

# THE ENHANCED ENFORCEMENT FOR HELMET WEARING AND DRINK DRIVING IN CAMBODIA

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<sup>1</sup>PR Prak, <sup>2</sup>S Kong, <sup>1</sup>EM Khoun. <sup>1</sup>*Preventive Medicine, Ministry of Health, Cambodia;*<sup>2</sup>*Calmette Hospital, Phnom Penh, Cambodia*

**Background** Injuries are a major, but neglected public health problem among Cambodian population. Before promulgate Land Safety Law, in 2008, Cambodia has prominent the motorcycle users accounts for the largest majority of casualties and fatalities (77% and 68%). Indeed, a higher percentage of head trauma resulting from motorcycle accidents was noticed high in Phnom Penh capital city compared to the provinces. The trend of road traffic accidents fatalities increased by almost 65% (8.3 to 12.7/100 000 population) over the last 7 years from 2004 to 2010. In fact drunk driving is the second major cause of road crashes and casualties after over speeding.

**Objective** To establish extent of alcohol involvement in road traffic injury patients in Phnom Penh, Cambodia.

**Methods** The survey was undertaken in Calmette hospital by using questionnaire to all road accident injury patient that admitted in ICU and then the patient has been screened by health staff according to study criteria for blood alcohol testing. The alcohol dehydrogenase and NAD is an enzymatic method for analyse ethyl alcohol in blood by Selectra E clinical chemistry analyser machine. Cohen's  $\kappa$  values of Blood Alcohol Concentration has been used to identify the intensity of risk.

**Results** We found the highest crash happened at 18:00–20:00 and a duration of transferring victims from areas of accident to arrived ICU are between 20–60 min (Phnom Penh) to 12 h (province). There upon male is more likely to be crashed and injured than female (75.1%). The highest victims were noted in the age group 15 to 29 years old (40.7%), follow by 30 to 44 (15.5%) and male was predominantly higher than female. Nevertheless 88.3% of victims used motorcycle during crash, followed by 5.9% vehicle, 3.7% pedestrians, 0.8% bicycled, afterward workers 21.4% are the highest occupations among injured victims, then farmers 19.4% follow by students 18.3% and business 14.8%. The passengers 11.4% are less wore helmet than the motorcycle driver 32.6%; thus male wore helmet higher 29.4% than female 20.7%. The highest used helmet are student 25.7% follow by farmer 16.4%, worker 15%, business 11.9%, private 10.7%, government 9%, motorbike taxi 5.2%, and the lowest is police and military only 2.1%. Among 100 victims that used car as transportation, we found only 15.3% uses seatbelt during crash, while driver used seatbelt than passenger. The majority of the victim's drunk alcohol that we found the blood concentration in the grade of very sever intoxication might cause the high accident rate 33.80%, it varied from 300 mg/l to 6685 mg/l that was not accepted by Cambodian law (0.050 mg/l blood); 4.90% severe intoxication; 5.40% mild intoxication. The peak of very severe alcohol intoxication has between the age group

of 15 to 29. The majority have had transferred by ambulance 74% and had received pre hospital care 61.6%; and the severe injury victims were transferred by ambulance has had first aid only 42.3% and 13.7% have not received it.

**Significance** The majority of victims used motorcycle as a transport during accident and they are mostly rider's that correlated to external cause of injury, the probability of severity by none wore helmet with drunk driving at night time is significantly higher compare with wore helmet. Thus, there are no significantly different between wore and none wore helmet when accident victims has been hit by someone. The increase of drunk driving may cause a crucial of traffic crash among young age population initiate to public health problem and overloading bed occupancy in ICU services within the hospital in Cambodia, it set in motion to the capacity of trauma care with inadequate of life saving equipment. An attempt to reduce this catastrophe dramatic, the road traffic law should be boosted up. The community awareness on reduction of alcohol consumption during driving and the utilisation of helmet and seatbelt should be considered as the priority intervention of the government for the prevention of road traffic mortality, morbidity and disability.