Cambodia Road Traffic Accident and Victim Information System

RTAVIS
ROAD TRAFFIC ACCIDENT & VICTIM INFORMATION SYSTEM

Annual Report 2007

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Developed by:

Ministry of Interior

Ministry of Health

Ministry of Public Works and Transport

Handicap International Belgium

Website: www.roadsafetycambodia.info

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Foreword

Note from the Minister of Public Works and Transport

The Royal Government of Cambodia, in its third, mandate, has issued a "**4 Angles-Based Strategic Policy**" which is the Government's priority program. Transportation infrastructure, roads, bridges, railroads, waterways, ports, airports were taken into the second angle made in the strategy. More efforts needs to be given to attain the implementation since transportation infrastructure is the means to serve the transportation sector and other services leading to the promotion of commercial productivity, investment climate, agriculture sector, industry, tourism and job opportunity.

While many benefits have been made from this transportation infrastructure, road accidents are also occurring. Noticeably, road accidents have become the second catastrophe after HIV/AIDS causing many fatalities, casualties and disabilities, and damaging private and public assets. It is realized that, based on the research, the causes of accidents are from three factors: human error, road environment and vehicle defects. To prevent and minimize road accidents, which is ever are increasing daily, the Royal Government of Cambodia along with Ministry of Public Works and Transport and with collaboration from various stakeholders, created a new Road Traffic Law. As the result, it was endorsed by the National Assembly on 20 December 2006. Following the endorsement, Royal Decree was also made to use the law officially on 08 February 2007. However, the road traffic law enforcement, recently, cannot be achieved unless there is involvement from the government, NGOs, private sector and citizens because their involvement plays a crucial role to encourage road users to obey the law.

I highly appreciate the involvement made by Handicap International Belgium (HIB) and National Road Safety Committee (NRSC) in terms of disseminating road traffic law to road users so as to equip them with safety-based driving skills. Anyways, it is an invaluable contribution made by HIB to decrease road accidents in Cambodia.

Ultimately, may I ask all of road users or drivers/riders to obey and comply with the new road traffic law.

Minister of Ministry of Public Works
and Transport (MPWT) and Chairman of
National Road Safety Committee (NRSC)

Sun Chanthol

Note from the Minister of Health

During the last few years, road accidents have increased dramatically and alarmingly. Consequently, they have contributed negative impacts on both social welfare and economic growth. Moreover, road accidents have hampered the development of the nation, causing fatalities and disability, particularly among the active age group to develop the economy; and which also hamper the poverty reduction of the Royal Government of Cambodia.

MoH has a big concern on this issue, and considers it as one of our prioritized agendas. To analyze and to develop it as a Road Traffic Accident Victim Information System (RTAVIS), MoH with the collaboration from National Road Safety Committee (NRSC) and Handicap International Belgium (HIB) has taken part in collecting road accident data from various hospitals nationwide.

The report 2007 showed that the rate of accidents, fatalities and casualties increased. It is seen that Cambodia has suffered the highest road accident rate, comparing to the other nations in the region and comparing to the vehicle volume.

As the injury has increased noticeably and in line with the absence of surveillance system, MoH, in the coming year, will collaborate with HIB and other development partners to bring about improved emergency management system and pre and post-hospital care, and to expand the system to the state-run and private hospitals and clinics in order to develop an effective injury surveillance system in line with MoH strategic plan.

MoH has a great privilege to receive RTAVIS system from HIB which plans to be integrated into a joint surveillance system. Following this, MoH will be committed to process this system in close collaboration with NRSC and HIB to encode the data, as well as to provide the data to NRSC to be encoded with that received from the traffic polices in terms of developing a very first hand road accident report in Cambodia.

Finally, I would like to express my grateful thanks to HIB, WHO, and EU which they have supported MoH to develop a report reflecting the road accident context in Cambodia; and would like to ask all citizens to take part in obeying the traffic law so that road accidents in Cambodia will be reduced to the lowest level.

HE Dr. Nuth Sokhom
Minister of Ministry of Health

Note from the Ministry of Interior

General situations in Cambodia, at the moment, have been continuously bettered such as social stability, public order, social harmony and standard of living. Dramatically, all of which have brought about increased means of transport over the last few years. Consequently, road accidents are increasing noticeably, causing 4 fatalities and more than 70 casualties every day. Comparing to the nations in ASEAN region, Cambodia has the highest accident rate.

The General Commissariat of the National Police, Ministry of Interior, underlying the support from Handicap International Belgium, have used GPS to determine accident scene, nationwide, for the sake of analyzing and converting it into a Road Traffic Accident and Victim Information System (RTAVIS) as a tool for bettering road safety in Cambodia.

The majority of accidents, based on RTAVIS, are caused by human error – speeding, drunk driving, risk overtaking. The other causes are vehicle defects and road environment.

To improve road safety and to reduce road accidents to a lowest level, General Commissariat of National Police has taken various actions:

- Strengthening enforcement agency;
- Disseminating and enforcing the law on a large scale;
- Promoting collaboration with all institutions, all level of authority, local and international NGOs, and civil society;

Finally, General Commissariat of National Police would like to encourage all citizens to obey traffic law on a serious scale to protect lives, property and harmony of the individuals, family and society, and to promote the national prestige.

Commissariat General of National Police
Deputy Commissioner

General

Ouk Kim Lek

Note from Handicap International Belgium

This fourth RTAVIS annual report is, like the previous one, the result of an exemplary cooperation between the Ministry of Public Works and Transport, the Ministry of Health, the Ministry of Interior and Handicap International Belgium. And like the previous ones, it reflects the grim reality of the Cambodian roads.

The statistics in this report clearly highlight a worsening road safety situation: with about 27,500 yearly traffic casualties (up from 26,000 in 2006), 17,000 vehicles involved (14,000 in 2006), more than 7000 severe injuries (6000 in 2006) and 1,545 fatalities (1,300 in 2006), Cambodia has reached the sad record of 4.2 fatalities every day. The figures collected during the first months of 2008 reflect an even worsening picture.

There is also good news. The new road traffic law, adopted by the National Assembly, came into force in Sept. 2007. This law is an important milestone and its approval must be considered as a major step taken by the Cambodian government.

However, there has been little action on enforcement to date, and therefore little impact on the rapidly increasing road accidents and casualties.

This report not only disseminates and analyses information, it also makes concrete recommendations, all aligned with the National Road Safety Policy, Action Plan and the traffic law. Since human error by road users is the leading cause of accidents, the first recommendation is to enforce immediately, strictly and consistently the articles of the law related to helmet wearing, speed limits, drink-driving and overloading regulations.

We strongly believe that such enforcement measures, together with effective education and awareness campaigns and a strong coordination of all stakeholders under the leadership of the National Road Safety Committee, will lead to concrete results. We would be more than happy to reflect an improved situation in our next report.

Numerous people and institutions contributed to this fourth report, in particular the National Road Safety Committee, the Ministry of Public Works and Transport, the Ministry of Health and the Ministry of Interior. We sincerely thank them all.

Our thanks go also to the doctors and staffs of numerous hospitals, health centres, and private clinics as well as to all traffic police officers who fill in the data collection forms every day. They remain key contributors in the success of the system.

The Handicap International Belgium road safety team has shown its usual commitment and professionalism to finalize this sophisticated report. Special thanks go to Ms. Sann Socheata, Mr. Meas Chandy, Mr. Sem Panhavuth, Ms. Ou Amra, Mr. Uy Math, Mr. Yorn Virak, Mr. Pea Kimvong, Mr. They Visal and Mr. Ryan Duly.

The RTAVIS project and this report are funded by the Belgian Cooperation, the European Commission and the World Health Organization. Their support and their trust have been invaluable.

Handicap International Belgium
Country Director

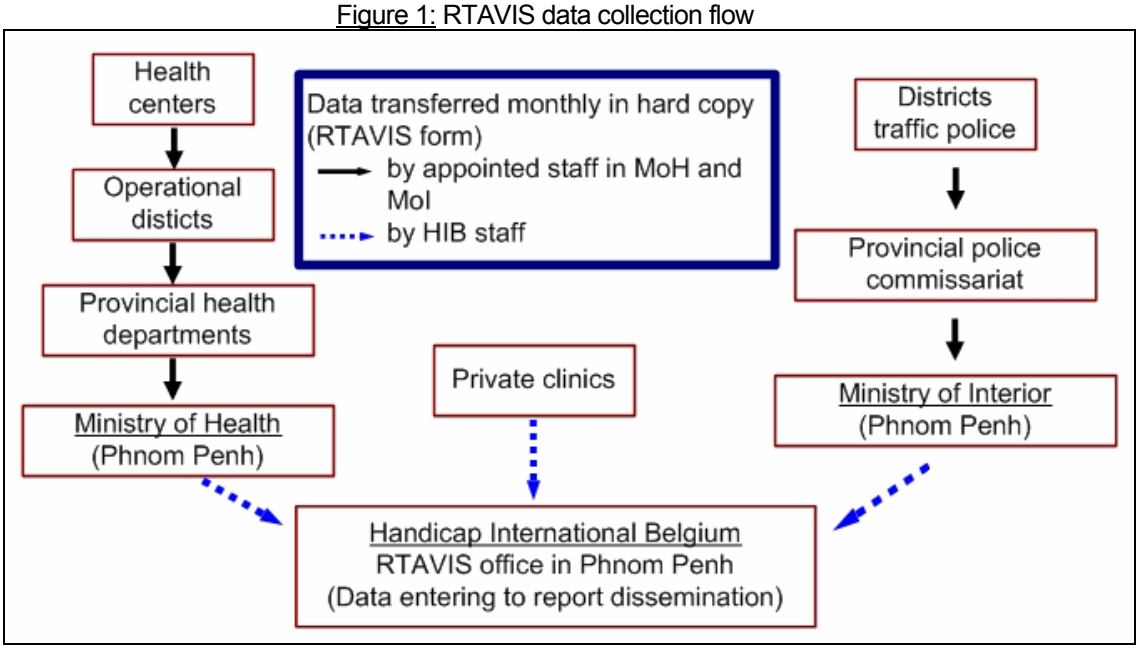
Bruno Leclercq

I. Introduction

The **objective** of the Road Traffic Accident and Victim Information System (RTAVIS) is to provide government and development stakeholders in Cambodia with accurate, continuous and comprehensive information on **road traffic accidents and victims** for the purposes of increased understanding of the current road safety situation, planning appropriate responses and policy, and evaluating impact of current and future initiatives.

RTAVIS collects, centralizes, analyses and disseminates information provided by **three different sources**:
- Traffic police.
- Public health facilities;
- Private clinics;

Figure 1: RTAVIS data collection flow



The system has been progressively developed since March 2004 by the **Ministry of Public Works and Transport,** the **Ministry of Interior** and the **Ministry of Health**, with the technical support of Handicap International Belgium. In Siem Reap, Otdar Mean Chey and Kampong Cham provinces, the system is also supported by the **Belgian Technical Cooperation**.

RAVIS is developed in the framework of Action 2 (Road Accident Data Systems) of the **National Road Safety Action Plan** of the Royal Government of Cambodia.

This report analyses the information collected by RTAVIS for the year **2007**. It is a synthesis of all the monthly reports that were published throughout 2007. The previous annual reports (2004, 2005 and 2006), as well as all monthly reports and other information related to road safety can be found on the following website: www.roadsafetycambodia.info and www.cnctp.info

From 2008, RTAVIS will broaden its scope to include an injury surveillance system, which will collect data not only on road traffic injuries but also on other kinds of injuries such as falls, domestic accidents, violence and drowning. A pilot phase will be conducted in selected hospitals and provinces, with collaboration between Handicap International Belgium and Ministry of Health.

By the end of 2006, **RTAVIS, through the traffic police and health facilities, collected accident data from all 24 Cambodian provinces/cities[1].** All traffic police officers were trained in the RTAVIS data collection forms since 2005. Training of hospital and private clinic staffs was finalized in mid-2006, in collaboration with the Ministry of Health.

In 2007, HIB and MoI provided refresher trainings to the national traffic police on RTAVIS data collection forms and use of Global Positioning System (GPS) to 24 provinces/cities. Traffic police officers along the main Cambodian national roads are now equipped **with 186 GPS devices**, **chargers, and covers** to accurately identify the road traffic accidents location. This GPS information is collected nationwide, and since August 2007, the information is being integrated into the RTAVIS system and disseminated through the RTAVIS monthly reports. By accurately locating road traffic accidents, precise digital maps can be produced and help to identify black spots, a key element for understanding the nature of accidents, prioritizing actions to reduce accidents and measuring progress.

[1] Although they have received training, none health facilities from Pailin did report in 2007.

II. Executive Summary

New land traffic law was endorsed by the National Assembly on 20 December 2006. Following the endorsement, Royal Decree was also made to use the law officially on 08 February 2007. While the traffic law has yet to be comprehensively enforced, it is an important milestone and its approval must be considered as a major step taken by the Cambodian government in its struggle against the rapidly increasing road accidents and casualties, and worsening road safety situation, as the statistics in this report clearly highlight.

Since human error by road users is the leading cause of accidents and casualties on the roads of Cambodia, it is critical that actions, particularly ones that focus on education and enforcement, are designed to change the behavior of drivers. In particular, dangerous behavior such as excessive and inappropriate speed, drink-driving, and low helmet wearing rates are contributing to the majority of accident and casualties.

With the integration of GPS data to the RTAVIS report, it is now possible to identify accident locations and black spots. This information adds a new dimension to accident analysis and hopefully can provide the authorities and agencies active in the road safety sector with more complete information from which to base policy and interventions to reduce accidents and casualties on the road of Cambodia.

Key figures

General figures

- In 2007, **27,403 road traffic casualties** were reported to RTAVIS, resulting from **9,449 accidents**. Among them, **1,545 were fatalities (an average of 4.2 fatalities per day)** and **7,150 were severely injured**. **16,982** vehicles were involved in those accidents.

- The number of road traffic **fatalities has almost doubled** over the last 5 years.

- Road traffic accidents increased more proportionally than road traffic and population.

- There are **17.8 fatalities per 10,000 registered vehicles**, a decrease of 2% compared to 2006 but an increase of 13% compare to 2005. **Cambodia has one of the highest fatality rates in the region**.

- In Phnom Penh, the number of **fatalities has increased by 54% from 2006 to 2007**. **Most fatal accidents are motorbike- four wheeler collisions.**

- In Phnom Penh, the number of fatalities increased in all districts from 2006 to 2007. A significant increase was noticed in **Dangkao and Ruessei Keo districts**.

- In comparison between 2006 and 2007, the number of fatalities on Chinese New Year and Khmer New Year **did not increase,** but **on Pchum Ben and Water Festival** the number of fatalities **increased by 50% and 46% respectively**.

- **In comparison, the** fatality rate per 10,000 registered two-wheelers **has increased 32%.** Conversely, **four-wheelers (per 10,000 registered four-wheelers) has decreased 7%, compare to 2006.**

- The number of fatalities on Asian highways **has increased, except national road 4 where the number of fatalities decreased by 9% in 2007 as compared to 2006.**

- 50% of fatalities were due **to speeding,** while another 19% were caused by **alcohol abuse.**

- **17%** of motorbikes' riders involved in an accident in 2007, and who **were not wearing helmets,** suffered from head injuries. **This figure decreased to 13% when riders wore a helmet.**

Notice on 2008:
The figures for the first 2 months of 2008 **showed a sharp increase of the number of fatalities**: on average, **4.8 people died per day due to road traffic accidents in Cambodia** during the first 2 months of 2008.

Age of casualties

- The average age of casualties is 28.
- People aged between **20 and 29 years old** represent the **highest percentage of fatalities**.
- People aged between **25-29 years old account for 22% of fatalities although they represent only 8% of population**.

Gender of casualties

- Males account for 73% of casualties, although they account for 49% of the population.
- The number of male fatalities in 100,000 inhabitants is **4 times higher** than female fatality representing the rate (**17.1 compared to 4.1**). The highest male fatality rate is among 25-29 years old group (more than 50), more than double compared **to 2006.**
- This over-representation of male casualties is important as most are of working age.

Occupation of casualties

- **The economically active part of the population is the most affected by road traffic accidents.**
- The percentages of fatalities by occupation follows a similar pattern as casualties: **farmers represent the highest percentage, they constitute the largest group of fatalities and casualties** (29% of fatalities, 26% of casualties), followed by workers and students.
- **More than 45%** of bicycle riders and almost **40% of pedestrians** are students.

Type of transport

- Motorbikes' users account for the largest majority of casualties and fatalities (75% and 63% respectively), followed by pedestrians, bicyclists and car users.
- **Pedestrians represent 13% of fatalities, while they represent only 8% of casualties.**
- The percentage of motorcycle and pedestrian casualties is much higher in Phnom Penh than in the rest of the country.
- **The percentage of pedestrian and bicycle casualties is much higher among children and old people.** Almost 50% of casualties below 5 years old are pedestrians.

Nature of injuries

- **81% of fatalities** suffered from head injuries.
- **27% of casualties** suffered from head injuries.
- **A higher percentage of head injuries is noticed in Phnom** Penh compared to the rest of the country (more than 40%).
- The average cost of medical treatment is US$ 118 per casualty.

Transfer to hospital

- **Only 26% of casualties are transferred to the hospital or clinic by ambulance**. This is mainly an issue in the provinces where only 23% of casualties are transferred to the hospital by ambulance.
- 33% of casualties arrive at the hospital **less then 30 minutes** after the accident while 34% of casualties take **more than 2 hours to reach hospital**.
- In the provinces, 43% of seriously injured casualties take more than 2 hours to reach the hospital.

Severity of injuries and hospital discharge

- **6% of casualties are fatalities.**
- **26% of casualties are severely injured** (requiring surgery or admission to intensive care).
- 39% of motorbikes' riders suffered from head injuries, 26% were severely injured and 5% died.
- Car users and pedestrians suffered more fatalities than other types of road users.
- Although 80% of the casualties were fully treated and sent home, 9% were referred to other hospitals and 1% requested to be treated by a private clinic or a traditional healer.

Helmet wearing

- **27% of casualties suffered from head injuries**.
- More than 40% of casualties injured in Phnom Penh suffered from cranial trauma. This is partly due to the fact that a larger proportion of motorbike casualties was noticed in Phnom Penh (83% compared to 72% in province).
- **76% of casualties suffering from a cranial trauma were indeed motorbike riders** and only 3% were wearing a helmet at the time of the accident.
- 39% of motorbike riders suffered from head injury.
- **17%** of motorbike rider involved in an accident in 2007 and who **were not wearing helmet** suffered from head injuries. This figure decreased to 13% when wearing a helmet.

Seatbelt

- In 96% of the cases, a 4-wheel vehicles driver/passenger who was moderately, mildly or severely injured in a traffic accident was not wear a seatbelt.

Driving license

- **Only 50% of car/truck/bus drivers have a valid driving license** at the time of the accident.
- 25% of children between 5 and 14 years old who were victim of a motorbike accident were driving the motorbike by themselves at the time of accident.

Day of accident

- On average, more than **70 road traffic casualties are reported every day by RTAVIS[2]**. **Several peaks (up to 293 casualties a day) are noticed**, corresponding mainly to Khmer national holidays.
- Weekend (Friday 6 pm until Sunday midnight) accidents are responsible for 36% of casualties.
- A higher percentage of casualties are noticed on Saturdays**, especially during the night**. A lower percentage of casualties occur on Friday evenings.

Time of accident

- Nighttime accidents are responsible for 31% of casualties.
- The peak of casualties is observed between 4 pm and 8 pm.

Causes of accident

- "**Hit and run" accidents**[3] represent 24% of accidents and are responsible for 21% of casualties.
- **Human error alone is responsible for 94% of all road accidents.**
- 50% of fatalities are due **to speeding,** while another 19% are caused by **alcohol abuse.**
- Alcohol abuse is a larger problem during the night than during the day: 10% of accidents occurring during the day are due to alcohol, whereas 28**% of accidents occurring during the night are due to alcohol.**

Type of collision (vehicles involved)

- **Motorbike-motorbike collisions** are responsible for 14.94% of the fatalities, followed by **motorbike-4 wheeler collisions** (34.78%) and motorbikes that fell alone (5.48%).
- Pedestrians are mainly injured by motorbikes rather than by cars. Motorbike-pedestrian collisions represent 4.76% of fatalities while car-pedestrian collisions represent 8.62% of fatalities.
- **29%** of four-wheelers involved in road traffic accidents are **right-hand drives**.
- On average, 2.9 people are injured per accident.

[2] All hospitals and private clinics do not yet participate to RTAVIS and the actual average daily number of casualties is therefore higher than 70. For example, The Cambodian Demographic and Health Survey 2005 estimates the number of road traffic casualties at around 125,264 (348 per day).
[3] Hit and run accidents are defined as when the driver of the vehicle causing the accident escapes after the accident.

Type of collision

- 24% of accidents are **head-on** and **right-angle collisions,** followed by rear end (15%).
- 70% of vehicles were going straight ahead at the time of the accidents.

Type of road

- **60% of casualties** are injured in accidents occurring on **national/provincial roads**.
- **Comparing the number of fatalities of national roads with the road length per kilometer**, National Road 6A is the most deadly followed by National Road 4 and National Road 6.

Road characteristics

- More than 75% of casualties are injured in accidents occurring on **straight roads**.
- 74% of casualties are injured in accidents occurring on **paved roads**.

Police attendance

- Police are present at the accident site in almost **60% of the cases**.

Cost of accident

The average damage cost per vehicle involved in accident is **US$ 179. Considering** that **16,982 vehicles were involved in accidents in 2007**, the total damage cost estimate is **US$ 3,039,778**.

Location of accident

- **43% of casualties are injured in urban areas.**
- **23% of accidents** occurred in Phnom Penh, followed by Kampong Cham (18%), Kandal (9%).
- The provinces most affected by road traffic fatalities are **Phnom Penh, Kampong Cham and Kandal.**
- In terms of population density, **the highest fatality rates are observed in Mondol Kiri, Sihanouk Ville and Pailin**.
- The top three communes affected by road traffic fatalities in Phnom Penh are Choam Chau, Preak Lieb and Tonle Basac. The first two are located along major national roads.

Recommendations

All recommendations are aligned with the Cambodian National Road Safety Policy and Action Plan and the 2007 Road Traffic Law.

Recommendation 1: Enforce the new road traffic law

The new road traffic law was approved by the King on February 8, 2007. Although the traffic law came into force in Sept. 2007, there has been little action on enforcement to date. The law is comprehensive and should be enforced uniformly in time, but it is recommended to enforce key articles immediately, strictly and consistently, which have a positive impact on reducing accident and saving lives. These articles include:

- Helmet wearing for all motorized 2-3 wheeler drivers
- Enforcing speed limits in urban areas and along national roads
- Enforcing drink-driving laws
- Enforcing overloading regulations

Recommendation 2: Improve law enforcement by training and motivating traffic police.

Law enforcement remains weak. Experience in other countries shows that even if traffic laws are stringent, they are ineffective without adequate enforcement.

Traffic police officers should be trained on proper enforcement of the traffic law and receive **incentives** to enforce it correctly. As part of an output from the training, **a national enforcement action plan** should be developed. At the same time, traffic police officers should be provided with appropriate tools and resources to ensure the effectiveness of its enforcement (breathalyzers, speed guns, etc..).

Traffic police officers currently lack respect by the population. A campaign to improve their legitimacy and their image should be developed, simultaneously with clear changes in the way they operate.

Recommendation 3: Link education campaigns to enforcement actions

Best practices from successful road safety initiatives in other countries point to the importance of educating the public on the traffic law, as well reinforcing safety messages of specific law articles before, during and after the enforcement actions to give legitimacy to the law and enforcement measures. The Cambodian authorities, particularly the National Road Safety Committee and the Traffic Police, in collaboration with the media and civil society, should conduct publicity campaigns to the public detailing relevant information (dates, fines) related to enforcement as well as highlighting the safety rational behind the measures in advance of enforcement.

Recommendation 4: Develop specific strategies to minimize motorcycle accidents and casualties

RTAVIS statistics clearly highlight that motorcycle riders account for the majority of fatalities and casualties, and are involved in the majority of accidents. Furthermore, young males represent the group most affected in motorcycle accidents. Strategies should be developed that target motorcycles as a high-risk mode of transport and seek to reduce accidents specifically among young males. Strategies may include:

- Conduct national educational campaigns on benefits of wearing helmet; enforce helmet wearing laws
- Encourage free or subsidizes helmet distribution schemes with motorcycle sellers
- Develop and regulate an appropriate helmet safety/quality standard for the Cambodian market
- Ensure rigorous and accessible driving licensing system for motorcyclist with particular focus on safe road behaviour
- Create separate motorcycle lanes along national road and main urban roads
- Develop appropriate and dedicated educational campaigns targeting young male motorcyclists

Recommendation 5: Target excessive and inappropriate speed on Cambodian roads

Excessive and inappropriate speed is the most important factor contributing to the road injury problem faced by Cambodia. Resources should be allocated from the government authorities and civil society to tackle speed management issues. These strategies may include:

- Setting and enforcing appropriate speed limits and speed zones
- Training police on proper enforcement strategies and procedures of speeding, ensure traffic police are properly equipped
- Long-term public education on the dangers of excessive and inappropriate speed
- Traffic calming road engineering measures where problem locations have a high rate of speed related casualty crashes.
- Installing clearly-visible traffic signs to clarify speed limits

Recommendation 6: Target strategies to reduce drink driving related accidents on Cambodian roads

Road users in Cambodia who are impaired by alcohol have a significantly higher risk of being involved in an accident. Statistics show that alcohol-related related accidents are the second leading factors behind speeding. Drinking and driving programme strategies to address this problem may include:

- Setting legal maximum for Blood Alcohol Concentration (BAC) for drivers/riders which state the type of offence and realistic penalties for those offences
- Enforcement of the legal BAC limits at strategic locations by training traffic police on proper enforcement measures and providing appropriate equipment
- Conducting public education on dangers of drinking and driving
- Seek support from alcohol companies to promote responsible drinking messages

Recommendation 7: Ensure higher priority on strategies involving safety of children and pedestrians in the Cambodian National Road Safety Action Plan

- Promote the safety of children when entering and exiting schools through the creation of safe school zones (enforcing appropriate speed limits in those zones, and ensuring school cross-walks are respected and clearly-marked)
- Ensure that sidewalks and crosswalks are accessible and respected for pedestrians

Recommendation 8: Allocate more resources on awareness and enforcement campaigns during national holidays

Road accidents and casualties spike during national holidays in particular Khmer New Year, Chinese New Year and the Water Festival. It is recommended that government authorities and other organizations active in road safety focus awareness campaigns and enforcement measures on risky behavior (speeding, drink-driving, helmet wearing, overloading) common during the holiday travel period.

Recommendation 9: Strengthen and expand the implementation of the current road safety curriculum

Road safety education is a key component towards developing safe road behaviours among students. Road safety curriculum is currently being taught from Grades 1-9. Future strategies to reinforce road safety in schools should include:

- Extending the road safety curriculum to all primary and lower secondary schools in Cambodia
- Developing a Grade 10-12 road safety curriculum

Recommendation 10: Develop road safety audit and black spot improvement programmes

RTAVIS GPS data now allows for specific accident locations and black spots to be identified in Phnom Penh and along the national roads. The relevant transport and public works authorities should use this data to investigate these accident locations and black spots, inform the public to drive carefully on these dangerous locations, and fund road engineering solutions to improve safety at these locations. Additionally, law enforcement agencies can target these locations for enforcement actions.

Recommendation 11: Improve the Emergency Medical Services System (EMS)

RTAVIS statistics clearly show that medical care does not reach road accident victims in a timely or appropriate manner. An improved emergency medical services system can deliver medical care to emergency situation such as road accidents thus reducing severity of injuries. Components of an EMS system that should be prioritized and funded that will have a positive impact on road traffic related injuries in the long-term include:

- First Aid and On Site Management: Development of local capacity of FA among first responders (police, firemen) and community volunteers;
- Aspects of Transportation: Development of fleet of ambulances, equipment, trained staff; Identification of other appropriate means of transports such as tuk-tuk, taxi; and appropriate emergency routes;
- Capacity of Hospitals: Development of hospital staff qualification in EMS and improvement of emergency equipment;
- Mechanisms to Manage the System: Improvement of dispatch centers, protocol and standards,

Recommendation 12: Explore the possibility of public transport system for Phnom Penh

A well-executed public transport system is safer than other modes of transport, thus encouraging a mass transit system in appropriate areas such as Phnom Penh could potentially have a positive impact on road safety, as well as on mobility and the environment. Relevant authorities should explore the long-term option of introducing a convenient, efficient and affordable public transport system.

Recommendation 13: Increase the amount of road safety in Cambodia research

Road safety research is critical in influencing policy, securing funds and determining appropriate strategies and activities. To date, there is very little research on road safety being conducted in Cambodia. Possible areas of research could include:

- Cost of accidents on household incomes
- Reasons for dangerous driver behavior in the context of Cambodia

A long-term recommendation to advance research in Cambodia is to set up a research centre dedicated to transport and road safety either in the National Road Safety Committee or appropriate educational institution

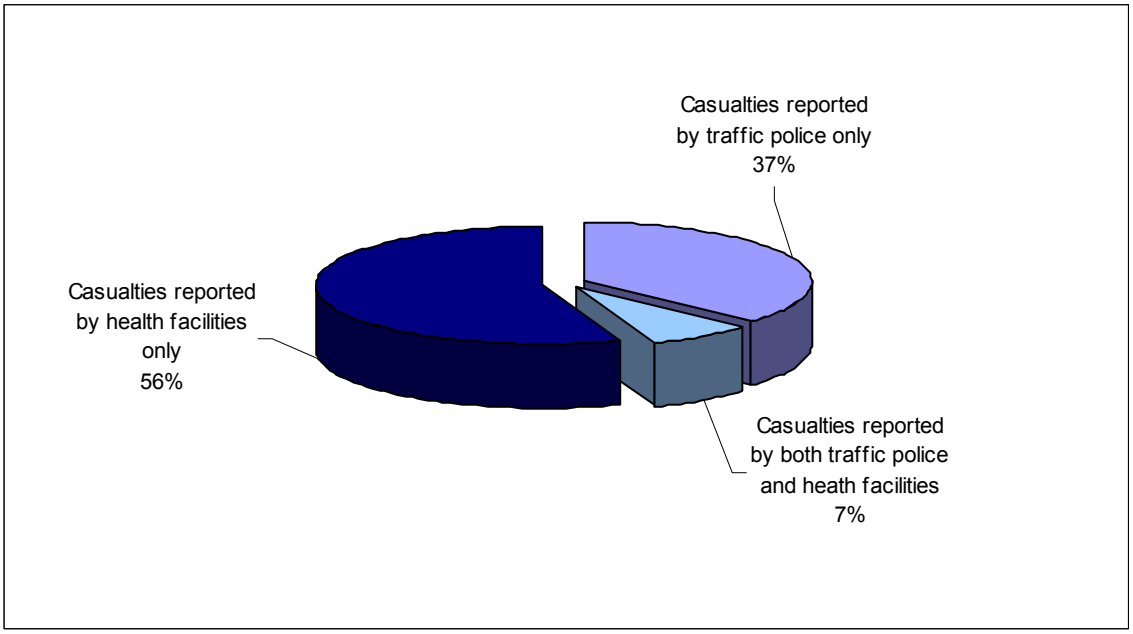
Recommendation 14: Increased funding and skills transfer opportunities for the National Road Safety Committee

The National Road Safety Committee is the body tasked with overall management and coordination of road safety in Cambodia. However, they lack the necessary resources and skills to make a significant impact on reducing accidents, fatalities and injuries on the roads of Cambodia. To ensure sustainability of road safety action and that the issue becomes a greater priority for the Royal Government of Cambodia, donors should prioritize the funding for the NRSC as well as creating opportunities for the Committee's decision-makers and staff to improve their road safety skills and knowledge

III. Data Source

In 2007, 37% of casualties were reported by traffic police only, 56% were reported by health facilities only and 7% were reported by both traffic police and health facilities as shown in the figure below.

Figure 2: Percentage of casualties reported to RTAVIS – 2007



Notice:
To avoid double entries between health facilities and traffic police data, when a casualty is reported by a health facility as well as by the traffic police, it is taken into account only once and shared around 7% of the casualties.

Private clinics play a growing role in the treatment of road traffic casualties. In Phnom Penh, they have treated more than **14% of the reported casualties** in 2007.

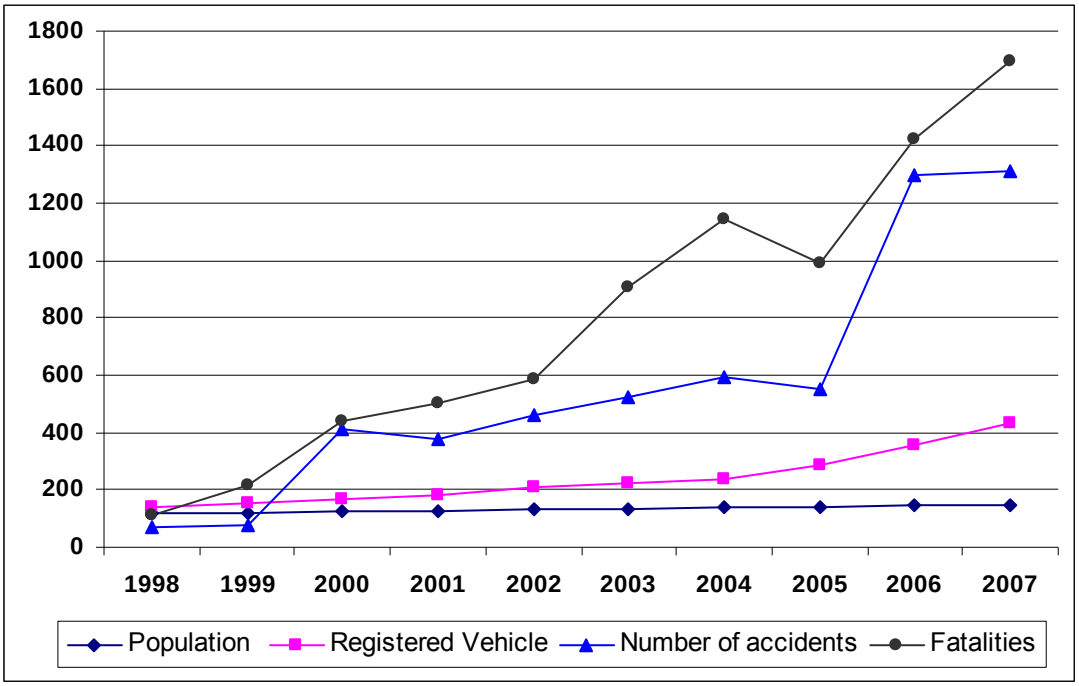
Health facility data sources have been progressively added into the RTAVIS coverage. From 2006 to 2007, 167 health facilities (provincial hospitals, referral hospitals and health centers) were participating in RTAVIS. This number has steadily increased during the year. Full country coverage with hospital and traffic police data has been achieved by the end of 2006.

In July 2006, Global Position System (GPS) devices were introduced to the traffic police in Russei Keo District in Phnom Penh. Since August 2007, GPS devices have been progressively introduced to other districts of Phnom Penh and provinces crossed by major national roads. These efforts will enable RTAVIS to identify black spot along the major Cambodian Road Network, using GIS data.

IV. Evolution of data

Road traffic accidents, casualties and fatalities continue to increase more proportionally than road traffic and population. Over the last 5 years, the number of accidents increased by 151% and **the number of fatalities has almost doubled**. At the same time, the population has increased by 11% and the number of registered motorized vehicles has **increased by 94%.**

Figure 3: Evolution of road traffic accidents and casualties in Cambodia[4], 1998 – 2007 (base 100 = 1998)



The year 2007 saw an overall increase in the number of road traffic accidents casualties on Cambodian roads. The figure below shows the breakdown of road traffic accidents casualties in 2007 as compared to 2006.

Figure 4: Breakdown of road traffic accident casualties in 2006 and 2007

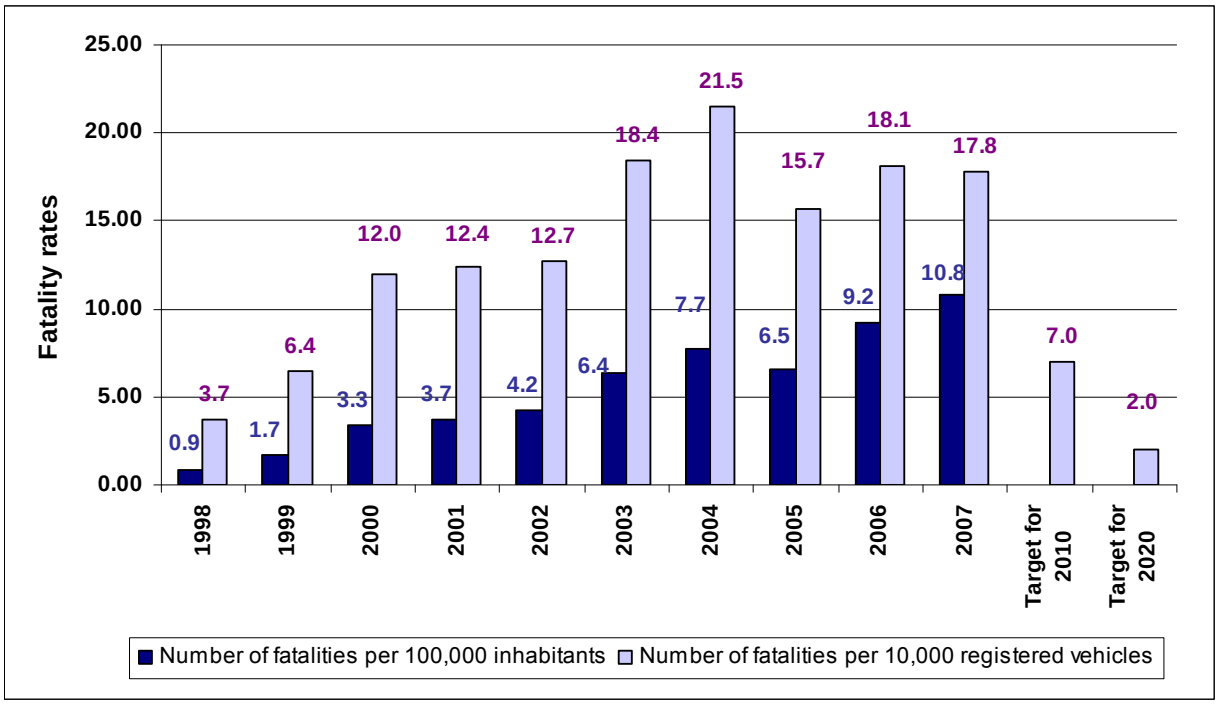
Type of Casualties	2006	2007	Difference
Killed	1,292	1,545	+ 20%
Severe injuries	6,033	7,150	+ 19%
Sligh injuries	17,836	17,655	- 1%
Unknown	985	1,053	+ 7%
Total	26,146	27,403	+ 5%

Generally, the fatality rate (in 100,000 inhabitants) has increased since 1998, with the highest rate recorded in 2007 (10.8 fatalities per 100,000 inhabitants), an **increase of 17%** compared to 2006.

In 2007, there were 17.8 fatalities per 10,000 registered vehicles, a decrease of 2% compared to 2006 but an increase of 13% compare to 2005. **Cambodia has one of the highest fatality rates in the region**.

[4] Sources:
- Population: First Revision of Population Projections for Cambodia 1998 -2020, National Institute of Statistics, Ministry of Planning, June 2004;
- Traffic and accident figures: from 1998 to 2005 based on traffic police only and 2006 to 2007 based on RTAVIS.

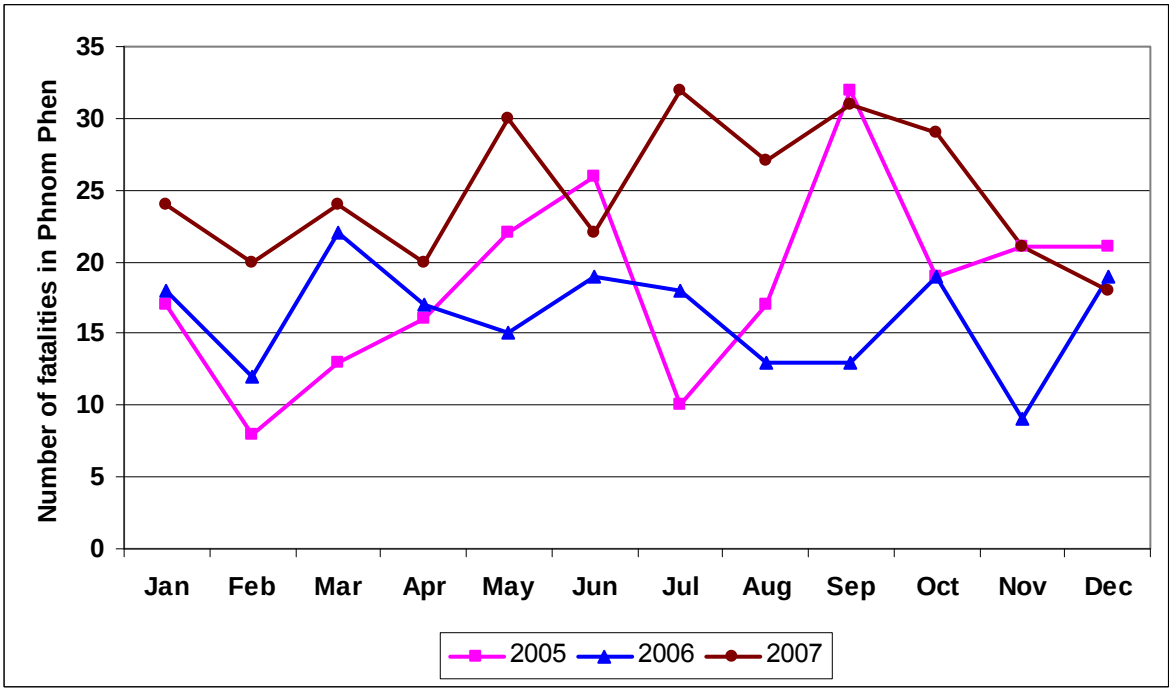
Figure 5: Fatality rates in Cambodia 1998 – 2007 and its target for 2010 and 2020[5]



Notice:
RTAVIS has been recently created. Long period evolution charts or year to year comparisons at the national level are therefore not yet possible from 1998 up to 2005. The graphs (figure 3 and 5 from 1998 up to 2005) are based on figures provided by the traffic police only and 2006 to 2007 bases on RTAVIS.

In Phnom Penh, the number of **fatalities has increased by 54% from 2006 to 2007**. **Most of fatal accidents are motorbike- four wheeler collisions.**

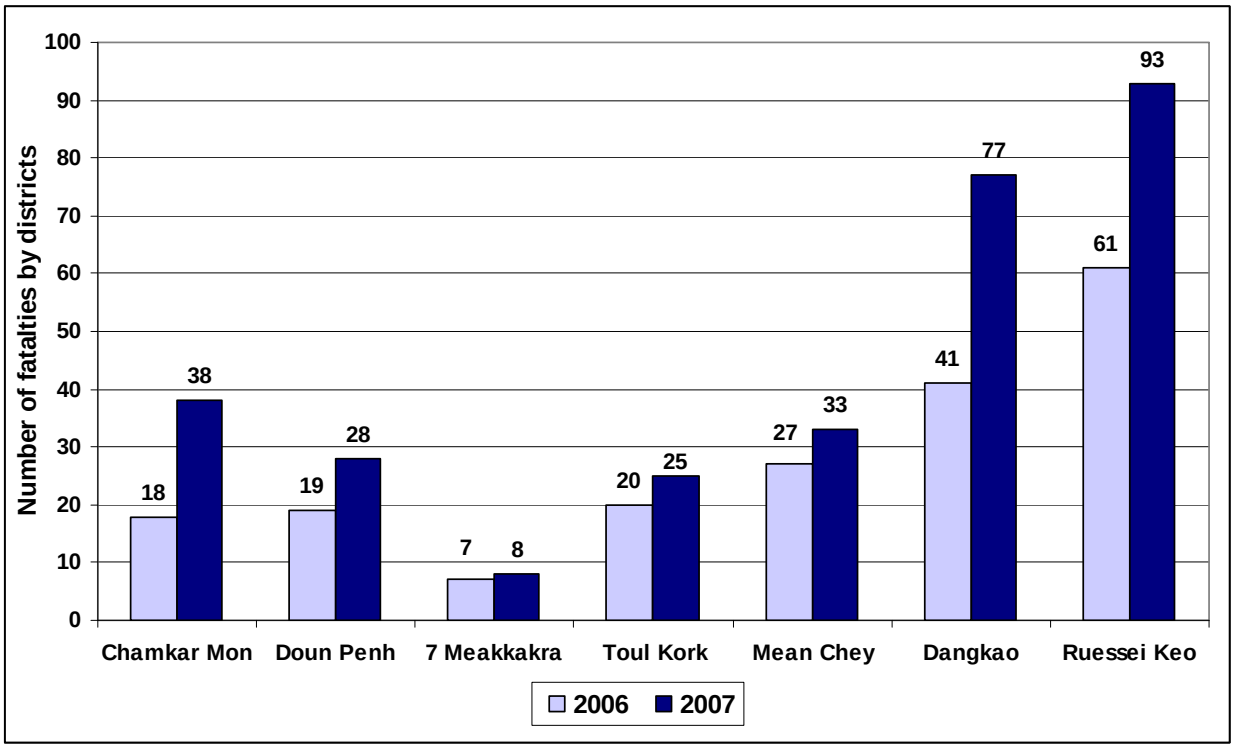
Figure 6: The evolution of the numbers of fatalities in Phnom Penh – January 2005 to December 2007



[5] Sources: National Road Safety Action Plan

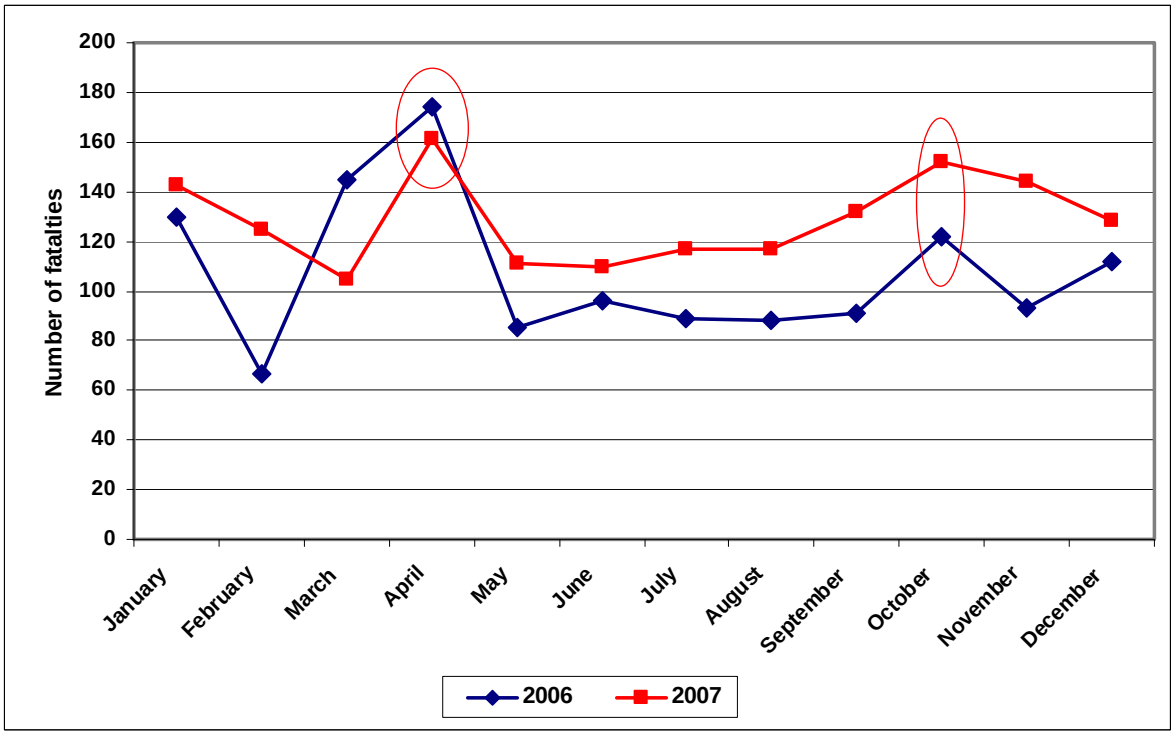
In Phnom Penh, the number of fatalities has increased in all districts from 2006 to 2007. A significant increase has been noticed in **Dangkao and Ruessei Keo districts**. This means that the number of fatalities in three districts (Dangkao, Mean Chey and Ruessei Keo) **is higher than** the other 4 districts due to those districts being crossed by the main national roads.

Figure 7: The numbers of fatalities by districts in Phnom Penh– 2006 compare to 2007



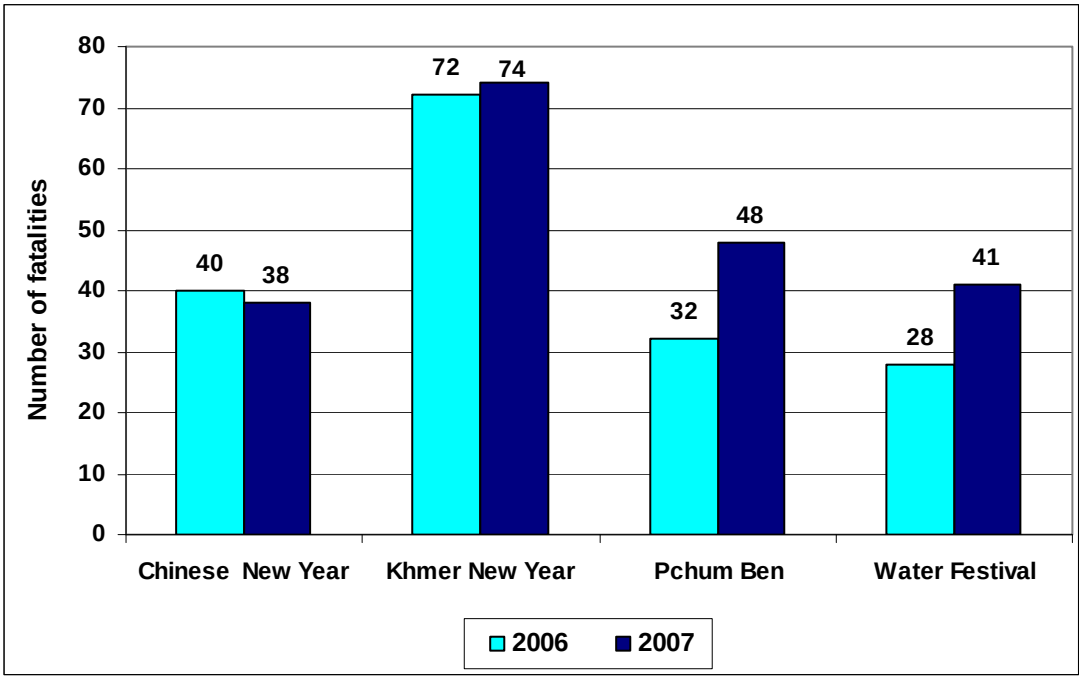
Compared to 2006, fatalities in every month in 2007 increased, except in March and April.

Figure 8: The evolution of the numbers of fatalities by month – 2006 - 2007



- In comparison between 2006 and 2007, the number of fatalities on Chinese New Year and Khmer New Year **did not increase,** but **on Pchum Ben and Water Festival** the number of fatalities **increased by 50% and 46% respectively**.

Figure 9: The evolution of the numbers of fatalities by main holidays – 2006 - 2007



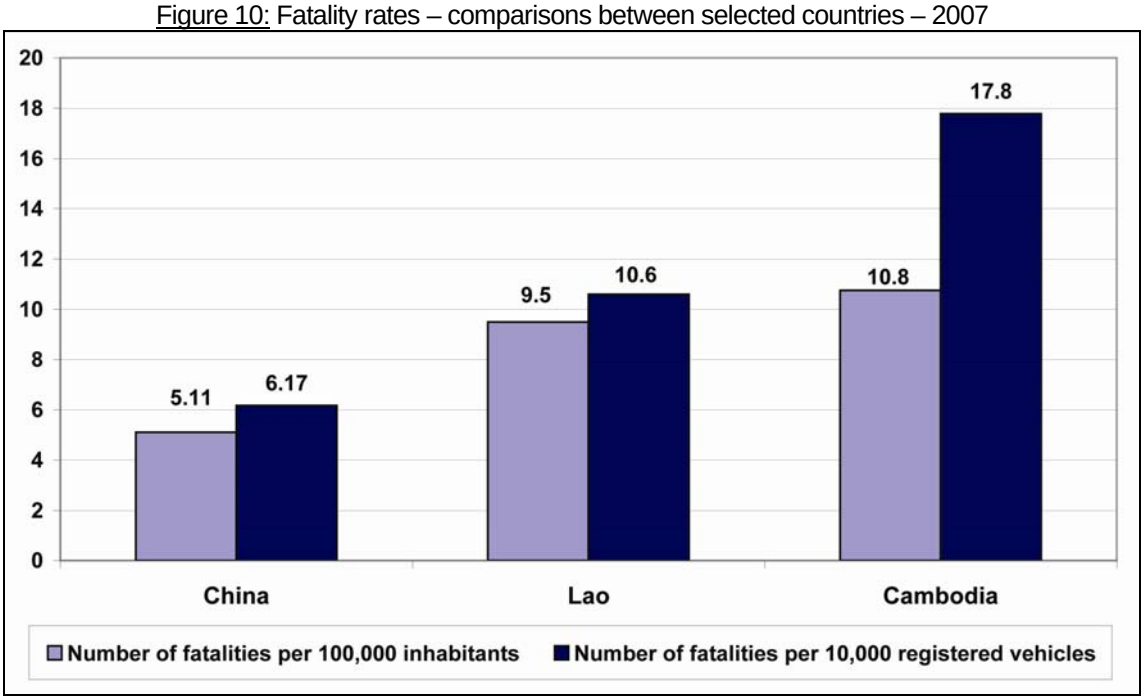
V. 2007 data analysis

V.1 Regional and National Comparisons

In 2007, **27,403 road traffic casualties** were reported by RTAVIS, resulting from **9,449 accidents**. Among them, **1,545 were fatalities**.

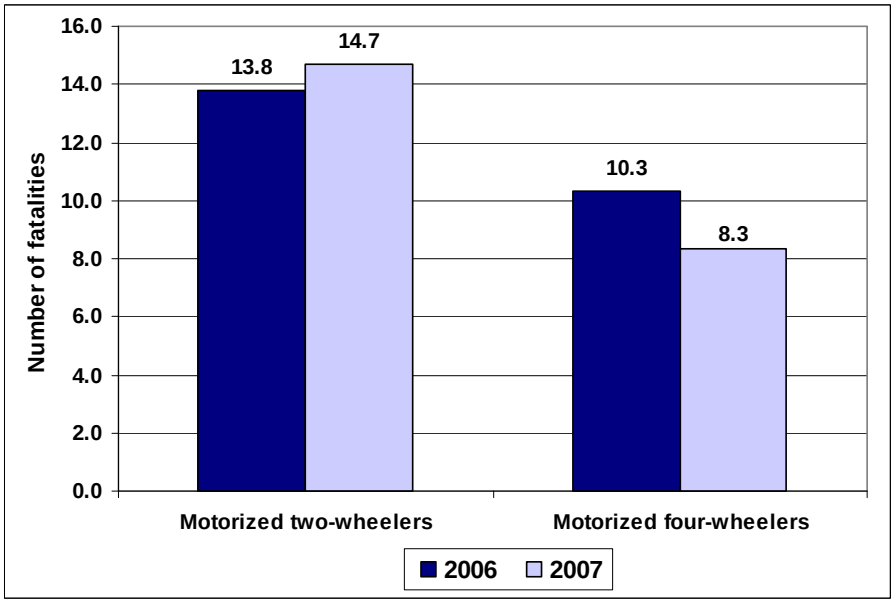
The fatality rate, calculated in comparison with the number of inhabitants and number of vehicles in used in the country, is still high compared to Laos and China, as shown in the figures below.

Figure 10: Fatality rates – comparisons between selected countries – 2007



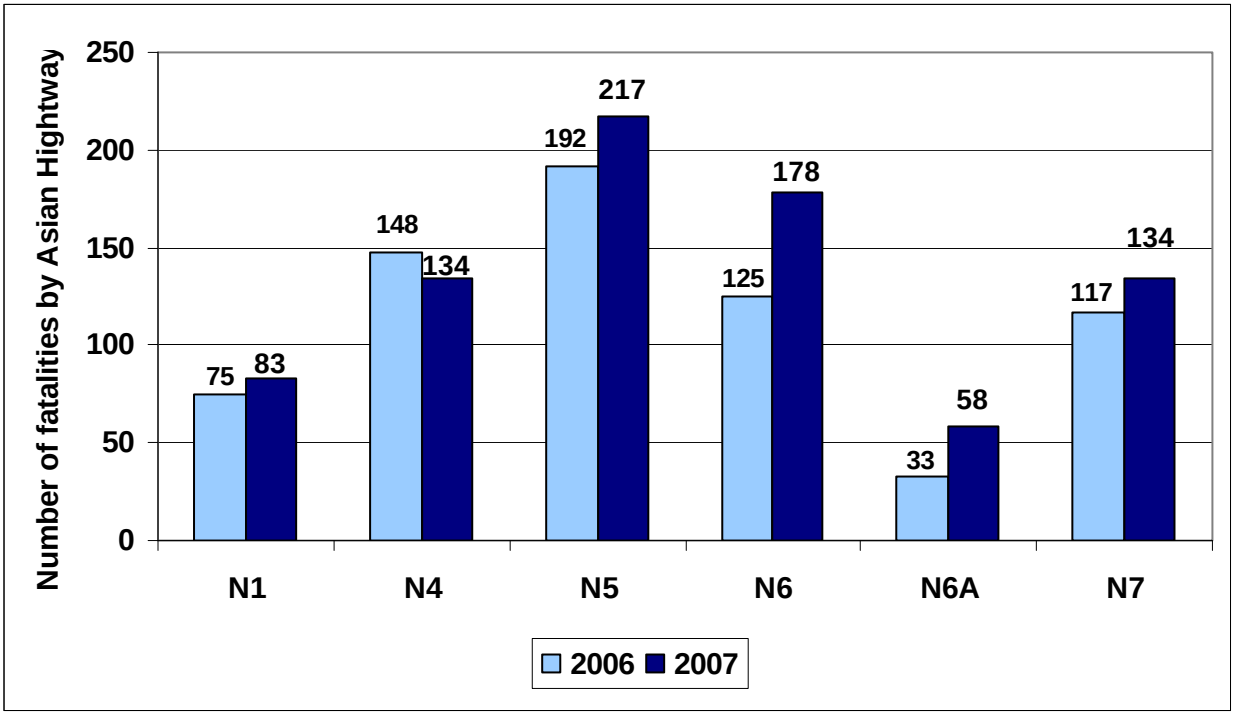
The fatality rate of two-wheelers (per 10,000 registered two-wheelers) **has increased 32%**. Conversely, fatalities in **four-wheelers (per 10,000 registered four-wheelers) have decreased 7%, compared to 2006**.

Figure 11: Comparison of fatality rates between two-wheelers and four-wheelers calculated per 10,000 registered two-wheelers and four-wheelers – 2006 compare to 2007



- The number of fatalities on Asian highways **has increased, except national road 4 where** the **number of fatalities decreased by 9% in 2007 as compared to 2006.**

Figure 12: Number of fatalities on Asian Highways – 2006 compare to 2007



Differences between Phnom Penh and provinces

The key indicators mentioned above are **national averages**. However, important differences are noticed in Phnom Penh and the provinces from 2006 to 2007. The figure here below summarizes the main differences.

Figure 13: Main road safety indicators -differences between Phnom Penh and provinces compare 2006 to 2007

	2006				2007			
	Phnom Penh only		All Provinces without Phnom Penh		Phnom Penh only		All Provinces without Phnom Penh	
Number of casualties reported to RTAVIS	**5,547**		**20,599**		**6,395**		**21,008**	
Age								
Percentage of casualties aged between 15 and 24 years old	43%	2,357	34%	7,044	31%	1,921	28%	5,755
Type of road user								
Percentage of motorbike riders	83%	4,627	69%	13,724	83%	5,310	72%	15,048
Percentage of pedestrians	8%	467	8%	1,594	8%	485	8%	1,635
Percentage of car riders (private and taxis)	2%	137	6%	1,155	3%	160	6%	1,205
Percentage of bicycle riders	3%	169	6%	1,194	3%	193	5%	992
Occupation								
Percentage of students	28%	1,466	20%	3,890	32%	1,867	21%	4,192
Percentage of farmers	3%	152	30%	5,855	3%	1,597	32%	6,460
Percentage of workers	31%	1,631	18%	3,372	27%	180	18%	3,523
Severity of injuries:								
Percentage of severely injured casualties (requiring chirurgical intervention of ICU)	24%	1,328	27%	4,305	23%	1,497	27%	5,653
Percentage of deaths	4%	194	5%	1,098	5%	298	6%	1,247
Nature of injuries: (1)								
Percentage of casualties suffering from cranial trauma	47%	1,986	37%	4,808	43%	2,052	38%	4,686
Day of accident:								
Percentage of casualties injured during the weekend (from Friday 6 pm to Sunday midnight)	37%	2,042	36%	7,370	37%	2,362	35%	7,418
Time of accident:								
Percentage of casualties injured during nighttime (from 6 pm to 5.59 am)	42%	2,304	27%	5,660	41%	2,604	28%	5,825
Peak(s) of casualties	7pm - 9pm		5pm - 7pm		8pm - 9pm		6pm - 8pm	
Cause of accident: (2)								
Percentage of casualties injured in accidents due to human error	**98%**	**5,235**	**92%**	**17,898**	**98%**	**5,959**	**93%**	**18,492**
High speed	35%	1,889	44%	8,442	47%	2,829	50%	9,873
Alcohol or drug abuse	18%	991	17%	3,403	16%	943	16%	3,163
Dangerous overtaking	19%	1,009	11%	2,111	15%	899	9%	1,824
Other	26%	1,346	20%	3,942	20%	1,288	18%	3,632
Percentage of casualties injured in accidents due to road conditions	**4%**	**197**	**13%**	**2,702**	**17%**	**416**	**15%**	**3,109**
Percentage of casualties injured in accidents due to weather conditions	**1%**	**66**	**3%**	**514**	**3%**	**180**	**2%**	**409**
Percentage of casualties injured in accidents due to vehicle defect	**1%**	**61**	**4%**	**892**	**1%**	**70**	**4%**	**881**
Type of collision:								
Percentage of casualties injured in motorbike-motorbike collisions	44%	2,399	31%	6,138	51%	3,186	35%	7,272
Percentage of casualties injured in motorbike-car collisions	28%	1,418	16%	3,247	22%	1,378	17%	3,441
Percentage of casualties injured in motorbike-pedestrian collisions	9%	491	7%	1,522	8%	455	7%	1,587
Hit and Run: (3)								
Percentage of casualties injured in accidents where the driver of the vehicle causing the accidents escaped after the accident	21%	211	22%	1,404	28%	295	21%	1,610
Time to be transferred to hospitals:								
Percentage of casualties arriving at hospitals between 10 and 30 minutes after the accident	40%	1,665	26%	3,205	45%	2,076	28%	3,148
Percentage of casualties arriving at hospital more than 2 hours after the accident	17%	716	37%	4,527	21%	967	39%	4,421
Way to be transferred to hospitals: (4)								
Percentage of casualties transported by ambulance	41%	1,681	19%	2,145	34%	1,525	23%	2,601
Attendance of police:								
Percentage of cases were police was present on the accident site	59%	3,248	64%	12,368	56%	3,553	66%	13,386

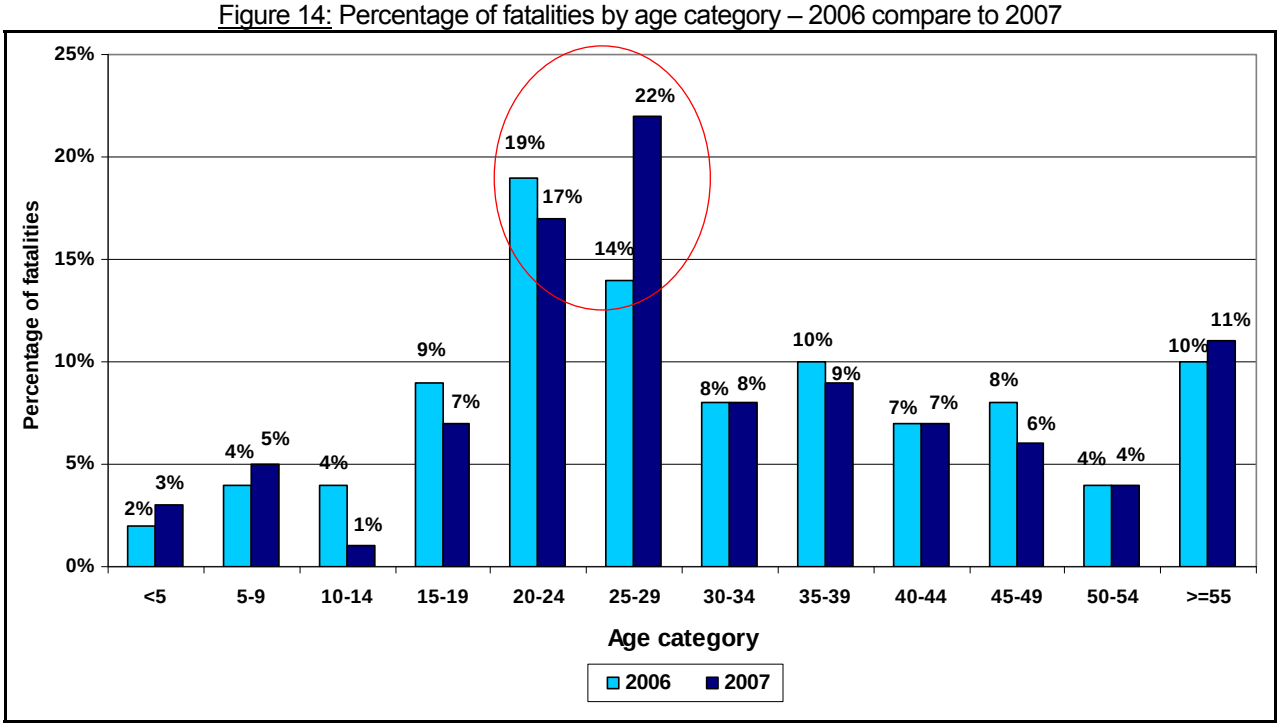
Note:
- (1) and (4): Based on hospital data only.
- (2): Some accidents were due to more than one cause.
- (3): Based on traffic police data only

V.2 Victim Information

V.2.1 Age

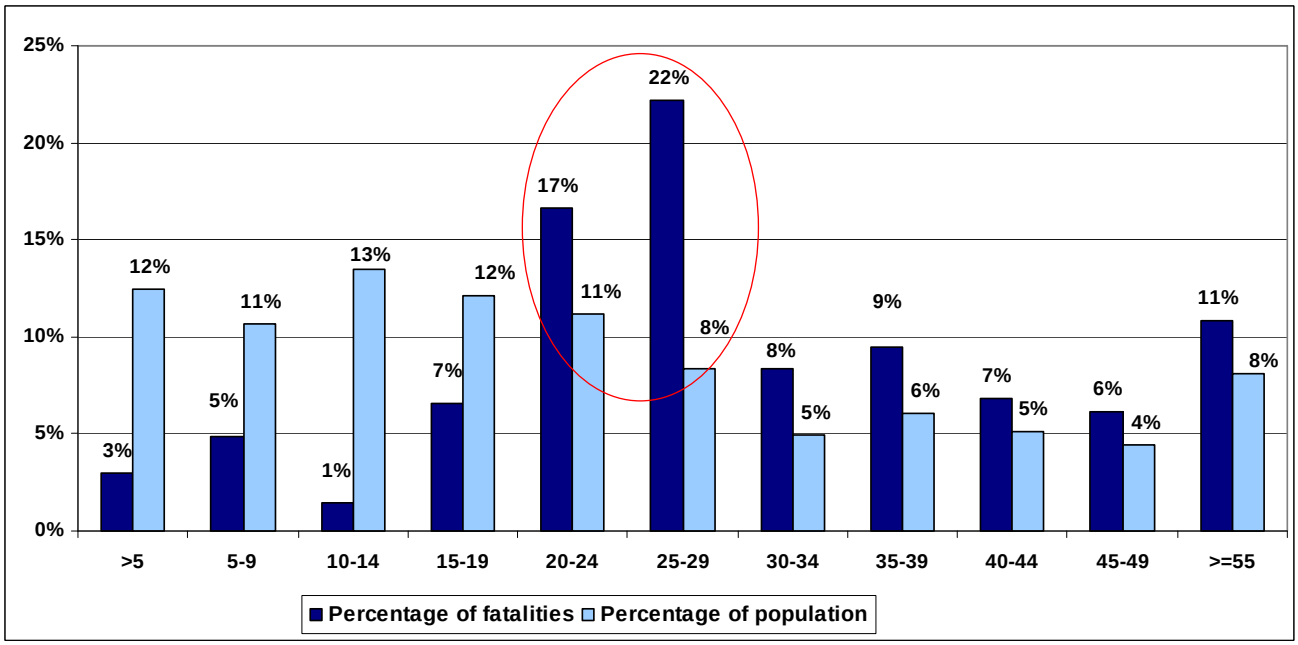
- The average age of casualties is 28.
- The economically active part of the population (20-54 years old) is the most affected by road traffic accidents representing 73% of fatalities.
- People aged between **20 and 29 years old** represent the **highest percentage of fatalities**.

Figure 14: Percentage of fatalities by age category – 2006 compare to 2007



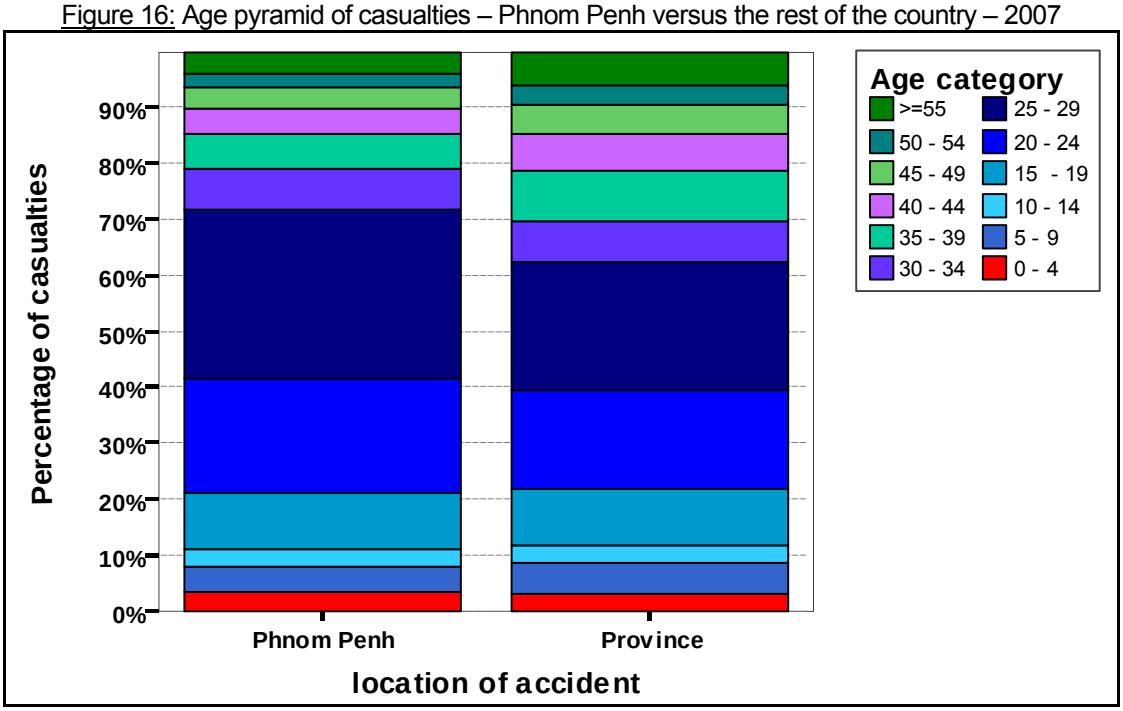
- People aged between **25-29 years old account for 22% of fatalities although they represent only 8% of population**. Conversely, **children (0-14) account for 9% of fatalities although they represent 37% of the population**.

Figure 15: Percentage of fatalities by age category – 2006 compare to 2007



The road traffic casualties age pyramid varies between Phnom Penh and the rest of the country. The proportion of young adults (age 25 to 29) affected by accidents is greater in Phnom Penh than in the provinces (30% compared to 22%). However, the proportion of people above 55 years old is higher in provinces than in Phnom Penh.

Figure 16: Age pyramid of casualties – Phnom Penh versus the rest of the country – 2007



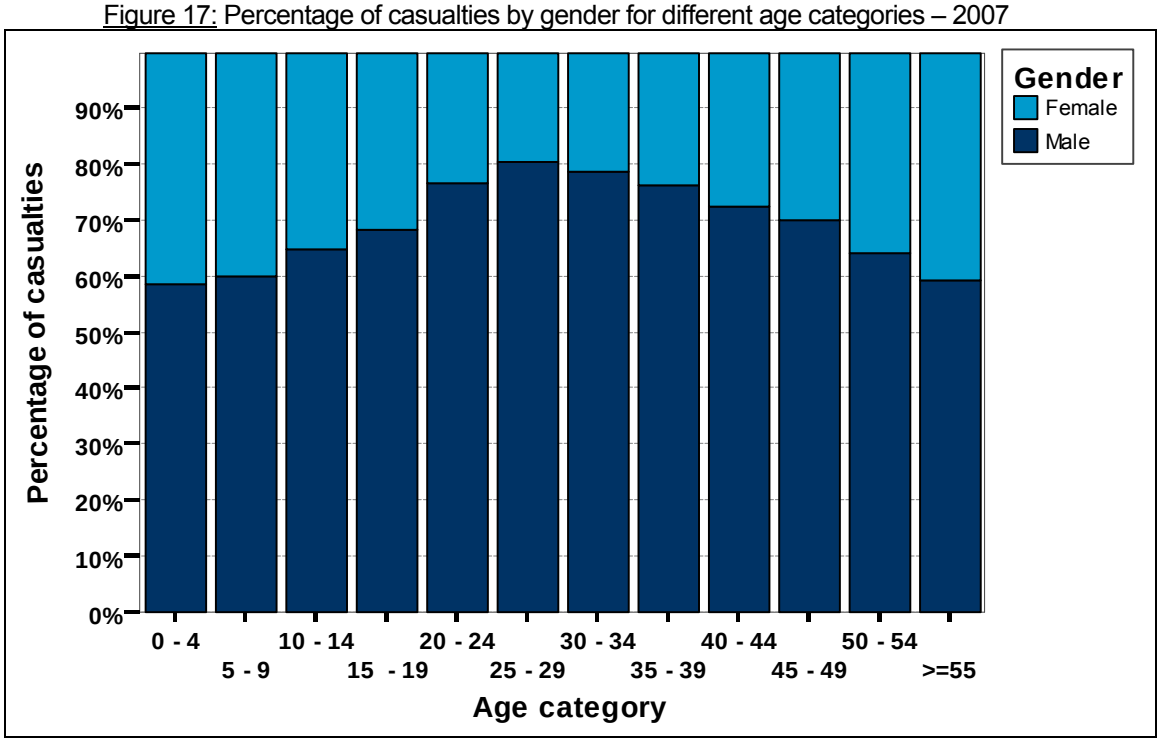
V.2.2 Gender

Males represent a higher ratio of casualties per inhabitants: they **account for 73% of casualties[6], although they account for only 49% of the population[7].** This over-representation has slightly increased in 2007 compared to 2006 (72%).

This over-representation of males in the casualties is especially important in the **working–age proportion** of the population (20-39 years old), where males represent around **80% of casualties**.

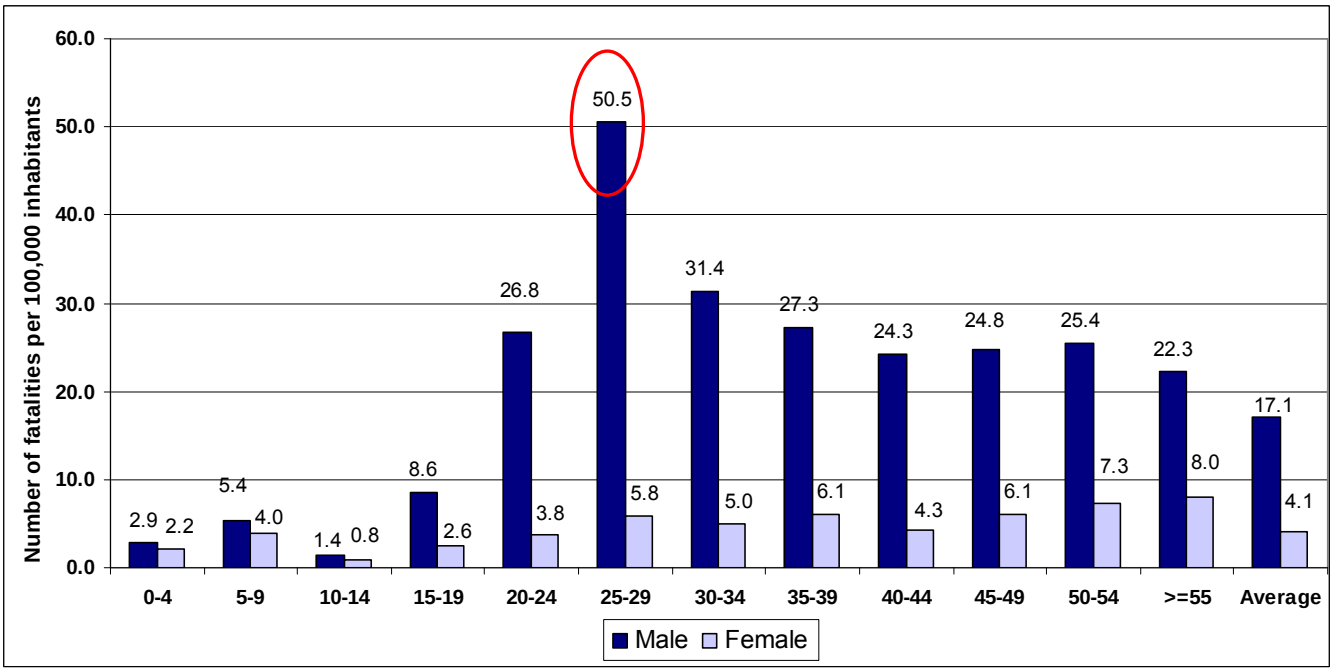
[6] 72% in Phnom Penh and 74% in provinces.
[7] Sources: RTAVIS and First Revision of Population Projections for Cambodia 1998 - 2020, National Institute of Statistics, Ministry of Planning, June 2004.

Figure 17: Percentage of casualties by gender for different age categories – 2007



On average, the male fatality rate per 100,000 inhabitants is **4 times higher** than the female fatality rate (**17.1 compared to 4.1**). The highest male fatality rate is among 25-29 years old group (more than 50), **more than double compared with 2006**. The highest rate among female is the group older than 55 years old (8).

Figure 18: Number of fatalities per 100,000 inhabitants by gender for different age categories[8] – 2007

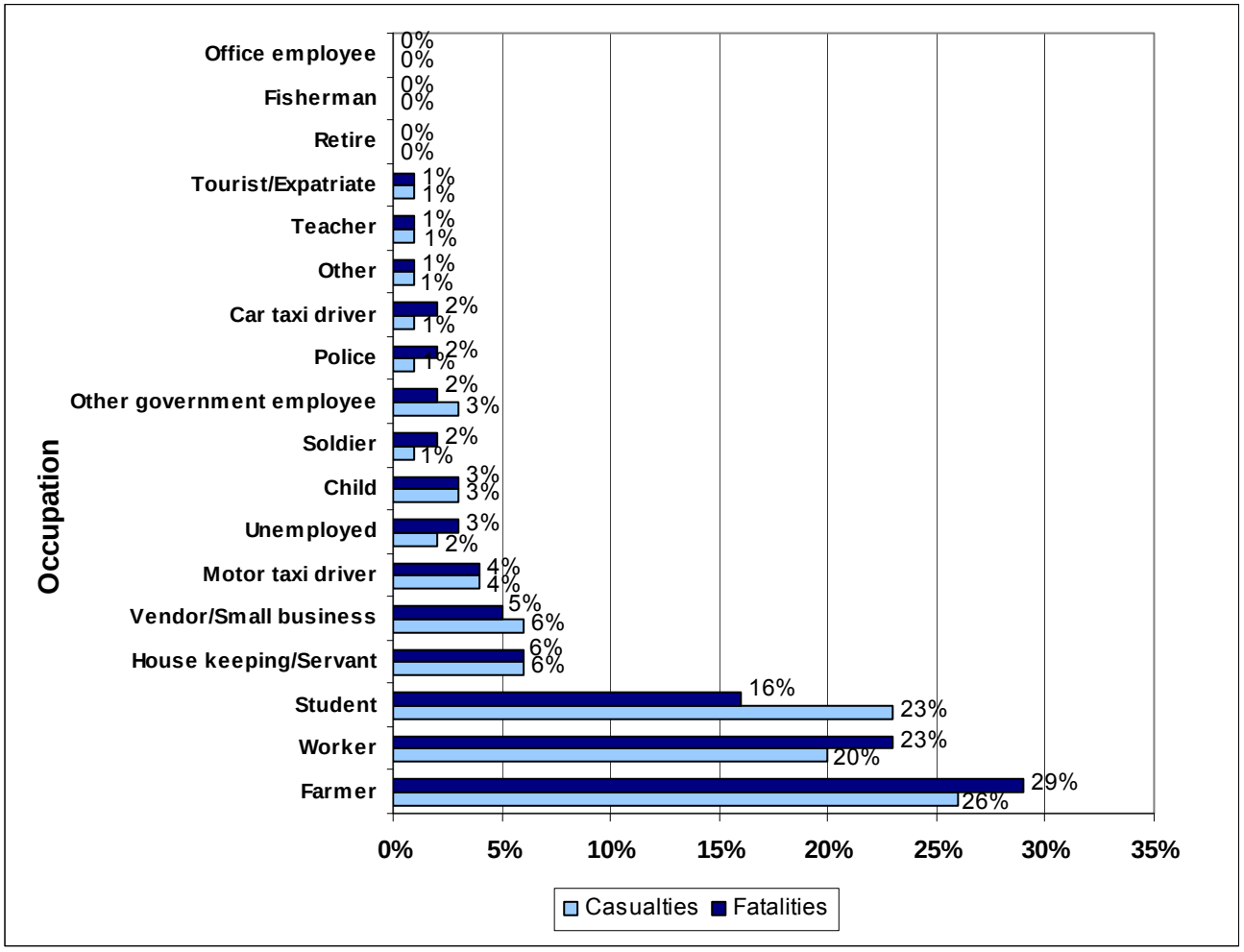


[8] Sources: First Revision of Population Projections for Cambodia 1998 -2020, National Institute of Statistics, Ministry of Planning, June 2004.

V.2.3 Occupation

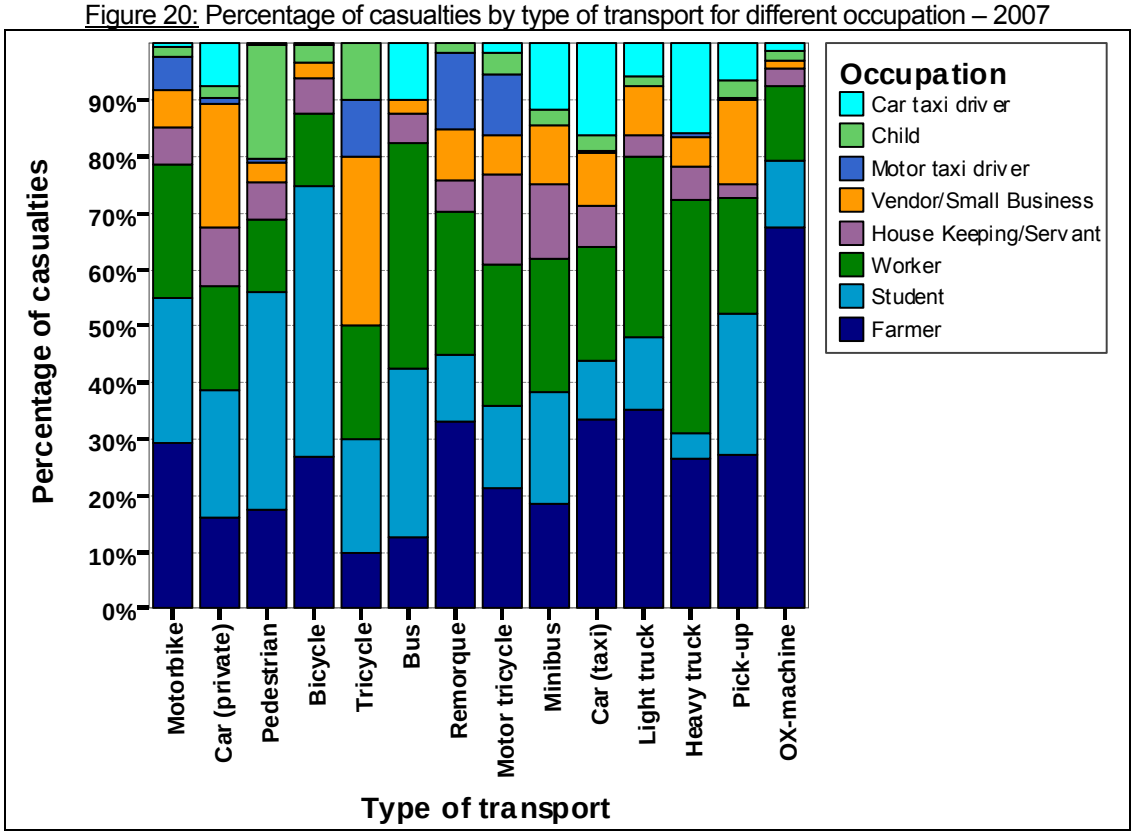
- **The economically active part of the population is the most affected by road traffic accidents.**
- The percentages of fatalities by occupation follow a similar pattern as casualties: **farmers represent the highest percentage, constituting the larger group of fatalities and casualties** (29% of fatalities, 26% of casualties), followed by workers and students.
- Motorbike taxi drivers constitute 4% of the total number of fatalities, while they represent only 4% in casualties.
- In 2007, 141 tourists/expatriates were reported among the casualties – an **increase of 18% compared to 2006**.

Figure 19: Percentage of fatalities and casualties by occupation – 2007



- The percentage of ox-machines casualties is much higher among farmers (around 70%).
- **More than 45%** of bicycle riders and **almost 40%** of pedestrians are students.
- 21% of pedestrian are children.
- More than 40% of heavy truck riders and 40% of bus riders are workers.

Figure 20: Percentage of casualties by type of transport for different occupation – 2007



V.2.4 Type of road user

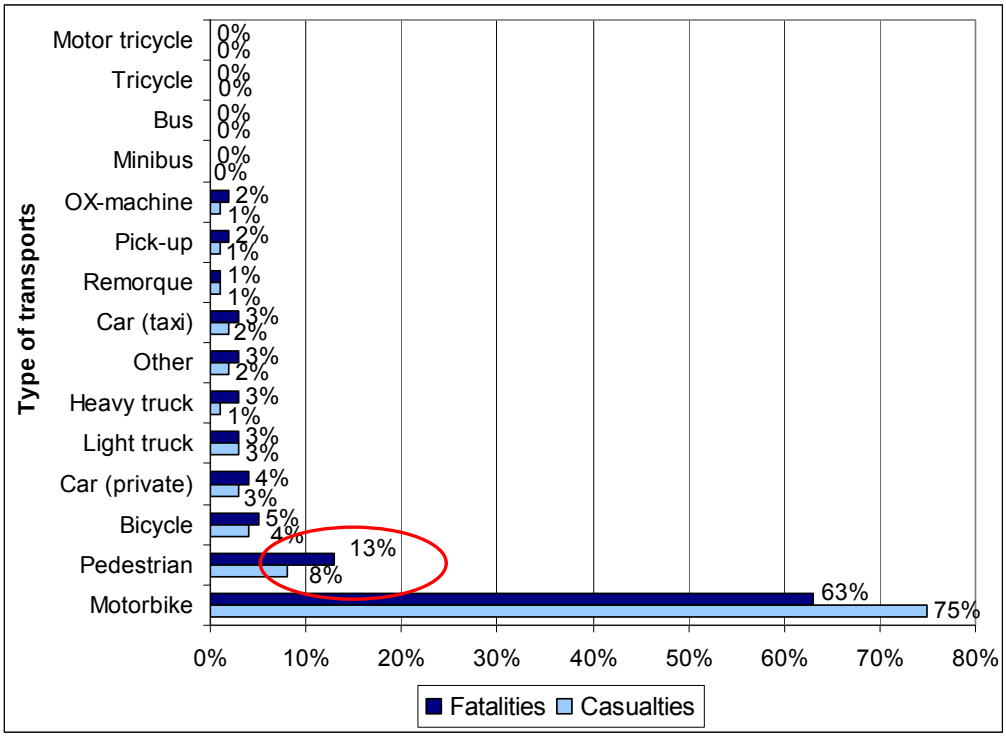
Motorbike and 4-wheeler riders continue to be the most affected group of road users. Compared to 2006, the number of fatalities among motorbike users **increased 30%, followed by 4-wheeler riders at 19%, and bicycle riders** at **9%**.

Figure 21: Number of fatalities by type of road user, 2006 compare to 2007

Road Users	2006	2007	Difference
Motobike riders	749	971	+30%
4-wheeler riders	194	231	+19%
Pedestrians	198	206	+4%
Bicycle riders	67	73	+9%
Other vehicles	84	64	-24%
Total	1,292	1,545	+20%

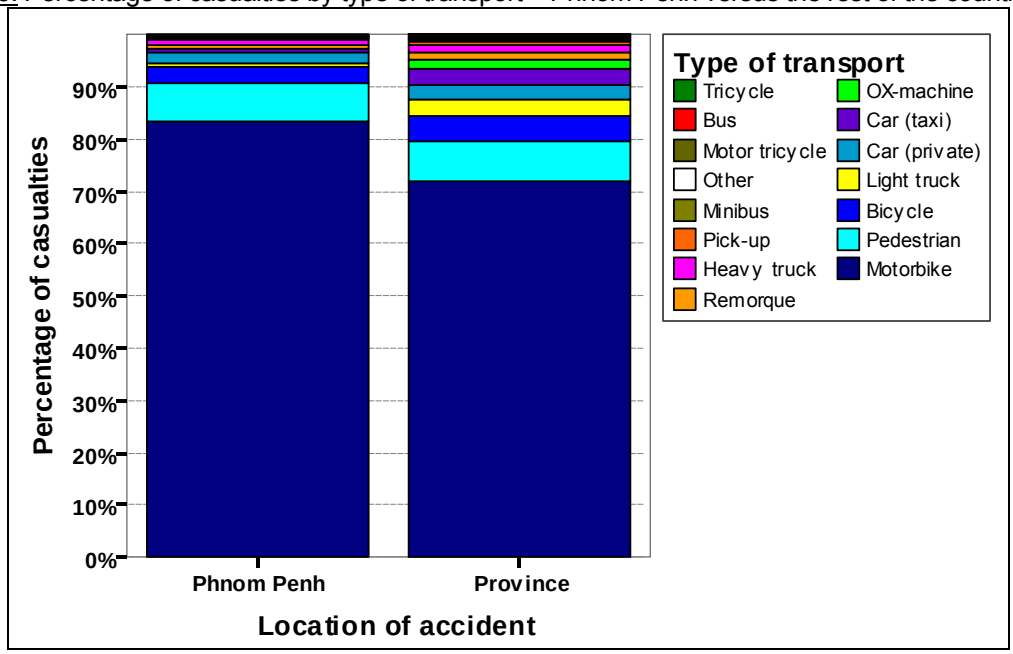
Motorbike users account for the largest majority of casualties and fatalities (75% and 63% respectively), followed by pedestrians, bicyclists and car users. It is very interesting to note that **pedestrians consist of 13% of fatalities, while they represent only 8% of casualties.**

Figure 22: Percentage of fatalities and casualties by type of transports – 2007



The percentage of motorcycle and pedestrian casualties is much higher in Phnom Penh than in the rest of the country, while the percentage of bicycle casualties is much higher in provinces than in Phnom Penh.

Figure 23: Percentage of casualties by type of transport – Phnom Penh versus the rest of the country – 2007

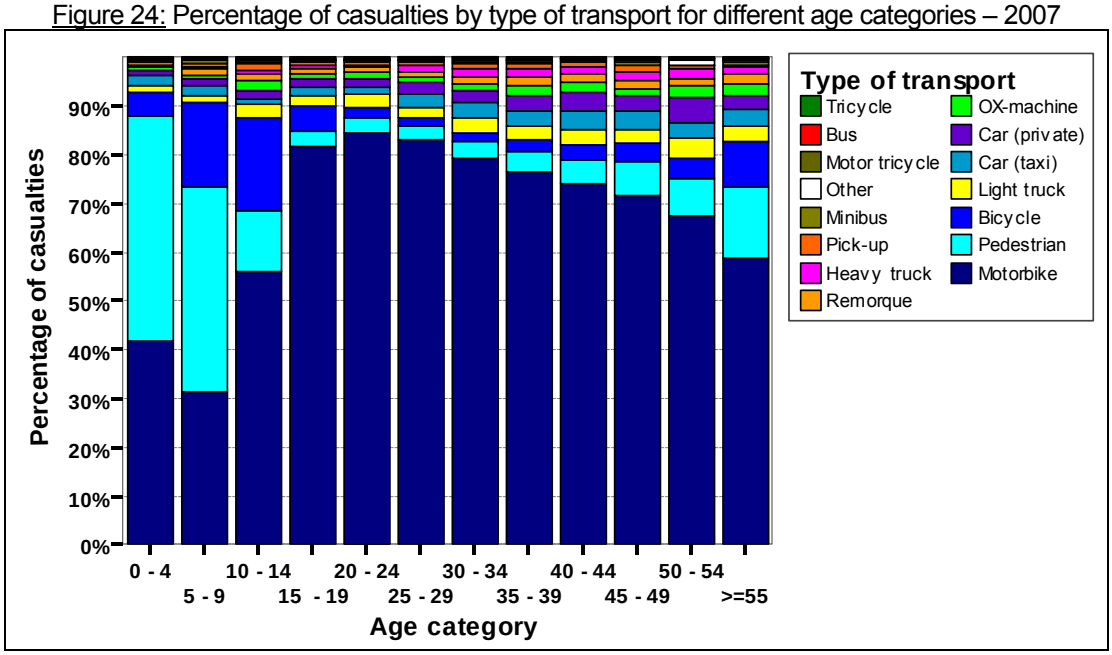


The percentage of pedestrians and bicycle casualties is much higher among children and old people:

- Almost 50% of casualties below 10 years old are pedestrians.
- More than 10% of casualties between 10 and 14 years old are pedestrians and almost 20% are bicycles riders[9].
- 12% of casualties above 55 years old are pedestrians

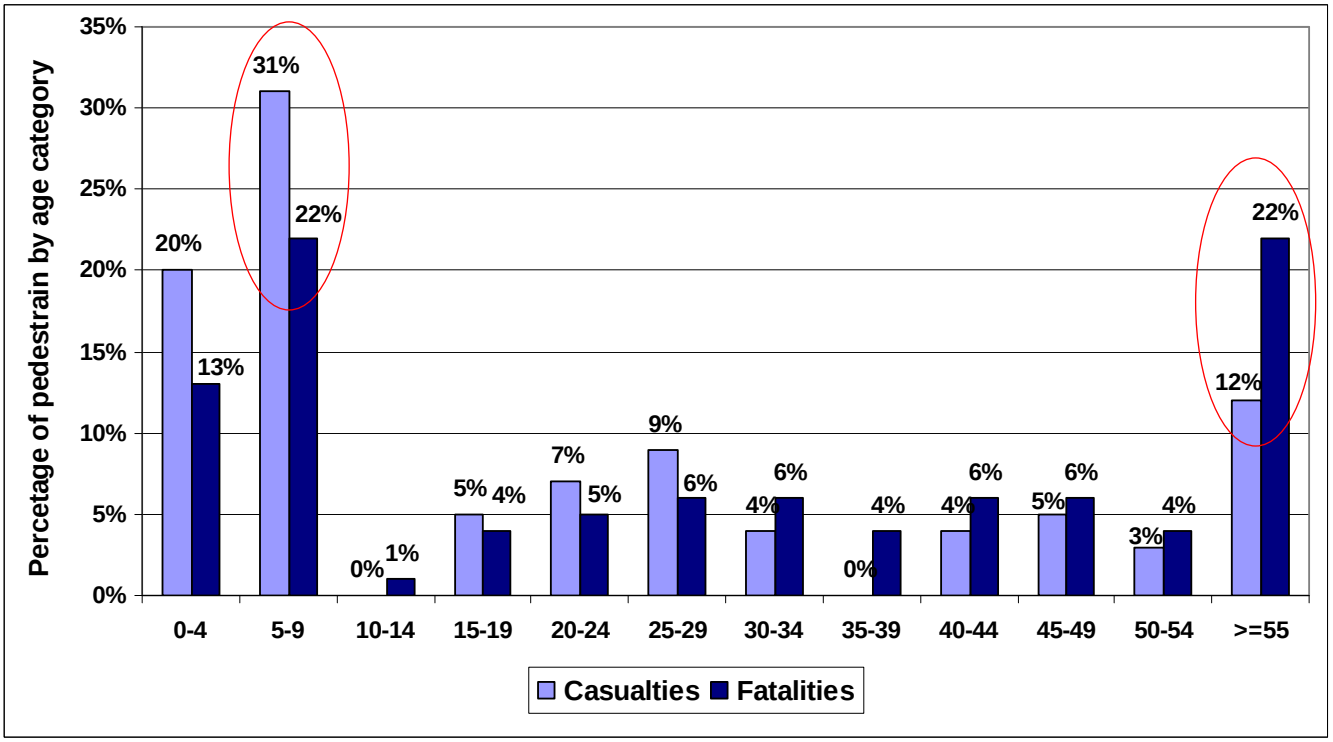
[9] It is also interesting to note that 4% of casualties between 5 and 14 years old are motorbikes riders and that 25% of them were driving the motorbike by themselves at the time of accident.

Figure 24: Percentage of casualties by type of transport for different age categories – 2007



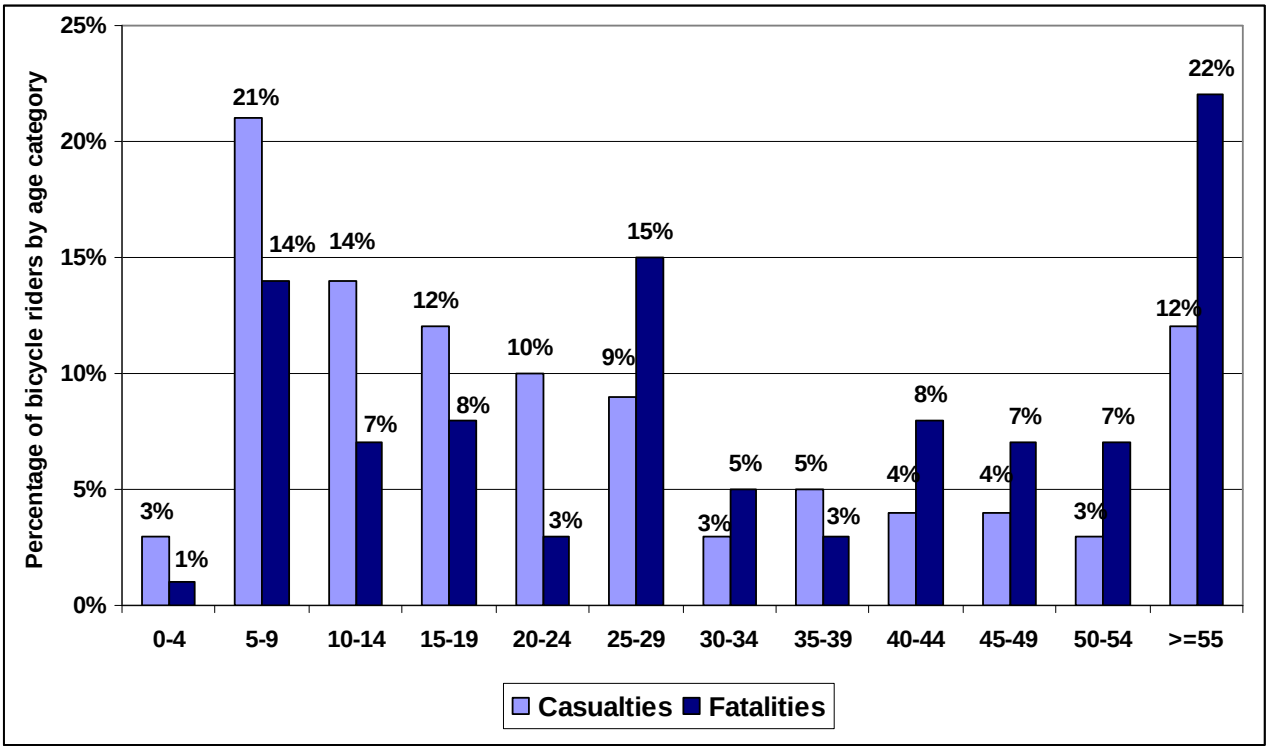
Pedestrians are the second most affected group of road users in 2007. **Pedestrian aged between 5-9 years old represents the highest percentage of casualties and fatalities**. Pedestrian aged more than 54 years old represent 22% of fatalities.

Figure 25: Percentage of pedestrian casualties and fatalities by age categories – 2007



Accidents involving bicycle riders is higher among children and adult. **Bicycle riders aged between 5-9 years old represent the highest casualties,** while bicycle riders aged more than 54 years old have a **higher percentage of fatalities than young people (**22% of fatalities**)**.

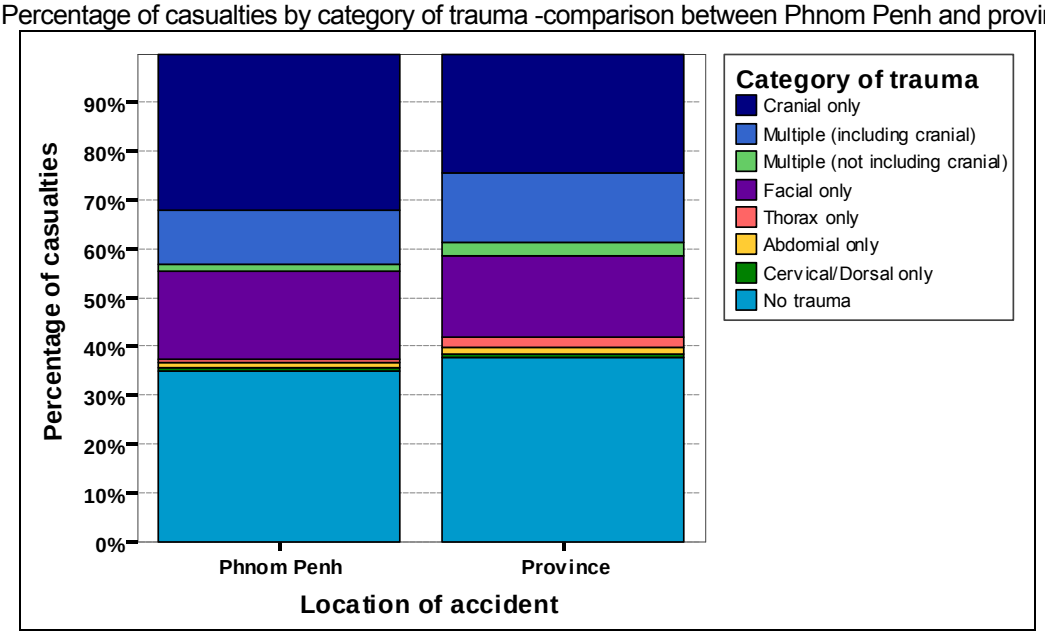
Figure 26: Percentage of bicycle casualties and fatalities by age categories – 2007



V.2.5 Nature of injuries

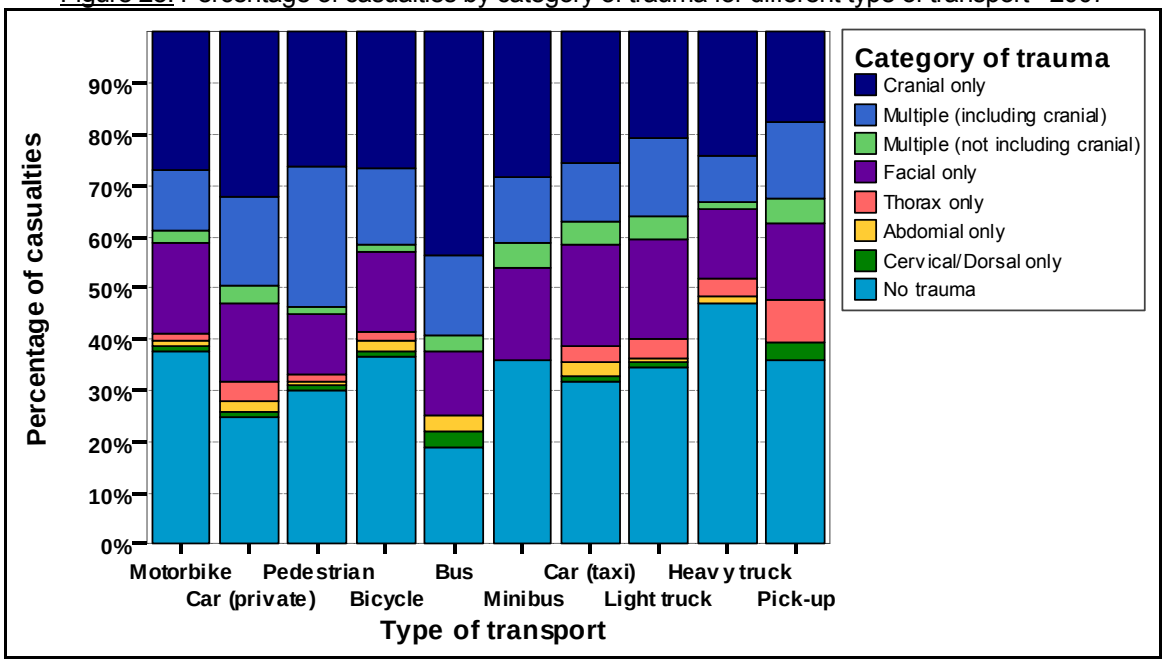
In total, **27% of casualties suffer from head injuries**. However, a **higher percentage of head injuries is noticed in Phnom Penh** compared to the rest of the country. More than 40% of casualties injured in Phnom Penh suffer from cranial trauma. This is partly due to the fact that a larger proportion of motorbike's casualties is noticed in Phnom Penh (83% compared to 72% in province). **76% of casualties suffering from a cranial trauma are indeed motorbike users** and only 3**% are wearing a helmet at the time of the accident**[10]**.**

Figure 27: Percentage of casualties by category of trauma -comparison between Phnom Penh and provinces - 2007



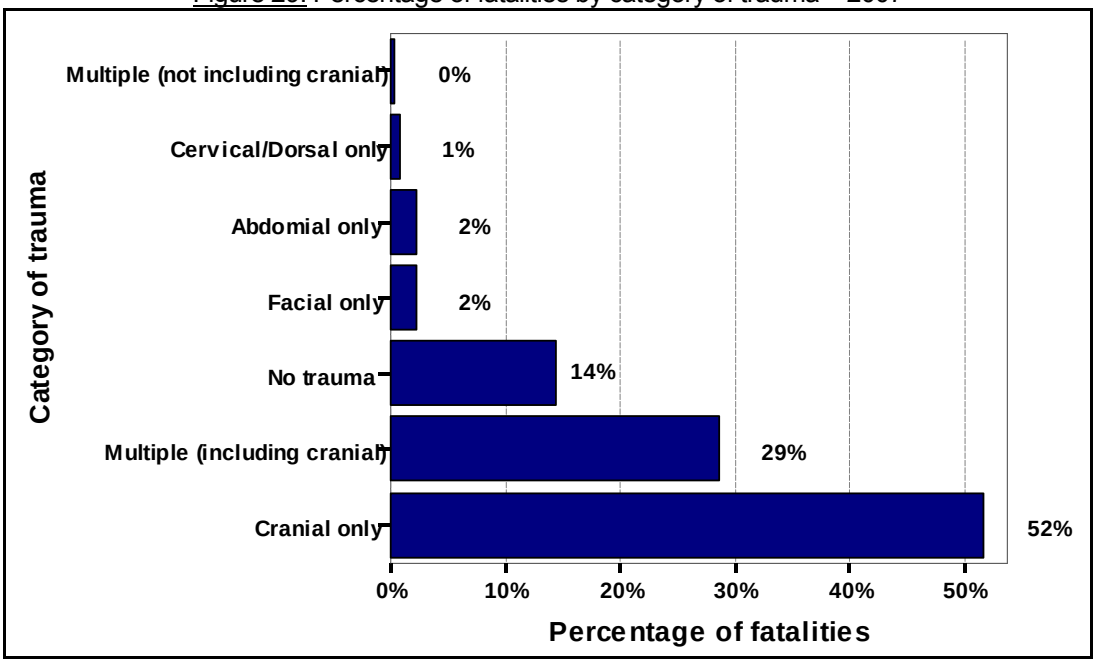
[10] This percentage is very low compared to the average helmet wearing rate in Phnom Penh which was almost 21% at the end of 2006. This average helmet wearing rate is measured regularly by the Ministry of Health, during 5 days, at different time and locations, to measure the effectiveness of helmet wearing awareness campaigns.

Figure 28: Percentage of casualties by category of trauma for different type of transport– 2007



Head injuries account for 81% of fatalities. It is interesting to note that only 3% of fatalities were wearing a helmet. In addition, **19% of casualties suffer from fractures and more than 50% suffer from serious cuts/wounds**.

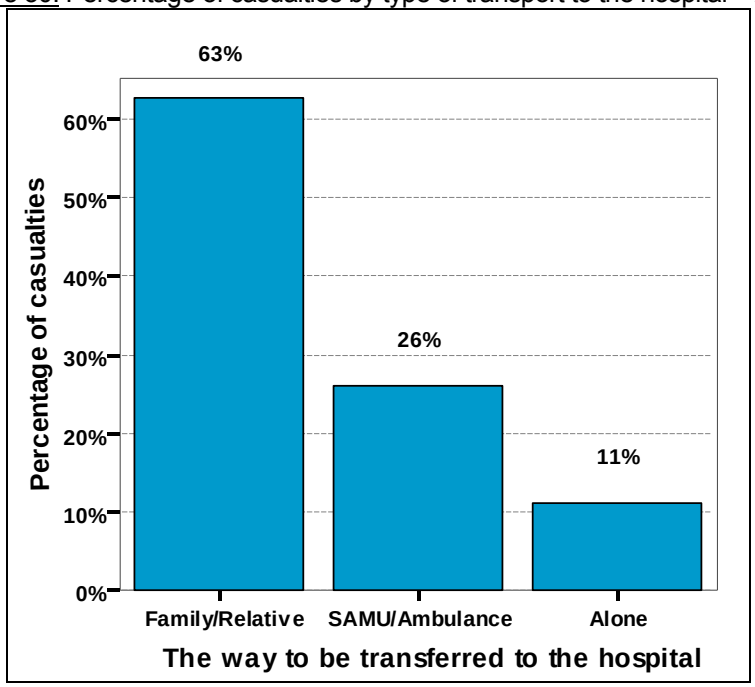
Figure 29: Percentage of fatalities by category of trauma – 2007



V.2.6 Transfer to hospital

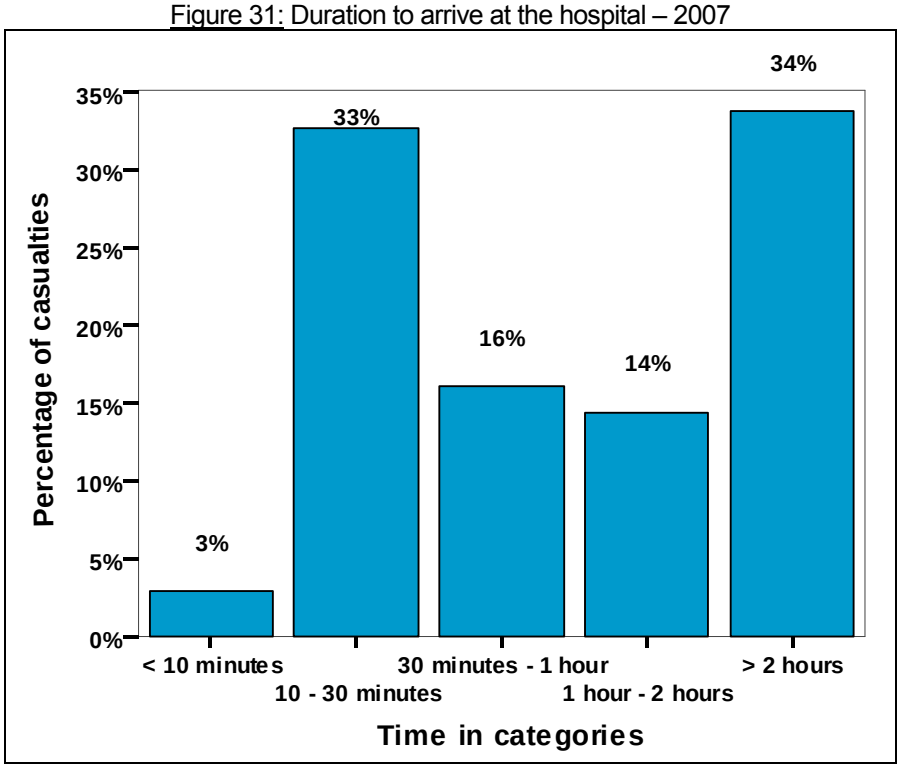
Only 26% of casualties are transferred to the hospital or private clinic by ambulance. This is mainly an issue in provinces where only 23% of casualties are transferred to the hospital by ambulance.

Figure 30: Percentage of casualties by type of transport to the hospital – 2007



- 33% of casualties arrive at the hospital **less then 30 minutes** after the accident while 34% of casualties take **more than 2 hours to reach hospital**.
- **In the provinces, 43% of seriously injured casualties take more than 2 hours to reach the hospital**.

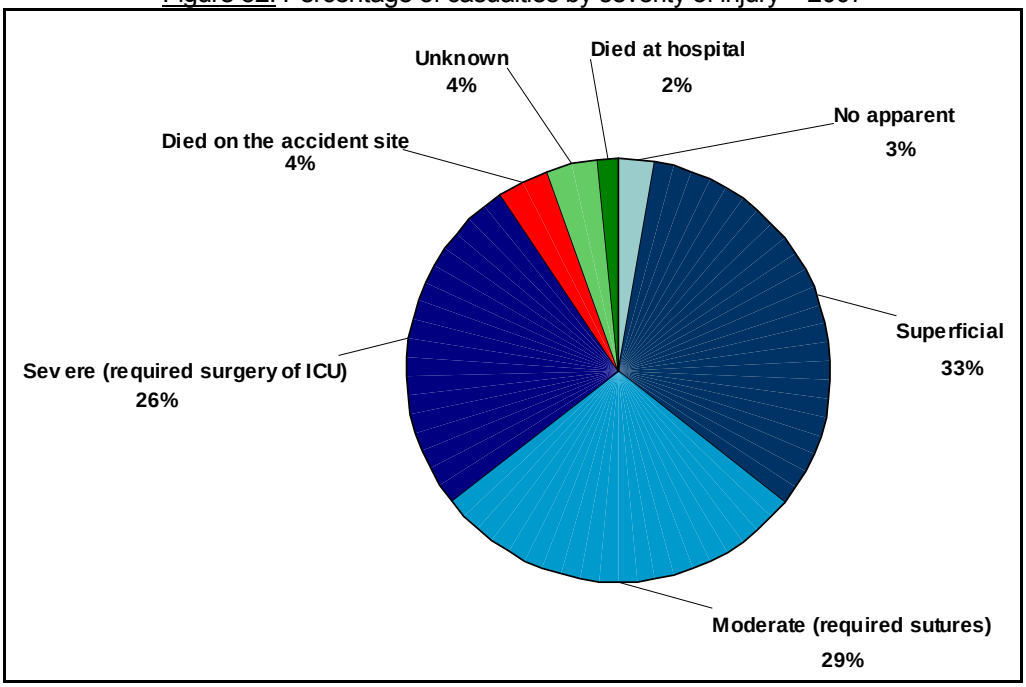
Figure 31: Duration to arrive at the hospital – 2007



V.2.7 Severity of injuries

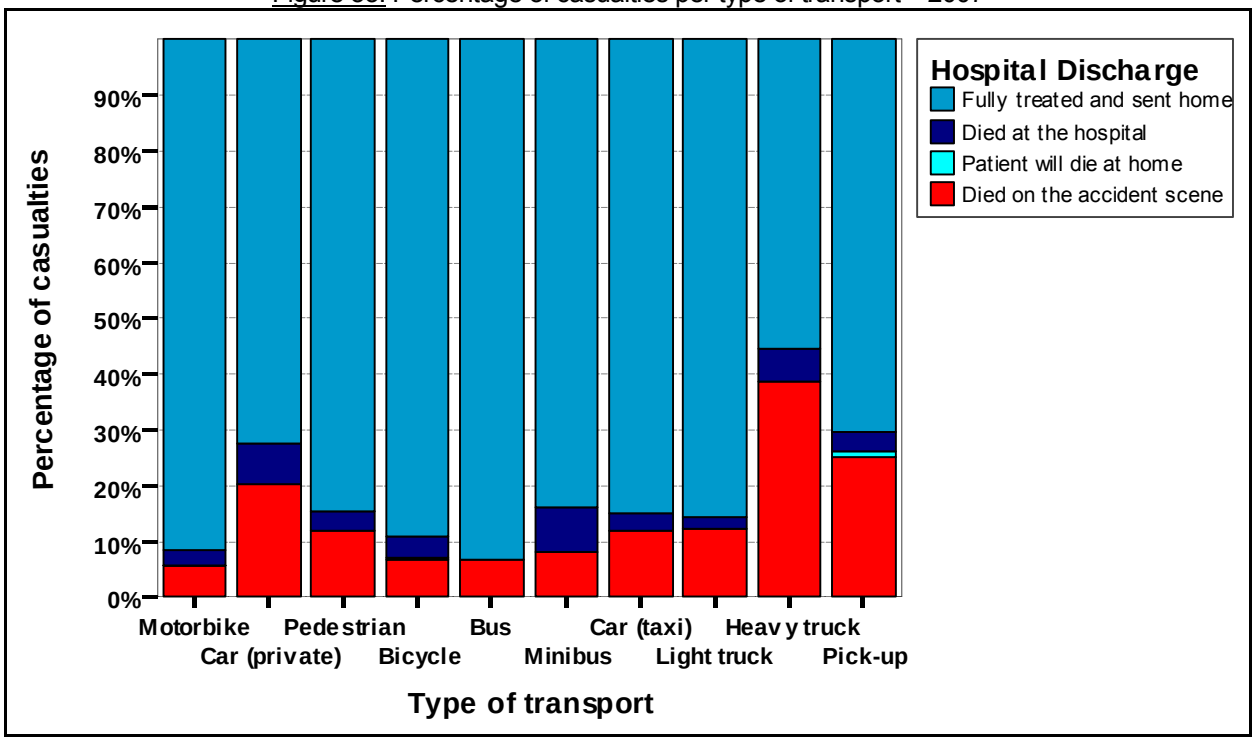
4% of casualties died immediately at the scene of the accident, 2% died at hospital and 26% were severely injured.

Figure 32: Percentage of casualties by severity of injury – 2007



A larger proportion of fatalities are noticed among pedestrian and four-wheeler casualties than among motorbike and bicycle casualties.

Figure 33: Percentage of casualties per type of transport – 2007

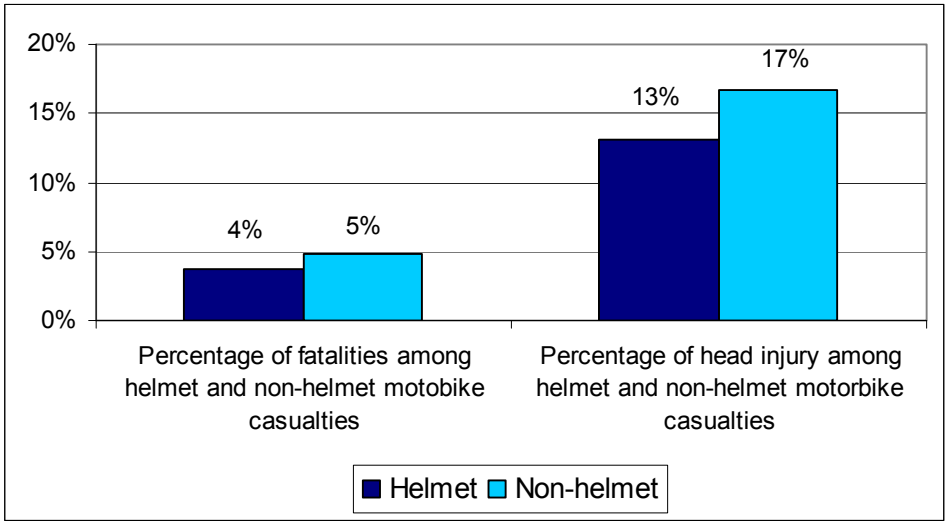


V.2.8 Helmet wearing

Only 3% of motorbike riders who had an accident in 2007 wore a helmet at the time of the accident. This percentage is low compared to the average wearing rate measured in Phnom Penh which was almost 21%[11].
In case of heavy accident, helmet seems to be still efficient as it decrease, although slightly, the percentage of fatalities to 4% (compare to 5% when the motorbike rider do not wear a helmet).

The role played by the helmet is obvious in lighter motorbike accidents (which remain the majority of the cases). In 2007, motorbike riders who wore a helmet suffered from head injuries in 13% of the cases compared to 17% when not wearing a helmet.

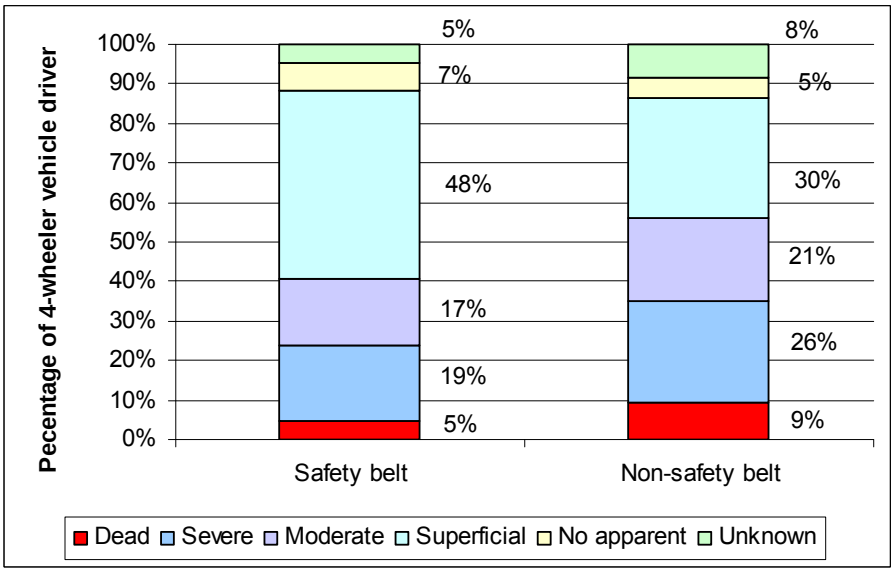
Figure 34: Percentage of motorbikes' riders by helmet using – 2007



V.2.9 Seatbelt

Only 9% of 4-wheels vehicles drivers who were injured in a traffic accident in 2007 wore a seatbelt at the time of the accident. Figure 22 illustrates clearly the safety role played by the seatbelt in case of collision. **The chances to be injured, moderately, mildly or severely are much higher when not wearing a seatbelt.**

Figure 35: Chance to be injured if wearing or not a seatbelt – 2007



[11] This average helmet wearing rate is measured regularly by the Ministry of Health, during 5 days, at different time and locations, to measure the effectiveness of helmet wearing awareness campaigns in 2006.

V.2.10 Cost of treatment

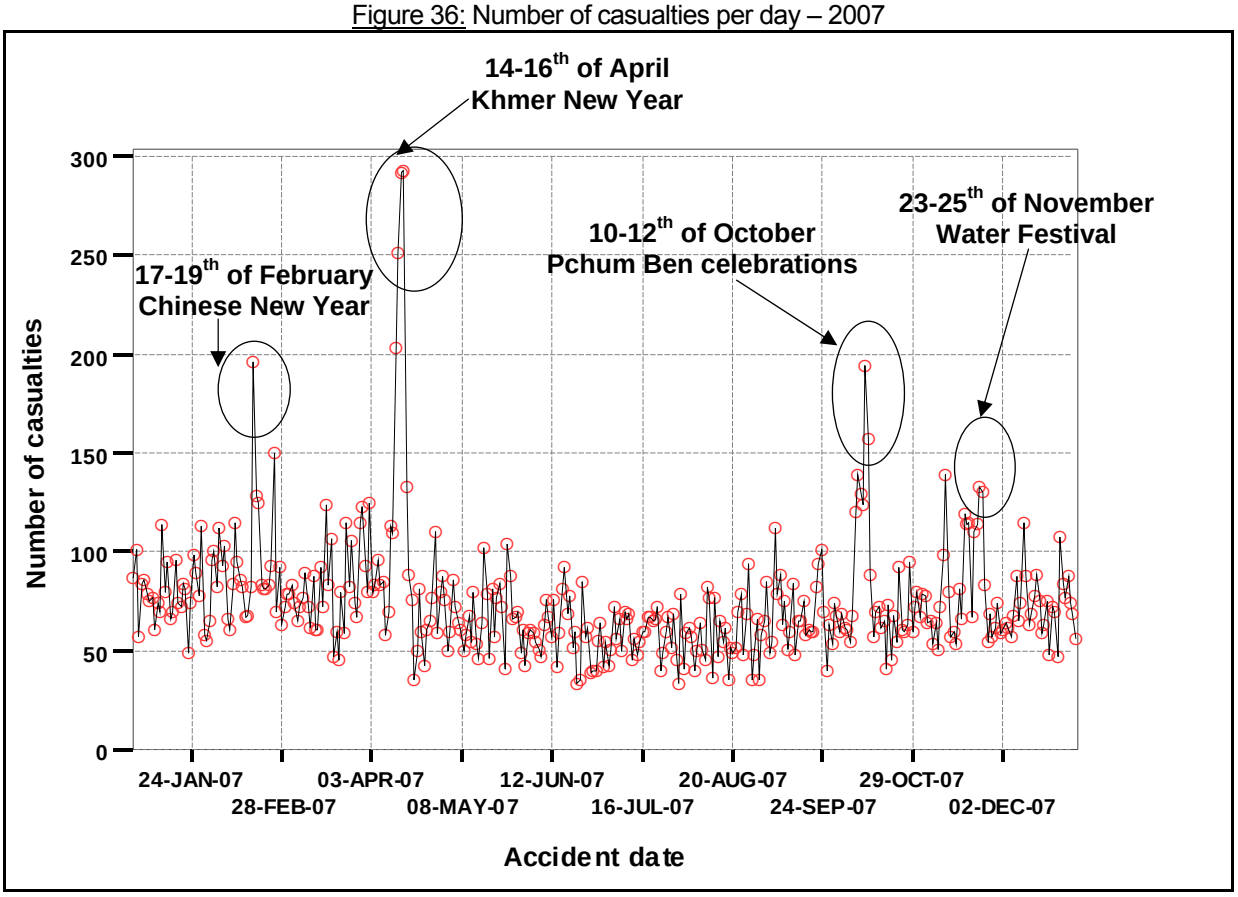
The average cost of medical treatment is US$ 118 per casualty, an **increase of 49%** compare to 2006.

V.3 Accident Information

V.3.1 Day and time of accident

On average, more than **70 road traffic casualties are reported every day in Cambodia**. **Several peaks (up to 293 casualties a day) are noticed**, corresponding mainly to Khmer national holidays, as shown in figure 36.

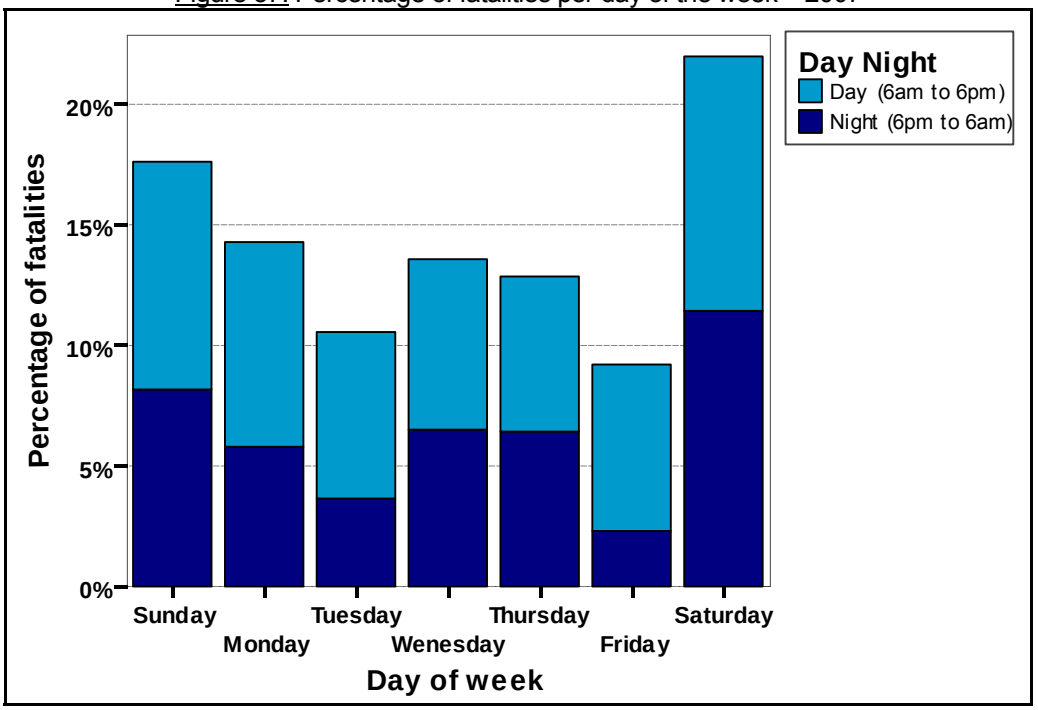
Figure 36: Number of casualties per day – 2007



Weekend (Friday 6 pm until Sunday midnight) accidents are responsible for 36% of casualties.

A higher percentage of fatalities are noticed on Saturdays**, especially during the night**. A very low percentage of fatalities occur on Friday evenings.

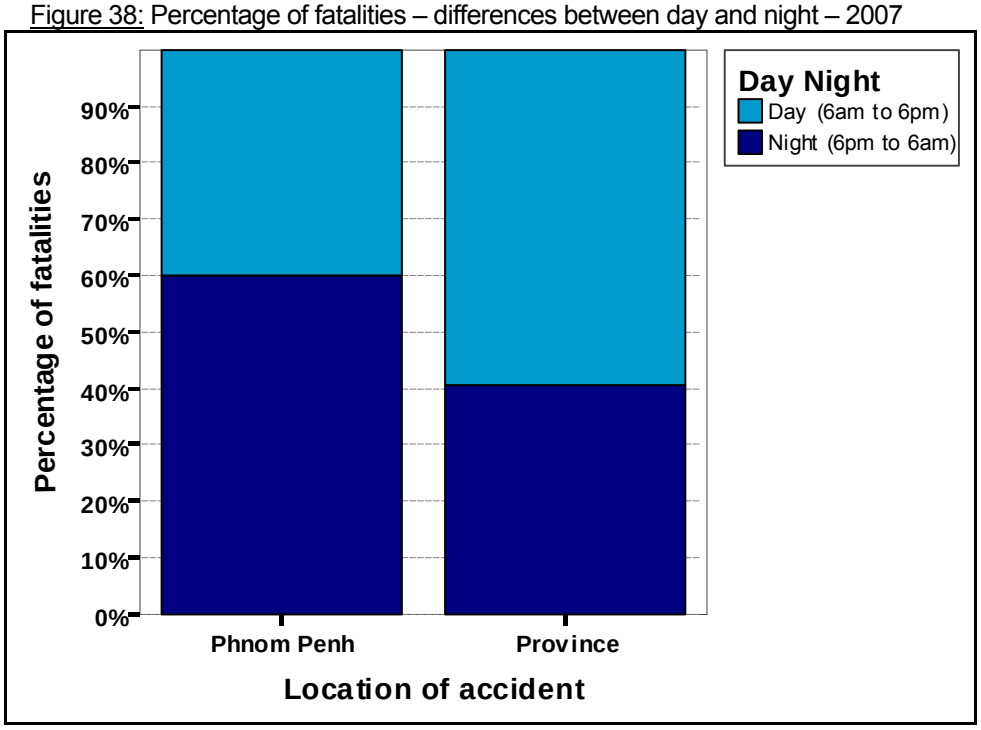
Figure 37: Percentage of fatalities per day of the week – 2007



V.3.2 Time of accident

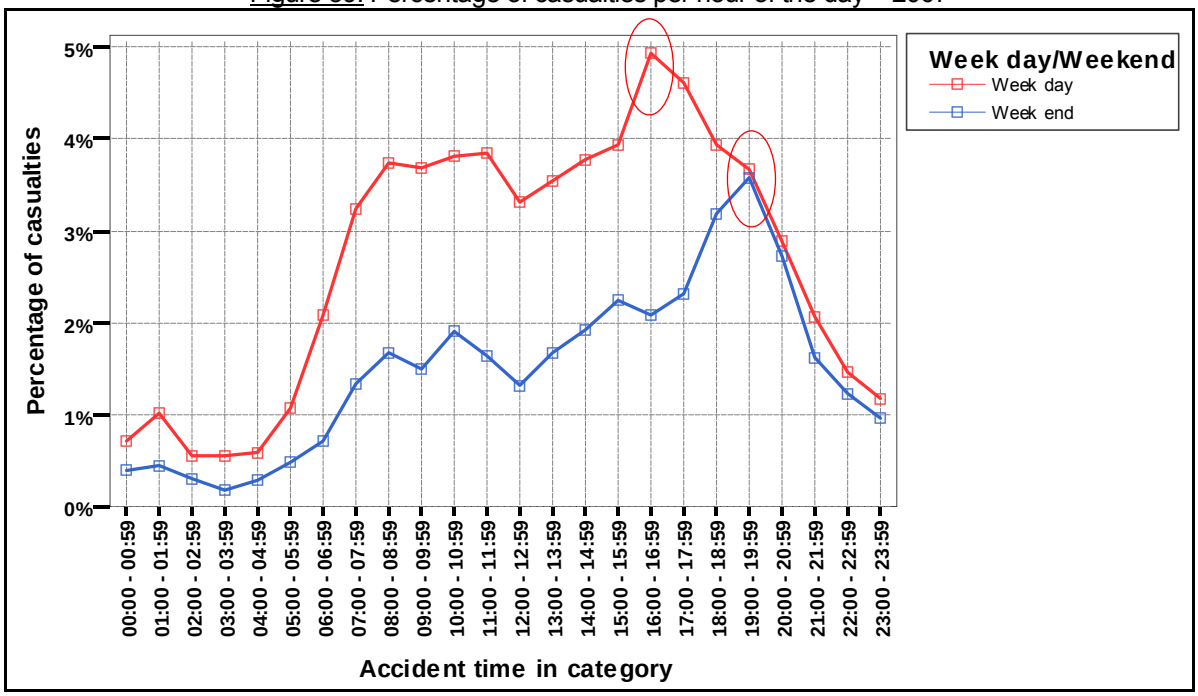
In total, nighttime accidents are responsible for 31% of casualties. Here again, a higher proportion of nighttime's accidents is noticed in Phnom Penh (60% of fatalities, compared to 40% of fatalities in the rest of the country).

Figure 38: Percentage of fatalities – differences between day and night – 2007



The peak of casualties is observed between 4 pm and 5 pm during the week day, and between 7 pm and 8 pm during the weekend.

Figure 39: Percentage of casualties per hour of the day – 2007

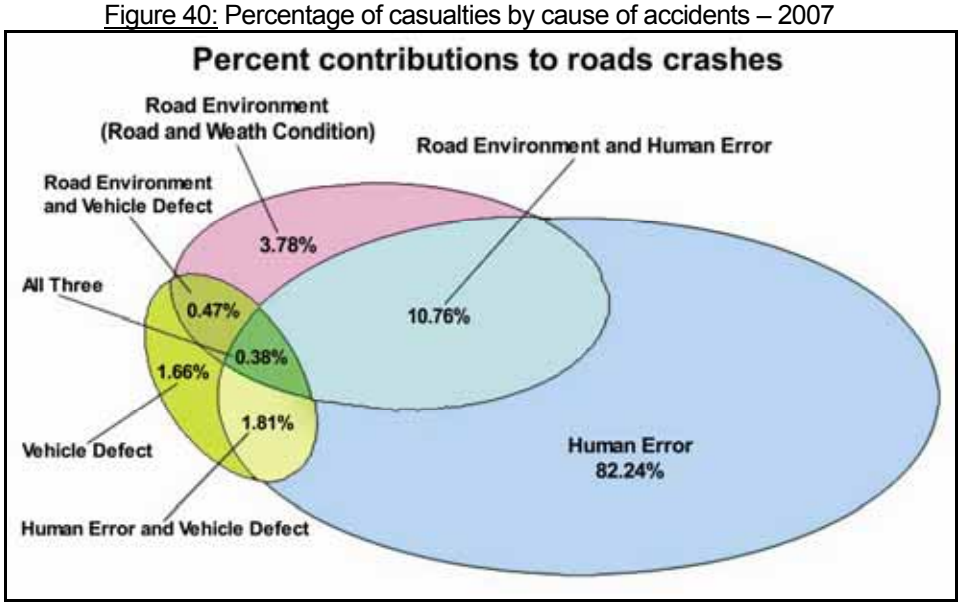


V.3.3 Causes of accident

About one fifth (22%) of casualties are injured in "hit and run" accidents[12] and 30% of the casualties reported by the traffic police are responsible for the accident in which they have been injured.

The below graphic shows the contributions of Human error, road condition and vehicle defect to road traffic accidents. **Human error alone is responsible for 82.24% of all road accidents**. Human error in combination with the road condition account for 10.76% of road traffic accidents, while human error in combination with vehicle defects **account for 1.81%** of road traffic accidents.

Figure 40: Percentage of casualties by cause of accidents – 2007

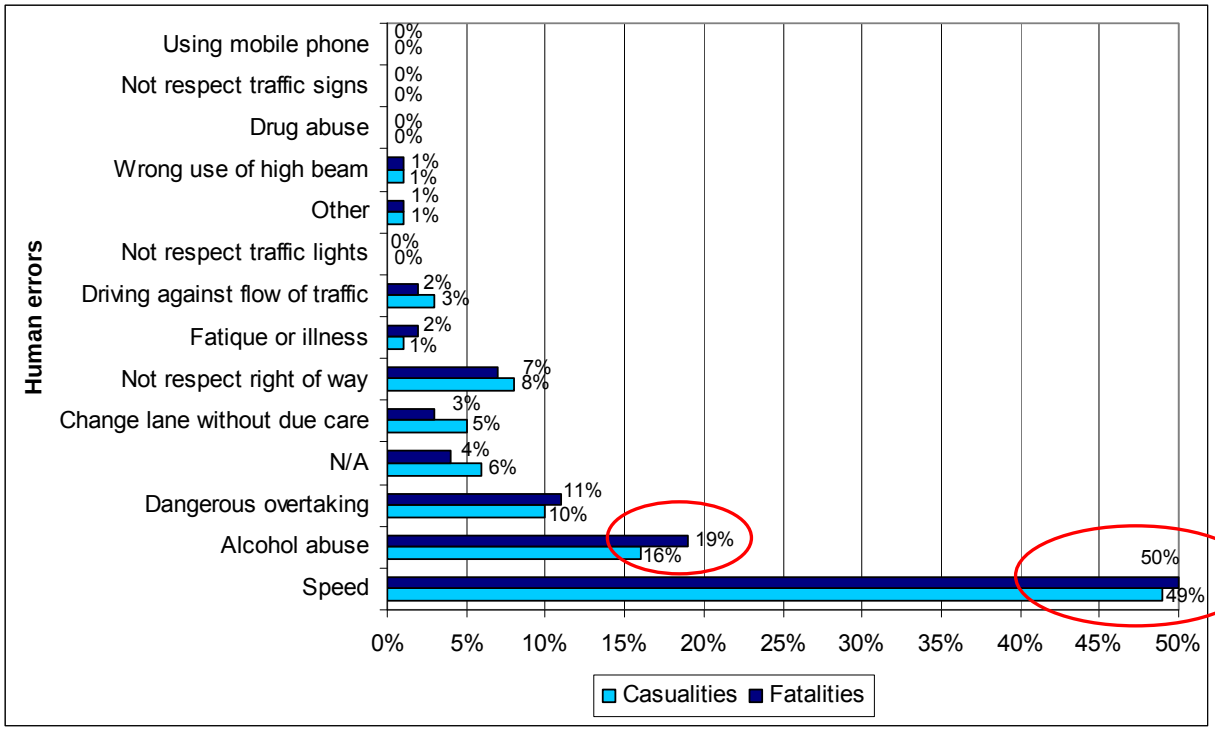


[12] Accidents where the driver of the vehicle causing the accident escapes after the accident.

V.3.3.1 Human error

50% of fatalities are due to **speeding**, while another 19% are caused by **alcohol abuse**. It is interesting to note that the percentages of fatalities for speed and alcohol abuse are higher than percentages of casualties, which demonstrates that a person has a higher risk of death in speed and alcohol abuse than other kinds of human errors.

Figure 41: Percentage of casualties compare to fatalities by cause of accident — 2007



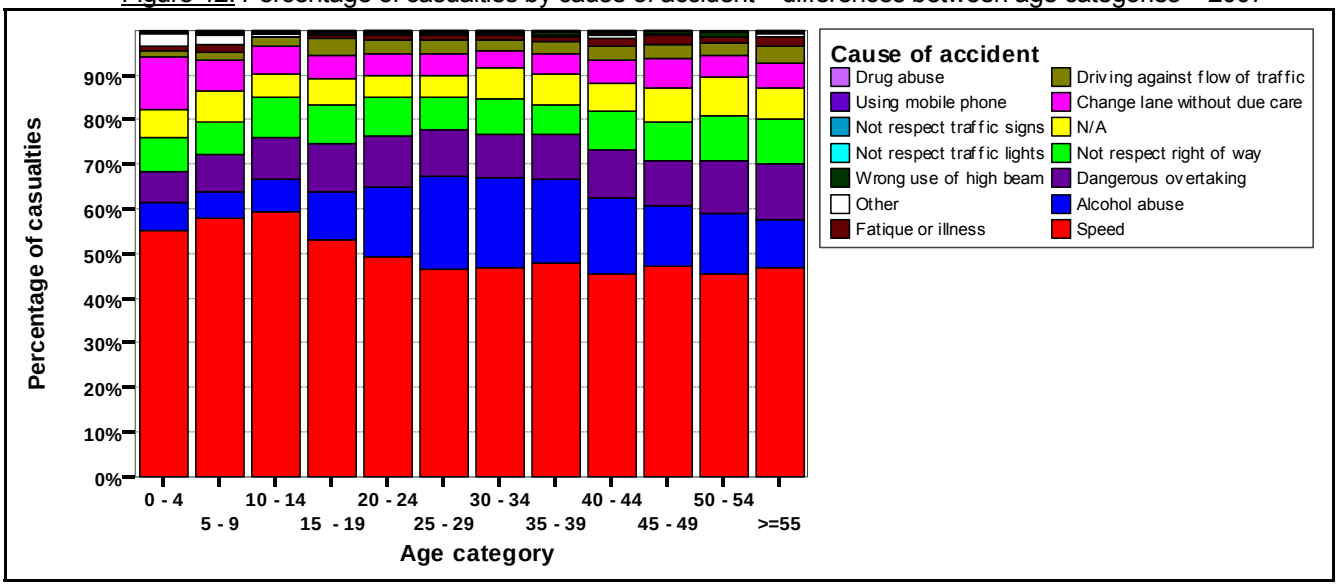
Dangerous overtaking is mainly an issue in Phnom Penh (15% of casualties compared to 9% in provinces).

Speed is an issue mainly in provinces on national/provincial roads. **Speed also affects more students** than other categories of casualties (speed is responsible for 55% of student casualties compared to 46% for farmers and 47% for workers).

Alcohol abuse is more of a problem during the night than during the day, although 10% of accidents occurring during the day are due to alcohol, 28**% of accidents occurring during the night are due to alcohol.**

Alcohol abuse is more of a problem among the 25 – 44 age categories, as illustrated on the figure 38. Alcohol is also responsible for 10% of student casualties, compared to 17% for farmers and 20% for workers.

- Figure 42: Percentage of casualties by cause of accident – differences between age categories – 2007



V.3.3.2 Weather conditions

Rain and wet roads are responsible for 2% of casualties.

V.3.3.3 Vehicle defects

Break failure, tire blow out are responsible for 2% of casualties, followed by **steering wheel failure, load off failure, headlight failure and other** are responsible for 1%.

V.3.3.4 Road conditions

Potholes, dirt/sand/gravel, animal on the road, dust and object on the road are responsible for **13% of casualties**.

V.3.4 Type of collision

- **Motorbike-motorbike collisions** are responsible for 14.94% of the fatalities, followed by **motorbike-4 wheeler collisions** (34.78%) and motorbikes that fell alone (5.48%).
- It is interesting to note that pedestrians are mainly injured by cars rather than by motorbikes. Motorbike-pedestrian collisions represent only 4.76% of fatalities while car-pedestrian collisions represent 8.62% of fatalities.

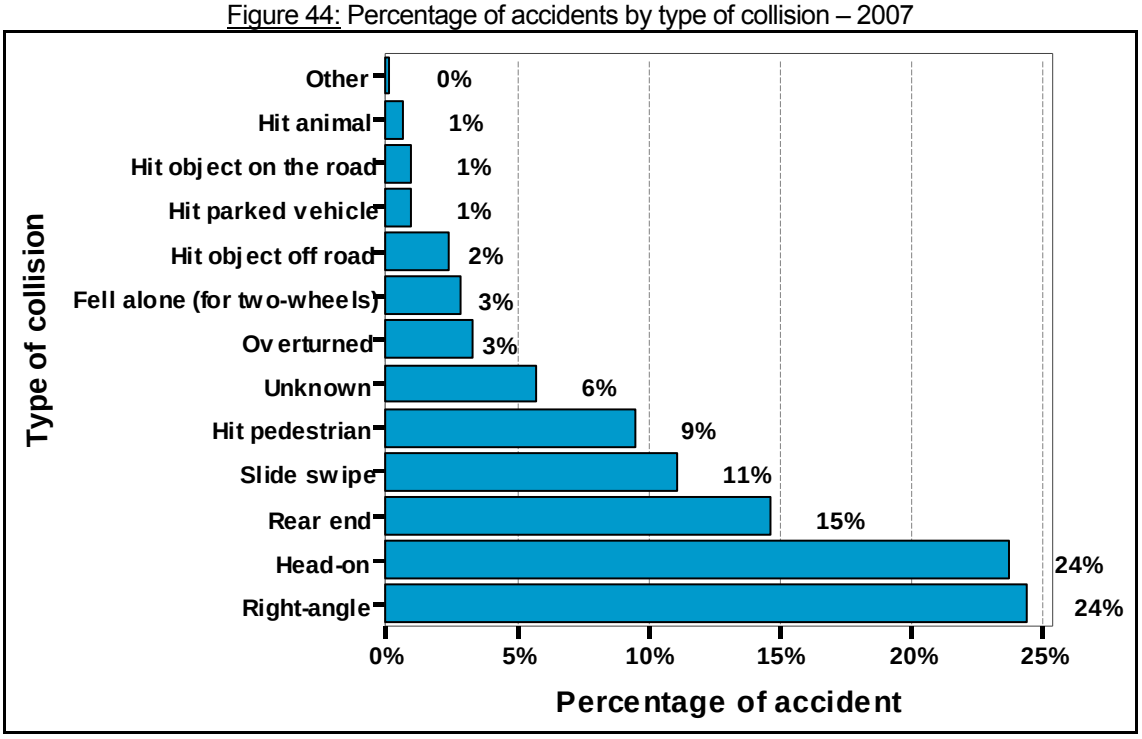
Figure 43: Percentage of casualties by type of vehicle involved – 2007

	Motorbike	4-wheeler	OX-machine	Pedestrian	Bicycle	Tricycle	Remorque	Motor tricycle	Other	Total
Motobike	14.94%									14.94%
4-wheeler	34.78%	4.98%								39.76%
OX-machine	1.96%	0.33%	-							2.29%
Pedestrian	4.76%	8.62%	0.26%	-						13.64%
Bicycle	2.68%	3.02%	0.20%	-	-					5.90%
Tricycle	0.07%	0.13%	-	-	-	-				0.20%
Remorque	0.98%	0.48%	-	0.07%	-	-	-			1.53%
Motor tricycle	0.26%	0.07%	-	-	-	-	-	-		0.33%
Stationary object	2.80%	1.90%	0.20%	-	0.07%	-	-	-	-	4.97%
Animal	0.39%	0.26%	-	-	-	-	-	-	-	0.65%
Fell alone	5.48%	6.26%	1.89%	-	-	-	0.20%	0.07%	0.20%	14.10%
Other	0.65%	0.54%	0.07%	0.39%	-	-	-	-	-	1.65%
Total	**69.75%**	**26.59%**	**2.62%**	**0.46%**	**0.07%**	**0.00%**	**0.20%**	**0.07%**	**0.20%**	**100%**

Notice:
The data for the two figures (44 and 45) come from traffic police only. Data might therefore slightly differ from the previous figure (43) which is based on data coming from both health facilities and traffic police.

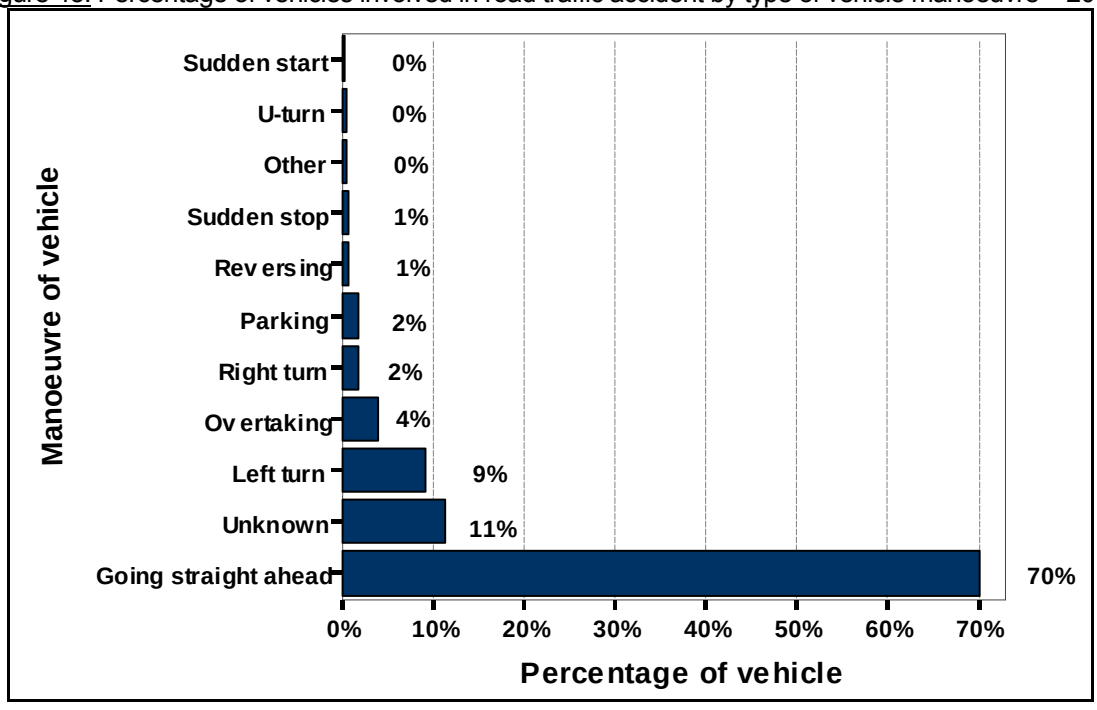
24% of accidents are head-on collision and right-angle, followed by rear end (15%).

Figure 44: Percentage of accidents by type of collision – 2007



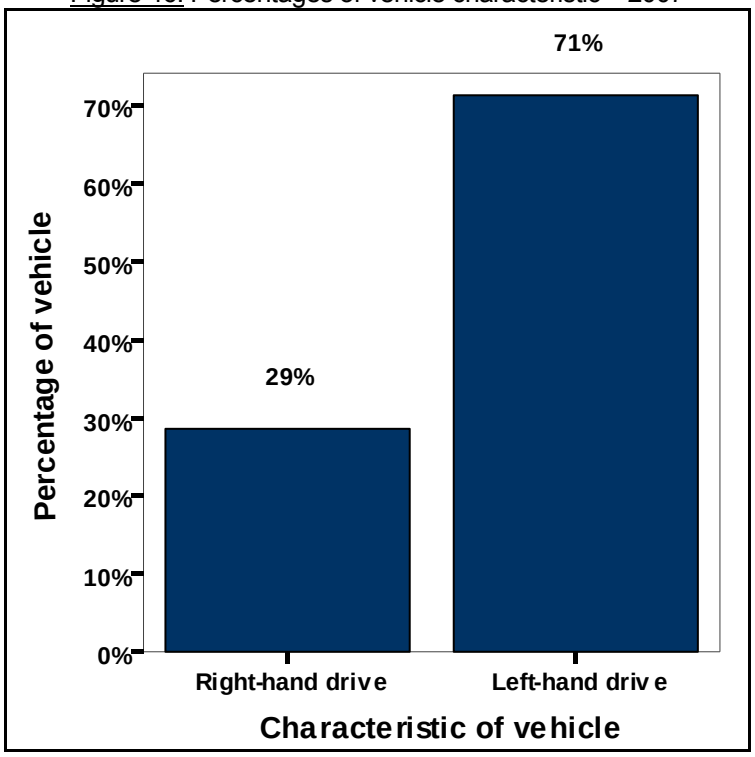
70% of vehicles were going straight ahead at the time of the accidents.

Figure 45: Percentage of vehicles involved in road traffic accident by type of vehicle manoeuvre – 2007



29% of four-wheelers involved in road traffic accidents **are right-hand drives**.

Figure 46: Percentages of vehicle characteristic – 2007

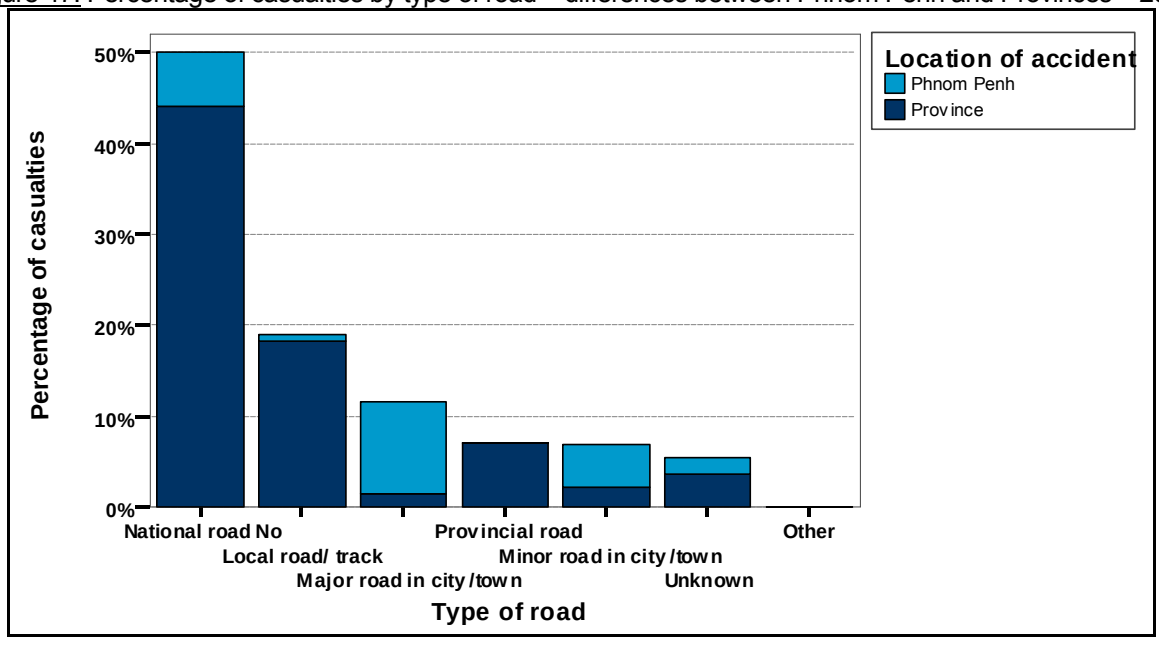


On average, 2.9 people are injured per accident.

V.3.5 Type of road

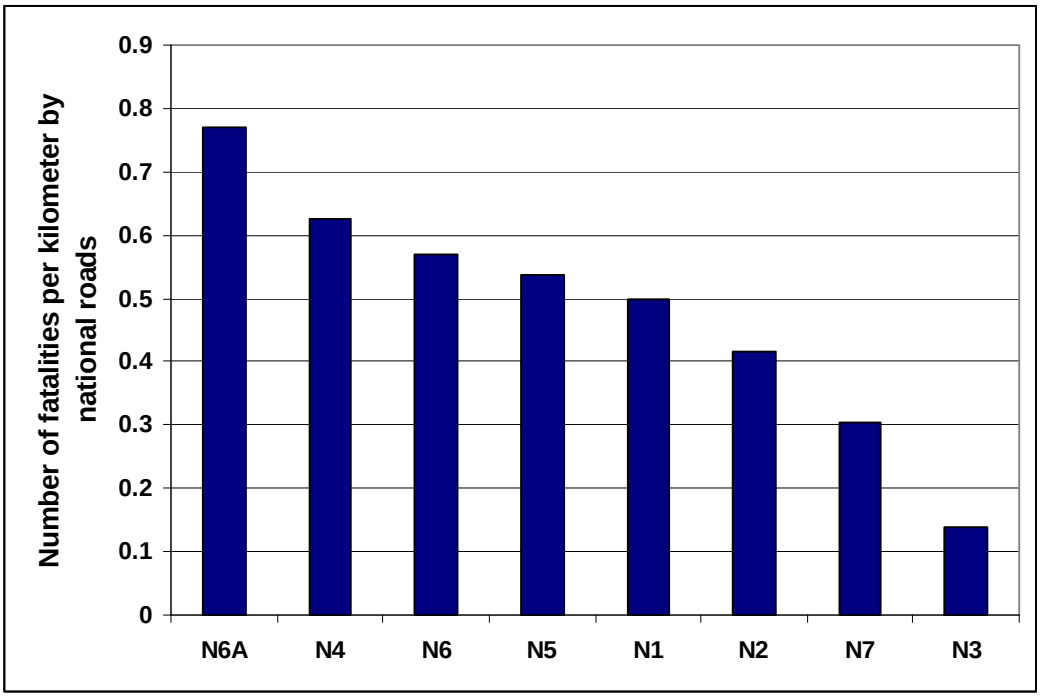
In total, 60% of casualties are injured in accidents occurring on **national/provincial roads**.

Figure 47: Percentage of casualties by type of road – differences between Phnom Penh and Provinces – 2007



Comparing the number of fatalities of national roads with the road length per kilometre, National Road 6A is the most deadly followed by National Road 4 and National Road 6.

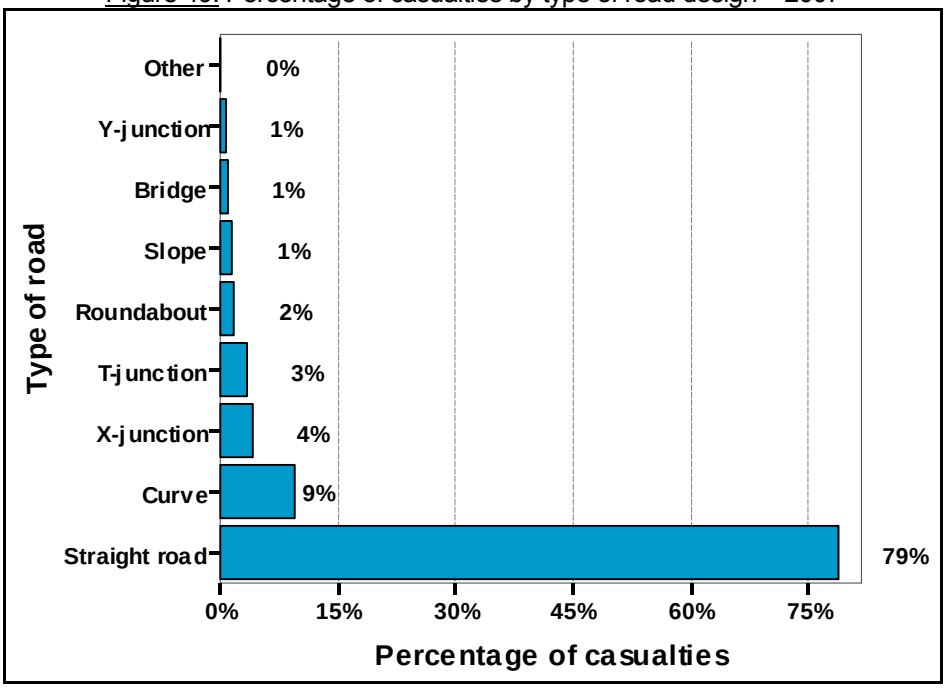
Figure 48: Number of fatalities per kilometer by national roads[13] – 2007



V.3.6 Road characteristics

More than 75% of casualties are injured in accidents occurring on **straight roads**.

Figure 49: Percentage of casualties by type of road design – 2007



74% of casualties are injured in accidents occurring on **paved roads.**

[13] Source for the number of kilometer by national roads: Ministry of Public Work and Transport.

V.3.7 Attendance of police

The traffic police are present at the accident site in more than 60% of the cases. This percentage is the same during the day and the night and between Phnom Penh and provinces.

V.3.8 Cost of accident

The average damage cost per vehicle involved in accident is **US$ 179.** Knowing that **16,982 vehicles were involved in accidents in 2007**, the total estimation of damage cost is **US$ 3,039,778**.

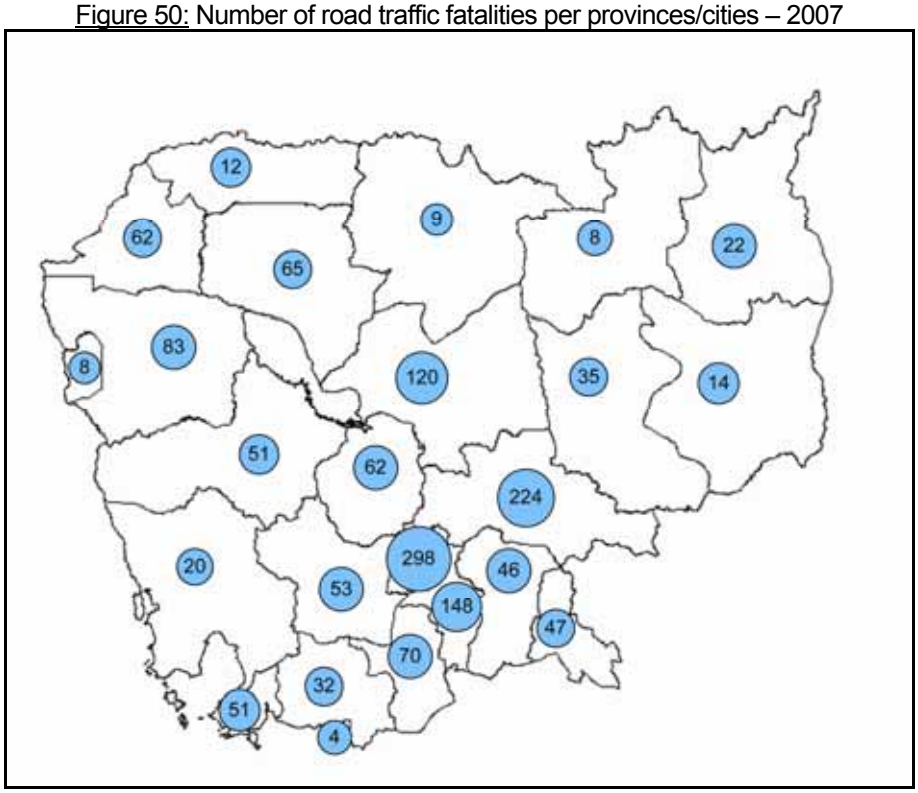
V.4 Location of Accident

V.4.1 Country level

- More than **43% of casualties are injured in urban areas.**
- **69% of casualties** are injured in urban areas during daytime.

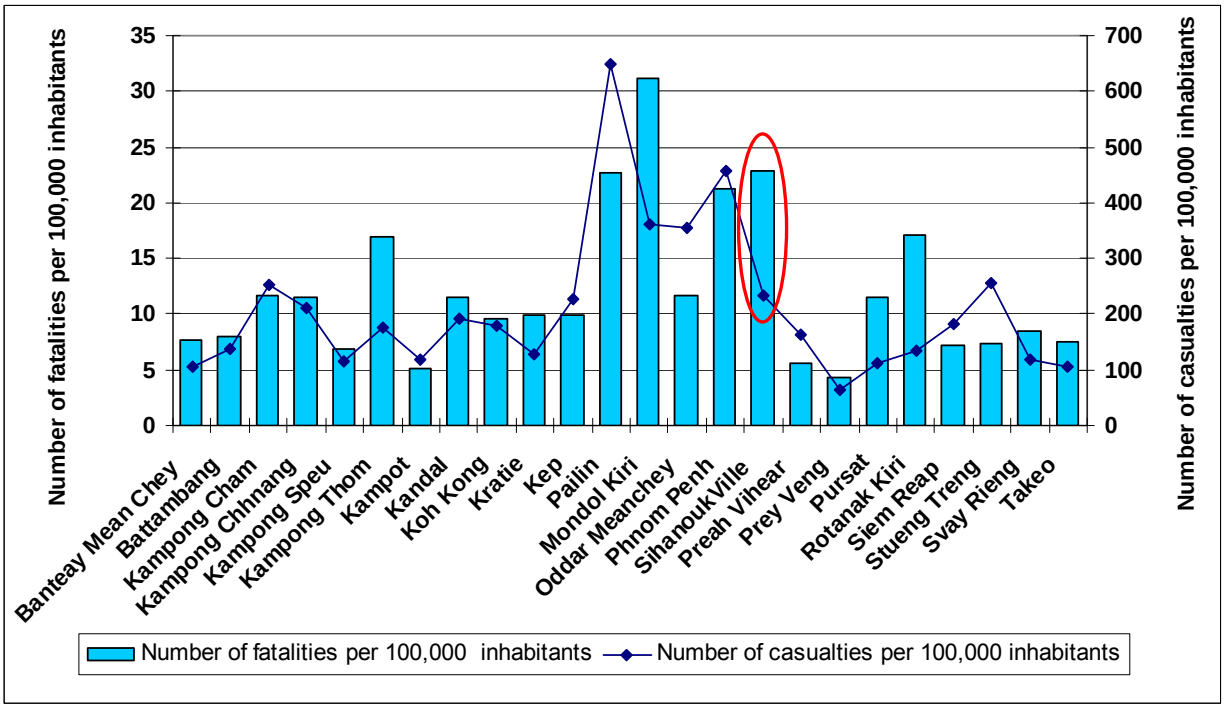
The provinces most affected by road traffic fatalities are **Phnom Penh, Kampong Cham and Kandal**, as shown on the figure below.

Figure 50: Number of road traffic fatalities per provinces/cities – 2007



In terms of population density, **the highest fatality rates are observed in Mondol Kiri, Sihanouk Ville and Pailin**. Noticeably, there is a very high fatality rate in Sihanouk Ville, while the casualty rate is low demonstrating the highest risk of death in an accident, compared to other provinces.

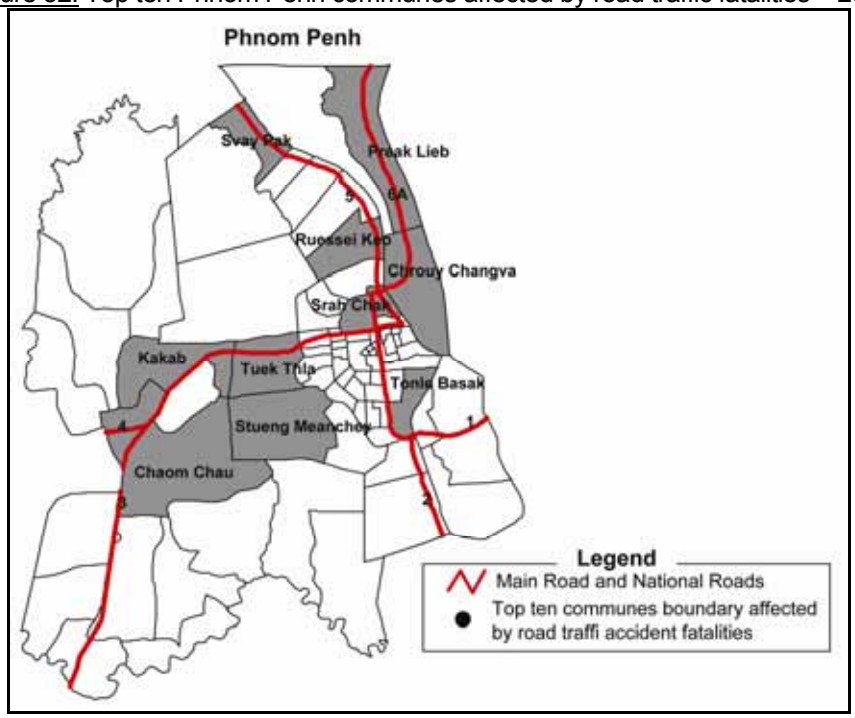
Figure 51: Number of road traffic fatalities and casualties by province14 per 100,000 inhabitants – 2007



V.4.2 Phnom Penh

The top three communes affected by road traffic fatalities in Phnom Penh are Choam Chau, Preak Lieb and Tonle Basac. The two first are located along major national roads.

Figure 52: Top ten Phnom Penh communes affected by road traffic fatalities – 2007

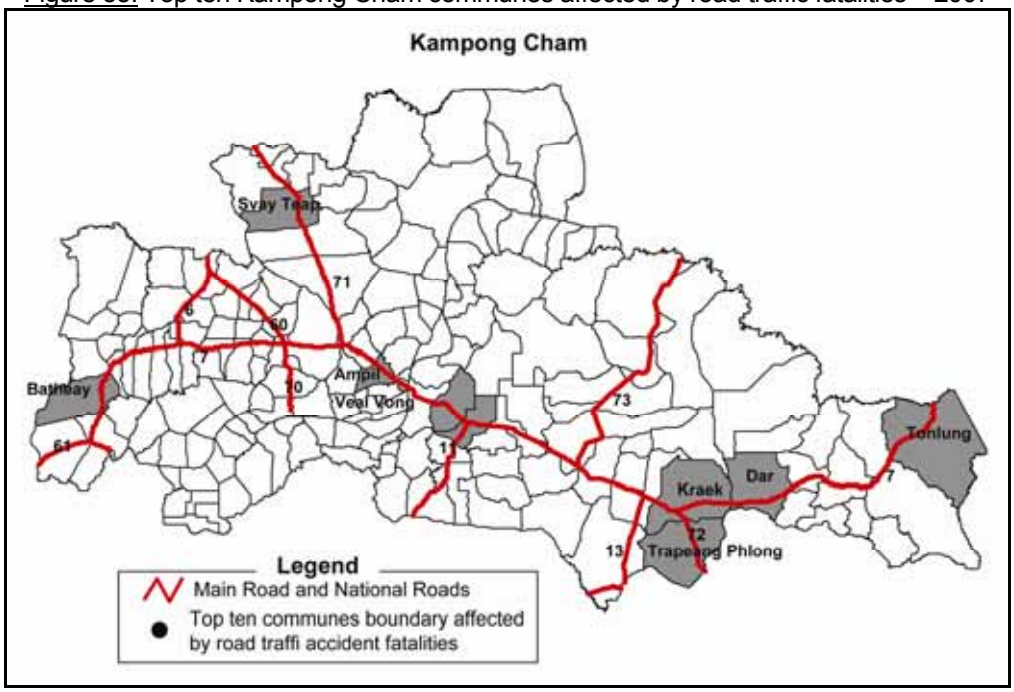


[14] Sources: RTAVIS and First Revision of Population Projections for Cambodia 1998 - 2020, National Institute of Statistics, Ministry of Planning, June 2004.

V.4.3 Kampong Cham

The top three communes affected by road traffic fatalities are Chirou Pir, Kraek and Trapeang Phlong. Those three communes are located along major national roads.

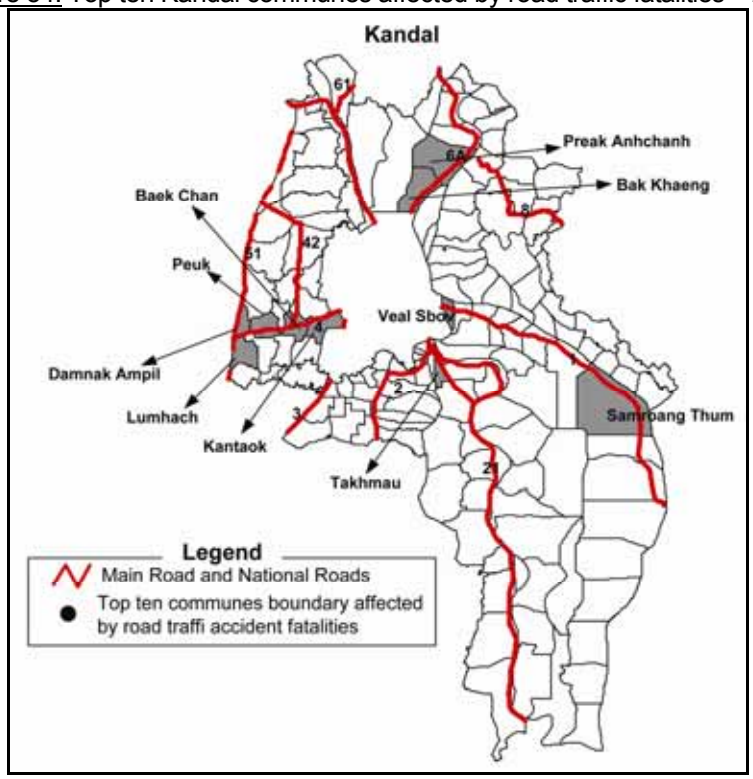
Figure 53: Top ten Kampong Cham communes affected by road traffic fatalities – 2007



V.4.4 Kandal

The top three communes affected by road traffic fatalities are Ta Khmau, Preak Anhchanh and Kantoak.

Figure 54: Top ten Kandal communes affected by road traffic fatalities – 2007



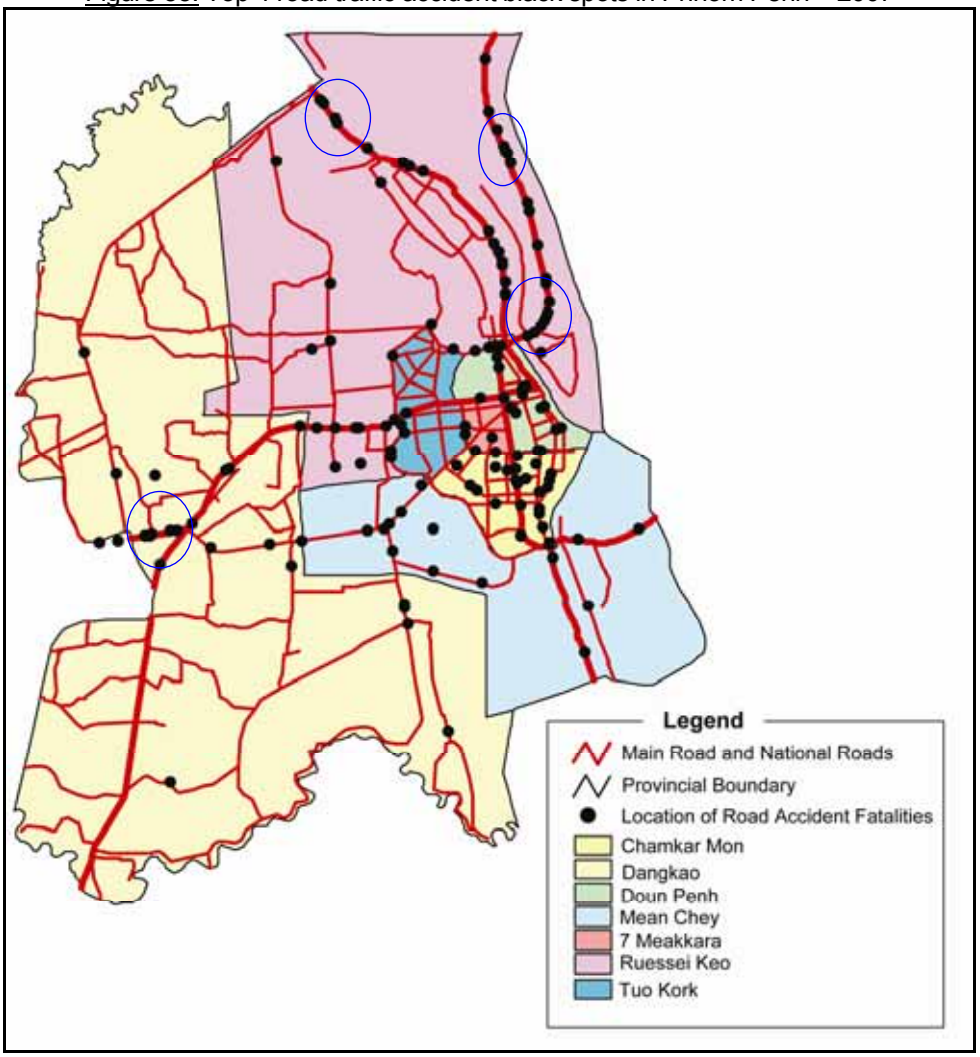
V.4.5 Black spot analysis

V.4.5.1 Phnom Penh

In Phnom Penh City, there are 4 black spots in communes including:

1. Along national road 6A in Chrouy Changva commune Ruessei Keo district.
2. Along national road 6A in Preak Leab commune Ruessei Keo district.
3. Along national road 4 in Chaom Chau commune Dang Kao district.
4. Along national road 5 in Svay Pak commune Ruessei Keo district.

Figure 55: Top 4 road traffic accident black spots in Phnom Penh – 2007

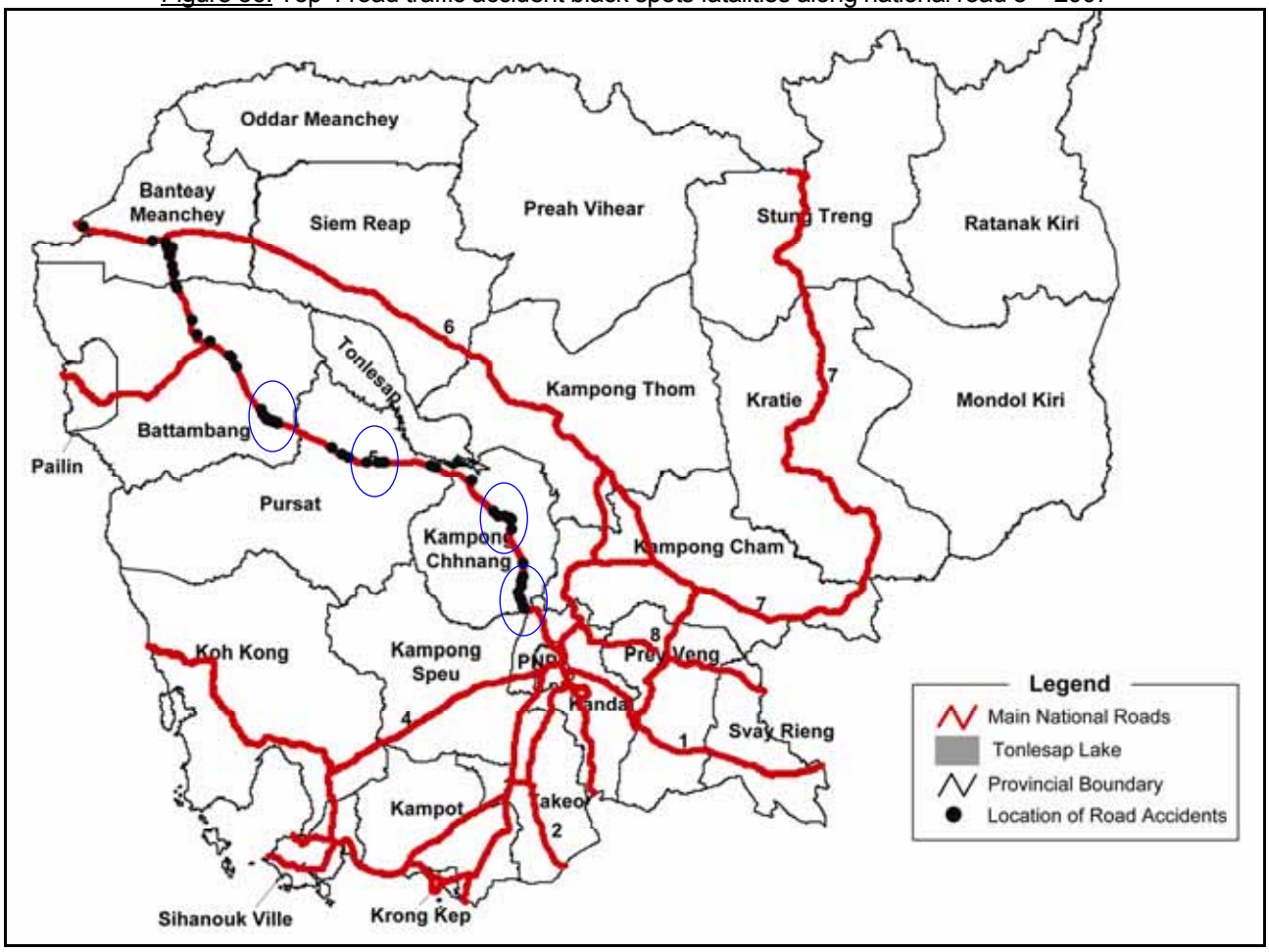


V.4.5.2 Country level

From August 2007, the use of GPS was extended to all provinces. As the result has shown the top four black spots along national road 5 in communes such as:

1. Battambang province Moung Ruessei district Kea and Prey Svay communes.
2. Pursat province Krakor district Boeng Kantout commune.
3. Kampong Chhnang province Kampong Chhnang district Kampong Chhnang and Khsam communes.
4. Kampong Chhnang province Kampong Tralach district Peani and Chhuksa communes
5. Kampong Chhnang province Sameakki Meanchey district Svay communes

Figure 56: Top 4 road traffic accident black spots fatalities along national road 5 – 2007



VI. Next step

Injury Surveillance System

In 2008 several workshops will be organized by the Ministry of Health, HIB and other interested stakeholders to **extend the data collection system set up for RTAVIS to other types of injuries**, such as falls, drowning, and domestic violence. Injuries in general are indeed estimated to be a **growing cause of death and disability in Cambodia,** but there is currently no ongoing data collection system to monitor these issues[15].

Hand over the database management to stakeholders

RTAVIS database is currently managed by HIB. To ensure its sustainability, HIB will ensure the transfer of the management of the database to designated staffs of the General Secretariat of the National Road Safety Committee (GSNRSC), Ministry of Interior (MoI) and Ministry of Health (MoH) in the beginning of 2009. Appropriate training will be given in 2008 and 2009 and detailed guidelines and procedures will be provided by HIB to manage the database to the stakeholders.

[15] The Demographic and Health Survey performed in 2005 in Cambodia estimated that road traffic injuries represent 45.9% of injuries, followed by falls from tree/building (14.2%).

Appendix

Evolution of data during the year

	Jan-07	Feb-07	Mar-07	Apr-07	May-07	Jun-07	Jul-07	Aug-07	Sep-07	Oct-07	Nov-07	Dec-07	Weighted average
Number of casualties reported to RTAVIS	2,450	2,637	2,486	3,133	2,113	1,754	1,779	1,780	2,061	2,516	2,455	2,239	**27,403**
Gender													
Percentage of males casualties	73%	72%	72%	74%	74%	75%	75%	72%	72%	73%	71%	74%	**73%**
Age													
Percentage of casualties aged between 15 and 24 years old	35%	42%	38%	42%	34%	31%	35%	28%	30%	31%	31%	29%	**28%**
Type of road user													
Percentage of motorbike riders	72%	73%	70%	76%	74%	75%	77%	74%	77%	76%	75%	75%	**75%**
Percentage of pedestrians	8%	7%	7%	5%	7%	6%	9%	9%	9%	7%	8%	7%	**8%**
Percentage of car riders (private and taxis)	5%	8%	5%	7%	6%	4%	4%	7%	2%	6%	5%	6%	**5%**
Percentage of bicycle riders	5%	5%	4%	3%	4%	5%	6%	3%	4%	5%	4%	4%	**4%**
Occupation													
Percentage of students	24%	25%	22%	20%	21%	24%	24%	23%	25%	22%	24%	25%	**23%**
Percentage of farmers	26%	25%	28%	30%	28%	20%	21%	17%	23%	28%	25%	24%	**26%**
Percentage of workers	18%	19%	20%	21%	19%	25%	23%	21%	20%	18%	19%	22%	**20%**
Percentage of house keepers	5%	6%	5%	6%	6%	5%	5%	7%	6%	7%	6%	6%	**6%**
Percentage of vendors/small businesses owners	7%	7%	6%	7%	7%	6%	5%	5%	7%	5%	5%	5%	**6%**
Percentage of motorbike taxis	3%	5%	3%	3%	4%	4%	5%	6%	5%	3%	4%	4%	**4%**
Residence of casualty													
Percentage of casualties residing in another province than the province of accident	13%	16%	16%	15%	14%	17%	20%	18%	15%	16%	19%	16%	**16%**
Severity of injuries:													
Percentage of severely injured casualties (requiring chirurgical intervention of ICU)	22% (547 cases)	24% (629 cases)	24% (586 cases)	25% (778 cases)	24% (509 cases)	26% (461 cases)	28% (502 cases)	31% (551 cases)	29% (596 cases)	28% (695 cases)	28% (678 cases)	28% (618 cases)	**26% (7150 cases)**
Percentage of deaths	6% (143 cases)	5% (125 cases)	4% (105 cases)	5% (161 cases)	5% (111 cases)	6% (110 cases)	7% (117 cases)	7% (117 cases)	6% (132 cases)	6% (152 cases)	6% (144 cases)	6% (128 cases)	**6% (1545 cases)**
Nature of injuries:													
Percentage of casualties suffering from cranial trauma	40%	39%	32%	34%	36%	41%	44%	45%	46%	44%	40%	51%	**40%**
Percentage of them being considered as severe (coma)	10%	9%	9%	12%	15%	8%	8%	10%	13%	10%	7%	4%	**10%**
Percentage of casualties suffering from fracture	15%	14%	17%	12%	14%	15%	16%	23%	19%	16%	20%	20%	**19%**
Percentage of casualties having wounds/cuts	57%	52%	59%	59%	58%	50%	54%	47%	50%	51%	54%	53%	**53%**
Day of accident:													
Percentage of casualties injured during the weekend (from Friday 6 pm to Sunday midnight)	32%	43%	35%	38%	32%	39%	34%	32%	39%	27%	40%	37%	**36%**
Time of accident:													
Percentage of casualties injured during nighttime (from 6 pm to 5.59 am)	34%	32%	27%	31%	30%	31%	33%	32%	30%	26%	33%	30%	**31%**
Peak(s) of casualties	7pm-8pm	6pm-7pm	10am-11am	7pm-8pm	7pm-8pm	4pm-5pm and 7pm-8pm	5pm-6pm	7pm-8pm	4pm-5pm	3pm-4pm	6pm-7pm	6pm-7pm	**4pm-8pm**
Cause of accident													
Percentage of casualties injured in accidents due to human error	**95%**	**95%**	**94%**	**95%**	**95%**	**94%**	**91%**	**94%**	**95%**	**96%**	**96%**	**97%**	**94%**
High speed	51%	54%	55%	55%	45%	46%	50%	45%	48%	45%	52%	54%	49%
Alcohol abuse	15%	18%	15%	16%	17%	14%	16%	15%	15%	14%	14%	12%	16%
Non respect of rights of way rules	7%	7%	7%	7%	8%	10%	10%	11%	11%	11%	8%	7%	8%
Changing lane without due care	5%	7%	6%	6%	5%	5%	5%	6%	6%	6%	5%	5%	5%
Dangerous overtaking	13%	7%	7%	6%	15%	13%	5%	10%	9%	13%	11%	13%	10%
Driving against flow of traffic	2%	1%	2%	2%	3%	5%	3%	4%	3%	3%	3%	3%	3%
Other	2%	1%	2%	3%	2%	1%	2%	3%	3%	4%	3%	3%	3%
Percentage of casualties injured in accidents due to road conditions	**13%**	**15%**	**13%**	**16%**	**11%**	**10%**	**10%**	**9%**	**9%**	**9%**	**10%**	**12%**	**13%**
Percentage of casualties injured in accidents due to weather conditions	**0%**	**0%**	**0%**	**1%**	**4%**	**5%**	**6%**	**6%**	**4%**	**3%**	**0%**	**0%**	**2%**
Percentage of casualties injured in accidents due to vehicle defect	**3%**	**5%**	**3%**	**4%**	**6%**	**3%**	**5%**	**3%**	**4%**	**3%**	**3%**	**1%**	**3%**

Notice: the weighted average is not equal to the average of the monthly figures because the number of casualties differs from one month to another.

	Jan-07	Feb-07	Mar-07	Apr-07	May-07	Jun-07	Jul-07	Aug-07	Sep-07	Oct-07	Nov-07	Dec-07	Weighted average
Type of accident:													
Percentage of casualties injured in motorbike-motorbike collisions	35%	36%	34%	40%	37%	37%	41%	39%	40%	45%	45%	44%	**39%**
Percentage of casualties injured in motorbike-4 wheeler collisions	16%	18%	16%	17%	18%	18%	18%	18%	19%	16%	17%	20%	**17%**
Percentage of casualties injured in motorbike-pedestrian collisions	8%	8%	7%	6%	7%	7%	8%	8%	9%	7%	8%	7%	**8%**
Percentage of motorbike casualties who fell alone	8%	10%	10%	11%	11%	10%	9%	9%	7%	6%	6%	6%	**10%**
Average number of people injured per accident	3	2.7	4	3.6	2.7	2.8	2	2.5	3	3	3.2	2.6	**2.9**
Hit and Run													
Percentage of casualties injured in accidents where the driver of the vehicle causing the accidents escaped after the accident	22%	19%	21%	18%	21%	23%	23%	18%	26%	23%	22%	23%	**22%**
Estimation of average vehicle damage cost	215 US$	136 US$	147 US$	196 US$	156 US$	178 US$	156 US$	204 US$	177 US$	160 US$	166 US$	190 US$	**179 US$**
Percentage of four-wheeled vehicles with													
Left-hand-drive	57%	67%	72%	77%	71%	72%	69%	61%	75%	74%	70%	70%	**71%**
Right-hand-drive	43%	33%	28%	23%	29%	28%	31%	39%	25%	26%	30%	30%	**29%**
Location of accident:													
Percentage of casualties injured in urban areas	47%	45%	43%	37%	42%	46%	53%	53%	47%	41%	50%	44%	**43%**
Percentage of casualties injured in accidents occurring on national roads	56%	55%	52%	55%	57%	56%	51%	48%	53%	58%	54%	55%	**53%**
Percentage of casualties injured in accidents occuring on provincial roads	6%	9%	8%	8%	6%	10%	7%	8%	8%	6%	4%	5%	**7%**
Percentage of casualties injured in accidents occurring on paved roads	77%	78%	73%	67%	77%	79%	82%	80%	81%	79%	79%	76%	**74%**
Characteristics of location:													
Percentage of casualties injured in accidents occuring on straight roads	80%	80%	78%	78%	78%	75%	81%	76%	78%	78%	80%	83%	**79%**
Percentage of casualties injured in junctions (X, T, Y-junctions and roundabout)	14%	12%	10%	8%	10%	12%	8%	13%	14%	12%	8%	9%	**9%**
Percentage of casualties injured in curves	6%	8%	10%	11%	8%	13%	10%	11%	8%	10%	12%	7%	**12%**
Safety Measures:													
Percentage of car/truck/bus drivers having a driving licence	46%	42%	54%	51%	51%	50%	48%	52%	52%	50%	55%	50%	**50%**
Percentage of motorbikes' casualties wearing a helmet	4%	2%	4%	3%	4%	2%	3%	3%	4%	3%	7%	4%	**3%**
Time to be transferred to hospitals:													
Percentage of casualties arriving at hospitals between 10 and 30 minutes after the accident	35%	34%	31%	32%	31%	37%	38%	32%	32%	39%	36%	30%	**33%**
Percentage of casualties arriving at hospital more than 2 hours after the accident	30%	33%	30%	34%	36%	35%	30%	38%	39%	33%	33%	39%	**34%**
Way to be transferred to hospitals:													
Percentage of casualties transported by ambulance	17%	26%	27%	23%	21%	27%	34%	36%	33%	34%	31%	43%	**26%**
Percentage of casualties transported to the hospital by their family or relatives	62%	57%	56%	63%	64%	63%	55%	57%	59%	59%	61%	53%	**63%**
Percentage of casualties arriving alone at the hospital	20%	17%	17%	14%	15%	10%	11%	7%	8%	7%	8%	4%	**11%**
Estimation of average cost of treatment	88 US$	73 US$	76 US$	73 US$	143 US$	119 US$	131 US$	182 US$	161 US$	146 US$	173 US$	185 US$	**118 US$**
Attendance of police:													
Percentage of cases were police was present on the accident site	61%	64%	60%	62%	56%	65%	67%	68%	69%	73%	64%	69%	**64%**

Notice: the weighted average is not equal to the average of the monthly figures because the number of casualties differs from one month to another.

Evolution of data by age category

Age category	0 - 4	5 - 9	10 - 14	15 - 19	20 - 24	25 - 29	30 - 34	35 - 39	40 - 44	45 - 49	50 - 54	>=55
Number of casualties reported to RTAVIS	**828**	**1,397**	**865**	**2,734**	**4,942**	**6,685**	**1,971**	**2,241**	**1,637**	**1,336**	**847**	**1,527**
Number of fatalities reported to RTAVIS	**45**	**72**	**22**	**98**	**248**	**331**	**125**	**141**	**102**	**92**	**64**	**161**
Gender												
Percentage of males casualties	58%	60%	65%	68%	77%	81%	79%	76%	72%	70%	64%	59%
Type of road user												
Percentage of motorbike riders	42%	31%	56%	82%	85%	83%	79%	77%	74%	72%	69%	59%
Percentage of pedestrians	46%	42%	13%	3%	3%	3%	6%	4%	5%	7%	8%	15%
Percentage of car riders (private and taxis)	3%	3%	3%	3%	3%	5%	6%	6%	8%	7%	8%	6%
Percentage of bicycle riders	5%	17%	19%	5%	2%	2%	2%	2%	3%	4%	4%	10%
Severity of injuries:												
Percentage of severely injured casualties (requiring chirurgical intervention of ICU)	16%	23%	22%	24%	25%	28%	27%	29%	26%	29%	30%	29%
Nature of injuries:												
Percentage of casualties suffering from cranial trauma	52%	47%	39%	37%	40%	38%	36%	37%	39%	39%	43%	47%
Day of accident:												
Percentage of casualties injured during the weekend (from Friday 6 pm to Sunday midnight)	65%	67%	68%	67%	61%	63%	64%	66%	66%	64%	65%	66%
Time of accident:												
Percentage of casualties injured during nighttime (from 6 pm to 5.59 am)	85%	87%	81%	76%	66%	61%	64%	69%	70%	70%	75%	80%
Peak(s) of casualties	4pm - 5pm	11am - 12pm	11am - 12pm	4pm - 5pm	6pm - 7pm	7pm - 8pm	7pm - 8pm	7pm - 8pm	7pm - 8pm	7pm - 8pm	8am - 9am	8am - 10am
Cause of accident:												
Percentage of casualties injured in accidents due to human error	**94%**	**93%**	**95%**	**94%**	**95%**	**95%**	**93%**	**93%**	**94%**	**92%**	**91%**	**93%**
High speed	55%	58%	60%	53%	49%	46%	47%	48%	45%	47%	45%	47%
Alcohol or drug abuse	6%	6%	7%	11%	15%	21%	20%	19%	17%	13%	14%	10%
Dangerous overtaking	7%	8%	9%	11%	12%	10%	10%	10%	11%	10%	12%	12%
Other	26%	21%	19%	19%	19%	18%	16%	16%	21%	22%	20%	24%
Percentage of casualties injured in accidents due to road conditions	**12%**	**13%**	**12%**	**12%**	**11%**	**12%**	**14%**	**15%**	**15%**	**17%**	**16%**	**13%**
Percentage of casualties injured in accidents due to weather conditions	**2%**	**4%**	**1%**	**2%**	**2%**	**2%**	**3%**	**2%**	**2%**	**3%**	**2%**	**2%**
Percentage of casualties injured in accidents due to vehicle defect	**3%**	**4%**	**2%**	**4%**	**3%**	**3%**	**4%**	**5%**	**4%**	**5%**	**5%**	**4%**
Type of collision:												
Percentage of casualties injured in motorbike-motorbike collisions	22%	17%	30%	44%	44%	44%	41%	39%	38%	36%	36%	30%
Percentage of casualties injured in motorbike-4wheeler collisions	11%	7%	12%	16%	20%	20%	20%	17%	18%	18%	15%	14%
Percentage of casualties injured in motorbike-pedestrian collisions	35%	31%	11%	5%	4%	4%	4%	5%	5%	7%	8%	12%
Time to be transferred to hospitals:												
Percentage of casualties arriving at hospitals between 10 and 30 minutes after the accident	25%	22%	26%	38%	38%	36%	34%	31%	31%	30%	27%	26%
Percentage of casualties arriving at hospital more than 2 hours after the accident	47%	45%	35%	28%	29%	32%	33%	35%	34%	37%	36%	39%
Way to be transferred to hospitals: (4)												
Percentage of casualties transported by ambulance	8%	11%	8%	25%	29%	30%	26%	30%	27%	30%	27%	27%
Attendance of police:												
Percentage of cases were police was present on the accident site	52%	58%	56%	65%	66%	63%	61%	64%	62%	65%	68%	66%

Notice: Unknown ages are not included in this analysis.

Number of casualties reported at health facilities

	Jan-07	Feb-07	Mar-07	Apr-07	May-07	Jun-07	Jul-07	Aug-07	Sep-07	Oct-07	Nov-07	Dec-07	Total
Number of casualties reported to RTAVIS	**2,450**	**2,637**	**2,486**	**3,133**	**2,113**	**1,754**	**1,779**	**1,780**	**2,061**	**2,516**	**2,455**	**2,239**	**27,403**
Total number of casualties reported at hospitals	**1,642**	**1,692**	**1,726**	**2,033**	**1,518**	**1,144**	**1,066**	**1,055**	**1,163**	**1,349**	**1,517**	**1,387**	**17,292**
Number of casualties reported at Banteay Mean Chey hospitals:	**26**	**1**	**4**	**66**	**9**	**54**	**18**	**36**	**19**	**5**	**14**	**6**	**258**
Malai health center	2	1	0	11	3	8	0	8	3	0	0	4	40
Mongkol Borei referral hospital	15	0	0	34	0	15	10	12	8	0	0	0	94
Ou Ampil health center	0	0	0	0	0	0	0	0	0	0	1	0	1
Ou Chrov referral hospital	0	0	4	0	1	8	5	8	8	0	9	0	43
Phnom Leap health center	3	0	0	0	0	0	0	2	0	0	0	0	5
Phnom Toch health center	0	0	0	0	0	0	0	1	0	0	0	0	1
Russei Kraok II health center	0	0	0	0	0	0	0	0	0	0	1	0	1
Srah Chik health center	0	0	0	18	5	11	3	0	0	0	0	0	37
Serey Sophorn health center	6	0	0	3	0	12	0	5	0	5	3	2	36
Number of casualties reported at Battambang hospitals:	**4**	**84**	**61**	**106**	**49**	**31**	**45**	**74**	**96**	**78**	**66**	**61**	**755**
Battambang provincial hospital	2	3	9	9	0	0	0	0	0	0	0	0	23
Emergency Center	2	81	52	97	49	31	45	74	96	78	66	61	732
Number of casualties reported at Kampong Cham hospitals:	**537**	**488**	**538**	**697**	**461**	**114**	**86**	**50**	**115**	**189**	**238**	**171**	**3684**
Ampil Tapok health center	0	0	0	0	0	2	0	0	0	0	0	0	2
Chamkar Leu referral hospital	3	13	14	3	13	10	3	0	7	10	6	7	89
Cheung Prey referral hospital	62	73	61	90	54	16	11	0	12	18	15	13	425
Chikor-Mong Riev health center	0	0	0	0	0	0	0	0	1	0	0	0	1
Chiro Pir health center	0	0	0	0	0	1	0	0	0	0	0	0	1
Kampong Cham provincial hospital	156	162	194	246	167	0	3	0	25	46	63	40	1,103
Kau Sou Tapav health center	0	0	0	0	0	0	0	0	3	0	0	0	3
Kroch Chhmar referral hospital	0	1	2	0	0	1	0	0	0	0	11	0	15
Memot referral hospital	88	61	76	94	63	41	33	39	30	49	52	36	661
Ou Reang Ouv referral hospital	0	2	0	0	1	11	9	0	5	16	4	8	56
Ponhea Krek referral hospital	78	26	19	39	24	18	4	0	1	18	67	32	326
Prey Chhor referral hospital	70	76	124	105	73	0	4	0	8	6	6	5	477
Rokar Po Pram II health center	0	0	0	0	0	0	0	0	3	4	0	0	7
Sla health center	0	0	0	0	0	0	0	0	1	5	0	0	6
Srae Spey health center	0	0	0	0	0	1	0	0	0	0	0	0	1
Srey Santhor health center	5	9	0	9	5	2	7	0	3	5	0	5	50
Thnol Kaeng health center	0	0	0	0	0	1	0	0	0	0	0	0	1
Tboung Kmum referral hospital	75	65	48	111	61	10	11	11	16	12	14	25	459
Trapeang Preh health center	0	0	0	0	0	0	1	0	0	0	0	0	1
Number of casualties reported at Kampong Chhnang hospitals:	**62**	**32**	**44**	**53**	**48**	**53**	**44**	**41**	**34**	**42**	**59**	**65**	**577**
Kampong Chhnang referral hospital	29	24	37	34	28	26	24	30	25	39	26	38	360
Kampong Tralach referral hospital	33	8	7	19	20	27	20	11	9	3	33	27	217
Number of casualties reported at Kampong Speu hospitals:	**51**	**55**	**52**	**62**	**43**	**7**	**19**	**19**	**33**	**18**	**11**	**7**	**377**
Angk Popel health center	0	0	0	0	0	0	1	0	0	0	0	0	1
Kampong Speu provincial hospital	44	50	50	55	42	1	16	19	13	16	9	7	322
Kong Pisei referral hospital	0	0	1	0	0	0	0	0	0	0	0	0	1
Odongk referral hospital	7	4	0	7	1	6	1	0	20	2	2	0	50
Pechr Muni health center	0	1	1	0	0	0	0	0	0	0	0	0	2
Toul Sala Svay Chocheb health center	0	0	0	0	0	0	1	0	0	0	0	0	1
Number of casualties reported at Kampong Thom hospitals:	**55**	**72**	**72**	**67**	**0**	**2**	**40**	**31**	**27**	**53**	**40**	**36**	**495**
Baray-Santuk referral hospital	21	24	39	17	0	0	21	3	8	24	13	18	188
Kampong Thom provincial hospital	20	20	24	28	0	2	14	20	12	25	19	18	202
Sra Yov health center	0	2	0	0	0	0	0	0	0	0	0	0	2
Stoung health center	12	18	9	13	0	0	5	8	7	4	8	0	84
Tang Krasang health center	0	8	0	6	0	0	0	0	0	0	0	0	14
Treal health center	2	0	0	3	0	0	0	0	0	0	0	0	5
Number of casualties reported at Kampot hospitals:	**48**	**55**	**58**	**31**	**14**	**15**	**11**	**9**	**9**	**16**	**15**	**10**	**291**
Angkor Chey referral hospital	7	5	7	19	6	5	7	5	6	11	12	7	97
Chhouk referral hospital	9	13	5	4	4	8	4	4	3	5	3	3	65
Kampong Trach referral hospital	11	0	11	0	0	0	0	0	0	0	0	0	22
Kampot referral hospital	21	37	35	8	4	0	0	0	0	0	0	0	105
Sdech Kong health center	0	0	0	0	0	2	0	0	0	0	0	0	2
Number of casualties reported at Kandal hospital:	**62**	**63**	**51**	**34**	**35**	**47**	**15**	**0**	**4**	**0**	**8**	**10**	**329**
Anlong Romiet health center	9	8	7	9	0	0	9	0	0	0	1	6	49
Boeng Kiang health center	8	6	5	0	0	0	4	0	0	0	7	2	32
Chey Chomnah provincial hospital	9	9	13	3	9	26	2	0	0	0	0	0	71
Dey Eth health center	6	0	3	0	0	0	0	0	0	0	0	0	9
Koh Thom referral hospital	4	3	0	0	0	0	0	0	4	0	0	0	11
Ksach Kandal referral hospital	0	16	5	6	5	0	0	0	0	0	0	0	32
Preak Anh Chanh health center	8	7	8	8	7	6	0	0	0	0	0	0	44
Prek Pnov health center	0	0	1	0	0	0	0	0	0	0	0	2	3
Samrong Thom health center	15	0	3	0	0	0	0	0	0	0	0	0	18
Ta Khmau health center	3	14	3	8	14	15	0	0	0	0	0	0	57
Tom Nob Thom health center	0	0	3	0	0	0	0	0	0	0	0	0	3

	Jan-07	Feb-07	Mar-07	Apr-07	May-07	Jun-07	Jul-07	Aug-07	Sep-07	Oct-07	Nov-07	Dec-07	Total
Number of casualties reported at Koh Kong hospitals:	**9**	**8**	**9**	**10**	**5**	**10**	**6**	**14**	**7**	**7**	**4**	**6**	**95**
Koh Kong referral hospital	0	0	0	0	0	0	0	0	0	6	4	6	16
Smach Mean Chey referral hospital	9	8	9	10	5	10	6	14	7	1	0	0	79
Number of casualties reported at Kratie hospitals:	**0**	**3**	**0**	**3**	**0**	**0**	**1**	**3**	**0**	**0**	**0**	**2**	**12**
Chhlong referral hospital	0	3	0	3	0	0	1	3	0	0	0	2	12
Number of casualties reported at Mondol Kiri hospitals:	**2**	**2**	**3**	**1**	**0**	**2**	**1**	**0**	**2**	**2**	**2**	**0**	**17**
Kaoh Nheaek referral hospital	2	1	2	1	0	2	1	0	1	0	2	0	12
Saen Monorom referral hospital	0	1	1	0	0	0	0	0	1	2	0	0	5
Number of casualties reported at Phnom Penh hospitals:	**674**	**622**	**596**	**603**	**642**	**597**	**629**	**638**	**672**	**694**	**836**	**835**	**8,037**
Calmette	228	212	178	176	185	145	155	155	198	223	249	406	2,510
Ket Mealea	9	3	8	7	5	0	0	0	0	0	0	0	31
Kossamak	111	114	95	82	80	85	72	94	89	73	81	89	1,065
Kunthabopha	47	38	44	51	34	33	32	30	31	42	33	57	472
National Pediatric	44	35	44	41	59	60	80	55	67	28	51	53	617
Sihanouk	57	54	64	44	91	57	56	69	69	86	117	84	848
Bayon	121	90	108	134	101	152	137	144	144	178	243	72	1,624
Dusit	51	59	47	60	76	63	74	83	63	62	62	73	773
Naga	3	7	3	3	4	0	3	4	0	0	0	0	27
Vibol Sok	3	10	5	5	7	2	20	4	11	2	0	1	70
Number of casualties reported at Preah Vihear hospitals:	**17**	**12**	**10**	**9**	**11**	**8**	**11**	**13**	**8**	**9**	**7**	**5**	**120**
Cham Roeun helth center	0	0	1	0	0	0	0	0	0	0	0	0	1
Choam Ksant referral hospital	3	2	1	4	4	0	2	6	4	0	0	0	26
Dabprammouy Makara health center	11	5	7	0	3	5	7	6	4	7	5	3	63
Kou Len health center	1	0	0	0	0	0	0	0	0	0	0	0	1
Phnom Dek health center	0	1	0	3	2	2	0	0	0	0	0	0	8
Rovieng health center	2	1	1	2	1	0	2	1	0	2	2	2	16
Sra Aem health center	0	3	0	0	1	0	0	0	0	0	0	0	4
Tbaeng Mean Chey health center	0	0	0	0	0	1	0	0	0	0	0	0	1
Number of casualties reported at Prey Veng hospitals:	**11**	**15**	**12**	**14**	**11**	**6**	**4**	**6**	**8**	**8**	**6**	**18**	**119**
Cheach health center	0	1	0	0	0	0	0	0	0	0	0	0	1
Doun Koeng health center	0	0	0	2	0	0	0	0	0	0	0	0	2
Kamchay Mear referral hospital	0	4	0	0	0	0	0	0	0	0	0	0	4
Kampong Trabaek referral hospital	0	0	8	5	5	3	3	2	3	4	3	17	53
Mesang referral hospital	3	2	0	4	4	0	0	2	4	3	2	0	24
Pea Reang referral hospital	3	5	2	3	2	1	1	2	1	1	1	1	23
Preah Sdach referral hospital	5	2	2	0	0	0	0	0	0	0	0	0	9
Seang Khvenag health center	0	1	0	0	0	2	0	0	0	0	0	0	3
Number of casualties reported at Pursat hospitals:	**2**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**2**
Bakan referral hospital	2	0	0	0	0	0	0	0	0	0	0	0	2
Number of casualties reported at Rattanak Kiri provincial hospital	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
Number of casualties reported at Siem Reap hospitals:	**0**	**83**	**127**	**155**	**98**	**82**	**79**	**80**	**80**	**108**	**87**	**100**	**1,080**
Kralanh referral hospital	0	4	7	28	9	4	6	7	7	8	7	5	92
Puok health center	0	8	23	7	6	7	7	4	8	15	0	13	98
Siem Reap provincial hospital	0	63	86	88	67	54	52	51	50	62	52	63	689
Sot Nikum referral hospital	0	8	11	32	16	17	14	18	15	23	28	19	201
Number of casualties reported at Krong Preah Sihanouk provincial hospital	**8**	**11**	**8**	**9**	**6**	**4**	**6**	**0**	**7**	**12**	**6**	**4**	**81**
Number of casualties reported at Stung Treng provincial hospital	**5**	**15**	**13**	**20**	**11**	**19**	**2**	**10**	**7**	**12**	**10**	**15**	**139**
Number of casualties reported at Svay Rieng hospitals:	**7**	**15**	**24**	**9**	**28**	**23**	**9**	**5**	**0**	**23**	**43**	**10**	**196**
Chi Phu referral hospital	7	9	15	9	5	9	8	5	0	9	11	8	95
Romeas Haek referral hospital	0	0	0	0	0	0	1	0	0	0	0	0	1
Svay Rieng referral hospital	0	6	9	0	23	14	0	0	0	14	32	2	100
Number of casualties reported at Takeo hospitals:	**49**	**46**	**35**	**42**	**20**	**29**	**30**	**26**	**31**	**36**	**35**	**26**	**405**
Doun Keo provincial hospital	42	46	35	42	20	29	30	26	31	36	35	26	398
Kirivong referral hospital	7	0	0	0	0	0	0	0	0	0	0	0	7
Number of casualties reported at Otdar Mean Chey hospitals:	**13**	**7**	**0**	**34**	**26**	**39**	**4**	**0**	**0**	**37**	**30**	**0**	**190**
Anlong Veng health center	10	0	0	23	22	35	0	0	0	37	30	0	157
Otdar Mean Chey provincial hospital	3	7	0	11	4	4	4	0	0	0	0	0	33
Number of casualties reported at Krong Kep hospital	**0**	**3**	**9**	**8**	**1**	**2**	**6**	**0**	**4**	**0**	**0**	**0**	**33**
Krong Kep provincial hopsital	0	3	9	8	1	2	6	0	4	0	0	0	33

Number of casualties reported at traffic police districts

	Jan-07	Feb-07	Mar-07	Apr-07	May-07	Jun-07	Jul-07	Aug-07	Sep-07	Oct-07	Nov-07	Dec-07	Total
Total number of casualties reported by traffic police	**808**	**945**	**760**	**1,100**	**595**	**610**	**713**	**725**	**898**	**1,167**	**938**	**852**	**10,111**
Number of casualties reported in Banteay Mean Chey province	**56**	**52**	**43**	**88**	**20**	**21**	**31**	**22**	**37**	**40**	**40**	**56**	**506**
Malai district	0	0	0	0	1	0	3	0	0	0	0	5	9
Mongkol Borei district	14	15	21	22	6	2	7	0	2	3	7	5	104
Ou Chrov district	7	2	3	9	0	0	6	3	19	1	3	21	74
Phnom Srok district	0	0	0	0	0	1	0	0	1	0	2	0	4
Preah Netr Preah district	8	5	2	4	1	1	0	0	4	1	7	0	33
Serei Saophoan district	24	30	12	41	9	15	15	19	9	35	19	24	252
Svay Chek district	3	0	0	10	3	2	0	0	2	0	2	1	23
Thma Puok district	0	0	5	2	0	0	0	0	0	0	0	0	7
Number of casualties reported in Battambang province	**86**	**70**	**101**	**124**	**30**	**36**	**66**	**73**	**105**	**65**	**60**	**64**	**880**
Aek Phnom district	0	0	0	0	0	0	4	4	1	2	5	0	16
Banan district	6	0	0	14	0	0	4	0	5	5	4	0	38
Battambang district	31	35	35	43	17	16	35	27	40	23	17	23	342
Bavel district	12	0	3	2	1	0	0	5	4	0	0	0	27
Kamrieng district	0	0	0	0	0	0	0	0	5	1	0	7	13
Moung Ruessei district	16	16	13	46	1	0	8	12	19	1	5	8	145
Ratanak Mondol district	0	0	0	14	1	2	2	1	0	0	0	0	20
Phnom Proek district	0	0	0	0	4	0	0	0	3	0	0	0	7
Sampov Loun district	0	0	0	0	0	0	0	6	2	0	0	6	14
Sangkae district	18	15	38	0	2	9	4	8	23	22	16	7	162
Thmor Koul district	3	4	12	5	4	9	9	10	3	11	13	13	96
Number of casualties reported in Kampong Cham province	**57**	**56**	**112**	**92**	**42**	**94**	**49**	**70**	**61**	**96**	**87**	**93**	**909**
Batheay district	14	6	15	17	13	13	5	1	5	8	7	3	107
Chamkar Leu district	12	9	6	10	8	13	5	20	5	21	8	16	133
Cheung Prey district	9	6	16	7	3	5	8	4	3	5	9	3	78
Dambae district	0	1	1	0	0	9	3	0	2	3	4	5	28
Kampong Cham district	4	2	1	9	7	10	2	10	20	9	12	20	106
Kampong Siem district	4	3	5	5	5	5	3	4	3	9	0	6	52
Kang Meas district	0	0	0	0	0	0	0	0	0	0	3	0	3
Koh Sotin district	0	0	0	2	0	0	0	0	0	0	0	0	2
Krouch Chhmar district	0	0	3	0	0	0	0	0	0	0	0	0	3
Memot district	2	6	11	11	1	14	4	10	4	4	9	7	83
Ou Reang Ov district	3	2	0	0	0	0	0	0	6	8	0	8	27
Ponhea Kraek district	5	11	7	5	1	2	5	3	3	9	3	4	58
Prey Chhor district	1	2	3	11	4	8	3	5	2	10	9	11	69
Srei Santhor district	0	0	0	0	0	0	1	0	0	0	0	0	1
Stueng Trang district	0	0	0	1	0	0	5	0	0	0	2	0	8
Tboung Khmum district	3	8	44	12	0	15	5	13	8	10	21	10	149
Unknown	0	0	0	2	0	0	0	0	0	0	0	0	2
Number of casualties reported in Kampong Chhnang province	**18**	**45**	**35**	**33**	**26**	**28**	**23**	**44**	**50**	**59**	**43**	**31**	**435**
Baribour district	2	9	12	4	8	6	4	3	6	6	4	10	74
Kampong Chhnang district	4	21	14	9	9	4	6	3	14	15	16	6	121
Kampong Leaeng district	0	0	0	0	0	0	0	0	0	0	0	0	0
Kampong Tralach district	3	5	2	4	0	8	8	15	17	28	11	4	105
Rolea B'ier district	7	7	4	16	6	8	5	5	9	8	10	11	96
Sameakki Mean Chey district	2	0	1	0	3	2	0	18	4	2	2	0	34
Tuek Phos	0	3	2	0	0	0	0	0	0	0	0	0	5
Number of casualties reported in Kampong Speu province	**20**	**14**	**12**	**63**	**23**	**6**	**11**	**20**	**19**	**16**	**18**	**8**	**230**
Aoral district	0	0	0	0	11	0	5	0	0	0	0	0	16
Basedth district	0	0	0	0	0	0	0	0	0	0	0	1	1
Chbar Mon district	10	2	3	3	4	1	1	8	10	7	7	2	58
Kong Pisei district	0	0	0	32	0	1	0	0	0	0	0	0	33
Odongk district	0	2	0	1	0	0	0	0	3	7	3	4	20
Phnum Sruoch district	7	6	0	8	5	0	0	5	2	0	7	0	40
Samraong Tong district	3	4	7	19	3	4	5	7	4	2	1	1	60
Thpong district	0	0	0	0	0	0	0	0	0	0	0	0	0
Unknown	0	0	2	0	0	0	0	0	0	0	0	0	2
Number of casualties reported in Kampong Thom province	**35**	**51**	**26**	**74**	**34**	**44**	**50**	**38**	**32**	**84**	**53**	**55**	**576**
Baray district	2	11	1	10	9	8	13	5	7	10	7	10	93
Kampong Svay district	9	5	4	15	11	8	3	8	6	4	13	6	92
Prasat Balangk district	0	1	6	0	0	0	0	0	0	0	0	0	7
Prasat Sambour district	0	4	0	2	0	0	4	0	0	8	2	2	22
Sandan district	3	0	0	2	0	0	0	0	0	0	0	0	5
Santuk district	7	4	14	23	7	6	14	8	12	36	14	15	160
Stoung district	2	13	1	5	3	13	11	6	3	16	1	6	80
Stueng Saen district	12	13	0	17	4	9	5	11	4	10	16	16	117

	Jan-07	Feb-07	Mar-07	Apr-07	May-07	Jun-07	Jul-07	Aug-07	Sep-07	Oct-07	Nov-07	Dec-07	Total
Number of casualties reported in Kampot province	**40**	**28**	**20**	**15**	**25**	**3**	**28**	**29**	**22**	**65**	**49**	**10**	**334**
Angkor Chey district	11	3	0	2	0	0	0	3	3	9	6	2	39
Banteay Meas district	4	6	0	2	4	0	8	3	11	14	15	0	67
Chhouk district	0	0	0	0	0	0	0	3	0	2	0	0	5
Chum Kiri district	0	0	0	0	0	0	0	0	0	0	0	0	0
Dang Tong district	2	3	3	0	0	0	2	3	0	0	0	1	14
Kampong Bay district	16	8	13	5	17	3	7	4	3	4	7	1	88
Kampong Trach district	2	2	1	2	2	0	7	3	5	13	7	0	44
Kampot district	5	6	3	4	2	0	4	10	0	23	14	6	77
Number of casualties reported in Kandal province	**58**	**88**	**52**	**97**	**41**	**51**	**54**	**48**	**87**	**98**	**79**	**81**	**834**
Angk Snuol district	18	22	2	18	28	21	23	30	31	33	27	45	298
Kandal Stueng district	0	0	0	0	0	0	6	0	0	0	0	7	13
Kaoh Thum district	0	0	0	0	0	0	0	0	10	0	2	3	15
Khsach Kandal district	0	0	0	0		0	0	0	0	0	0	11	11
Kien Svay district	18	23	18	38	8	22	7	10	16	16	15	10	201
Mukh Kampul district	15	21	13	19	5	7	9	0	10	12	13	0	124
Ponhea Leu district	3	14	8	8	0	0	5	3	9	7	5	0	62
S'ang district	0	0	0	0	0	0	0	0	2	16	11	5	34
Ta Khmau district	4	8	11	14	0	1	4	5	9	14	6	0	76
Number of casualties reported in Koh Kong province	**13**	**22**	**22**	**28**	**11**	**16**	**15**	**22**	**5**	**24**	**9**	**27**	**214**
Botum Sakor district	2	1	1	7	0	1	0	2	0	2	0	0	16
Kampong Seila district	0	5	0	4	0	3	6	0	1	6	1	3	29
Koh Kong district	0	0	0	0	0	0	0	0	0	0	0	0	0
Mondol Seima district	2	0	4	4	0	4	3	3	1	1	0	4	26
Smach Mean Chey district	3	7	15	7	9	5	4	11	2	4	4	12	83
Srae Ambel district	6	9	2	6	2	3	2	6	1	11	4	8	60
Number of casualties reported in Kratie province	**38**	**36**	**23**	**40**	**16**	**19**	**11**	**9**	**24**	**40**	**43**	**24**	**323**
Chhloung district	2	6	0	1	1	2	2	1	3	6	4	2	30
Kracheh district	29	20	16	27	10	8	6	5	9	24	26	18	198
Preaek Prasab district	0	0	0	0	2	0	0	0	4	0	2	0	8
Sambour district	6	10	6	3	3	0	1	1	2	5	3	2	42
Snuol district	1	0	1	9	0	9	2	2	6	5	8	2	45
Number of casualties reported in Mondol Kiri province	**16**	**1**	**9**	**18**	**20**	**4**	**7**	**7**	**8**	**14**	**10**	**13**	**127**
Kaev Seima district	0	0	0	2	0	0	0	2	0	1	5	3	13
Kaoh Nhaek district	0	0	3	0	0	2	2	0	2	2	0	7	18
Ou Reang district	0	0	0	3	5	0	0	0	2	0	0	0	10
Pechr Chenda district	0	0	0	0	0	0	0	3	4	5	1	0	13
Saen Monorom district	1	1	6	13	15	2	5	2	0	6	4	3	58
Unknown	15	0	0	0	0	0	0	0	0	0	0	0	15
Number of casualties reported in Phnom Penh	**128**	**166**	**92**	**87**	**119**	**90**	**132**	**143**	**154**	**97**	**177**	**112**	**1,497**
Chamkar Mon district	14	8	14	5	14	6	10	23	23	5	15	9	146
Dang Koa district	28	58	24	22	38	40	53	25	48	5	75	22	438
Doun Penh district	27	12	7	10	11	4	12	16	14	20	36	30	199
Mean Chey district	14	34	11	16	19	14	17	26	15	16	7	5	194
Pram Pir Makara district	7	9	10	2	12	9	7	8	5	14	8	9	100
Russei Keo district	29	43	13	23	17	11	26	32	38	32	27	33	324
Toul Kok district	9	2	13	6	7	6	7	13	11	5	9	4	92
Unknown	0	0	0	3	1	0	0	0	0	0	0	0	4
Number of casualties reported in Preah Vihear province	**15**	**32**	**4**	**0**	**6**	**21**	**14**	**5**	**18**	**12**	**8**	**0**	**135**
Chey Saen district	0	0	0	0	0	0	0	0	2	0	0	0	2
Chhaeb district	2	0	0	0	0	0	0	0	0	0	0	0	2
Choam Khsant district	2	0	0	0	0	0	1	2	0	5	0	0	10
Kulaen district	1	20	0	0	0	2	4	0	3	4	7	0	41
Rovieng district	3	0	4	0	0	0	2	1	2	0	0	0	12
Sangkom Thmei district	0	0	0	0	0	0	0	0	0	0	0	0	0
Tbaeng Mean Chey district	7	12	0	0	6	19	7	2	11	3	1	0	68
Number of casualties reported in Prey Veng pronvince	**22**	**25**	**27**	**69**	**5**	**10**	**32**	**14**	**36**	**80**	**12**	**29**	**361**
Ba Phnom district	0	4	4	9	0	1	0	0	0	2	0	5	25
Kamchay Mear district	0	0	0	0	0	0	2	0	0	3	0	1	6
Kampong Leav district	9	0	0	10	0	0	0	0	0	17	1	0	37
Kampong Trabaek district	3	10	9	12	0	7	9	2	4	32	2	4	94
Kanhchriech district	0	0	0	3	0	0	1	0	0	4	3	0	11
Me sang district	4	0	0	1	2	0	0	0	2	1	0	1	11
Pea Reang district	3	1	3	0	1	0	2	0	0	1	0	0	11
Peam Chor district	0	0	2	2	0	0	0	0	0	0	0	0	4
Peam Ro district	0	4	0	16	1	1	14	6	7	9	0	4	62
Preah Sdach district	0	4	8	5	1	0	2	5	0	0	2	8	35
Prey Vaeng district	1	0	0	10	0	1	0	1	23	11	4	6	57
Sithor Kandal district	2	2	1	1	0	0	2	0	0	0	0	0	8
Number of casualties reported in Pursat province	**38**	**64**	**22**	**56**	**25**	**21**	**12**	**4**	**16**	**42**	**53**	**24**	**377**
Bakan district	10	15	5	23	15	9	2	3	9	4	33	2	130
Kandieng district	0	4	0	4	0	1	0	0	0	0	4	0	13
Krakor district	11	30	10	13	8	11	1	0	7	14	15	14	134
Phmun Kravanh district	5	2	5	8	0	0	0	0	0	0	0	0	20
Sampov Meas district	12	13	0	8	2	0	9	1	0	24	1	8	78
Veal Veng district	0	0	2	0	0	0	0	0	0	0	0	0	2

	Jan-07	Feb-07	Mar-07	Apr-07	May-07	Jun-07	Jul-07	Aug-07	Sep-07	Oct-07	Nov-07	Dec-07	Total
Number of casualties reported in Ratanak Kiri province	**5**	**29**	**5**	**17**	**16**	**24**	**11**	**11**	**9**	**12**	**17**	**11**	**167**
Angdoung Meas district	0	0	0	0	0	0	0	0	0	0	0	0	0
Ban Lung district	5	11	3	8	11	14	4	10	3	10	11	5	95
Bar Kaev district	0	1	2	0	0	0	2	0	0	0	0	0	5
Koun Mom district	0	13	0	2	1	0	0	1	0	0	2	2	21
Lum Phat district	0	0	0	2	2	0	1	0	0	0	0	0	5
Ou Chum district	0	0	0	0	0	10	4	0	4	0	4	4	26
Ou Ya Dav district	0	2	0	2	2	0	0	0	0	0	0	0	6
Ta Veaeng district	0	0	0	0	0		0	0	2	2	0	0	4
Veun Sai district	0	2	0	2	0	0	0	0	0	0	0	0	4
Unknown	0	0	0	1	0	0	0	0	0	0	0	0	1
Number of casualties reported in Siem Reap province	**38**	**17**	**34**	**36**	**29**	**19**	**43**	**29**	**66**	**88**	**52**	**61**	**512**
Angkor Chum district	0	0	0	0	0	0	0	0	0	5	0	0	5
Angkor Thum district	0	0	0	0	0	0	0	0	6	0	0	0	6
Banteay Srei district	0	1	0	0	0	0	0	0	0	0	0	0	1
Chi Kraeng district	0	2	10	3	0	0	0	0	0	18	0	9	42
Kralanh district	0	0	0	0	0	0	0	1	3	3	3	0	10
Prasat Bakong district	1	0	0	0	0	5	0	0	12	26	6	5	55
Puok district	1	2	0	1	1	0	0	2	0	0	8	0	15
Siem Reap district	29	8	23	31	26	14	43	26	37	35	33	44	349
Soutr Nikom district	0	0	0	1	0	0	0	0	0	0	0	0	1
Srei Snam district	0	0	0	0	0	0	0	0	4	1	0	0	5
Varin district	0	0	0	0	0	0	0	0	4	0	2	3	9
Unknown	7	4	1	0	2	0	0	0	0	0	0	0	14
Number of casualties reported in Sihanouk Ville	**33**	**28**	**30**	**30**	**18**	**23**	**24**	**28**	**26**	**43**	**30**	**23**	**336**
Mitta Pheap district	19	19	22	23	17	15	18	6	12	9	15	17	192
Prey Nob district	14	8	8	7	1	8	6	22	14	34	15	6	143
Stueng Hav district	0	1	0	0	0	0	0	0	0	0	0	0	1
Number of casualties reported in Stung Treng province	**2**	**12**	**5**	**18**	**9**	**10**	**3**	**12**	**16**	**19**	**20**	**17**	**143**
Sesan district	0	0	1	7	1	3	0	2	0	2	0	1	17
Siem Bouk district	0	0	0	0	0	0	0	0	0	0	3	0	3
Stueng Traeng district	1	10	4	7	8	7	3	10	16	17	17	16	116
Thala Barivat district	1	2	0	4	0	0	0	0	0	0	0	0	7
Number of casualties reported in Svay Rieng province	**35**	**42**	**44**	**52**	**24**	**24**	**37**	**36**	**38**	**47**	**17**	**25**	**421**
Chan Trea district	3	5	9	6	7	4	6	7	1	6	6	4	64
Kompong Ro district	4	2	3	4	3	2	6	0	0	8	0	0	32
Romeas Haek distirct	4	3	7	12	0	7	2	3	3	0	2	3	46
Rumduol distirct	0	1	0	0	0	0	0	0	0	1	1	0	3
Svay Chrum district	7	9	6	21	7	0	3	13	10	8	1	9	94
Svay Rieng district	12	10	9	5	4	9	4	6	15	7	4	6	91
Svay Teab district	5	12	10	4	3	2	16	7	9	17	3	3	91
Number of casualties reported in Takeo province	**32**	**27**	**36**	**46**	**27**	**23**	**31**	**27**	**24**	**67**	**21**	**29**	**390**
Angkor Borei district	0	0	3	1	0	0	0	0	2	1	0	0	7
Bati district	15	5	0	9	1	2	0	6	3	9	0	4	54
Borei Cholsar district	0	0	0	0	0	0	0	0	0	0	0	1	1
Doun Keo district	0	5	3	0	7	10	4	0	6	13	4	4	56
Kaoh Andaet distrcit	3	0	2	0	0	0	0	0	2	5	0	3	15
Kiri Vong district	8	5	5	6	8	1	10	5	0	10	7	1	66
Prey Kabbas district	0	0	0	0	0	0	0	0	0	0	0	0	0
Somraong district	2	1	0	5	0	2	0	0	1	1	1	0	13
Tram Kak district	0	8	15	8	5	6	14	7	0	5	5	9	82
Treang district	4	3	8	17	6	2	3	9	10	23	4	7	96
Number of casualties reported in Odor Mean Chey province	**11**	**7**	**0**	**0**	**9**	**11**	**9**	**10**	**10**	**35**	**23**	**36**	**161**
Anglong Veng district	3	5	0	0	5	7	3	3	3	8	3	7	47
Banteay Ampil district	4	0	0	0	2	2	0	0	2	1	0	3	14
Chong Kal district	0	0	0	0	2	0	0	1	0	6	7	2	18
Samraong district	0	2	0	0	0	2	6	2	1	20	10	17	60
Trapeang Prasat district	4	0	0	0	0	0	0	0	4	0	3	7	18
Unknown	0	0	0	0	0	0	0	4	0	0	0	0	4
Number of casualties reported in Krong Kaeb	**3**	**7**	**0**	**0**	**0**	**0**	**11**	**3**	**8**	**5**	**6**	**5**	**48**
Damnak Changaeur district	1	2	0	0	0	0	5	2	2	2	6	1	21
Kaeb distict	2	5	0	0	0	0	6	1	6	3	0	4	27
Number of casualties reported in Krong Pailin	**9**	**26**	**6**	**17**	**20**	**12**	**9**	**21**	**27**	**19**	**11**	**18**	**195**
Pailin district	9	23	3	16	3	10	9	12	23	14	6	7	135
Sala Krau district	0	3	3	1	17	2	0	9	4	5	2	11	57
Unknown	0	0	0	0	0	0	0	0	0	0	3	0	3

Data collection forms

Two different data collection forms are being used: the hospital data collection form, using the casualty as point of entry, and the traffic police data collection form, using the accident as entry point. Doubles entries are checked using the name of the casualty, the date and time of accident as well as the location.

Hospital data collection form

Developed for

Hospital Road Traffic Casualty Form

Supported by HANDICAP INTERNATIONAL

Serial No.

PART 1 - INTERVIEW INFORMATION

Hospital/OD name: ..... Interviewer name: ..... Date:

PART 2 - CASUALTY INFORMATION

1. Name:
2. Gender: ☐ Male ☐ Female
3. Age:
4. Residence: ☐ Province /town of accident ☐ Foreigner ☐ Other province/Town ☐ Unknown
5. Occupation: ☐ Child ☐ Student ☐ Worker ☐ Vendor/small business ☐ Motor taxi driver ☐ Car taxi driver ☐ House keeping/ Servant ☐ Farmer ☐ Fisherman ☐ Tourist/ Expatriate ☐ Teacher ☐ Police ☐ Soldier ☐ Other government employee ☐ Unemployed ☐ Other:..... ☐ Unknown
6. Date of arrival at hospital:
7. Time of arrival at hospital (use 24-hour clock): ____:____
8. Type of road user: ☐ Pedestrian ☐ Driver ☐ Passenger
9. Type of transport: ☐ Motorbike ☐ Bicycle ☐ Pedestrian ☐ Motor tricycle ☐ Tricycle ☐ Remorque ☐ Car (taxi) ☐ Car (private) ☐ Pick-up ☐ Minibus ☐ Bus ☐ Light truck ☐ Heavy truck ☐ Other:.....
10. Wearing a helmet/ seatbelt? ☐ Yes ☐ No ☐ N/A ☐ Unknown
11. Having driving license? ☐ Yes ☐ No ☐ N/A ☐ Unknown
12. Substance use: Alcohol: ☐ Yes/Suspected ☐ No ☐ Unknown Drugs: ☐ Yes/Suspected ☐ No ☐ Unknown
13. Nature of injuries: Trauma ☐ Cranial ____/15 ☐ Facial ☐ Thorax ☐ Abdominal ☐ Cervical or dorsal; Fracture ☐ UE ☐ LE ☐ Pelvis; Wounds/Cuts ☐ UE ☐ LE ☐ Pelvis; Narrative description: diagnoses - disability
14. Severity of injuries: ☐ No injury ☐ Superficial (minor cuts, bruises) ☐ Severe (required surgery or ICU) ☐ Moderate (fracture, sutures)
15. Medical treatment cost estimation(In $):.....
16. Is casualty insured? ☐ Yes ☐ No ☐ Unknown
17. Hospital discharge: ☐ Fully treated and sent home ☐ Sent home but disabled for life (17.A) ☐ Died on the accident scene ☐ Died at the hospital ☐ Admitted or referred to other hospital ☐ Patient requests to leave for other clinic/traditional healer ☐ Patient die at home ☐ Patient will die at home ☐ Unknown
17.A If disabled for life, what kind of disability?: ☐ Seeing ☐ Hearing ☐ Learning ☐ Moving (17.B) ☐ Feeling ☐ Psychological ☐ Other.....
17.B If moving difficult, what kind of moving? ☐ Limitation/deformity ☐ Paralysis ☐ Amputation(leg) ☐ Amputation(arm) ☐ Other.....
18. How did the casualty travel to hospital: ☐ SAMU/Ambulance ☐ Alone ☐ Family/Relative ☐ Unknown

PART 3 - ACCIDENT INFORMATION

1. Date of accident:
2. Time of accident (use 24-hour clock): .....:.....
3. Place of accident : Street name:..... Village:..... Commune/Sangkat:..... District:..... Province/Town:..... Detailed location (intersection or landmark):.....
4. Road type: ☐ Straight road ☐ Roundabout ☐ Curve ☐ X-junction ☐ T-junction ☐ Y-junction ☐ Bridge ☐ Slope ☐ Other:..... ☐ National road No: ..... ☐ Provincial road No:..... ☐ Km No (use decimal):..... ☐ Major road in city ☐ Minor road in city ☐ Local road/ track ☐ Other: ..... ☐ Paved ☐ Unpaved ☐ Construction site ☐ Unknown
5. Did accident happened in an urban area? ☐ Yes ☐ No
6. Cause of accident:
   - 6.a-Human error: ☐ Speed ☐ Not respect traffic lights ☐ Not respect right of way ☐ Driving against flow of traffic ☐ Not respect traffic signs ☐ Dangerous overtaking ☐ Using mobile phone ☐ Wrong use of high beam ☐ Alcohol abuse ☐ Drug abuse ☐ Change lane without due care ☐ Fatigue or illness ☐ Other:.....
   - 7.b-Road condition: ☐ Potholes ☐ Dirt/Sand/Gravel ☐ Dust ☐ Animal on the road ☐ Object on the road ☐ Other:.....
   - 7.c- Weather condition: ☐ Rain ☐ Cloudy/mist ☐ Wet road ☐ Other:.....
   - 7.d- Vehicle defect: ☐ Brake failure ☐ Tire blow out ☐ Steering wheel failure ☐ Headlight failure ☐ Load falling off ☐ Other:.....
7. Accident circumstance: - How many vehicles were involved in the accident? ..... - How many people were involved in the accident? ..... - How many people were injured in the accident? ..... - How many people died in the accident? .....
8. Pedestrian/Casualty's vehicle collided with: ☐ Motorbike ☐ Bicycle ☐ Pedestrian ☐ Motor tricycle ☐ Tricycle ☐ Remorque ☐ Car (taxi) ☐ Car (private) ☐ Pick-up ☐ Minibus ☐ Bus ☐ Light truck ☐ Heavy truck ☐ Stationary object ☐ Fell alone ☐ Animal ☐ Other .....
9. Attendance of police: ☐ Yes ☐ No

Traffic police form

Developed for: MoI, MoI, MPWT

Traffic Police Accident and Casualty Form

Supported by: WHO, BTC CTB, HANDICAP INTERNATIONAL

Serial No.

PART 1 - INTERVIEW INFORMATION

Province:......................	Traffic police unit:..............................	Interviewer name and signature:	Date:

PART 2 - ACCIDENT INFORMATION

1. Date of accident (DD,MM,YY):   **2. Time of accident (use 24-hour clock):** ....: ....

3. Severity of accident : ☐ Fatal injury ☐ Serious injury ☐ Slight injury ☐ Damage only

4. Place of accident : Street name:................ Village:.................. Commune/Sangkat:................ District:.................. Province/Town: ....
Detailed location (intersection or landmark): ....
GPS coordinates (optional): .... - ....

5. Road type: ☐ Straight road ☐ Roundabout ☐ Curve ☐ X-junction ☐ T-junction ☐ Y-junction ☐ Bridge ☐ Slope ☐ Other:...........
☐ National road No. ..... ☐ Provincial road No:..... ☐ Km No (use decimal):..... ☐ Major road in city ☐ Minor road in city ☐ Local road/ track ☐ Other: ....
☐ Paved ☐ Unpaved ☐ Construction site ☐ Unknown

6. Did accident happened in an urban area? ☐ Yes ☐ No

7. Cause of accident:

7.a-Human error: ☐ Speed ☐ Not respect traffic lights ☐ Not respect right of way ☐ Driving against flow of traffic ☐ Not respect traffic signs ☐ Dangerous overtaking ☐ Using mobile phone ☐ Wrong use of high beam ☐ Alcohol abuse ☐ Drug abuse ☐ Change lane without due care ☐ Fatigue or illness ☐ Other:............

7.b-Road condition: ☐ Potholes ☐ Dirt/Sand/Gravel ☐ Dust ☐ Animal on the road ☐ Object on the road ☐ Other:...........

7.c- Weather condition: ☐ Rain ☐ Cloudy/mist ☐ Wet road ☐ Other:..........

7.d- Vehicle defect: ☐ Brake failure ☐ Tire blow out ☐ Steering wheel failure ☐ Headlight failure ☐ Load falling off ☐ Other:..............

8. Collision type: ☐ Head-on ☐ Rear end ☐ Right-angle ☐ Side swipe ☐ Overturned ☐ Fell alone (for two-wheelers) ☐ Hit object on the road ☐ Hit object off road ☐ Hit parked vehicle ☐ Hit pedestrian ☐ Hit animal ☐ Other.............................

9. Hit and run: ☐ Yes ☐ No

	Vehicle 1	Vehicle 2	Vehicle 3	Vehicle 4
10. Vehicles involved:	☐ Motorbike ☐ Pick-up ☐ Bicycle ☐ Minibus ☐ Motor tricycle ☐ Bus ☐ Tricycle ☐ Light truck ☐ Motor remorque ☐ Heavy truck ☐ Car (taxi) ☐ Other:...... ☐ Car (private)	☐ Motorbike ☐ Pick-up ☐ Bicycle ☐ Minibus ☐ Motor tricycle ☐ Bus ☐ Tricycle ☐ Light truck ☐ Motor remorque ☐ Heavy truck ☐ Car (taxi) ☐ Other:...... ☐ Car (private)	☐ Motorbike ☐ Pick-up ☐ Bicycle ☐ Minibus ☐ Motor tricycle ☐ Bus ☐ Tricycle ☐ Light truck ☐ Motor remorque ☐ Heavy truck ☐ Car (taxi) ☐ Other:...... ☐ Car (private)	☐ Motorbike ☐ Pick-up ☐ Bicycle ☐ Minibus ☐ Motor tricycle ☐ Bus ☐ Tricycle ☐ Light truck ☐ Motor remorque ☐ Heavy truck ☐ Car (taxi) ☐ Other:...... ☐ Car (private)
11. Vehicle registration number:	....	....	....	....
12. Vehicle manoeuvre:	☐ Going straight ahead ☐ Reversing ☐ Right turn ☐ Sudden start ☐ Left turn ☐ Sudden stop ☐ U-turn ☐ Parking ☐ Overtaking ☐ Other	☐ Going straight ahead ☐ Reversing ☐ Right turn ☐ Sudden start ☐ Left turn ☐ Sudden stop ☐ U-turn ☐ Parking ☐ Overtaking ☐ Other	☐ Going straight ahead ☐ Reversing ☐ Right turn ☐ Sudden start ☐ Left turn ☐ Sudden stop ☐ U-turn ☐ Parking ☐ Overtaking ☐ Other	☐ Going straight ahead ☐ Reversing ☐ Right turn ☐ Sudden start ☐ Left turn ☐ Sudden stop ☐ U-turn ☐ Parking ☐ Overtaking ☐ Other
13. Vehicle traveling from:	.... To	.... To	.... To	.... To ....
14. Vehicle characteristics:	☐ Left- hand-drive ☐ Righ-hand drive	☐ Left- hand-drive ☐ Righ-hand drive	☐ Left- hand-drive ☐ Righ-hand drive	☐ Left- hand-drive ☐ Righ-hand drive
15. Importance of damage:	☐ Heavy ☐ Slightly ☐ No damage	☐ Heavy ☐ Slightly ☐ No damage	☐ Heavy ☐ Slightly ☐ No damage	☐ Heavy ☐ Slightly ☐ No damage
16. Estimation of damage cost (in US$):	....	....	....	....
17. Are vehicles insured?	☐ Yes ☐ No ☐ Unknown	☐ Yes ☐ No ☐ Unknown	☐ Yes ☐ No ☐ Unknown	☐ Yes ☐ No ☐ Unknown

18. Brief accident description (be as precise as possible):

PLEASE FILL IN THE CASUALTY INFORMATION ON THE BACK OF THIS PAGE

PART 3: DRIVER AND/OR CASUALTY INFORMATION

DRIVER/CASUALTY 1

1. Name: _____ | 2. Gender: ☐ Male ☐ Female | 3. Age: _____ | 4. Likely at fault? ☐ Yes ☐ No | 5. Residence: ☐ Province of accident ☐ Other province ☐ Foreigner ☐ Unknown

6. Occupation: ☐ Child ☐ Student ☐ Worker ☐ Vendor/small business ☐ Motor taxi driver ☐ Car taxi driver ☐ House keeping/ Servant ☐ Farmer ☐ Fisherman ☐ Tourist/ Expatriate ☐ Teacher ☐ Police ☐ Soldier ☐ Other government employee ☐ Unemployed ☐ Other:..... ☐ Unknown

7. Type of road user: ☐ Pedestrian ☐ Driver ☐ Passenger | 8. Type of transport: ☐ Vehicle number:..... ☐ Pedestrian

9. Wearing a helmet/seat belt: ☐ Yes ☐ No ☐ N/A ☐ Unknown | 10. Having Driving license: ☐ Yes ☐ No ☐ N/A ☐ Unknown

11. Substance use: Alcohol: ☐ Yes/Suspected ☐ No ☐ Unknown | Drugs: ☐ Yes/Suspected ☐ No ☐ Unknown

12. Severity of injuries: ☐ No apparent injury ☐ Superficial injury (e.g. bruises. Minor cuts) ☐ Moderate (fracture, sutures) ☐ Severe (requires surgery or ICU) ☐ Died on the accident site

13. Was the casuality transferred to hospital ? ☐ Yes ☐ No If yes, go by what?..... to which hospital/OD? .....

14. Did the casualties receive first aid ? ☐ Yes ☐ No | 15. who provide first aid ? ☐ Traffic police ☐ Military police ☐ Samu ☐ Other.....

16. Type of first aid: ☐ Bleeding ☐ Unconsciousness ☐ Burn ☐ Cardiac emergency ☐ Respiratory emergency ☐ Wound ☐ Broken bond ☐ How to transfer victim ☐ Other.....

DRIVER/CASUALTY 2

1. Name: _____ | 2. Gender: ☐ Male ☐ Female | 3. Age: _____ | 4. Likely at fault? ☐ Yes ☐ | 5. Residence: ☐ Province of accident ☐ Other province ☐ Foreigner ☐ Unknown

6. Occupation: ☐ Child ☐ Student ☐ Worker ☐ Vendor/small business ☐ Motor taxi driver ☐ Car taxi driver ☐ House keeping/ Servant ☐ Farmer ☐ ☐ Tourist/ Expatriate ☐ Teacher ☐ Police ☐ Soldier ☐ Other government employee ☐ Unemployed ☐ Unknown

7. Type of road user: ☐ Pedestrian ☐ Driver ☐ Passenger | 8. Type of transport: ☐ Vehicle number:..... ☐ Pedestrian

9. Wearing a helmet/seat belt: ☐ Yes ☐ No ☐ N/A ☐ Unknown | 10. Having Driving license: ☐ Yes ☐ No ☐ N/A ☐ Unknown

11. Substance use: Alcohol: ☐ Yes/Suspected ☐ No ☐ Unknown | Drugs: ☐ Yes/Suspected ☐ No ☐ Unknown

12. Severity of injuries: ☐ No apparent injury ☐ Superficial injury (e.g. bruises. Minor cuts) ☐ Moderate (fracture, sutures) ☐ (requires surgery or ICU) ☐ Died on the accident site

13. Was the casuality transferred to hospital ? ☐ Yes ☐ No If yes, go by what?..... to which hospital/OD? .....

14. Did the casualties receive first aid ? ☐ Yes ☐ No | 15. who provide first aid ? ☐ Traffic police ☐ Military police ☐ Samu ☐ Other.....

16. Type of first aid: ☐ Bleeding ☐ Unconsciousness ☐ Burn ☐ Cardiac emergency ☐ Respiratory emergency ☐ Wound ☐ Broken bond ☐ How to transfer victim ☐ Other.....

DRIVER/CASUALTY 3

1. Name: _____ | 2. Gender: ☐ Male ☐ Female | 3. Age: _____ | 4. Likely at fault? ☐ Yes ☐ | 5. Residence: ☐ Province of accident ☐ Other province ☐ Foreigner ☐ Unknown

6. Occupation: ☐ Child ☐ Student ☐ Worker ☐ Vendor/small business ☐ Motor taxi driver ☐ Car taxi driver ☐ House keeping/ Servant ☐ Farmer ☐ ☐ Tourist/ Expatriate ☐ Teacher ☐ Police ☐ Soldier ☐ Other government employee ☐ Unemployed ☐ Unknown

7. Type of road user: ☐ Pedestrian ☐ Driver ☐ Passenger | 8. Type of transport: ☐ Vehicle number:..... ☐ Pedestrian

9. Wearing a helmet/seat belt: ☐ Yes ☐ No ☐ N/A ☐ Unknown | 10. Having Driving license: ☐ Yes ☐ No ☐ N/A ☐ Unknown

11. Substance use: Alcohol: ☐ Yes/Suspected ☐ No ☐ Unknown | Drugs: ☐ Yes/Suspected ☐ No ☐ Unknown

12. Severity of injuries: ☐ No apparent injury ☐ Superficial injury (e.g. bruises. Minor cuts) ☐ Moderate (fracture, sutures) ☐ (requires surgery or ICU) ☐ Died on the accident site

13. Was the casuality transferred to hospital ? ☐ Yes ☐ No If yes, go by what?..... to which hospital/OD? .....

14. Did the casualties receive first aid ? ☐ Yes ☐ No | 15. who provide first aid ? ☐ Traffic police ☐ Military police ☐ Samu ☐ Other.....

16. Type of first aid: ☐ Bleeding ☐ Unconsciousness ☐ Burn ☐ Cardiac emergency ☐ Respiratory emergency ☐ Wound ☐ Broken bond ☐ How to transfer victim ☐ Other.....

DRIVER/CASUALTY 4

1. Name: _____ | 2. Gender: ☐ Male ☐ Female | 3. Age: _____ | 4. Likely at fault? ☐ Yes ☐ | 5. Residence: ☐ Province of accident ☐ Other province ☐ Foreigner ☐ Unknown

6. Occupation: ☐ Child ☐ Student ☐ Worker ☐ Vendor/small business ☐ Motor taxi driver ☐ Car taxi driver ☐ House keeping/ Servant ☐ Farmer ☐ ☐ Tourist/ Expatriate ☐ Teacher ☐ Police ☐ Soldier ☐ Other government employee ☐ Unemployed ☐ Unknown

7. Type of road user: ☐ Pedestrian ☐ Driver ☐ Passenger | 8. Type of transport: ☐ Vehicle number:..... ☐ Pedestrian

9. Wearing a helmet/seat belt: ☐ Yes ☐ No ☐ N/A ☐ Unknown | 10. Having Driving license: ☐ Yes ☐ No ☐ N/A ☐ Unknown

11. Substance use: Alcohol: ☐ Yes/Suspected ☐ No ☐ Unknown | Drugs: ☐ Yes/Suspected ☐ No ☐ Unknown

12. Severity of injuries: ☐ No apparent injury ☐ Superficial injury (e.g. bruises. Minor cuts) ☐ Moderate (fracture, sutures) ☐ (requires surgery or ICU) ☐ Died on the accident site

13. Was the casuality transferred to hospital ? ☐ Yes ☐ No If yes, go by what?..... to which hospital/OD? .....

14. Did the casualties receive first aid ? ☐ Yes ☐ No | 15. who provide first aid ? ☐ Traffic police ☐ Military police ☐ Samu ☐ Other.....

16. Type of first aid: ☐ Bleeding ☐ Unconsciousness ☐ Burn ☐ Cardiac emergency ☐ Respiratory emergency ☐ Wound ☐ Broken bond ☐ How to transfer victim ☐ Other.....

Feedback form

Please send back this form to the following address:
- By mail: Handicap International – Road Safety Program Manager – #18, Street 400 – Phnom Penh
- By fax: +855 (0)23/216 270

➢ Name of organization: ……

➢ Type of organization:

□ NGO
□ International Organization
□ Ministry
□ Private company
□ Other (please specify): ……..

➢ Sector(s) of activity:

□ Health
□ Education
□ Transport
□ Environment
□ Disability and Rehabilitation
□ Child welfare/rights
□ Rural & Livelihood Development
□ Press-media
□ Research Institute
□ Other (please specify): …….

➢ Name of respondent: ……
Position: ……..
Email address: ……...
Postal address: ……...
Phone number: ……

➢ Quality of report:

How would you rate this annual report? (please tick the corresponding box)

	Excellent	Good	Average	Poor	Please elaborate
Report presentation					……..
Quality of the data provided					……..
Quantity of the data provided					……..
Pertinence of the short analysis provided					……..

Would you like to receive this report by?

□ Hard copy □ Electronic mail copy □ Floppy Disk/CD copy

➢ Which additional information would you like to appear in this report? (please specify)
……
……

➢ How do you use this report?
……
……

➢ Additional comment
……
……

Contacts

Further analysis and **additional information** is available on request. Please do not hesitate to contact one of the following persons:

- **For additional analysis/customized reports:**

  Mr. Jean-François Michel
  Coordinator of Operations
  Handicap International Belgium
  Mobile: 012 217 427
  E mail: jeanfrancois.michel@hib-cambodia.org

  Ms. SANN Socheata
  Road Safety Program Manager
  Handicap International Belgium
  Mobile: 012 563 172
  E mail: sann.socheata@hib-cambodia.org

- **For information regarding the road safety situation in Cambodia:**

  HE. UNG Chun Hour
  Director General of Transports & Director of Land Transport Department
  Permanent Member of National Road Safety Committee
  Secretary General of Secretariat General of National Road Safety Committee
  Ministry of Public Works and Transport
  Mobile: 012 818 835
  Email: chunhour@hotmail.com

  General PHOU Khon
  Director of Order Department
  General Commissariat of National Police
  Ministry of Interior
  Mobile: 012 611 456

- **For information regarding emergency assistance in Cambodia:**

  Dr. PRAK PISETH Raingsey
  Director
  Preventive Medicine Department
  Mobile: 012 862 022
  Email: pisethsey@yahoo.com

- **For information regarding the technical aspects of the database:**

  Mr. SEM Panhavuth
  RTAVIS Manager
  Handicap International Belgium
  Mobile: 012 545 334
  E mail: sem.panhavuth@hib-cambodia.org

  Ms. OU Amra
  RTAVIS Officer
  Handicap International Belgium
  Mobile: 016 338 178
  E mail: rtavis@hib-cambodia.org

Editor

RTAVIS
Handicap International Belgium
18, Street 400, Phnom Penh
Kingdom of Cambodia
Phone: +855 – 23 – 217 298
Email: rtavis@hib-cambodia.org
Website: www.handicapinternational.be

Handicap International Belgium

With the support of:

European Union

Belgian Cooperation

World Health Organization