Risk factors for Motorcycle Injuries and implications for Prevention

FACTORS RELATED MOTORCYCLE INJURIES ,THAILAND

- *Road factor*

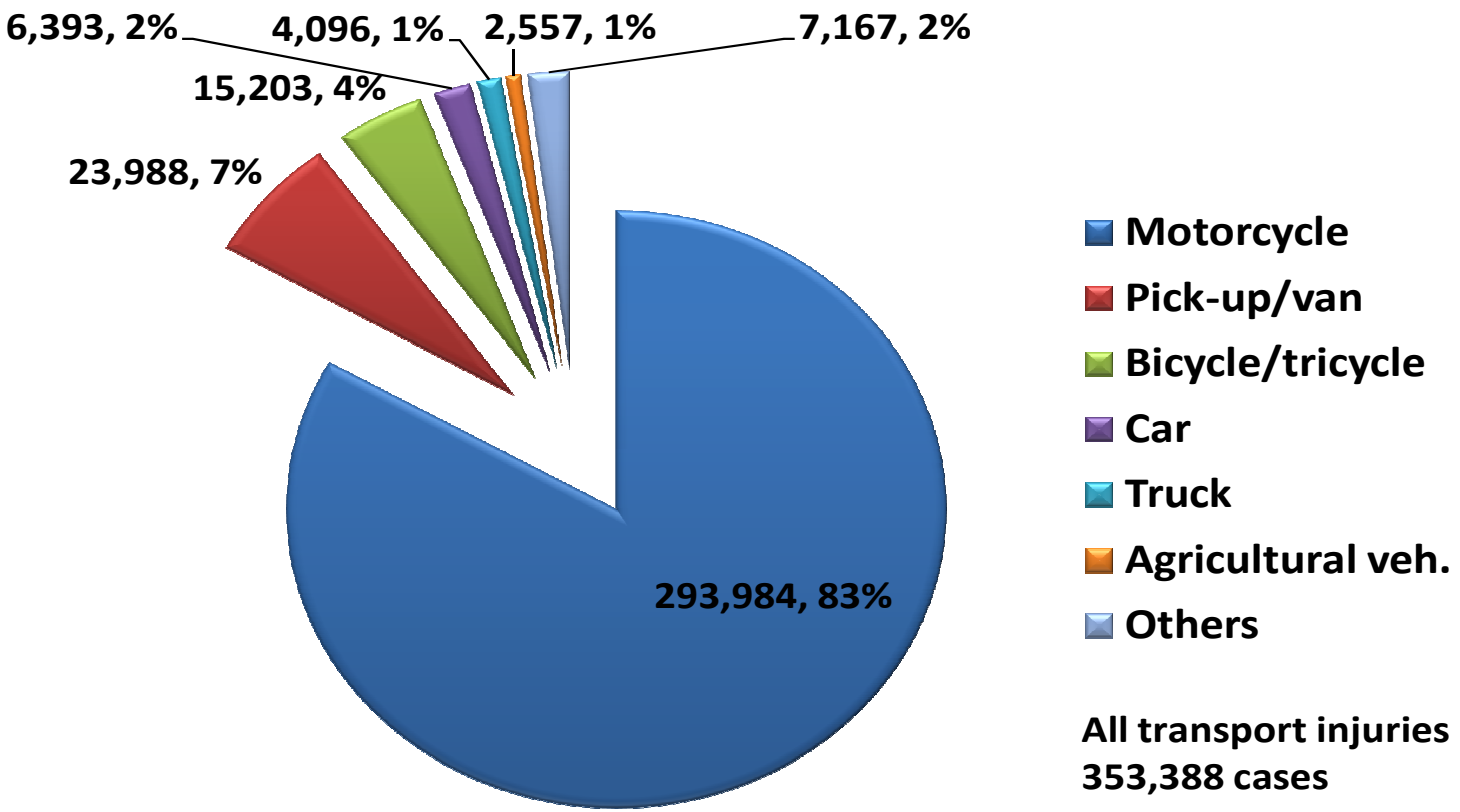
- **Motorcycle factor**

- the motorcycle itself and the manufacturers'advertisement

- **Driver factor**

- **The major risks or behavior risk (alcohol, speed, unhelmet, age + license)**

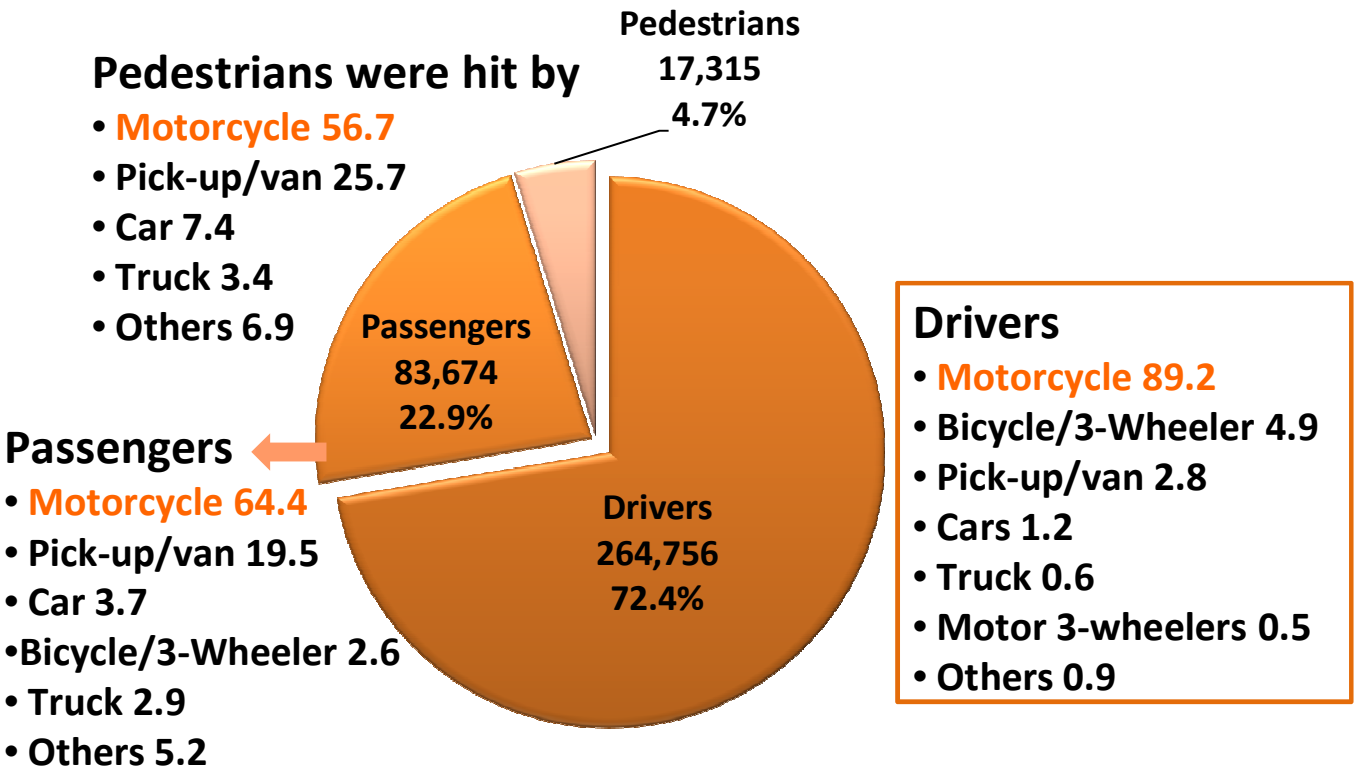
Figure1 Proportion of types of vehicles-related transport injuries Thailand 2005-2009



Source: 28 Sentinel hospitals, National Injury Surveillance System, Bureau of Epidemiology, Ministry of Public Health, Thailand

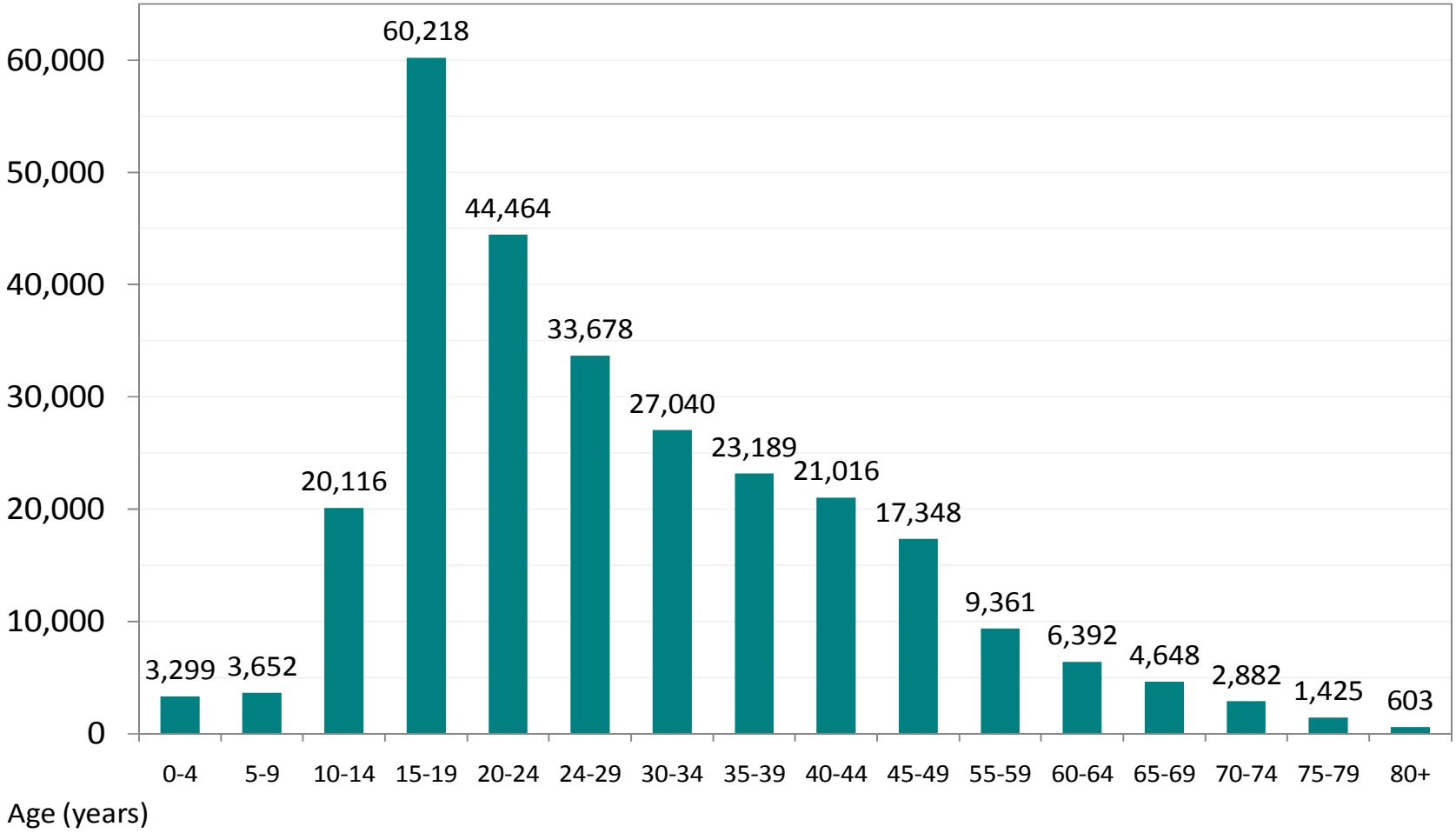
IS: Injury Surveillance

Figure2 MC injuries-related transport accidents Thailand 2005-2009



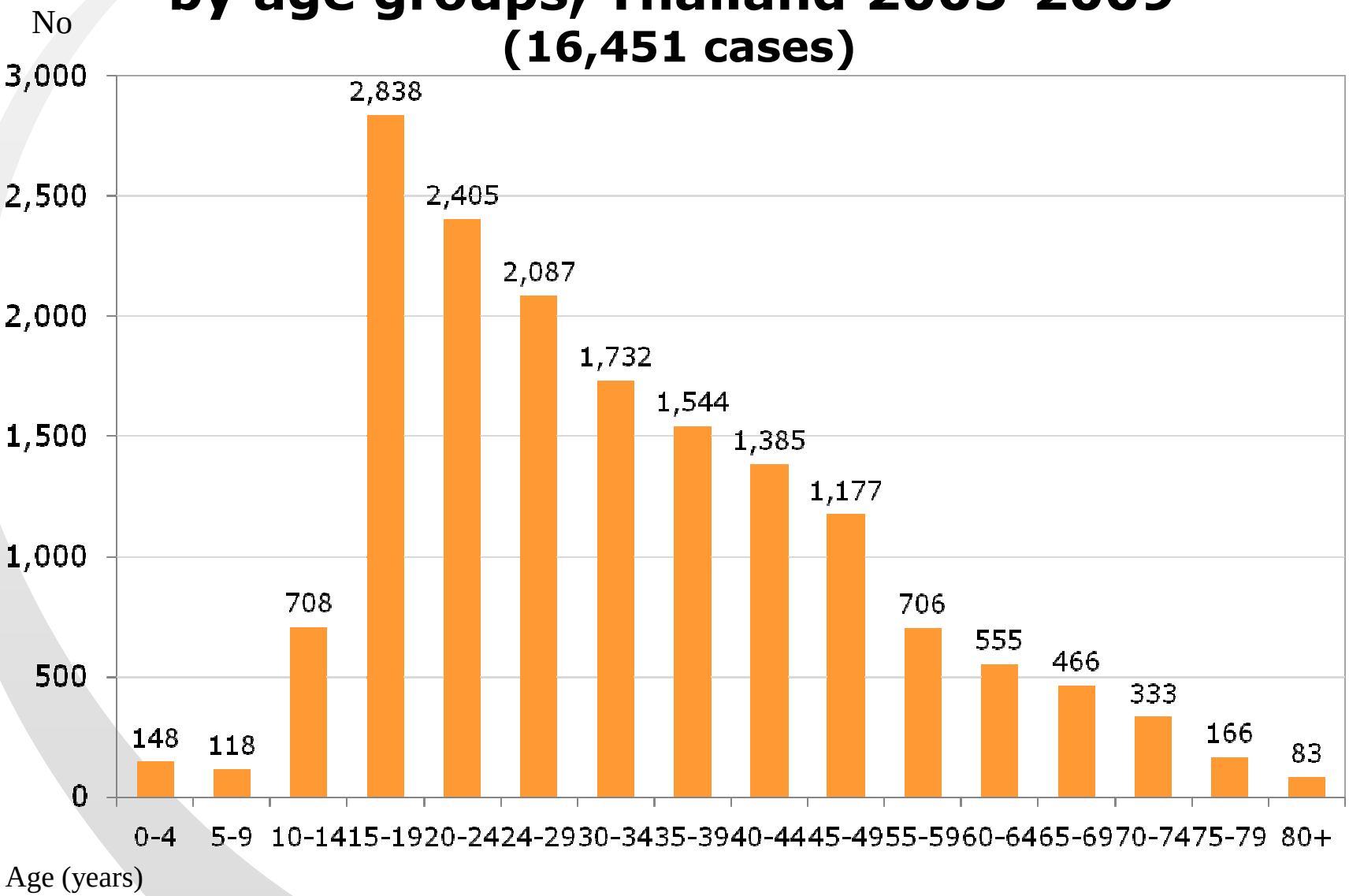
Source: 28 Sentinel hospitals, National Injury Surveillance System, Bureau of Epidemiology, Ministry of Public Health, Thailand

FIGURE 3 NUMBER OF INJURED PERSONS FROM MOTORCYCLE BY AGE GROUP YEAR 2005-2009
(TOTAL 293,044 CASES)



Source: 28 Sentinel hospitals, National Injury Surveillance System,
Bureau of Epidemiology, Ministry of Public Health, Thailand

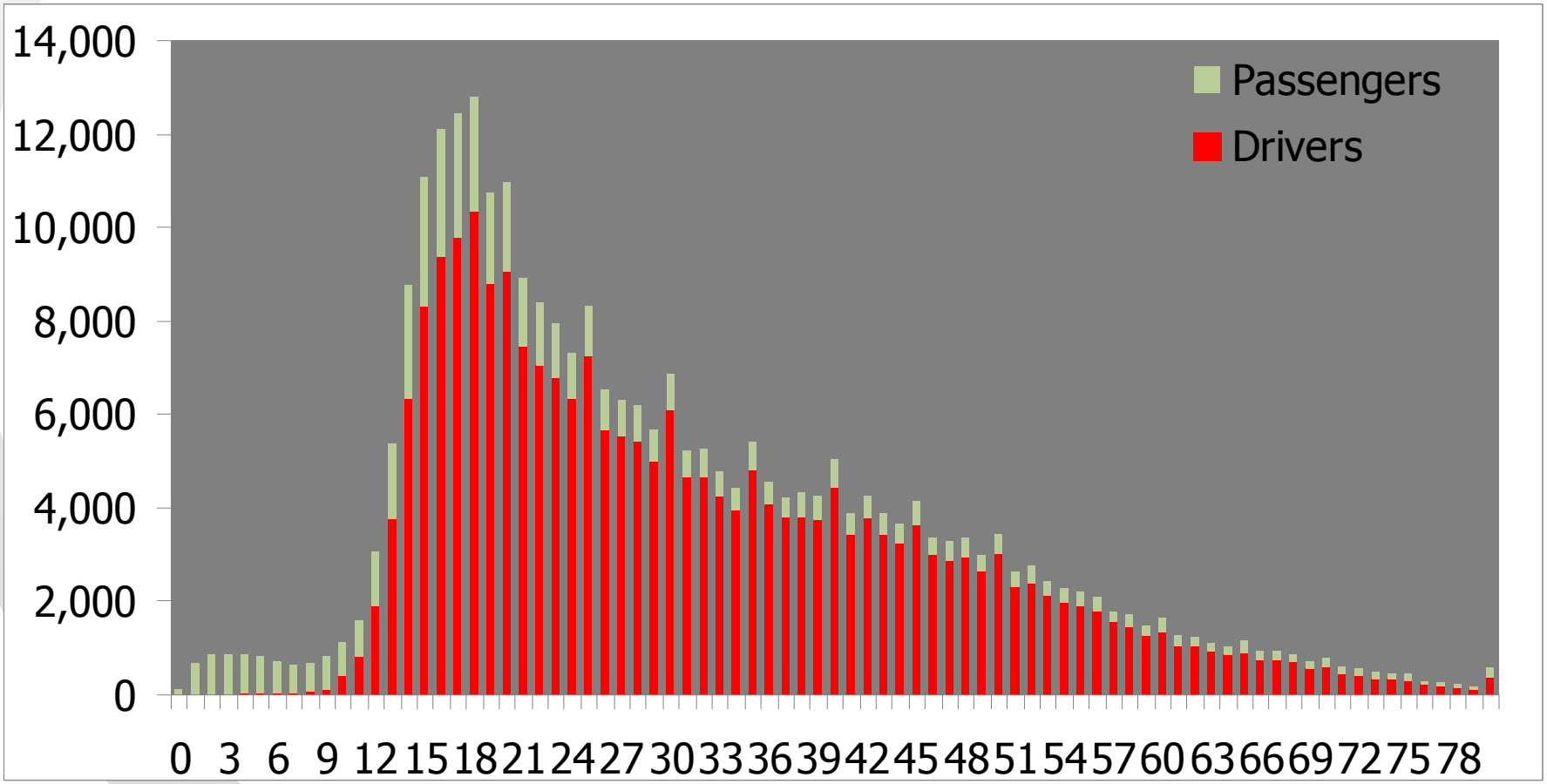
Number of severe injury DEATH-related motorcycle accidents by age groups, Thailand 2005-2009 (16,451 cases)



Source: 28 Sentinel hospitals, National Injury Surveillance System, Bureau of Epidemiology, Ministry of Public Health, Thailand

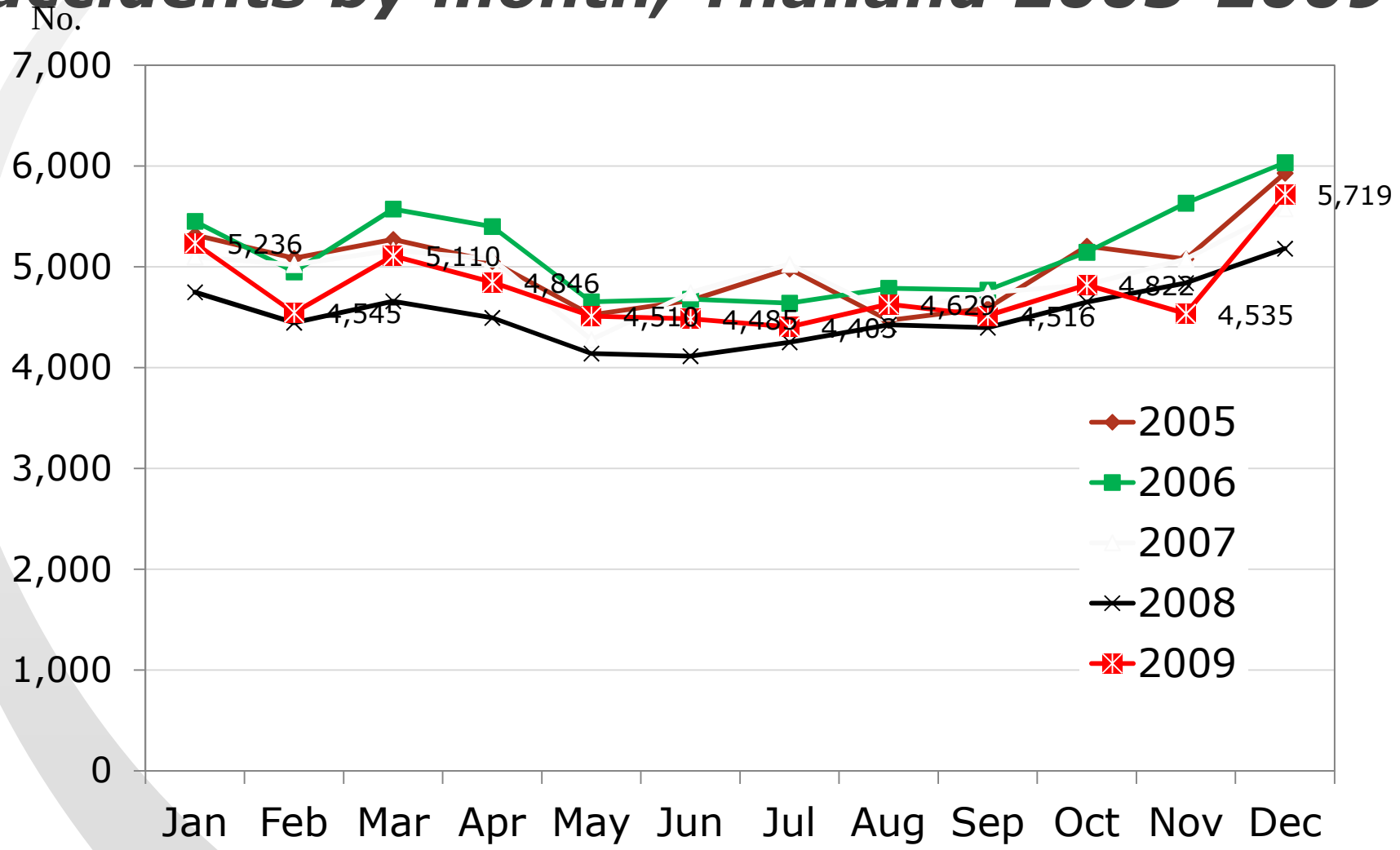
Number of severe injury-related motorcycle accidents

by road users type
Thailand, 2005-2009 (288,519 cases)



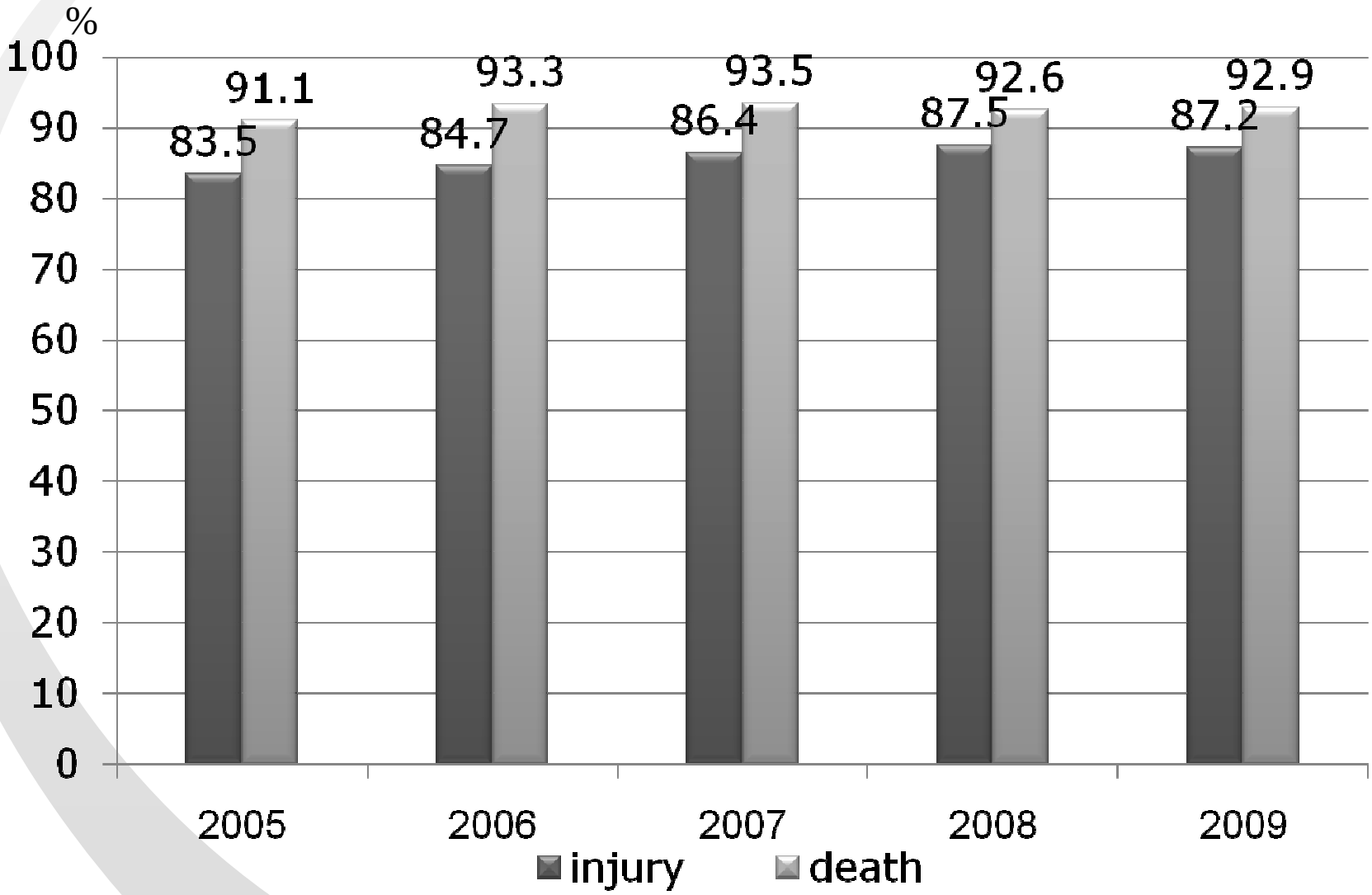
Source: 28 Sentinel hospitals, National Injury Surveillance System, Bureau of Epidemiology, Ministry of Public Health, Thailand

No. of severe injuries-related motorcycle accidents by month, Thailand 2005-2009



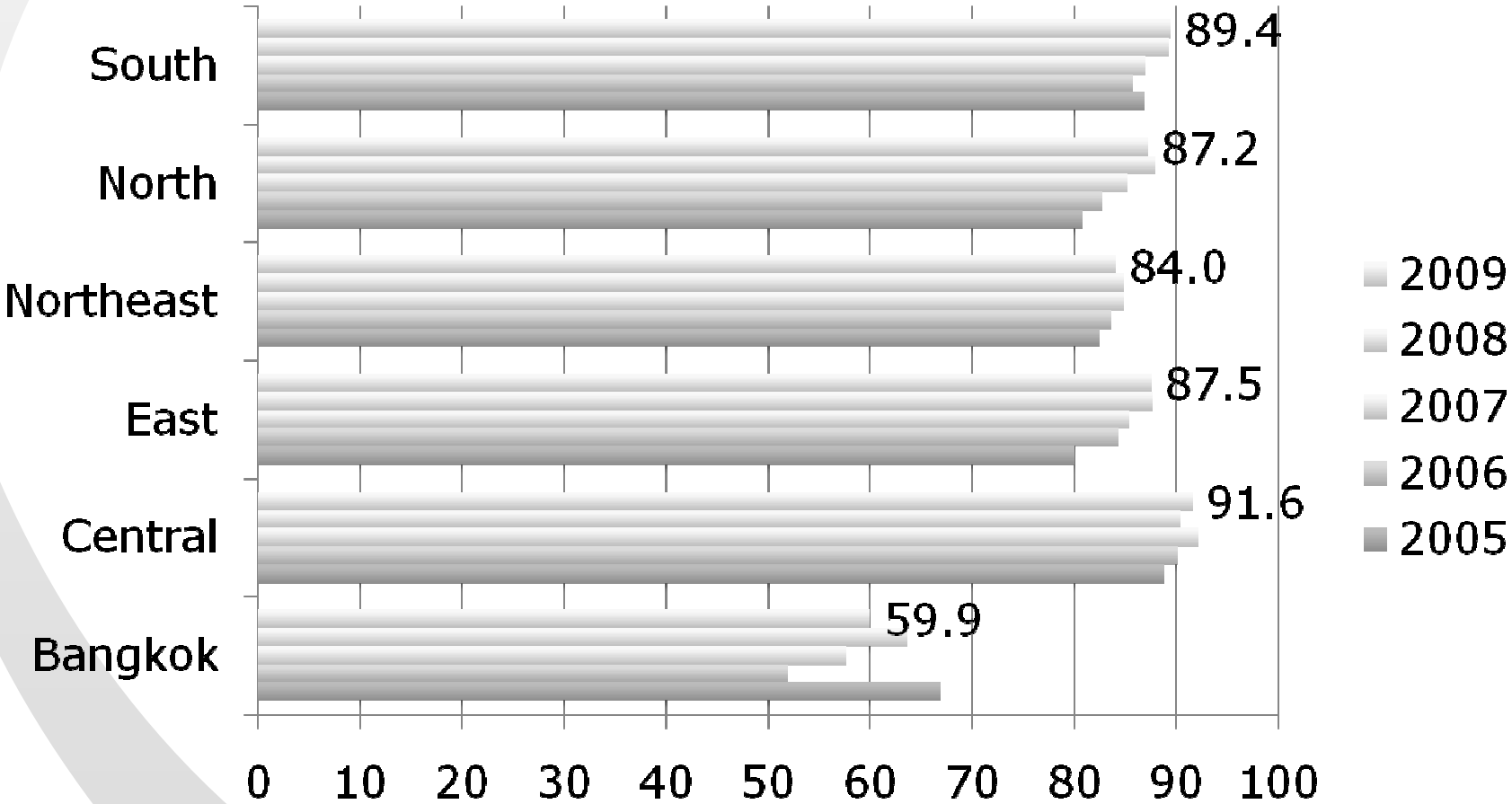
Source: 28 Sentinel hospitals, National Injury Surveillance System, Bureau of Epidemiology, Ministry of Public Health, Thailand

Percentage of non-helmet use by year
28 sentinel hospitals, Thailand 2005-2009



Source: 28 Sentinel hospitals, National Injury Surveillance System,
Bureau of Epidemiology, Ministry of Public Health, Thailand

Percentage of non-helmet use INJURIES by year 2005-2009



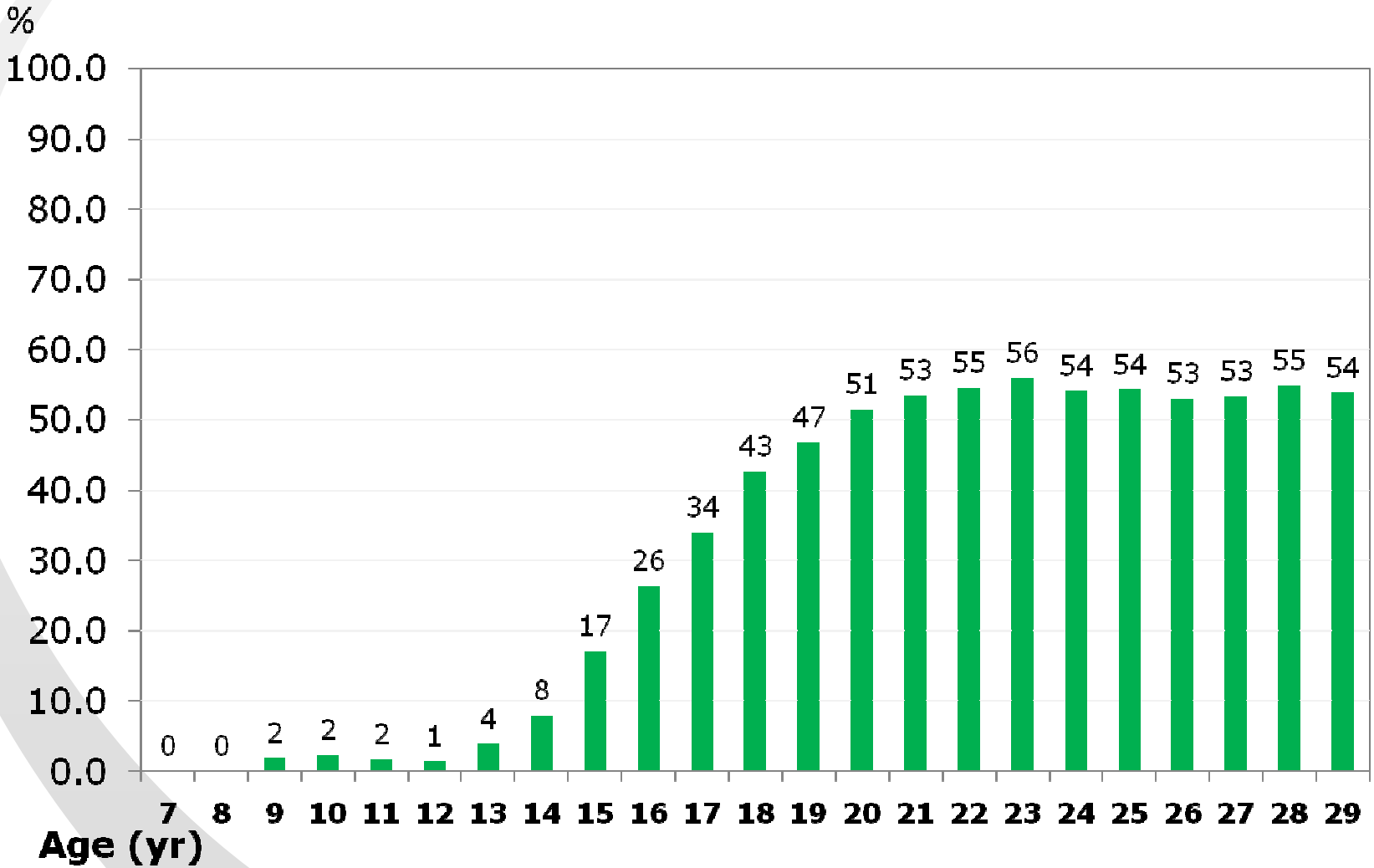
Source: 28 Sentinel hospitals, National Injury Surveillance System,
Bureau of Epidemiology, Ministry of Public Health, Thailand

Percentage and number of vehicle operator with alcohol drinking history classified by type of vehicle

	severe injuries		Death	
vehicle type	2005-9	2010	2005-9	2010
IE-TAN	30.16	38.96	18.75	33.33
Motorcycle	43.06	37.12	43.80	32.61
Car	42.17	33.93	27.46	21.62
Pickup	37.93	33.66	33.53	21.59
Motortricycle	29.80	33.45	24.68	36.84
Agricultural Vehicle	24.96	20.98	16.33	14.29
Bicycle	18.10	17.34	28.14	25.53
Truck	16.58	11.74	14.00	14.29

IS: Injury Surveillance

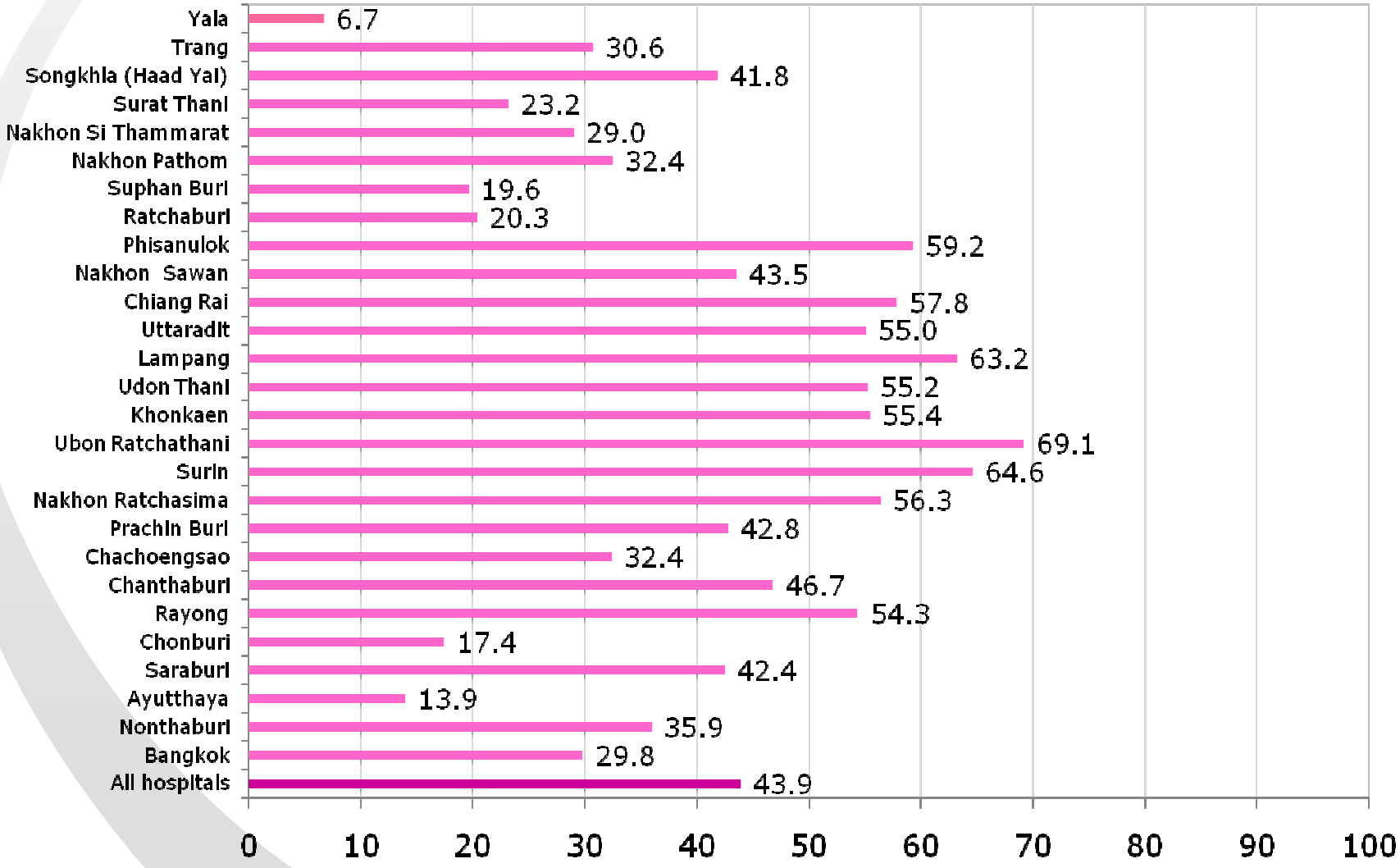
Percentage of alcohol use MC driver injuries, 2005-2009



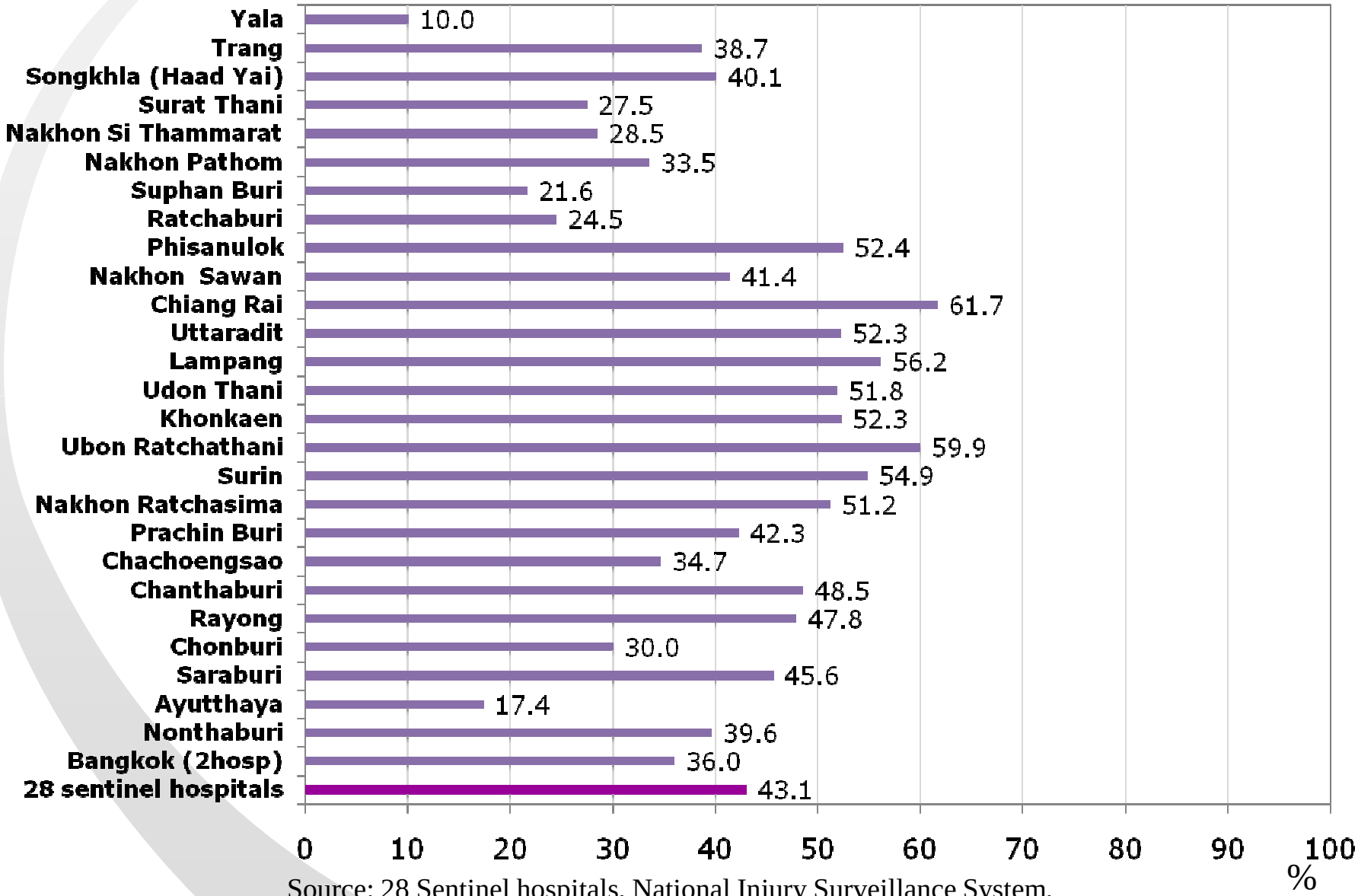
Source: 28 Sentinel hospitals, National Injury Surveillance System, Bureau of Epidemiology, Ministry of Public Health, Thailand

Percentage of alcohol use among motorcycle driver injuries

by sentinel hospital, Thailand 2005-2009

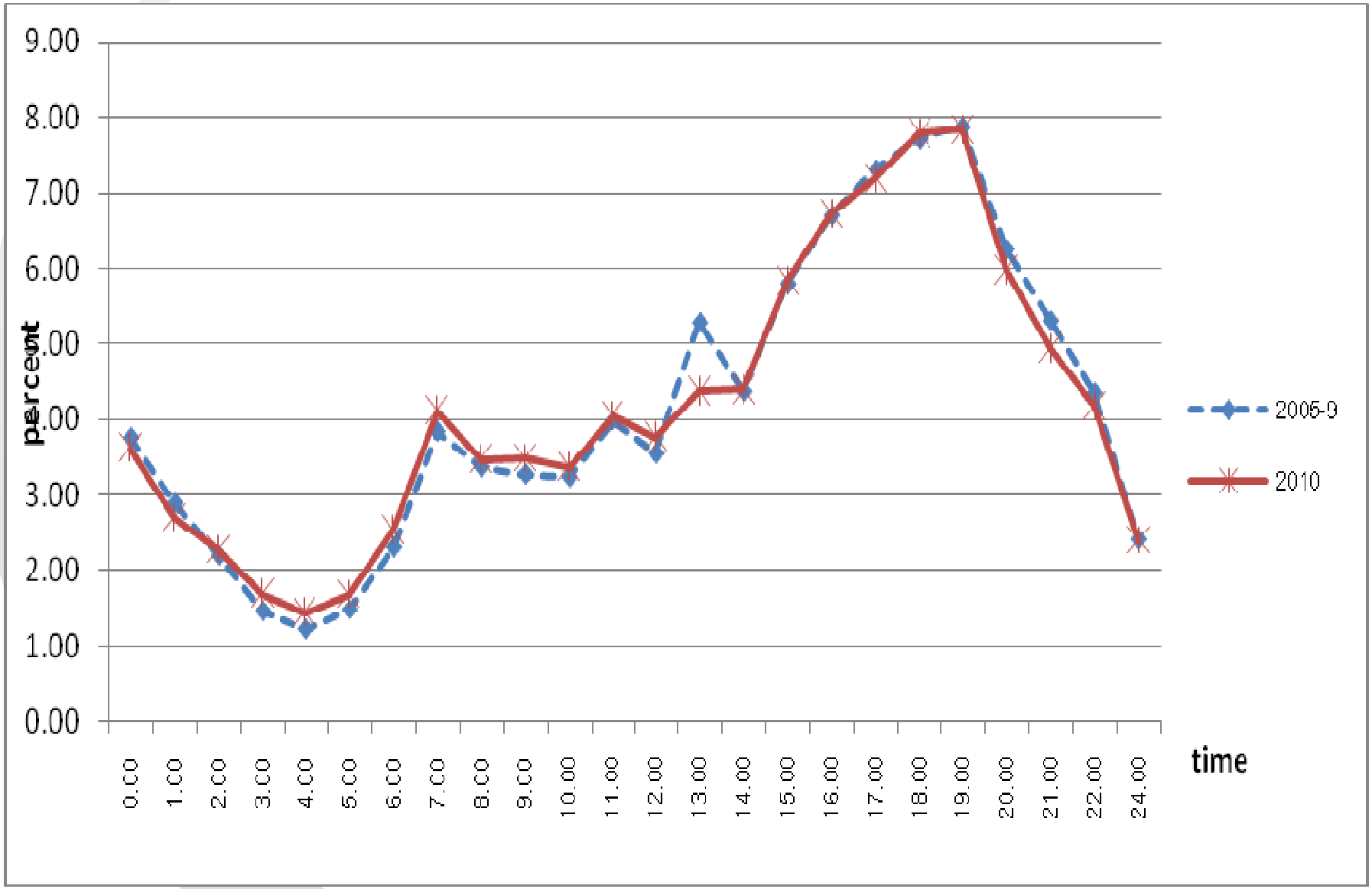


Percentage of alcohol use among motorcycle driver injury-deaths



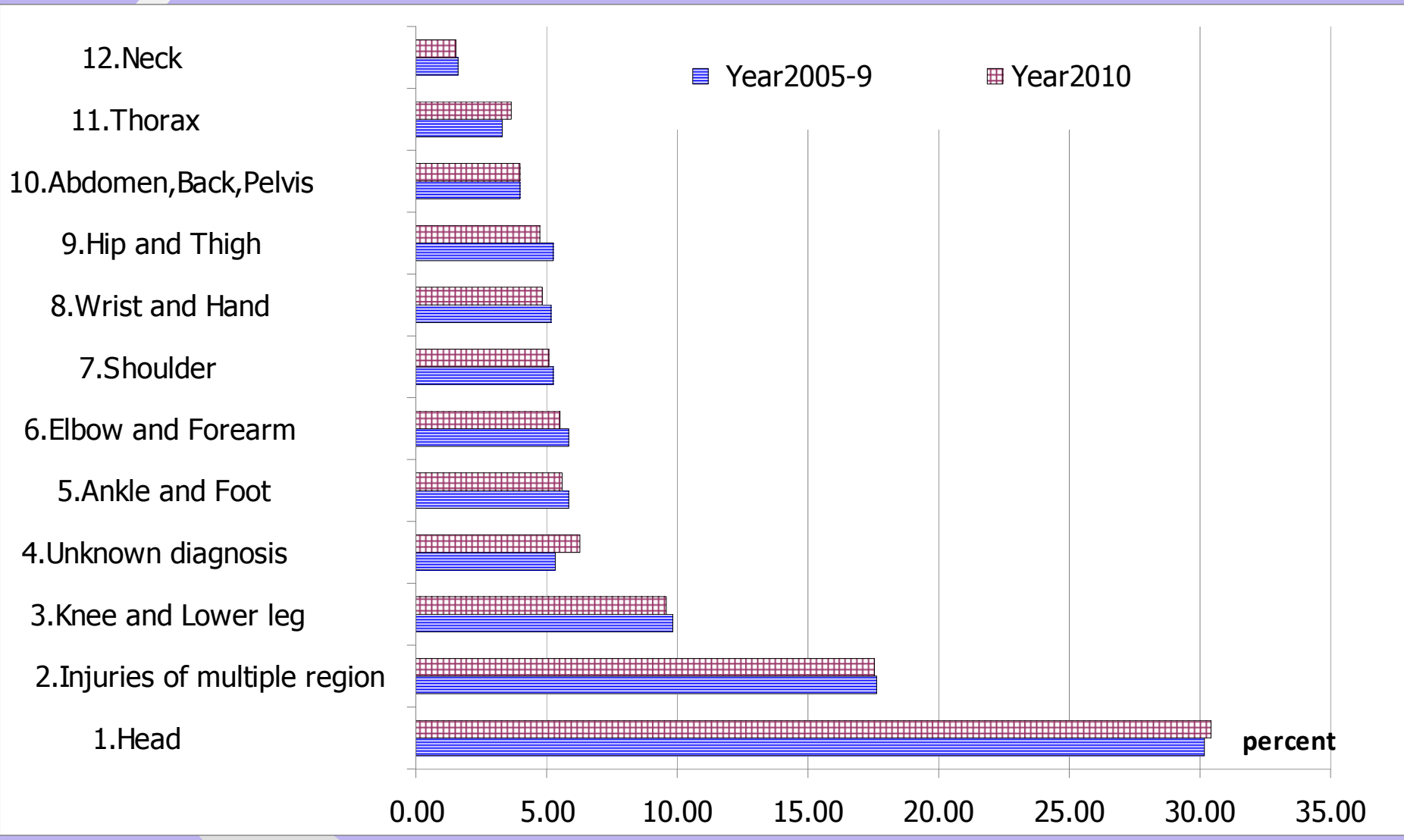
Source: 28 Sentinel hospitals, National Injury Surveillance System,
Bureau of Epidemiology, Ministry of Public Health, Thailand

Percent of alcohol consumption among severe injured by time of occurred injury, year 2005-2009 and 2010



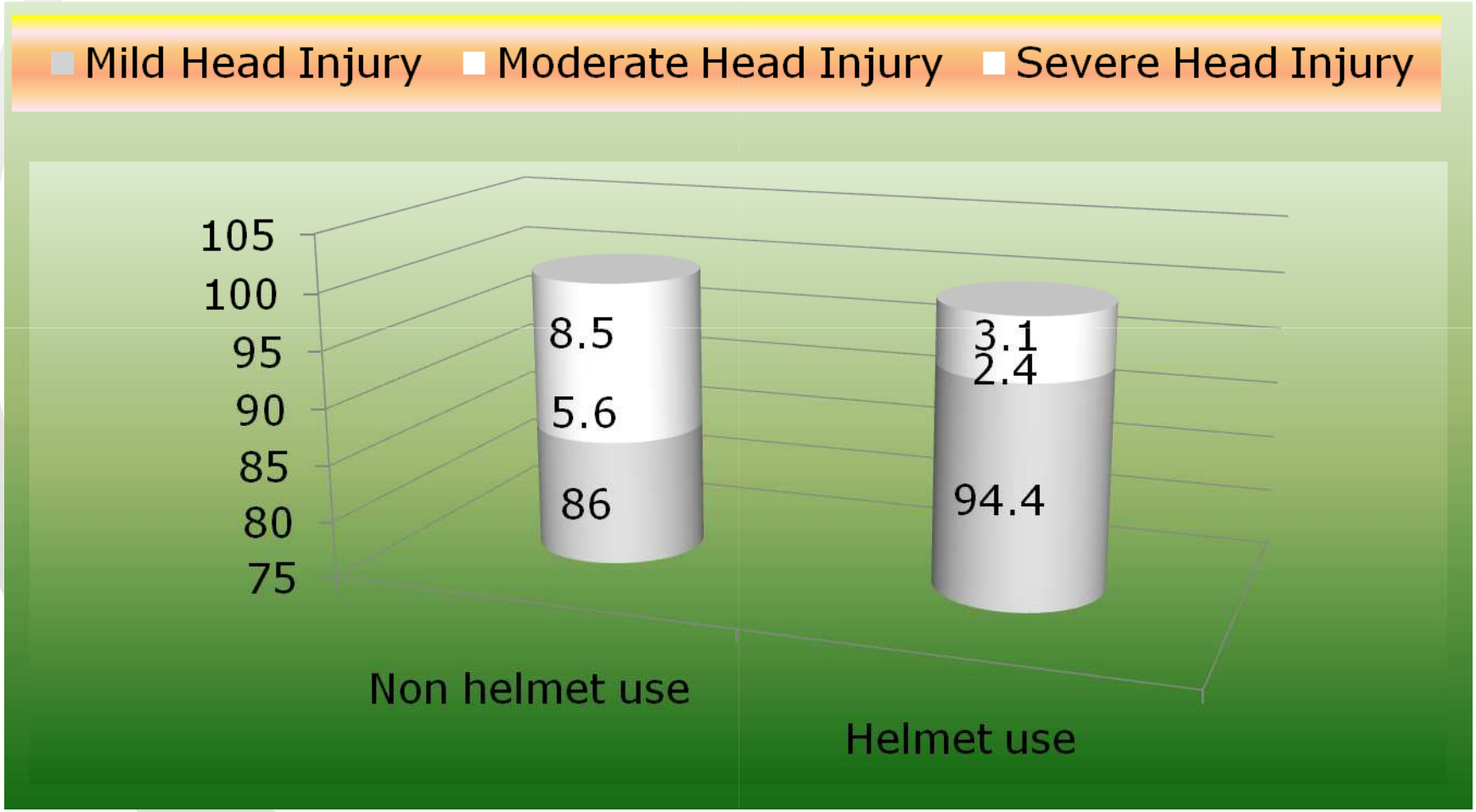
IS: Injury Surveillance

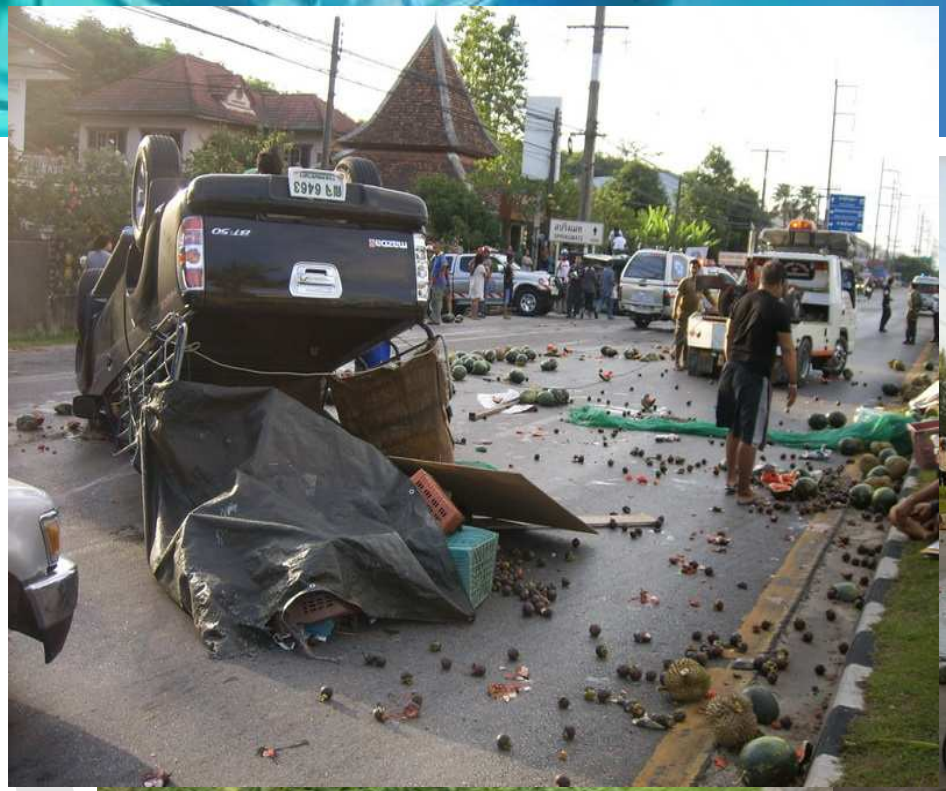
Percent of severe injured from motorcycle accident by organs year 2005-9 and 2010



MC head injury, by helmet use coma score 1-8, 9-12, 13-15

Thailand 2005-2009





SCENE OF INJURY AT U-TURN AREA

Facts sheet

- **Per vehicle mile traveled, motorcyclists' risk of a fatal crash is 35 times greater than a passenger car**

(NHTSA's National Center for Statistics and Analysis 2007)

- **Motorcycle rider deaths were nearly 30 times more than drivers of other vehicles :national study by the Australian Transport Safety Bureau (ATS)**
- **There is no Safe Limit for Drinking and Driving especially 2 wheelers (compton et al,2002)**
- **Riders wearing an approved helmet reduce the risk of death by 37 -40 percent**
- **Almost fourty percent of the severe injuries show alcohol involvement and one- thirds of death alcohol involving .(IS 2010)**

Facts sheet

- Almost 50% of severe traumatic patients were traffic injured and two thirds of them dead from Traffic injuries (IS)
- More than 80% of the traffic injured patients were motorcyclists. (IS)
- Almost 50% of the motorcycle injury suffered from head injury. (IS)
- Almost 3 times of non helmets/helmet were moderate and severe head injuries
- Average percentage of helmet wearing in driver ,2553 = 53.3 (21.5 -93.2) ,Occupant 19.4 % (1.8-56.6)

  Students who are occupants in bkk only 7 %

The key risk factors associated with motorcycle injuries are:

- Aged 15-18 years old
- Unlicensed/Unregistered or licensed but not for quanlified
- Speed
- Alcohol
- No helmet
- MC itself
- Black Spot
- Culture ? Belief ?

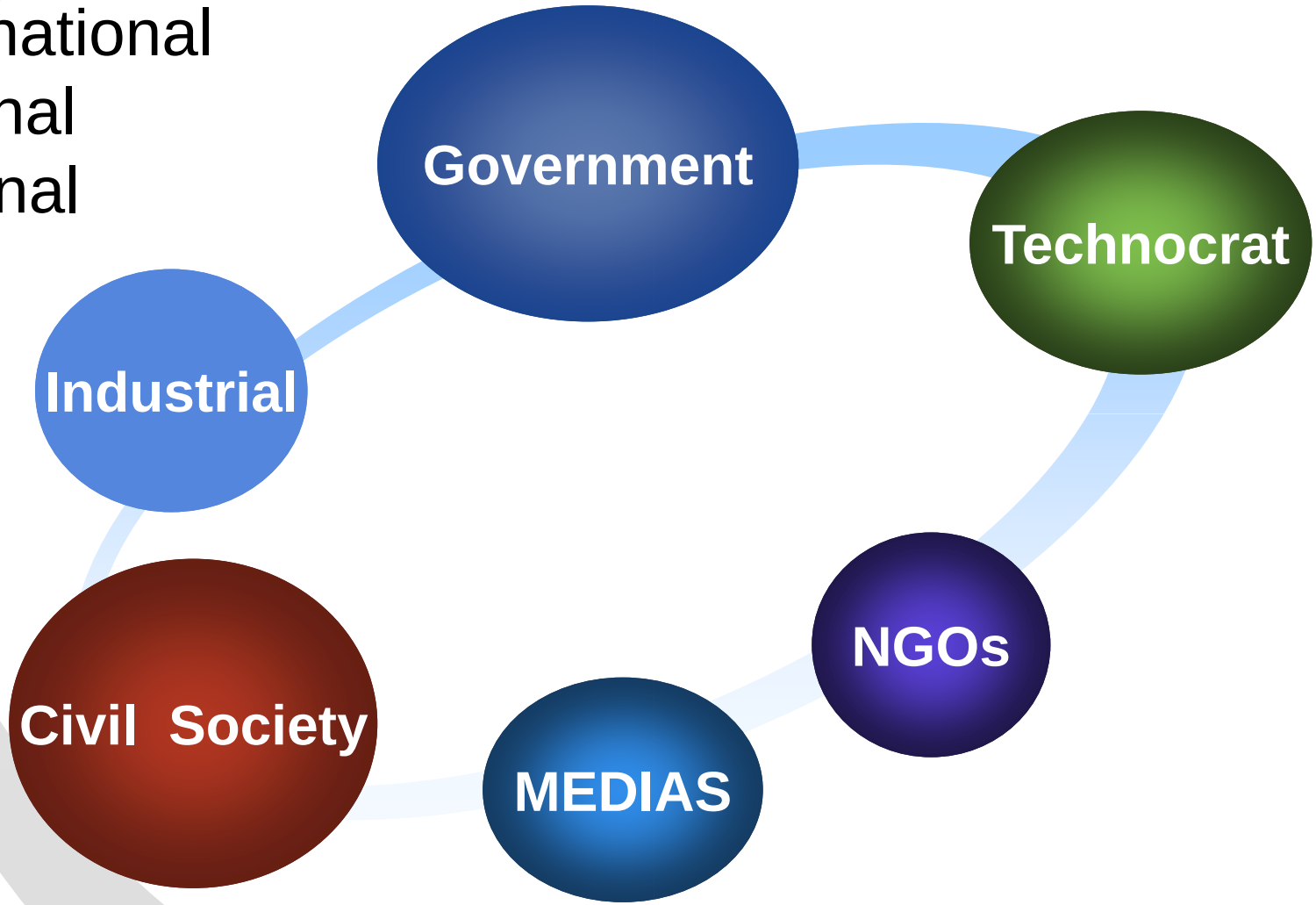
Accident is in the hand of god .lucky or unlucky … **Mai Pen Rai**

100 % WEARING HELMET BOTH DRIVERS AND OCCUPANTS

2011

Decade of Road safety

International
national
regional
local




ยินดีต้อนรับผู้สวมหมวกนิรภัย 100%


แม้ว่า หนูอยากใส่หมวกกันน็อค
หมวกกันน็อคหน่อย...เท่ห์ดี !

NHTSA's Motorcycle Safety Program

	Human Factors	Vehicle Role	Environmental Conditions
Crash Prevention (Pre-Crash)	•Rider Education/Licensing •Impaired Riding •Motorist Awareness •State Safety Programs	•Brakes, Tires, and Controls •Lighting and Visibility •Compliance Testing and Investigations	•Roadway Design, Construction, Operations and Preservation •Roadway Maintenance
Injury Mitigation (Crash)	•Use of Protective Gear	•Occupant Protection	•Roadside Design, Construction, and Preservation
Emergency Response (Post-Crash)		•Automatic Crash Notification	•Education and Assistance to EMS •Bystander Care •Training for Law Enforcement •Data collection & analysis

Recommendation

- Minimum age for award of motorcycle driving license be restricted to persons older than 18 years
- All agencies to implement and enforce laws effectively regarding helmet wearing, driving under the influence of alcohol, and speed control, and modification of motorcycles after sale
- Community empowering to regard dangers of transporting children younger than 5 years on motorcycles

Recommendation

- provision of 2 helmets (including the possibility of helmets for children) along with sale of motorcycles, placing of warnings on motorcycles regarding carriage of children

- Governments at national, provincial and municipal levels should consider policies concerning neighborhood schools and public transport facilities (including free or subsidy for the same)

- Accelerating research efforts for design of all helmets with better ventilation, lighter weight and visibility, and for improving helmet designs for children under 5 years old

Recommendation

- Improving methods of data collection and analysis, initiating research on risk factors associated with motorcycle user injuries, implementing
- evaluating known road safety interventions, undertaking research to develop road safety measures
- Strengthening care prevents mortality and disability :Optimizing pre-hospital and emergency trauma care response and training personnel


THANK YOU