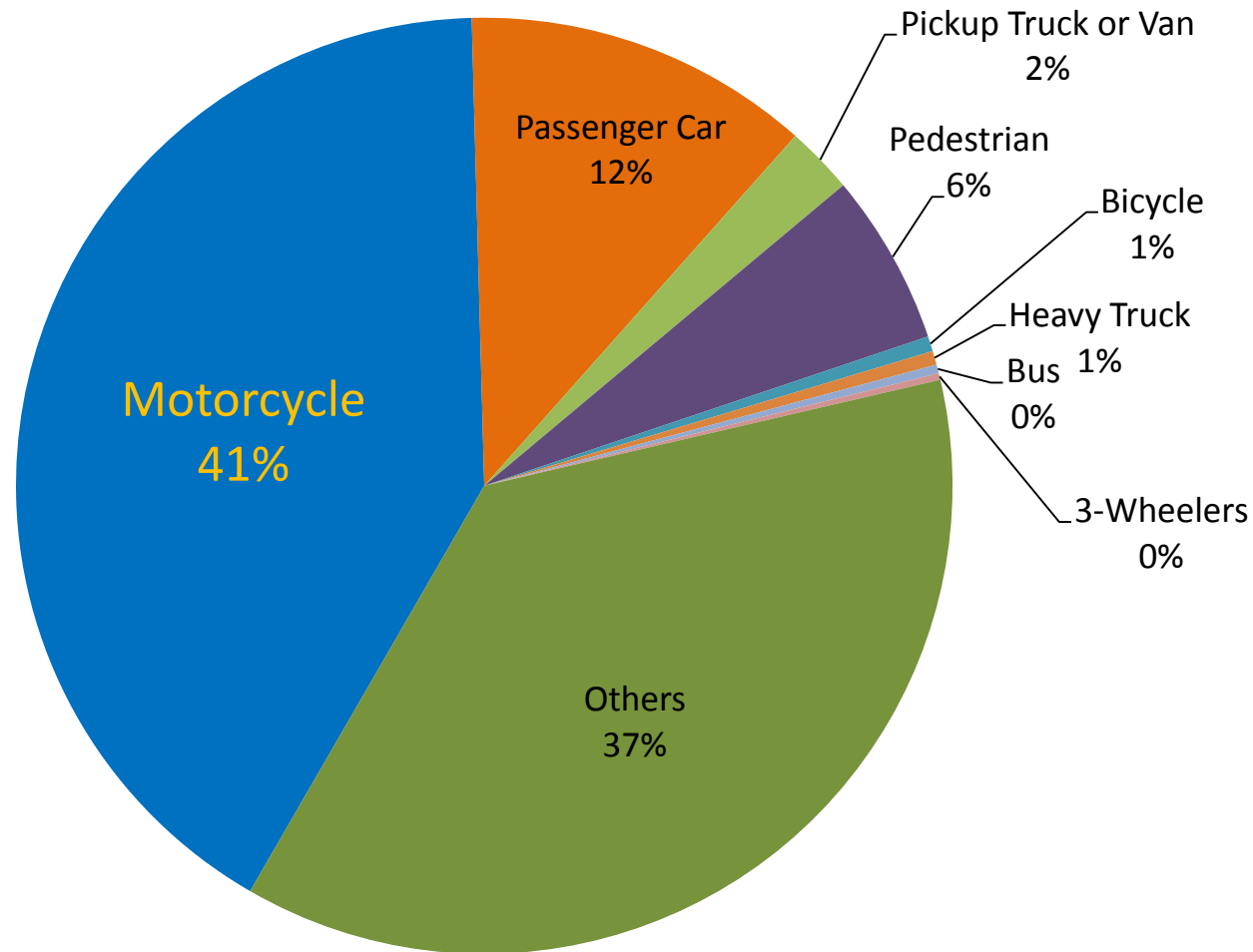


Motorcycle Crash in Thailand

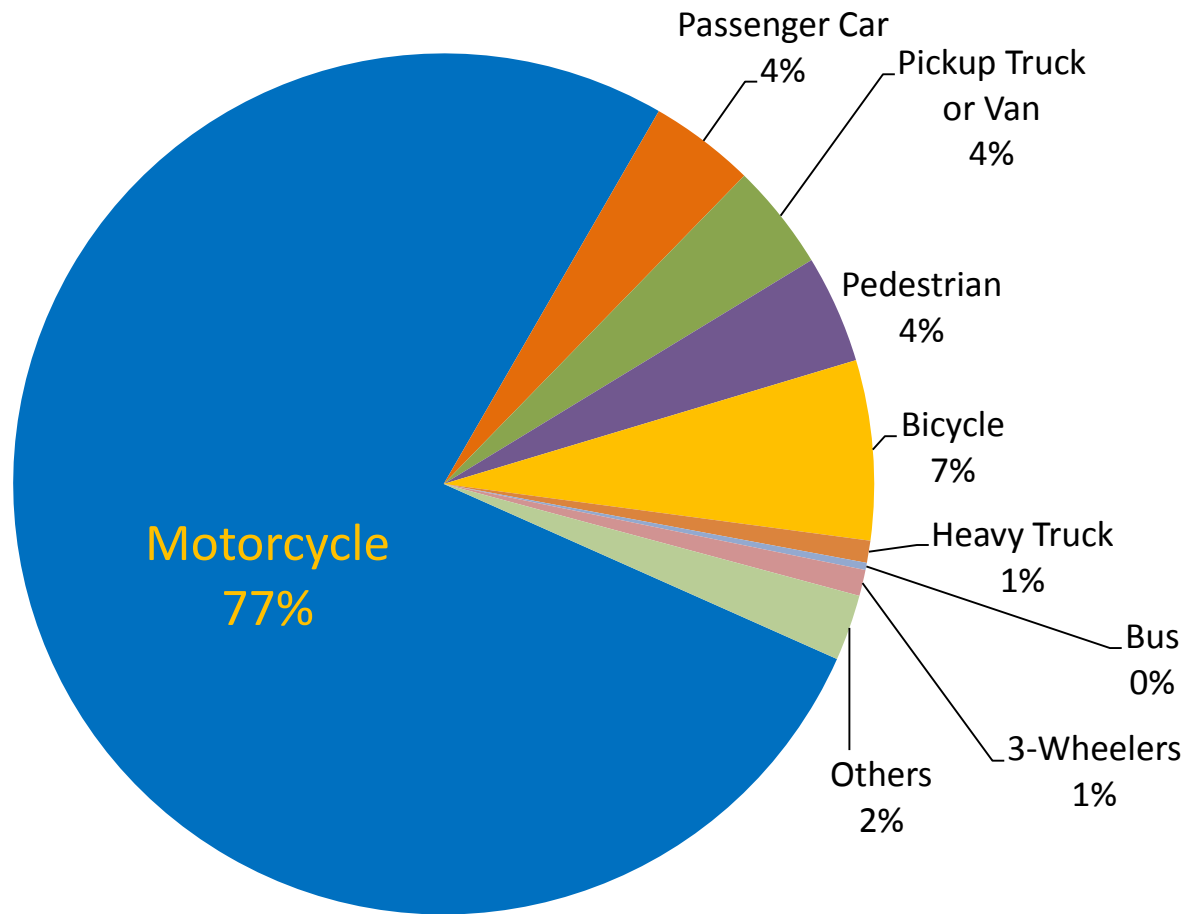
Proportion of Road Crashes classified by Road User Types in 2002-2011



Proportion of **Fatalities** classified by **Road User Types** in 2012



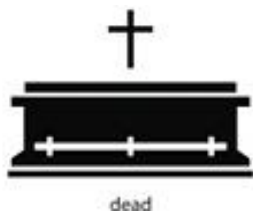
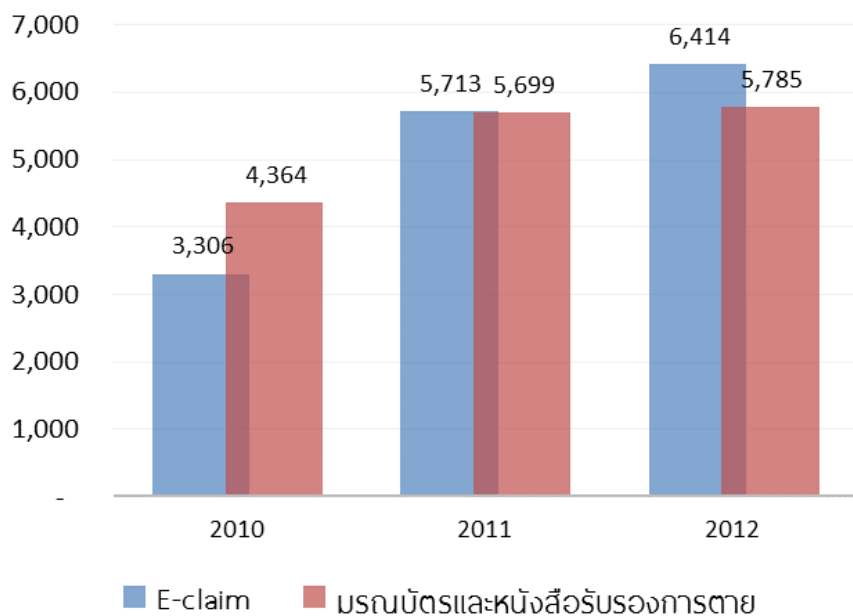
Proportion of **Severe Injuries** due to Road Crashes classified by **Road User Types** in 2012



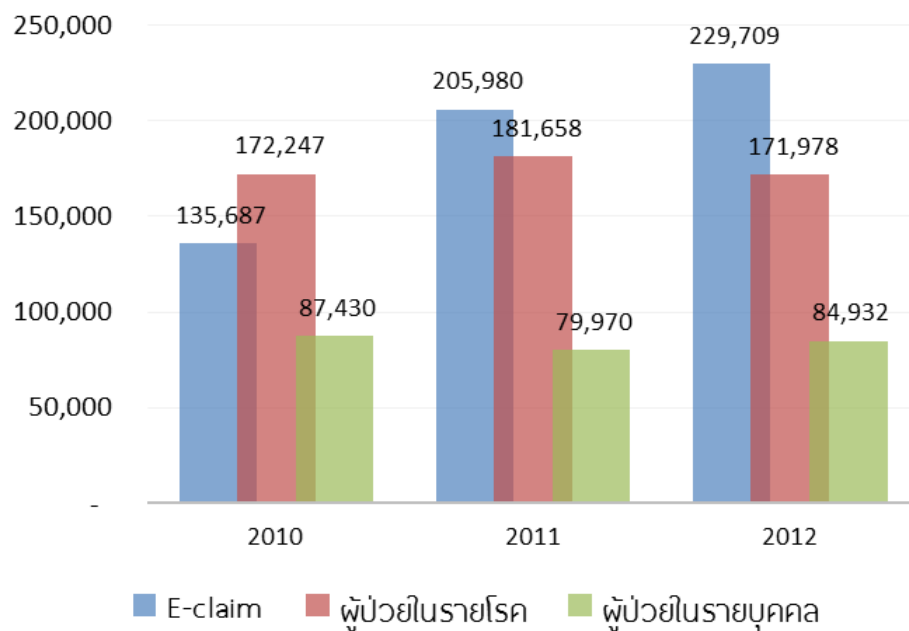
Number of Fatalities due to **Motorcycle Crashes**, 2010-2012

Source: Ministry of Public Health and Road Accident Victims Protection Co. Ltd. (RVP)

Fatalities

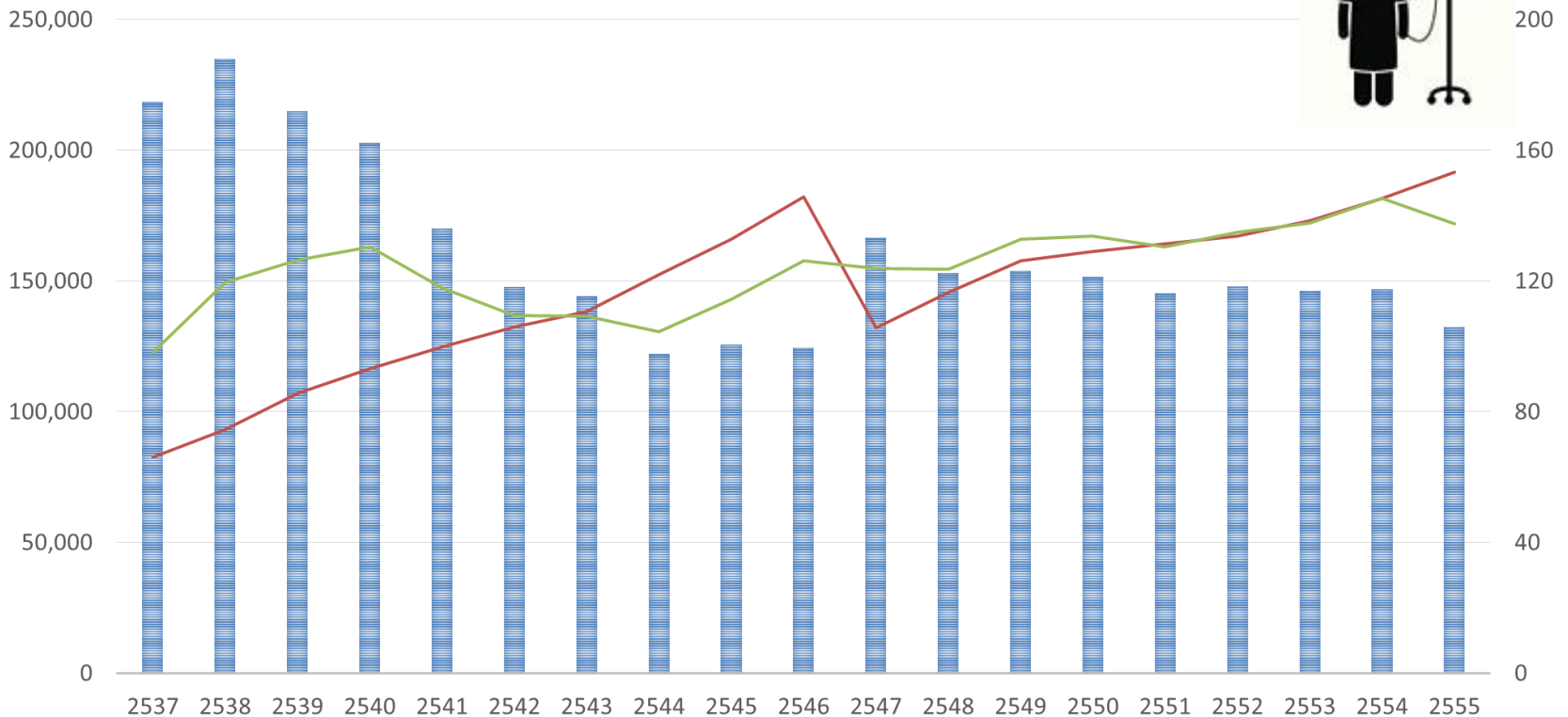


Injuries



Injuries due to Motorcycle Crashes in Thailand, 1994-2012

(Bangkok is not included)

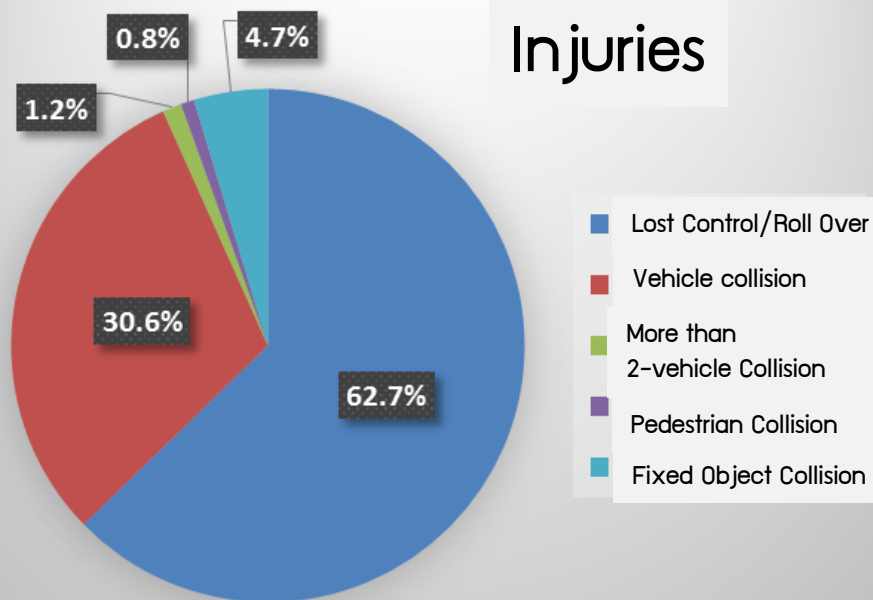


Source: MOPH

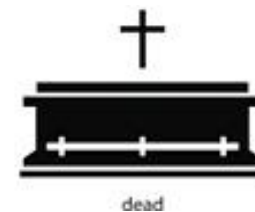
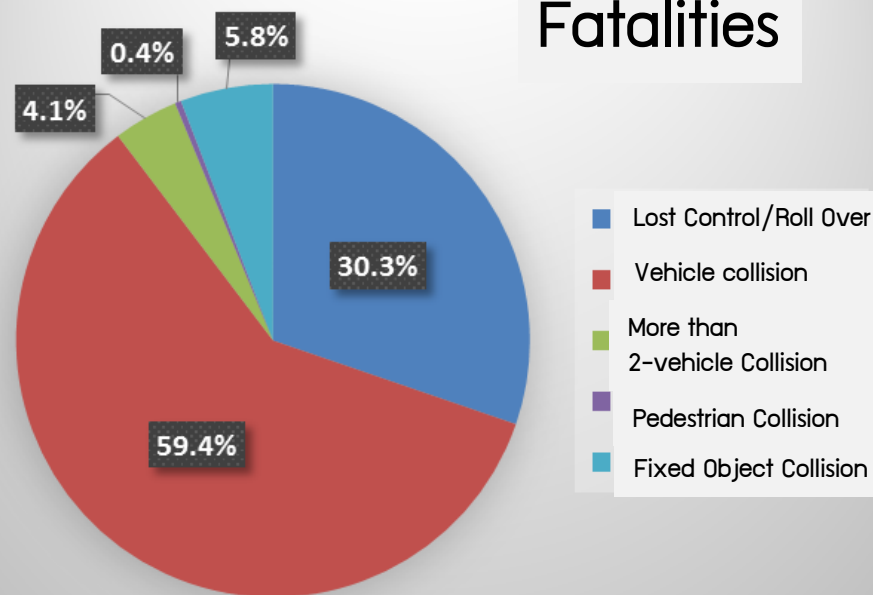
- Number of Motorcycles ('000 veh)
- Number of Injuries
- ▒ Injuries per Number of Motorcycles

Motorcycle Collision Pattern in Thailand, 2010-2012

Injuries

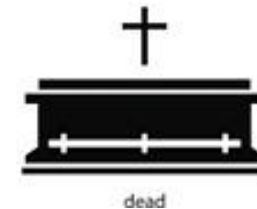
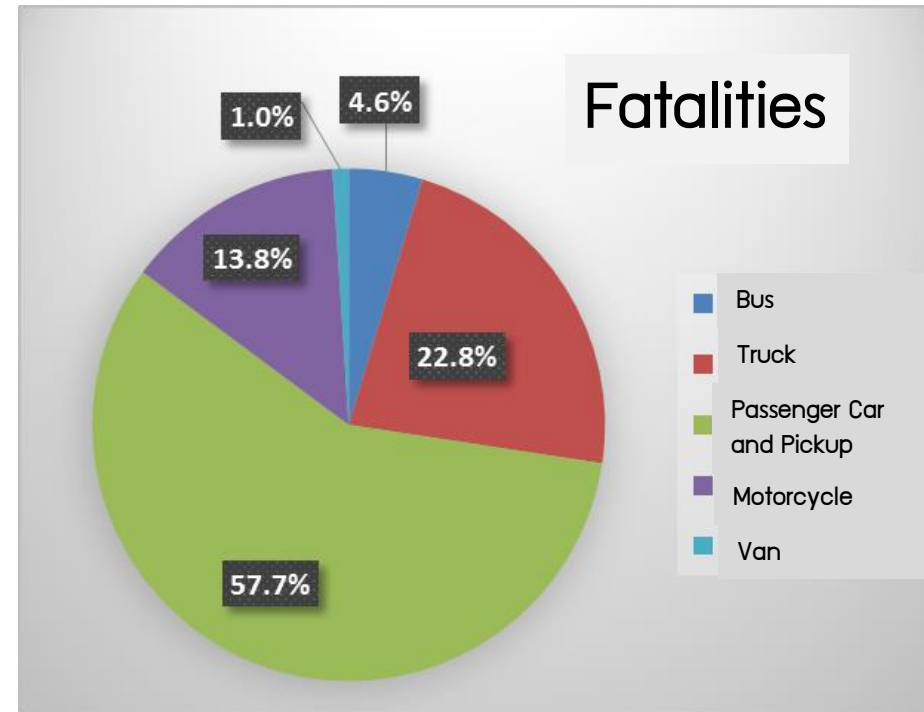
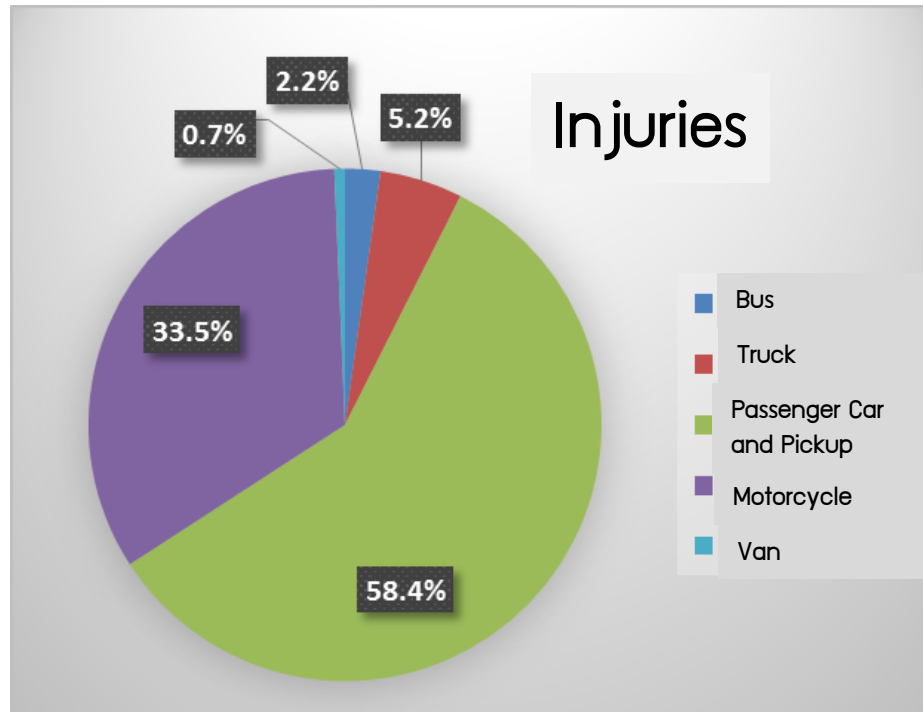


Fatalities



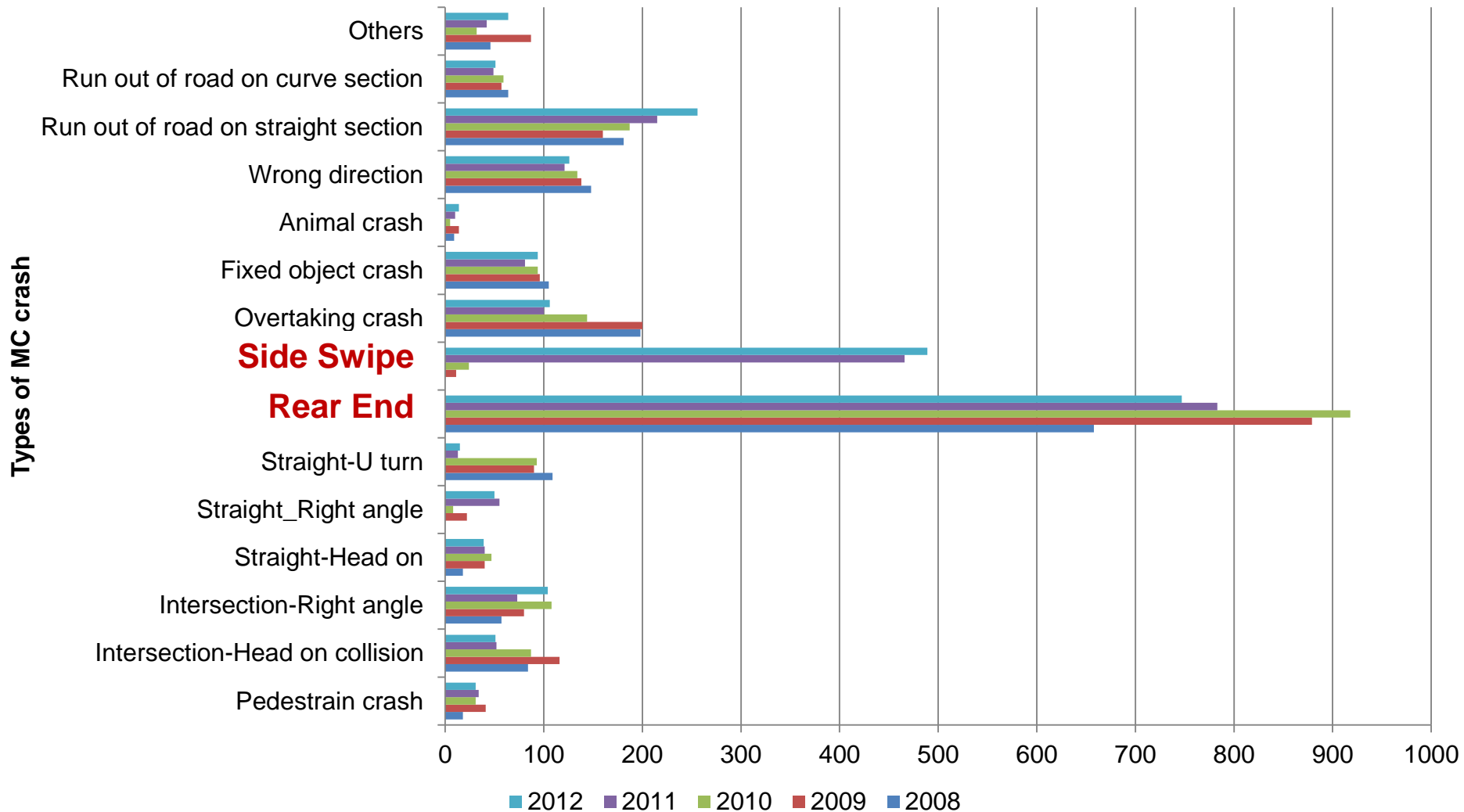
Source: E-claim from Road Accident Victims Protection

Other Vehicles Involved in Motorcycle Crashes, 2010–2012



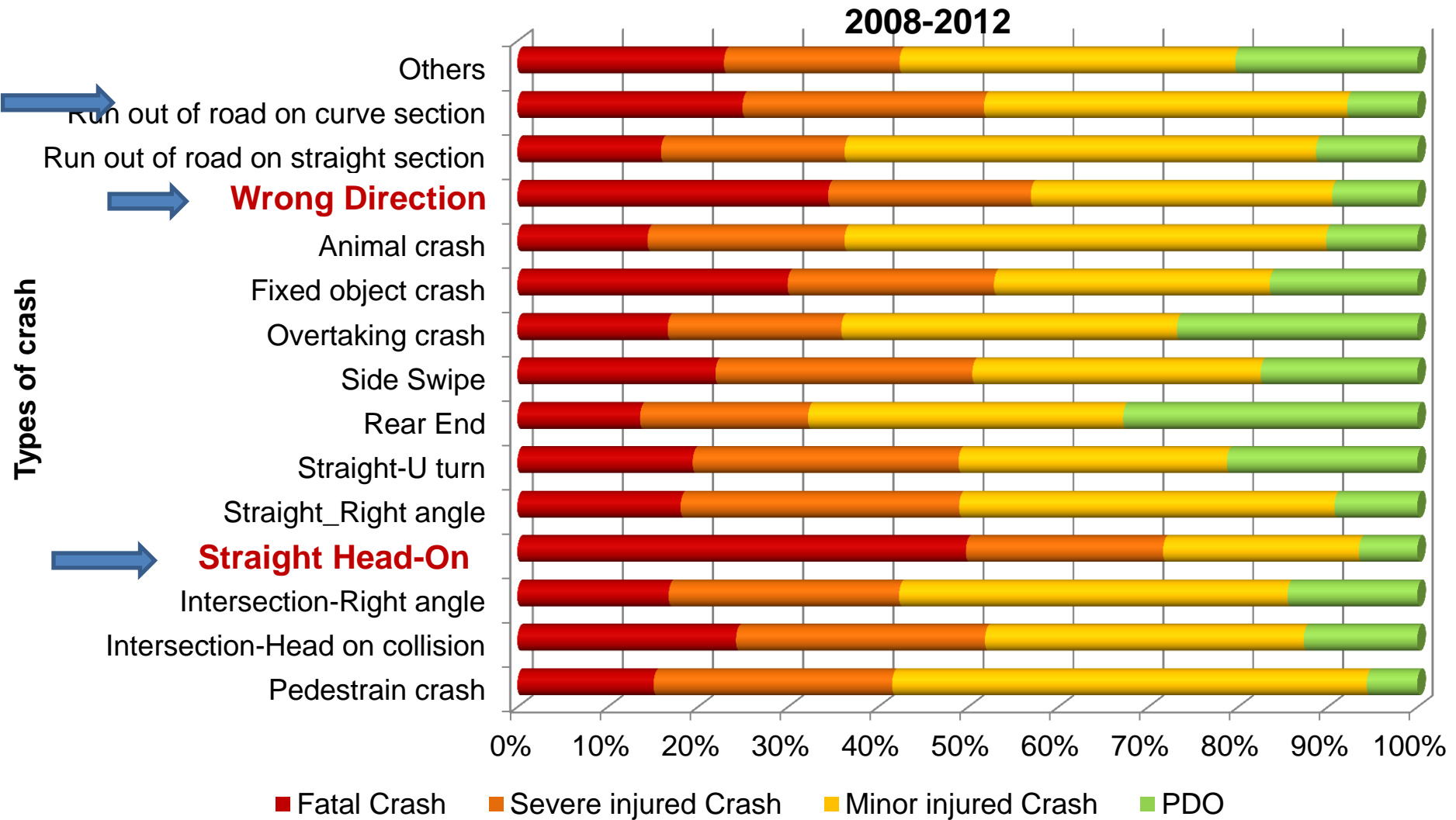
Source: E-claim from Road Accident Victims Protection

Types of Motorcycle Crashes on National Highways, 2008-2012



Source: Department of Highways. Ministry of Transport

Crash Severity by Types of Motorcycle Crashes, 2008-2012

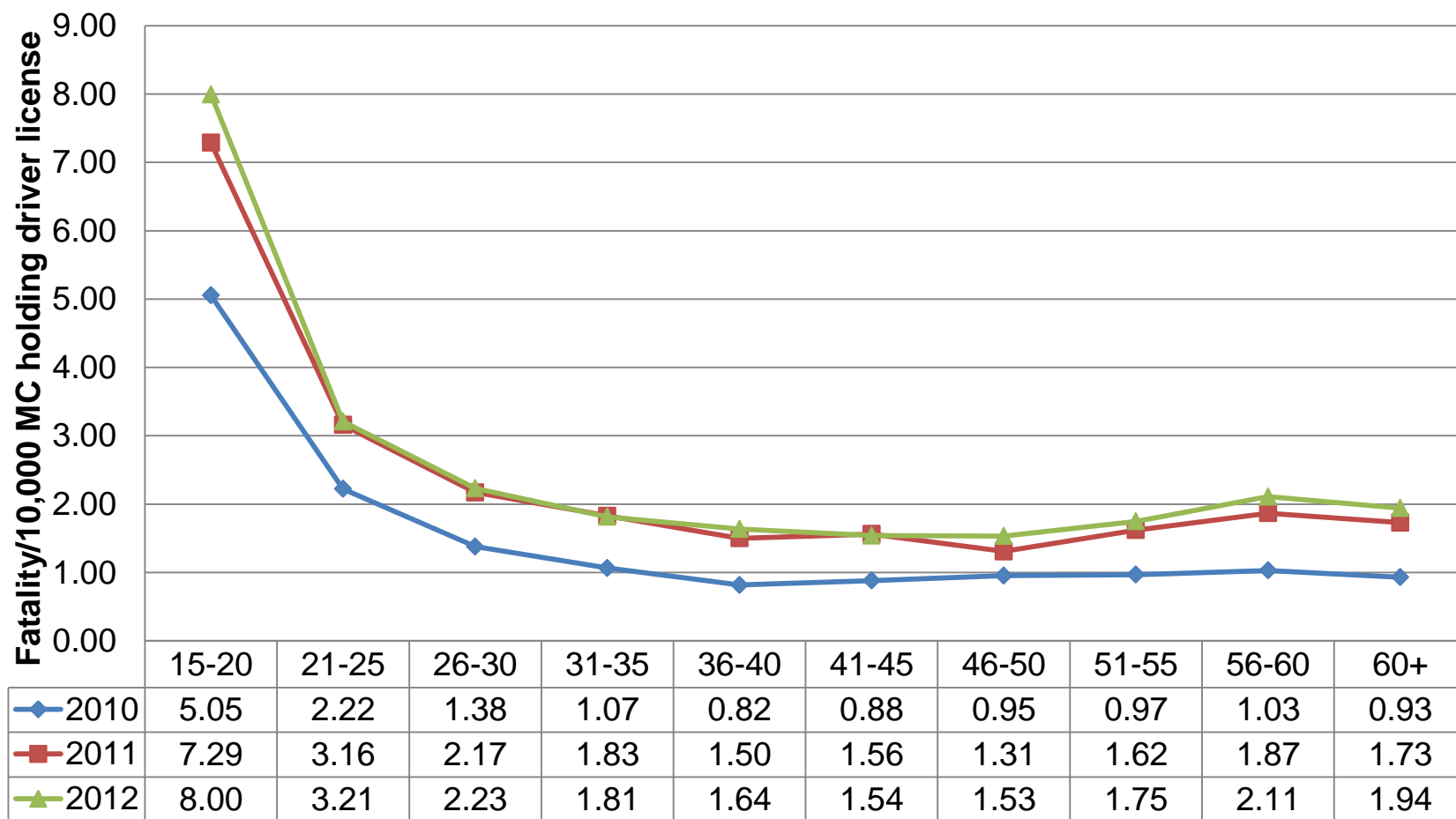


Source: Department of Highways. Ministry of Transport



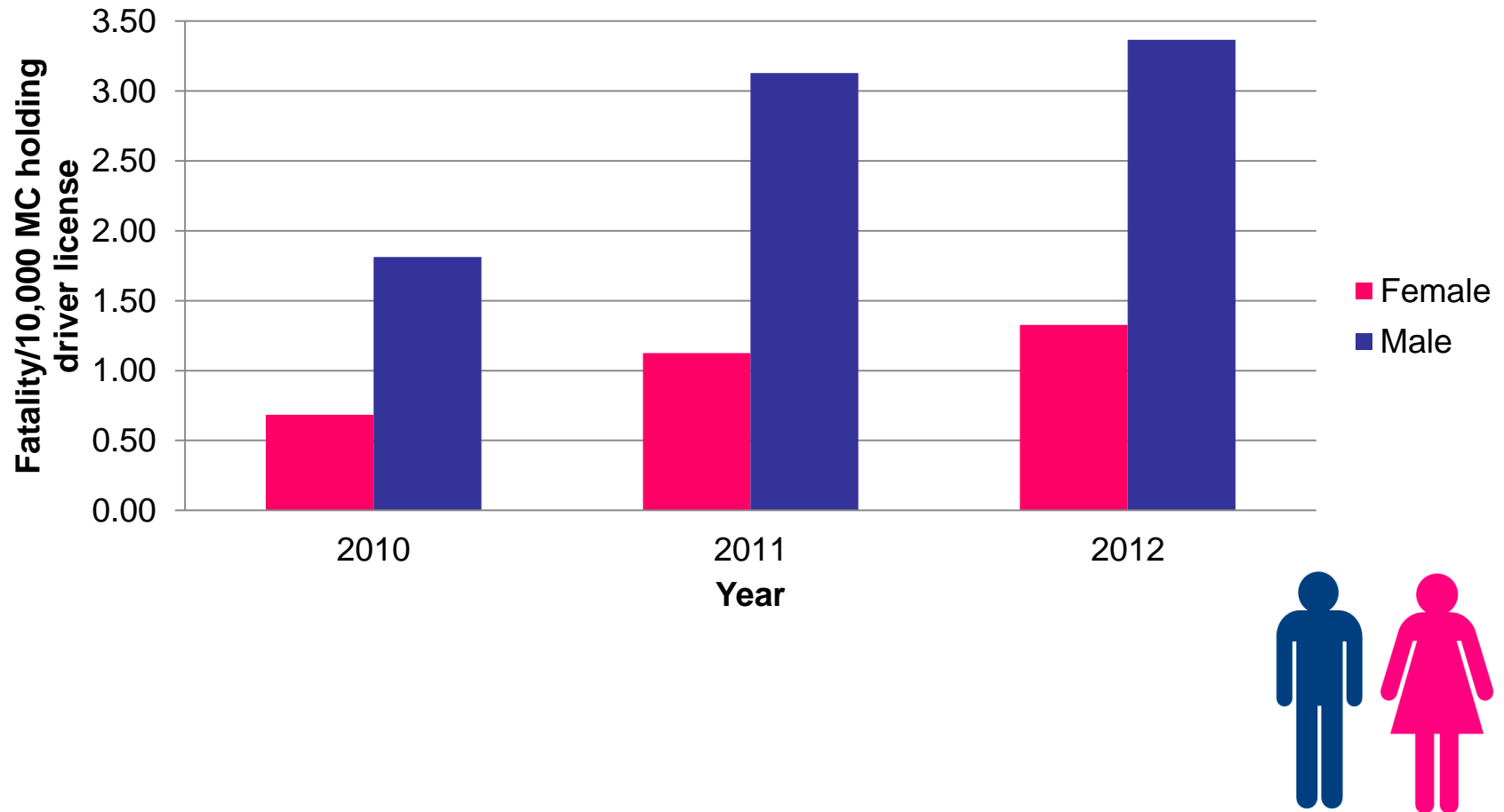
Motorcycle Crash Risk Groups

MC Fatalities per 10,000 MC License by Age, 2010-2012



Source: E-claim from Road Accident Victims Protection

Number of Motorcycle Casualties by Gender, 2010–2012



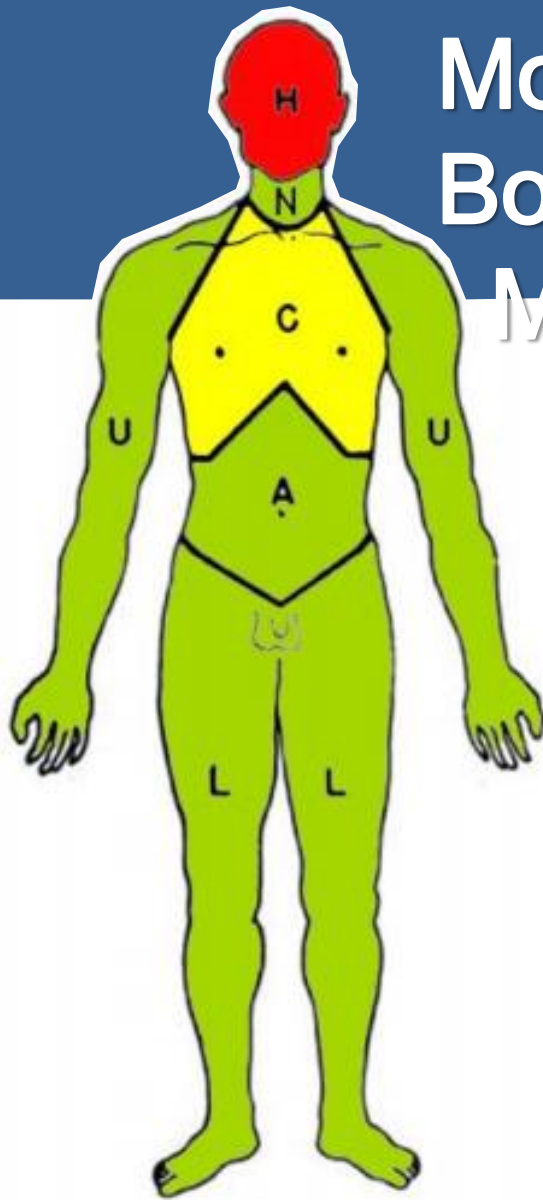
Source: E-claim from Road Accident Victims Protection

Motorcycle Casualties



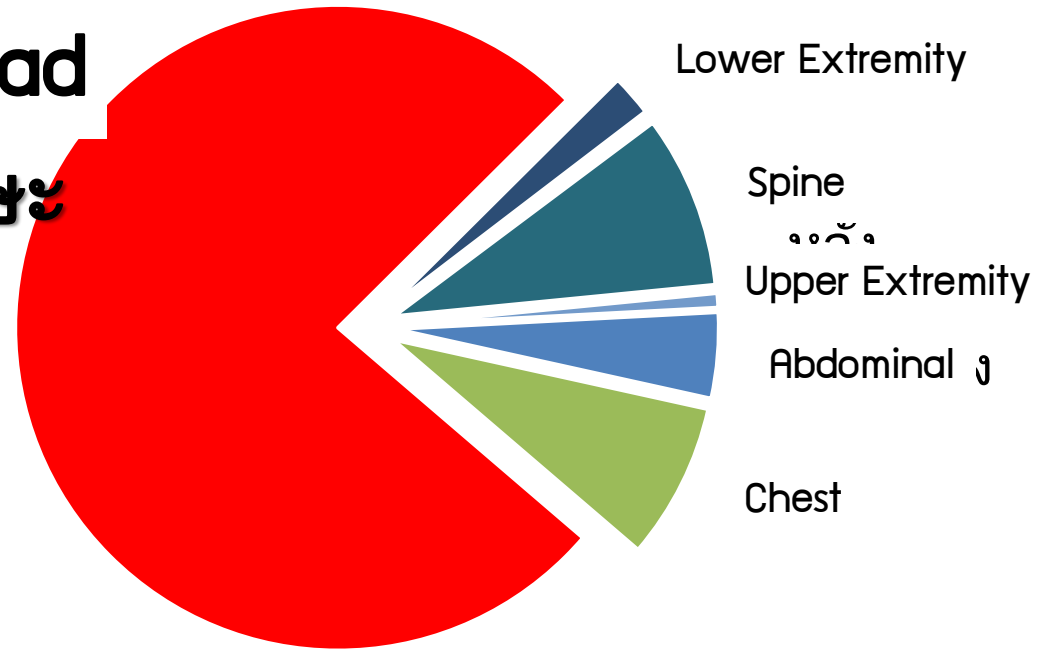
Motorcycle Fatalities by Injured Body Region

More than 70% is Head Injuries



Head

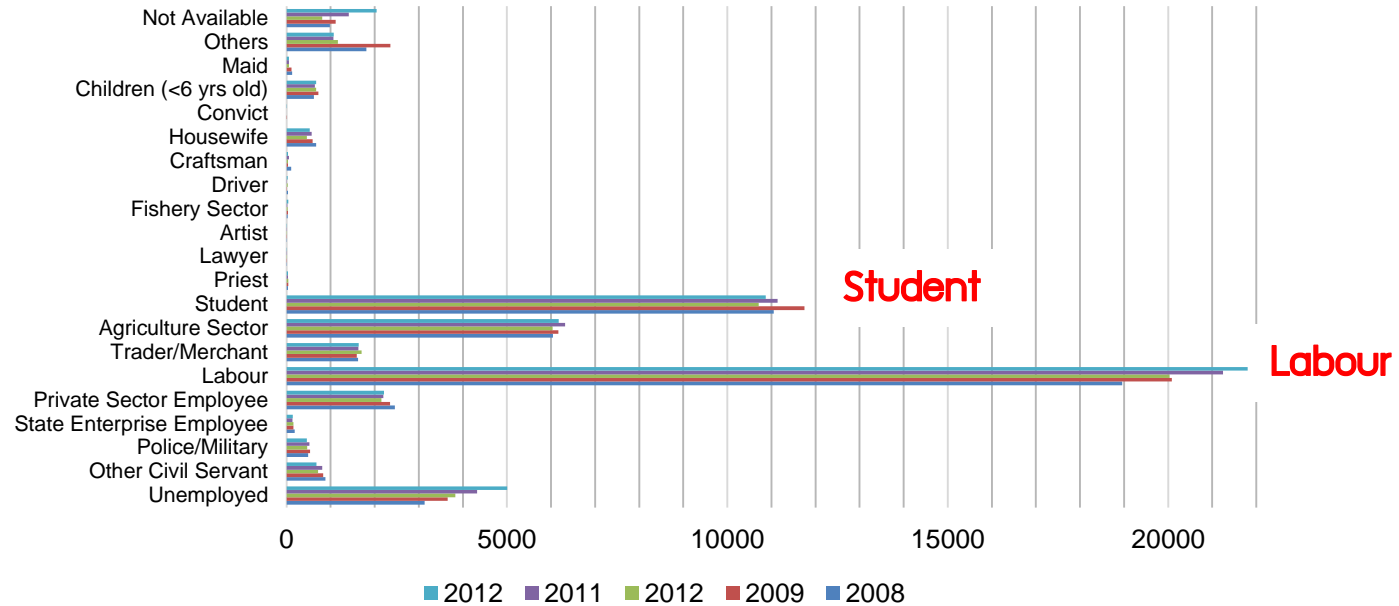
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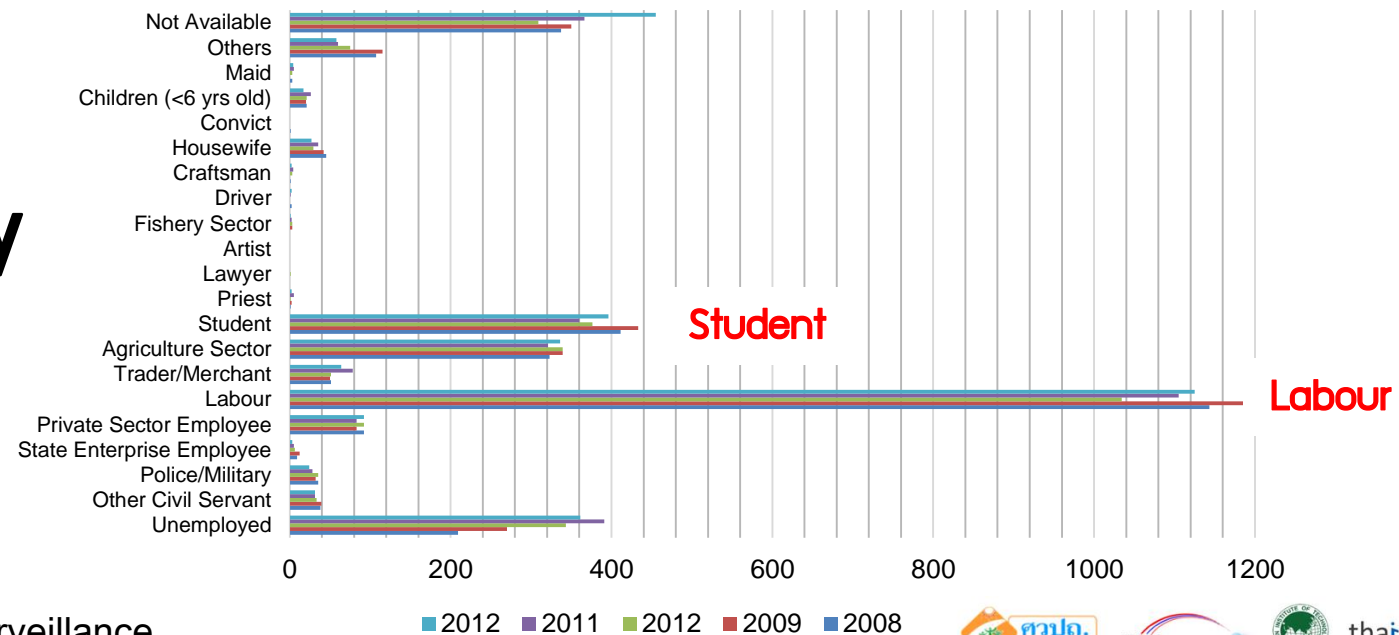
จำนวนการเสียชีวิต จำแนกตามช่วงอวัยวะ
ที่บาดเจ็บ

Motorcycle Casualties by Occupation, 2008–2012

Injury



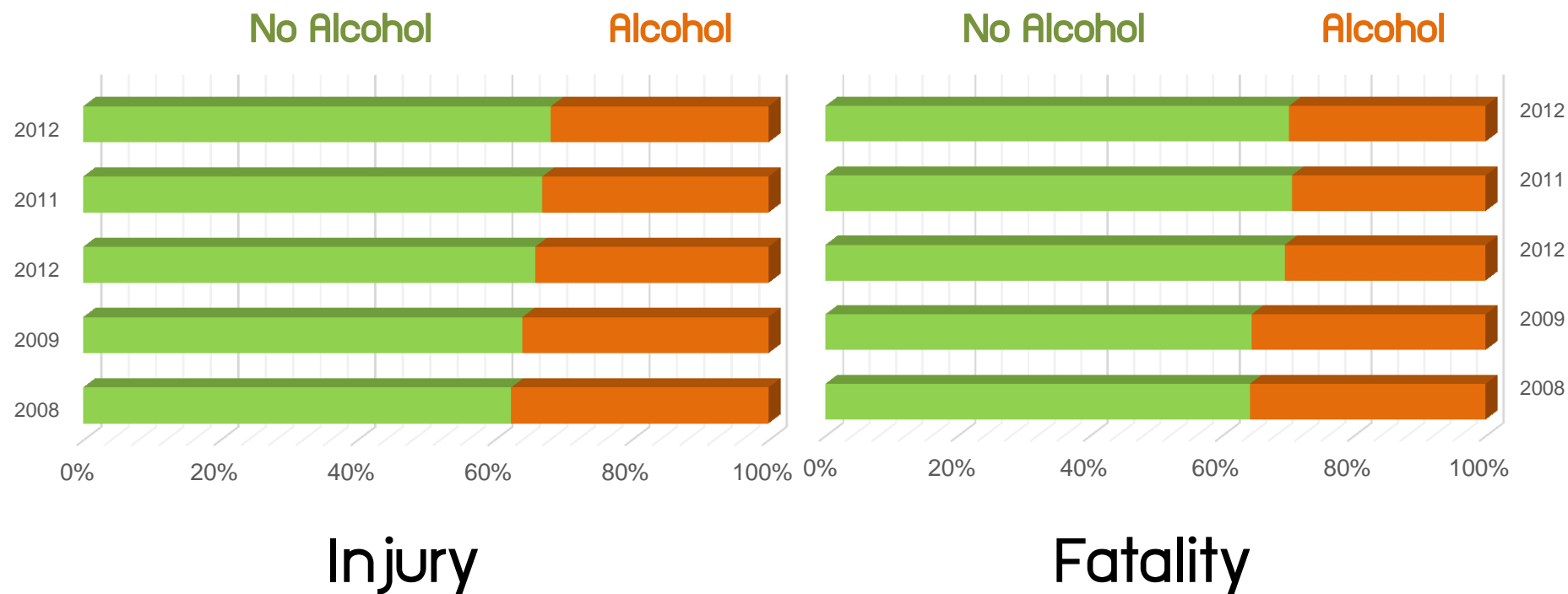
Fatality



Source: Injury Surveillance

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Motorcycle Casualties by Alcohol Influence, 2008–2012

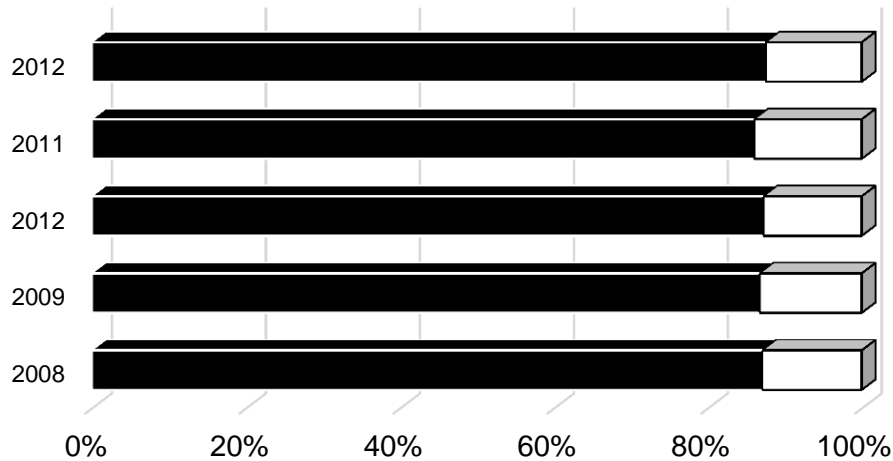


Source: Injury Surveillance

Page 10

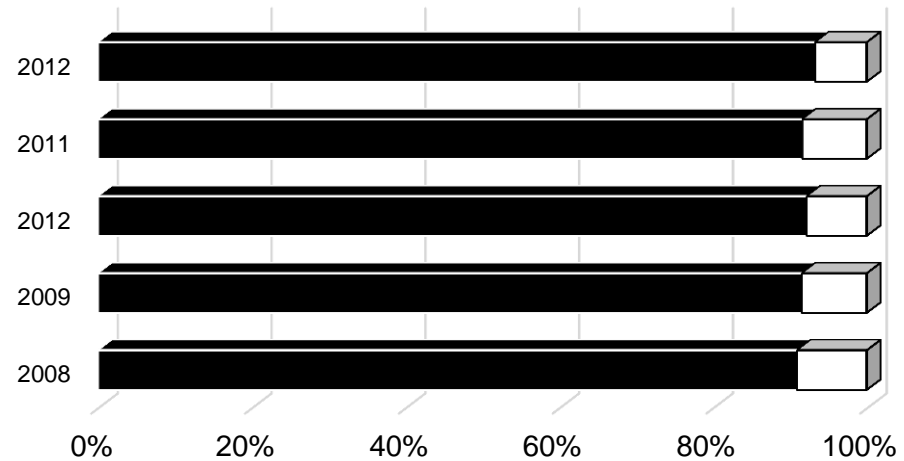
Motorcycle Casualties by Helmet Use, 2008–2012

No Helmet Helmet



Injury

No Helmet Helmet



Fatality

Source: Injury Surveillance System (IS)

Helmet Use Rate

 **ห่วยใครให้ใส่หมวก**
 ร่วมกันออกนโยบายใส่หมวกกันน็อกในองค์กร



คุณ ชัยวัฒน์ โสภะเดช คุณ วิภาณี ชุมวิระพงษ์ คุณ วิกรม วัฒนสินธุ์ คุณ กฤษณะ ใสใจ คุณ นันทลา วงศ์ผู้ดี

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 สวมหมวกนิรภัย
100%

Helmet Use Rate of Motorcycle Users in Thailand*



	2010	2011	2012	2013
Rider	53%	54%	52%	51%
Passenger	19%	24%	20%	19%
Total	44%	46%	43%	43%

* Sample Size

1,484,669 MC Users in 2013

1,502,949 MC Users in 2012

1,244,140 MC Users in 2011

954,956 MC Users in 2010

Helmet Use Rate of MC Users in 2013

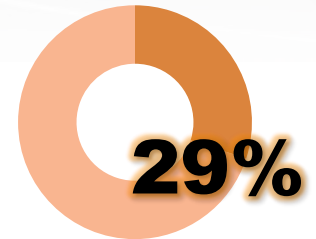
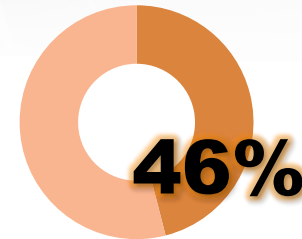
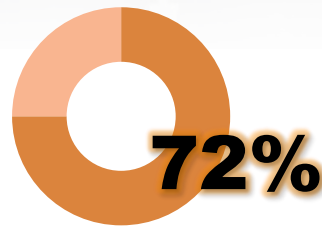
Urban

Suburban

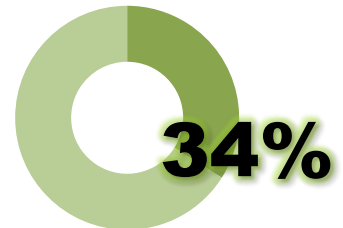
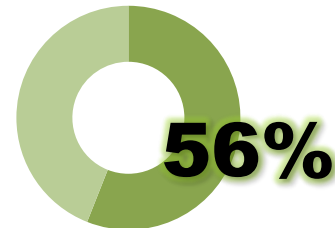
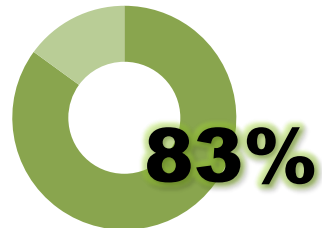
Rural



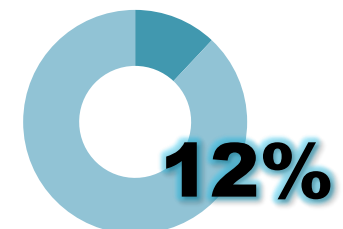
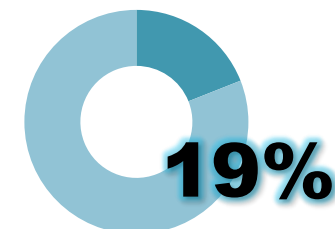
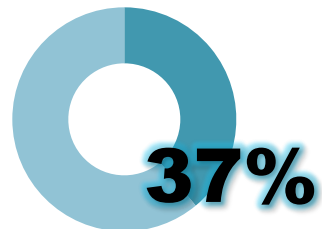
Rider and Passenger



Rider

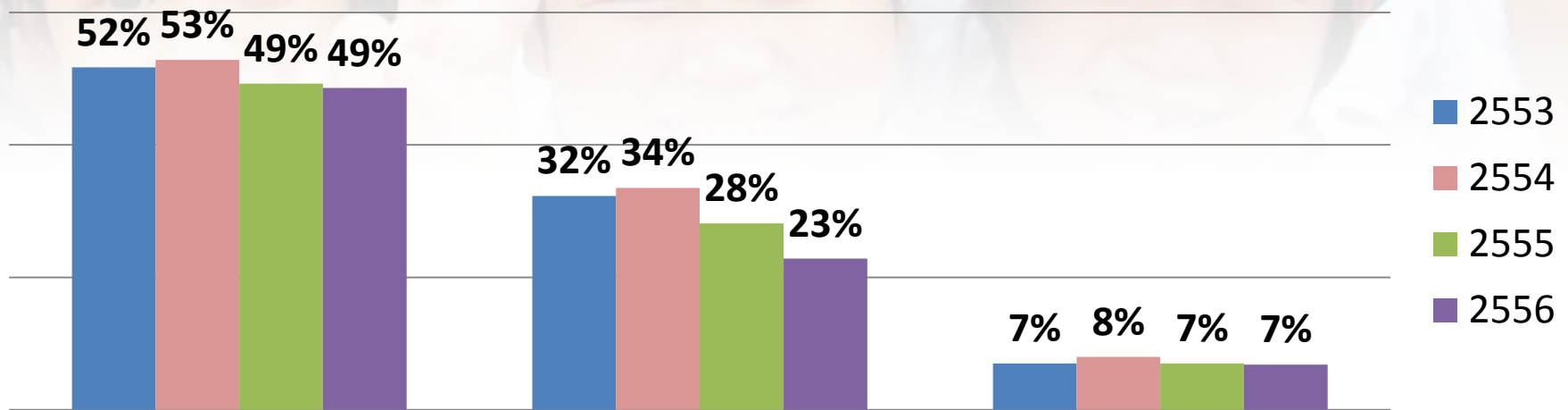


Passenger



Helmet Use Rate of Motorcycle Users 2010–2013

by Age Group



Adult

Rider and Passenger



Young

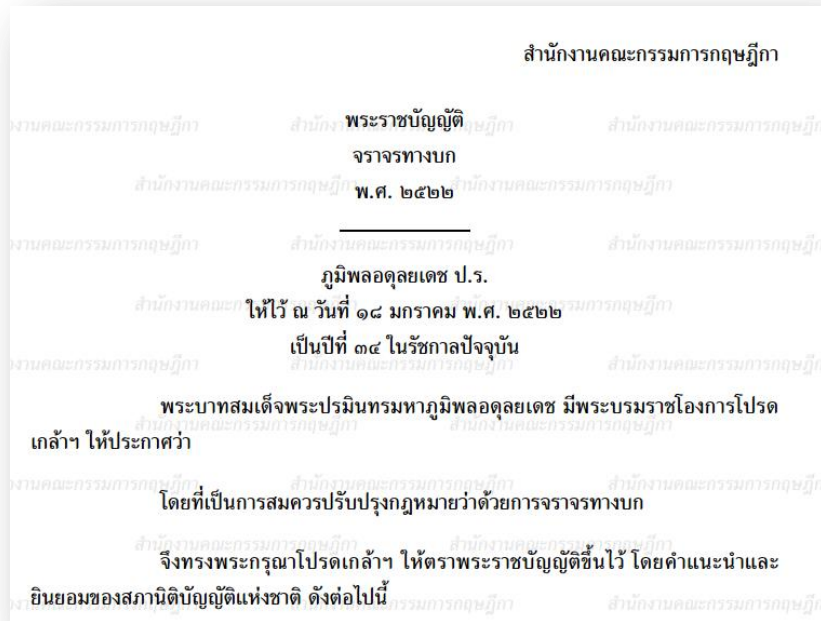
Rider and Passenger



Kids

Passenger Only

Land Traffic Act, B.E. 2522 (1979)



Not specific for motorcycle. Only for some sections such as:

Section 35: The driver of truck, passenger car, motorcycle, vehicle of low speed or travelling at lower speed than those of other vehicles moving in the same direction shall keep to the curb side of the roadway as close as possible (Penalty \$12-30)

Section 121: The rider of motorcycle shall sit on the saddle, provided for motorcycle rider.

If the competent officer specifies in the registration to be able to carry passengers, the passenger shall ride at the back seat provided for the passenger, or in the side-car.

(Penalty not more than \$15)

Section 122: The rider and passenger of motorcycle shall wear a motorcycle helmet.

(Penalty not more than \$15)

Ministerial Regulations, and Motor Vehicle Act, B.E. 2522 (1979)

(๓) สำหรับรถยนต์อื่นนอกจากที่ระบุไว้ใน (๑) หรือ (๒) หรือรถจักรยานยนต์ให้ขับในเขตกรุงเทพมหานคร เขตเมืองพัทยา หรือเขตเทศบาลไม่เกินชั่วโมงละ ๘๐ กิโลเมตร หรือนอกเขต ดังกล่าวให้ขับไม่เกินชั่วโมงละ ๙๐ กิโลเมตร

Speed Limit for motorcycle in urban area is not more than 80 km/hr, and outside urban area is not more than 90 km/hr. (Penalty not more than \$30)

ผู้ที่ต้องการขอมีใบอนุญาตขับขี่รถจักรยานยนต์ ต้องเป็นบุคคลที่มีอายุ 15 ปีบริบูรณ์ขึ้นไป และใบอนุญาตขับขี่รถจักรยานยนต์จะมีอายุ 5 ปีนับตั้งแต่วันออกใบอนุญาตขับรถ โดยจะได้รับหลังจากมีใบอนุญาตขับรถจักรยานยนต์ส่วนบุคคลชั่วคราว มาเป็นเวลา 1 ปี

Motorcycle driving license: Age > 15 years

Research Agenda on Motorcycle Safety

- Design Standard and Safety Considerations for Exclusive Motorcycle lane
- Child Safety for Motorcycle Usage
- Behavioral Influence Model for Promoting Helmet Use for Young Riders
- Speed Management of Motorcycle in Urban Area



Thank you..

