

بِسْمِ اللَّهِ الرَّحْمَنِ الرَّحِيمِ



# National burden of injuries and violence: A National Household survey in Egypt

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Regional Office for the Eastern Mediterranean

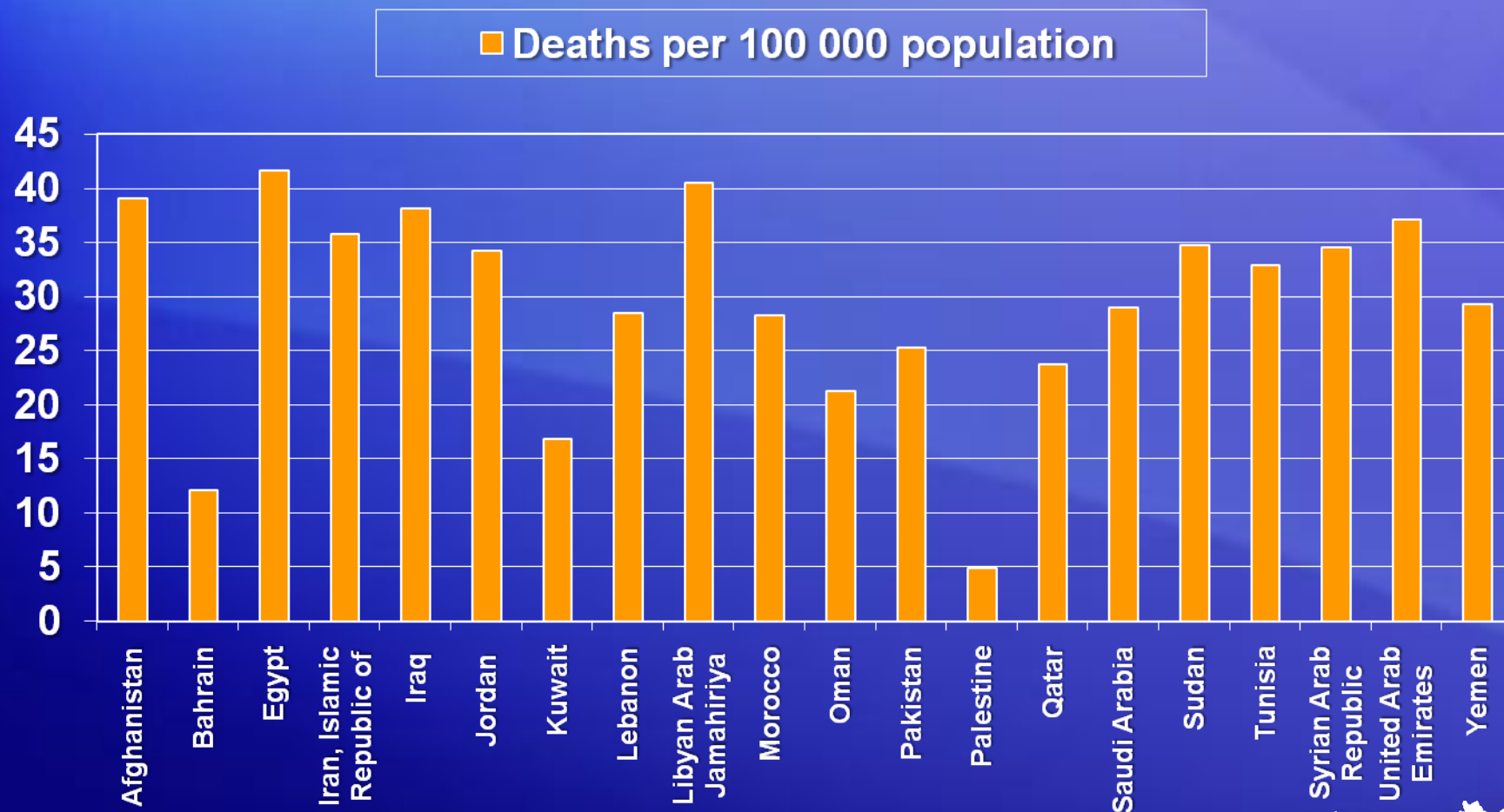


# Outline

- Background
- Goals and Objectives
- Data Elements and Consideration
- Methodology
- Key Findings
- Results
- Conclusion

# Road traffic deaths per 100 000 population, 2007

Data from 20 countries



# Background

- With epidemiological transition and socioeconomic changes, Injuries have emerged as a leading cause of deaths, hospitalizations and disabilities in Egypt
- Police and hospital based information provides some clues on injury problem, there are major gaps, though:
  - Nationally available data not representative of the whole country- surveillance covers only selected institutions (approx 50%-mainly government institutions).
  - Data from private sector not included.
  - Essential data required for informing policy on primary prevention and cost-effective interventions is not available.



# Survey Goal and Objectives

## Goal

- Strengthen understanding of injury burden through gathering population based information in order to strengthen national efforts for injury prevention and control

## Objectives

- Establish the magnitude of injury burden in terms of mortality, morbidity and impact
- Identify the pattern and causes of injuries at population level
- Delineate major risk factors for selected injuries e.g. Road traffic Injury
- Understand utilisation pattern of services for injury care and management

# Survey Methodology

- Population based household survey representative of all Egypt
- The whole survey process was conducted from Dec 08 to Oct 09
- Data was collected in five governorates covering 11,118 households and 47,797 individuals
- 3 stage random sampling method, survey population was identified based on probability proportional to size (House to house survey)
- Validated semi structured questionnaire. Qualitative inputs were provided by both the survey staff and community respondents through focussed group discussions



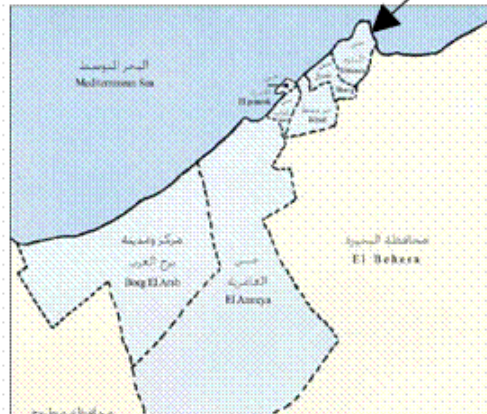
World Health  
Organization

Data was analysed using EPI INFO ( ver 6.0 ) package

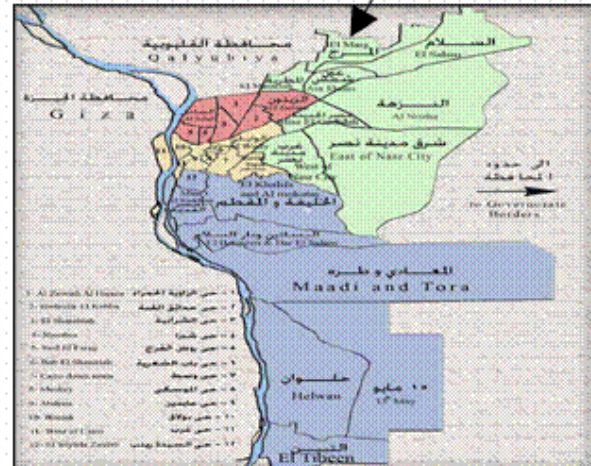


# Survey Geographical Areas

**Alexendria**

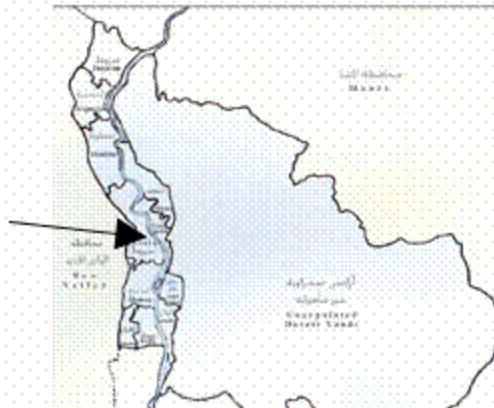


**Cairo**



**Total  
Population of  
Egypt: 73  
Million**

**Assuit**



**Sharkia**



**Dakahlia**



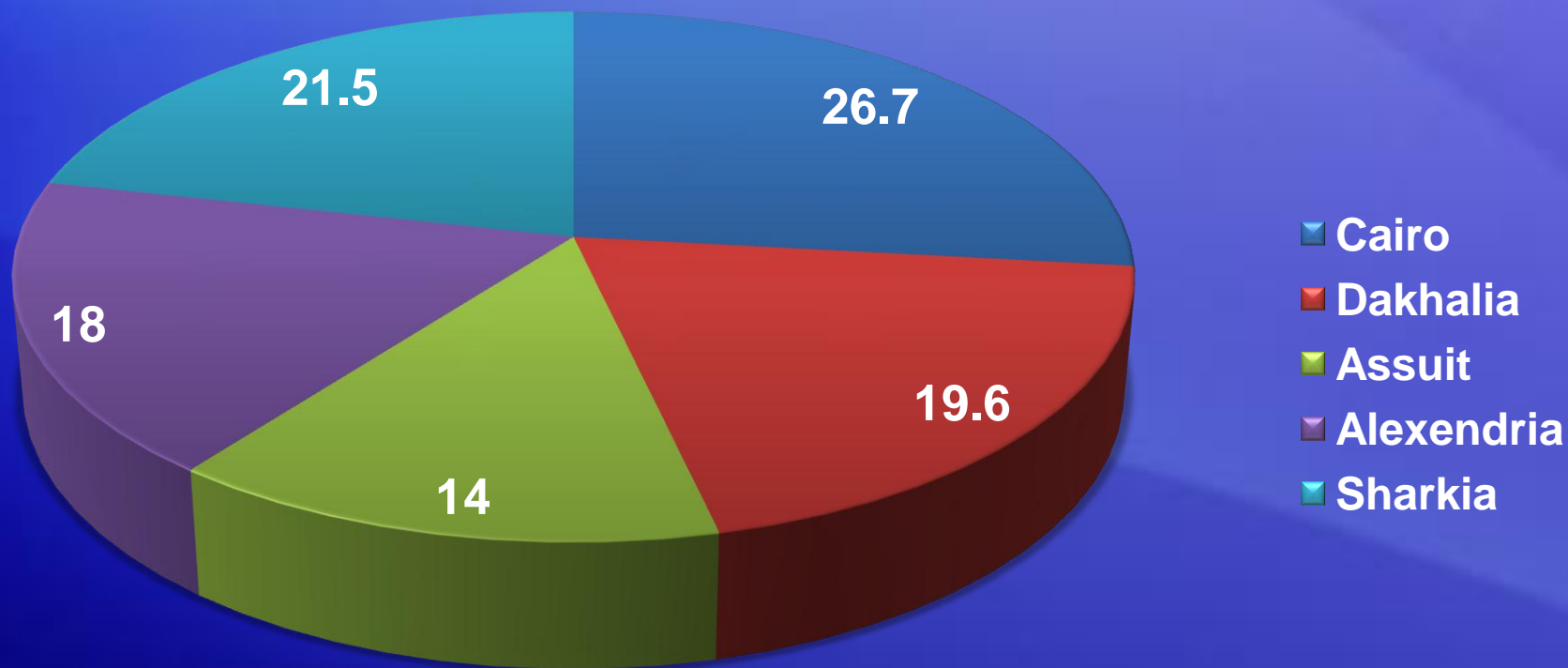


# PPS method for selection of survey population

Region	Selected Governorate	Population	% of Egypt Population	Required no. of HH based on PPS	HH Surveyed
North	Dakahlia	4989997	6.8 %	2058	2190
South	Assuit	3444967	4.7%	1470	1562
East	Sharkia	5354041	7.3%	2352	2394
West	Alexandria	4123869	5.6%	1764	2002
Central	Cairo	6758581	9.2%	2941	2970
Total				10, 585	11,118



# Distribution of survey population per governorate (%)



# Data Elements of the survey tools

- Sociodemographic characteristics of survey population
- Injury mortality
- Injury morbidity
  - Road traffic injuries
  - Fall injuries
  - Burn injuries
  - Poisoning
  - Agricultural injuries
  - Work place injuries
  - Assault / violence
- Injury care
- Injury impact
- Economic impact

# Survey Considerations

- The survey enumerated all deaths in the past 3 years and injury deaths were identified using verbal autopsy methods
- The data was collected from all identified households through a door to door survey approach (head of household)
- Details of deaths were collected from respondent of the survey with cross verification of medical records wherever available.
- Data pooling for the survey period was done with related sectors of police, transport and local health units
- Pilot study conducted in 100 households to examine the study feasibility
- Ethical issues considered through a informed consent. Ethical approval was obtained from the national ethical committee





# Results



# Key Findings

- An estimated 30,000; hospitalization 3,50,000 persons every year. Highest number of deaths/injuries occurs among men in **15 – 44** year age group.
- 9 out of 10 deaths were unintentional in nature
- Significant variation in injury burden and pattern exist among governorates and is linked to socioeconomic situation, motorization, safety mechanisms and other factors.
- Road Traffic injuries are a leading cause of both deaths and hospitalization in Egypt, (nearly 21,000 deaths every year) especially among men. Among women falls are the leading cause followed by RTIs.
- Pedestrians and car occupants account for nearly 80 % of deaths and hospitalization within **RTIs**. Vehicles hitting pedestrians is the commonest pattern of injury.

# Key Findings--Contd

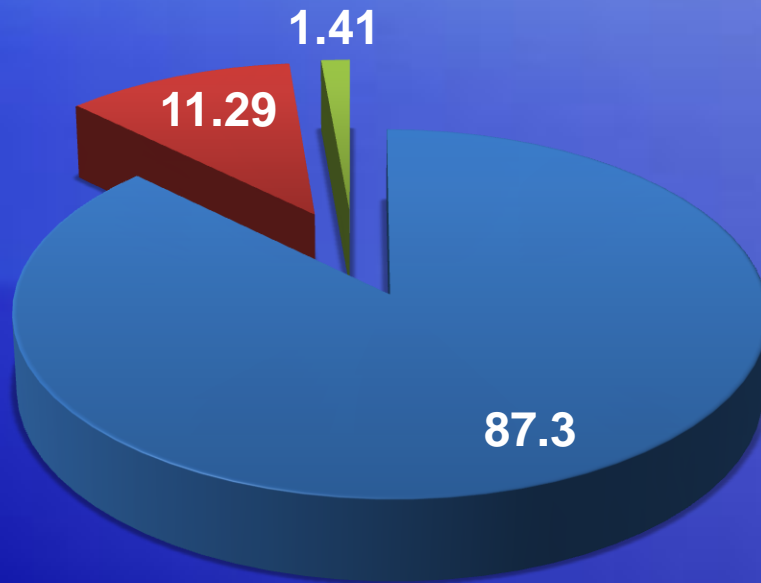
- Use of protective devices like helmets, seat belts and child restraints was very low.
- Speed appears to be a major risk factor and a common contributor for collisions.
- Fall injuries are found to be common among women mostly occurring at homes.
- Burn injuries were also found to be a cause of deaths and hospitalization-- household products like hot liquids was the major cause.
- Work place injuries were found to be the third leading cause--being hit by mechanical objects was the commonest pattern.

# Key Findings--Contd

- Even though intentional injuries like assaults and suicides were frequent ( as reported in FGDs), the survey did not capture them in direct interviews with respondents.
- Nearly 20 % of injured persons required hospital admissions and one among four of them left for home with varying levels of disabilities.
- The impact of injuries was huge as work status and productivity declined by half (among injured) and unemployment and part time employment doubled at 6 – 9 months after injury.
- Majority of injured incur out of pocket expenditure to meet direct and indirect costs of injury



# Income Level of Surveyed HH/Month



- Income less than 100 USD
- Income between 100-200 USD
- Income more than 200 USD

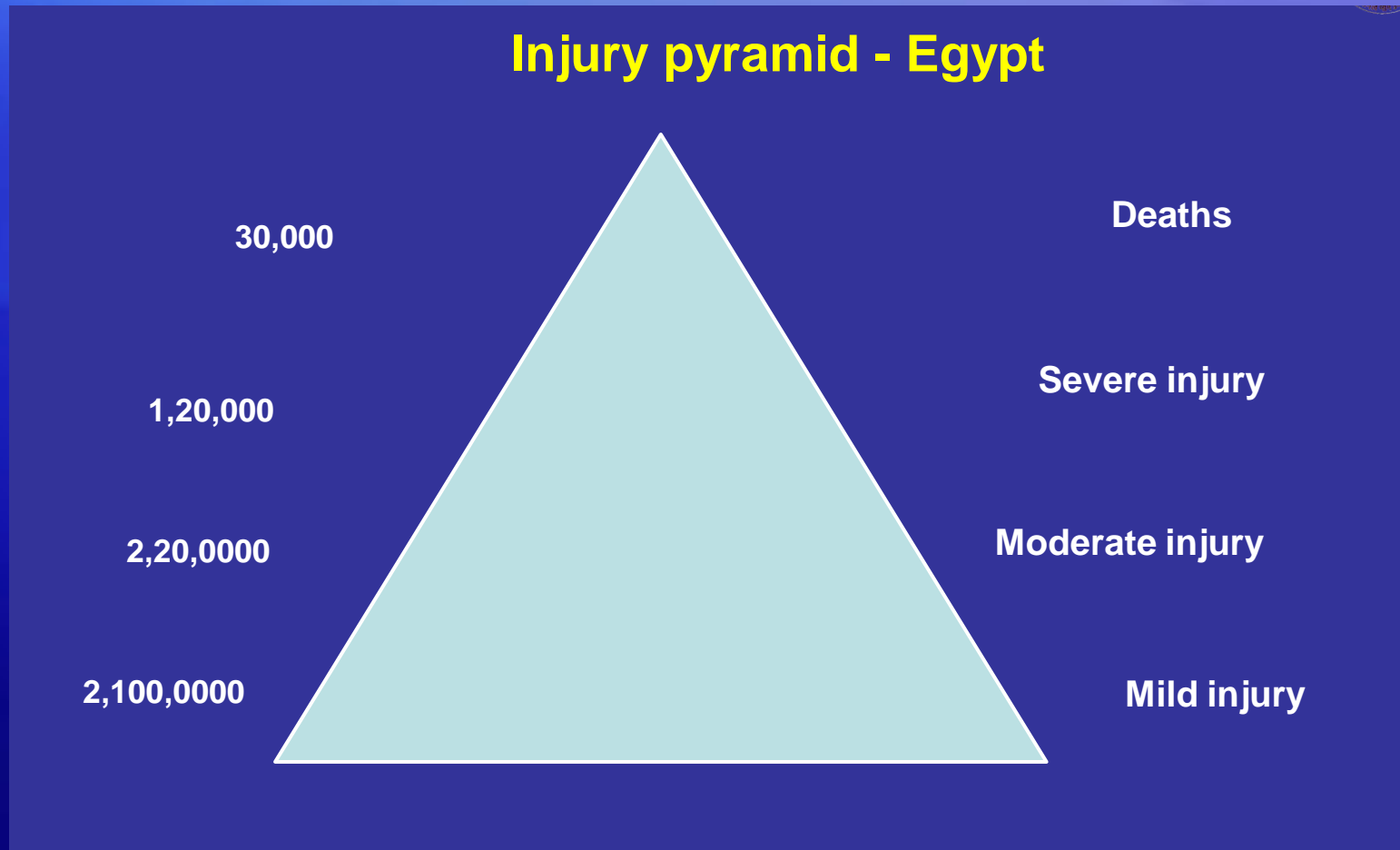
# Injury Mortality

19.5% of deaths were due to injuries

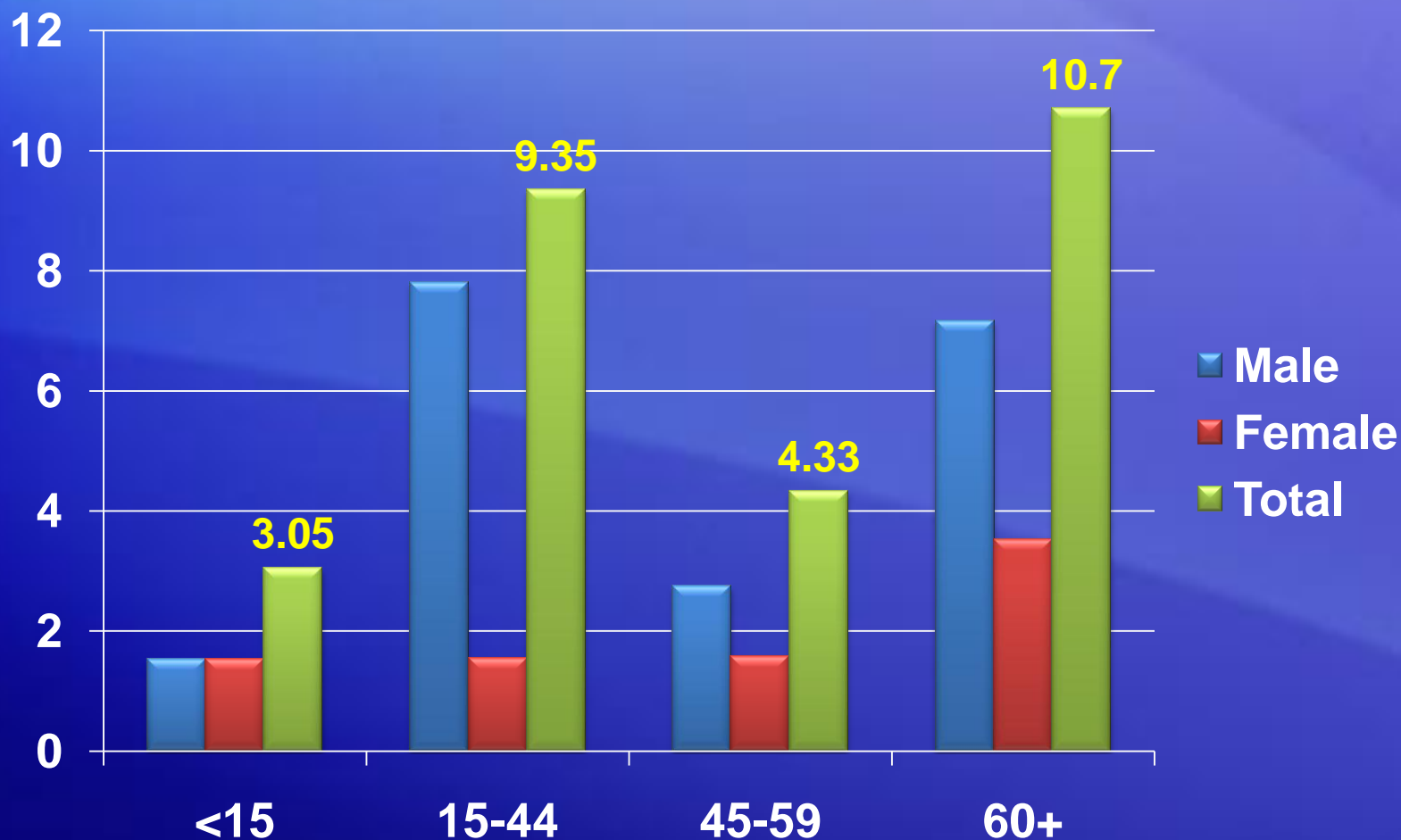


# Injury Pyramid

For every injury death, nearly 15 injured persons required hospital admission and 48 required emergency care services ( ratio of 1 : 15 : 50 ).

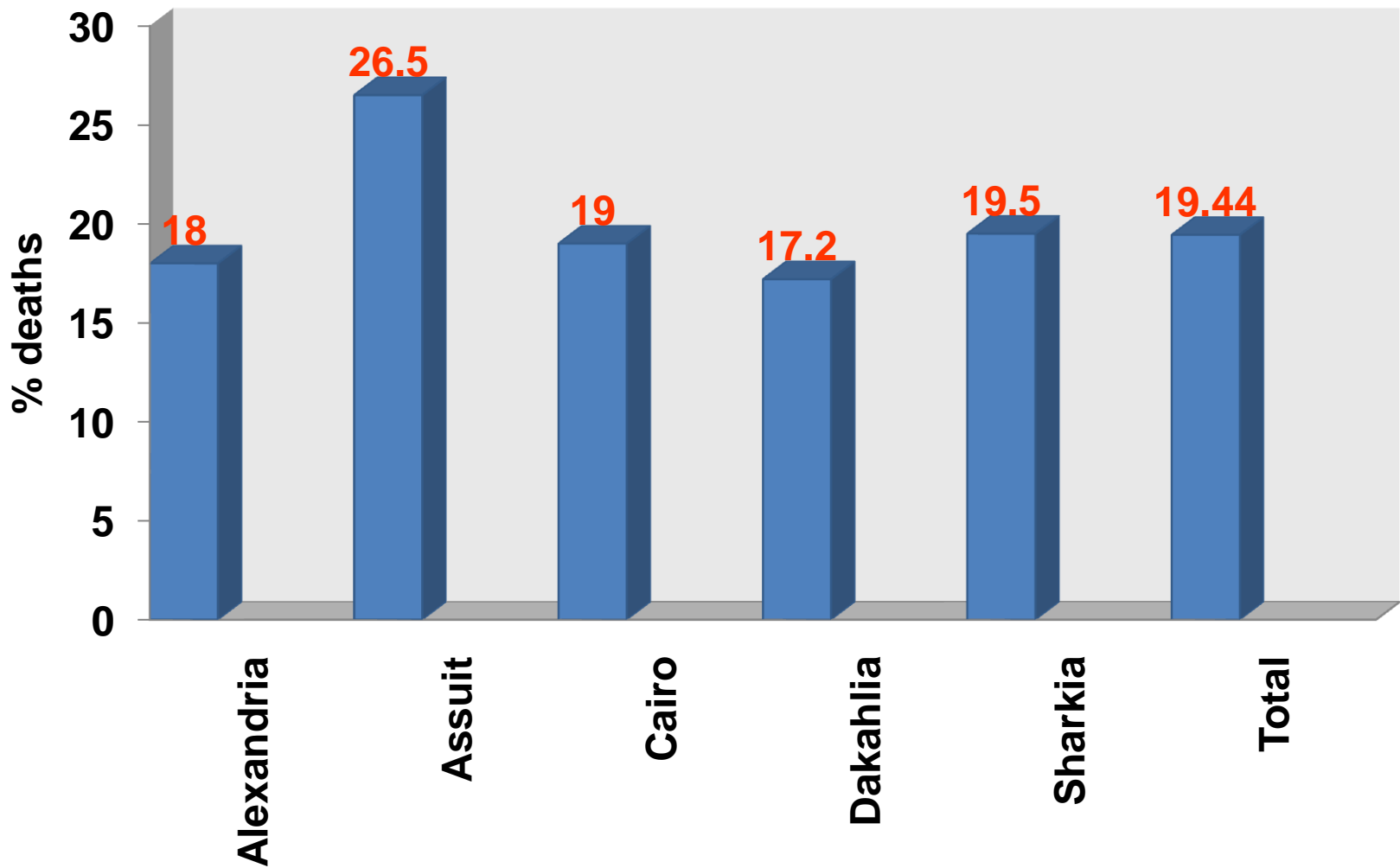


# Age adjusted Injury death rate/100, 000 Population

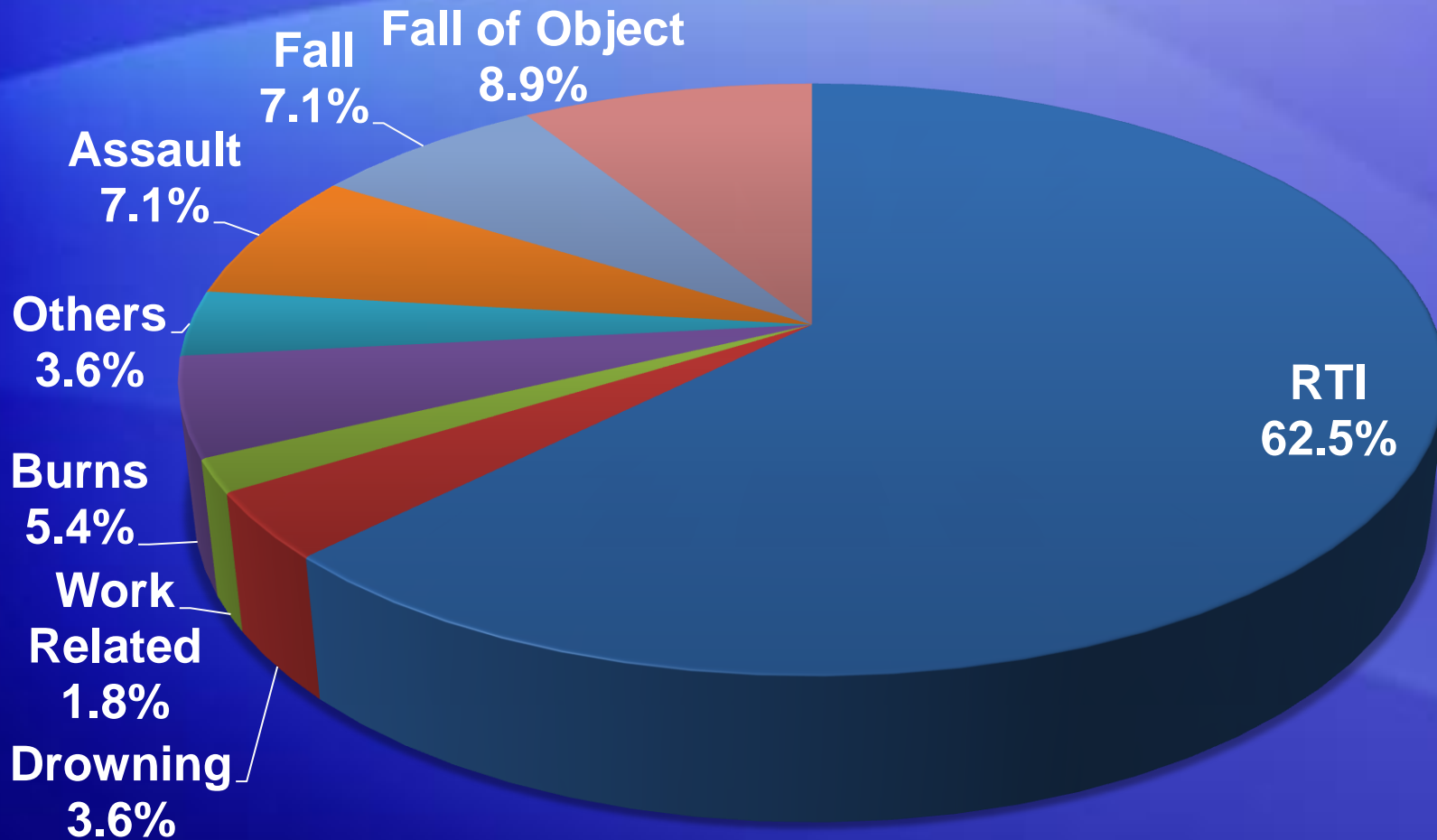




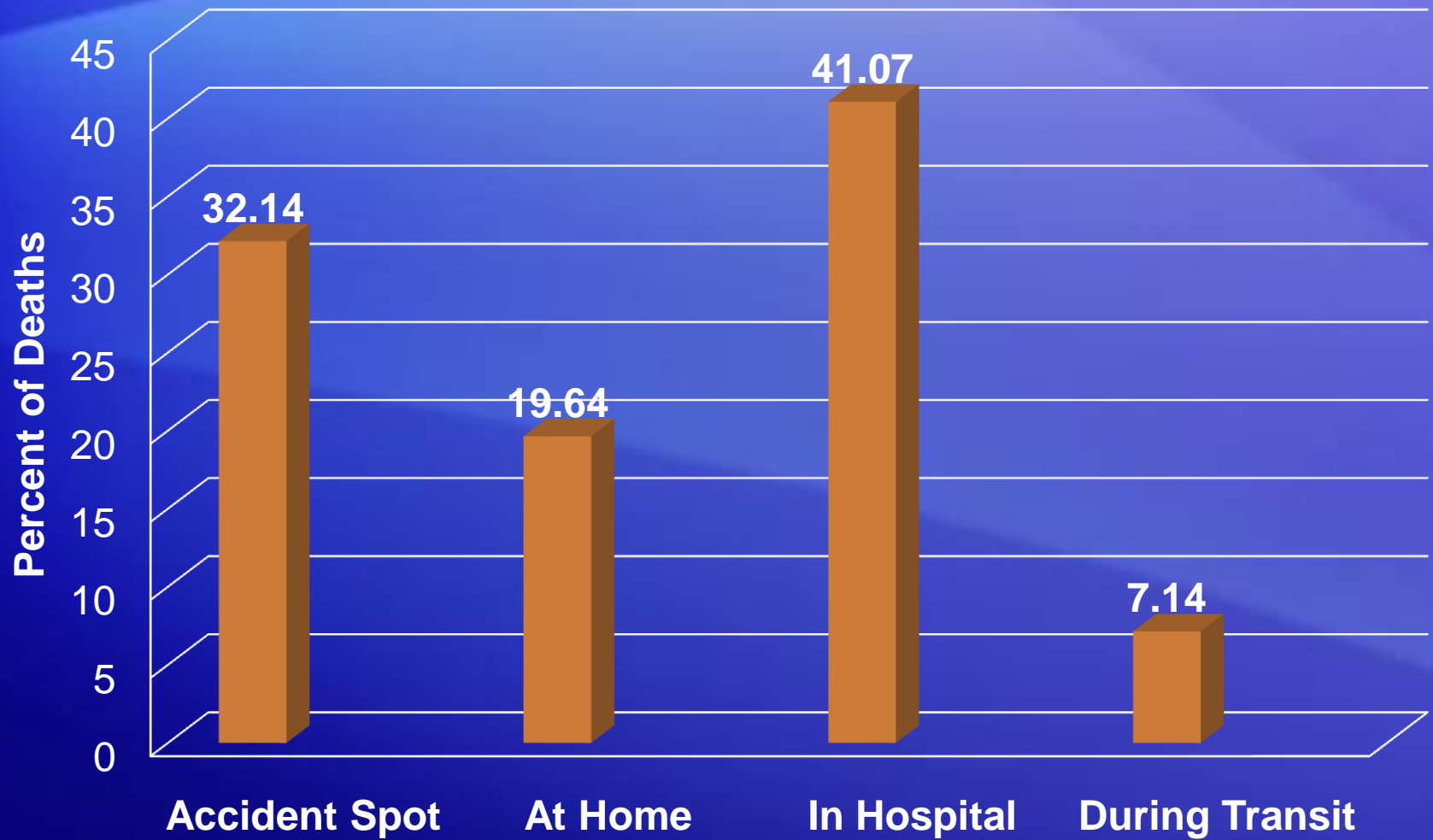
# Injury Deaths as percentage of all deaths



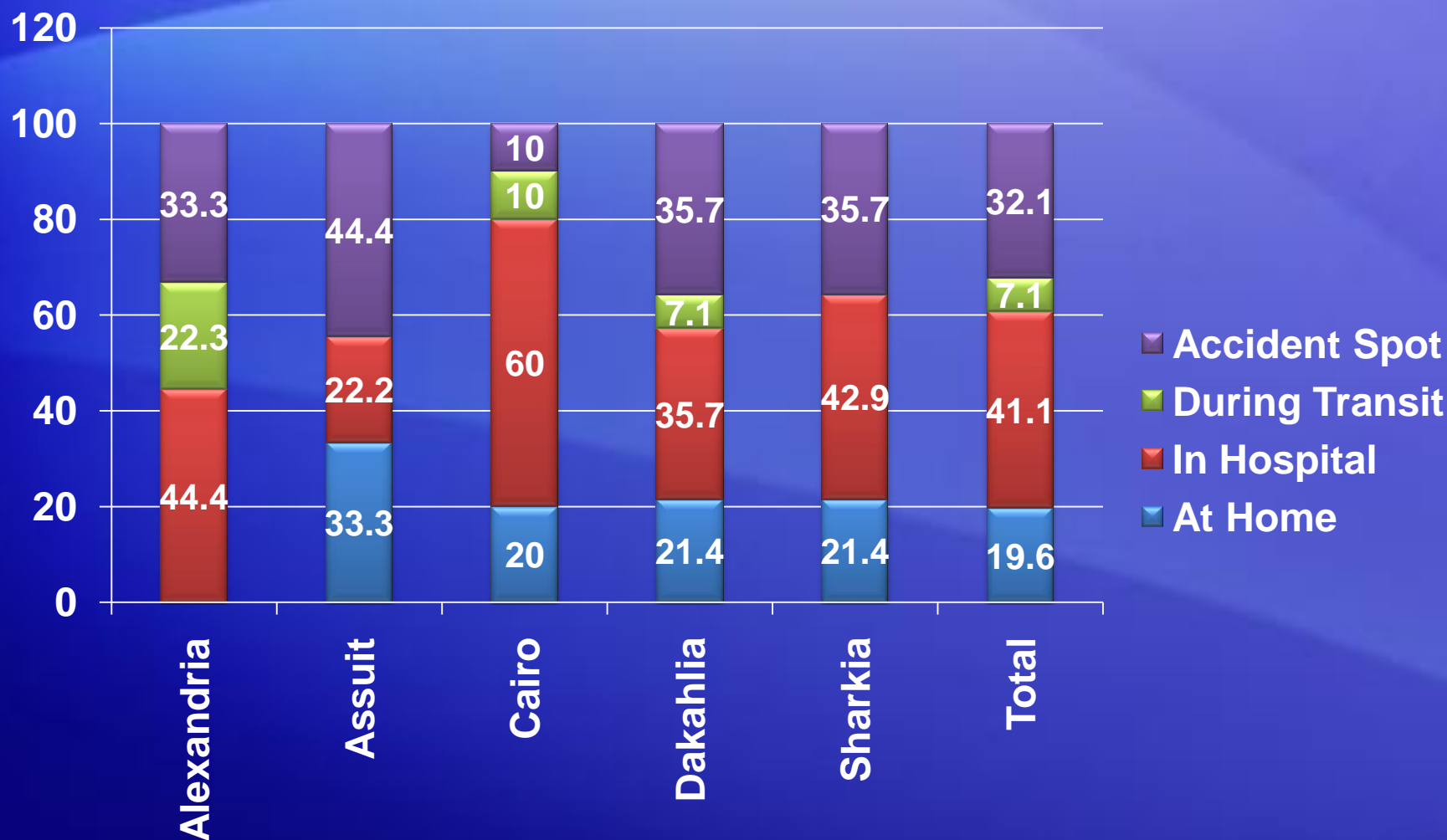
# External Injury Causes (%)



# Place of Injury Death

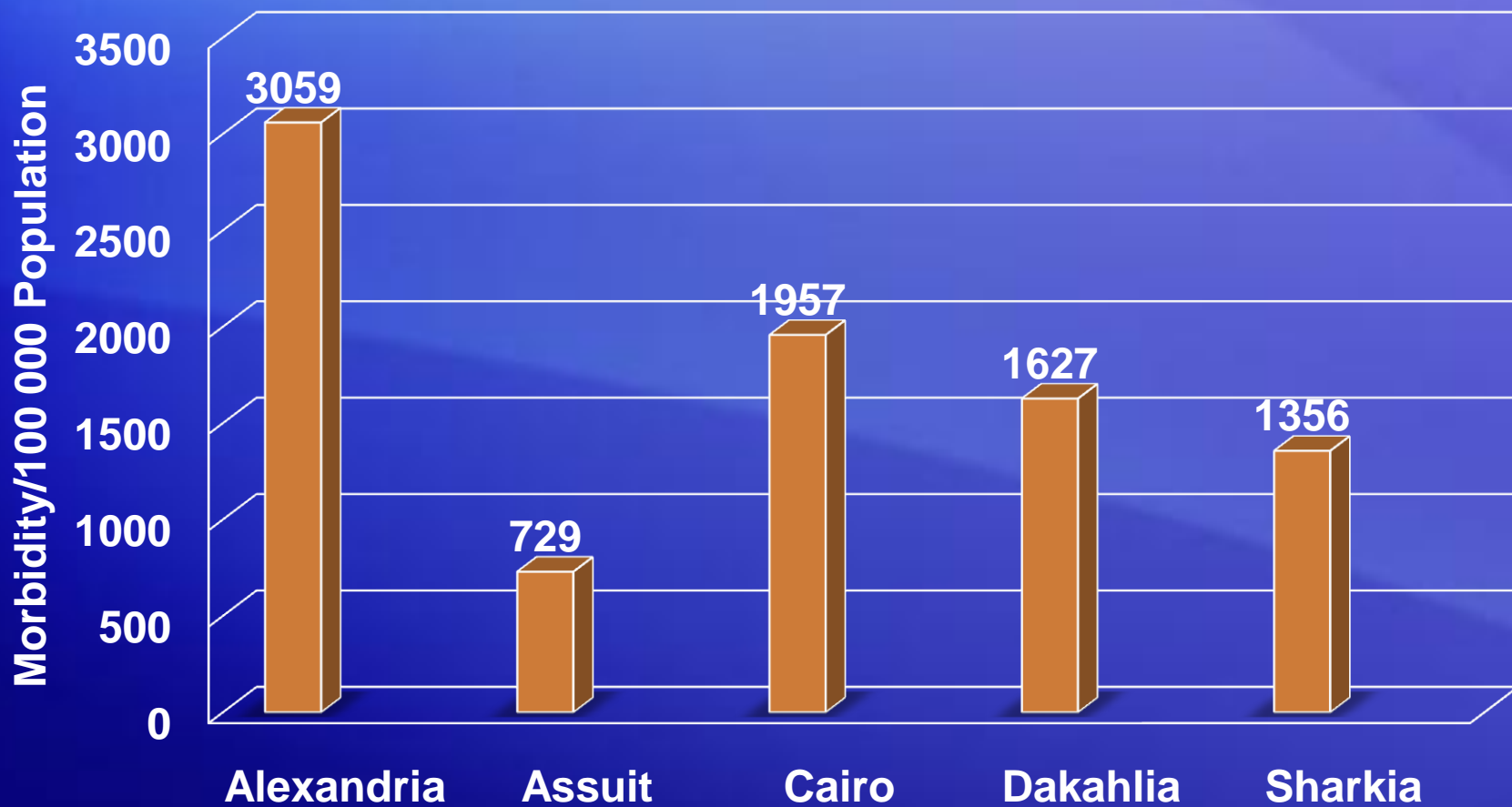


# Place of Death (expressed in %age)



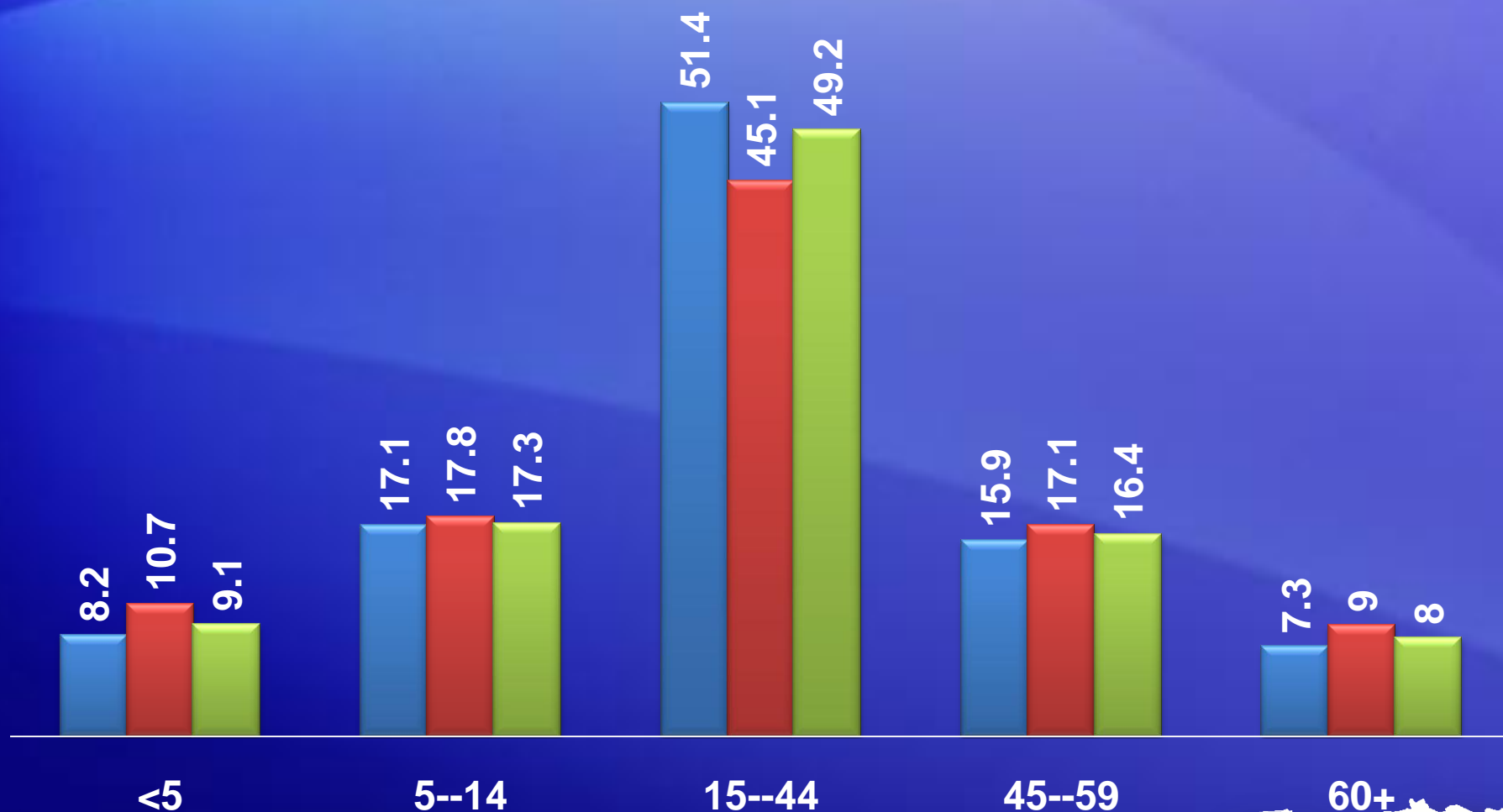


# Injury Incidence rates in all Governorates (per 100 000 population)

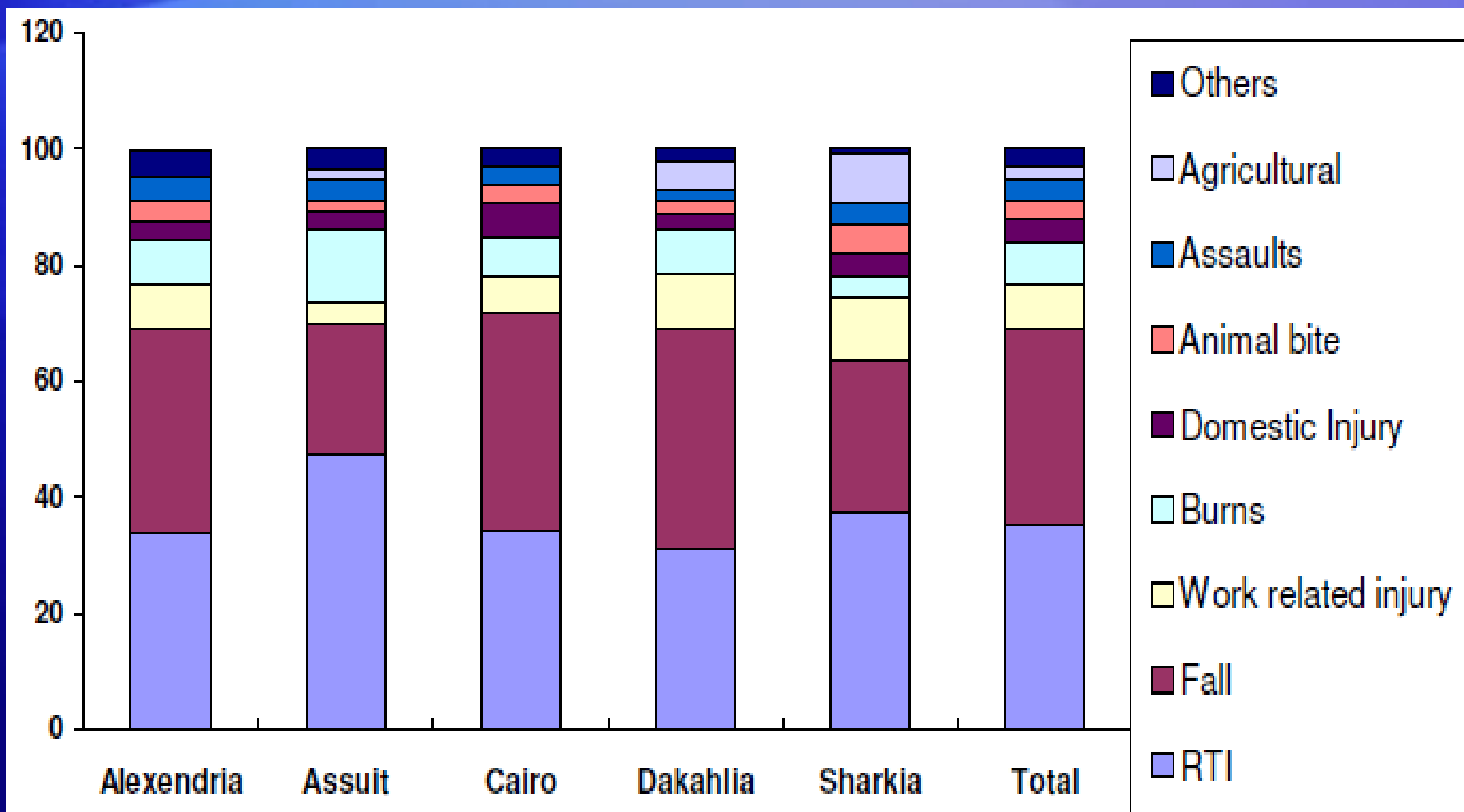


# Age and Sex Distribution of Non-fatal Injuries

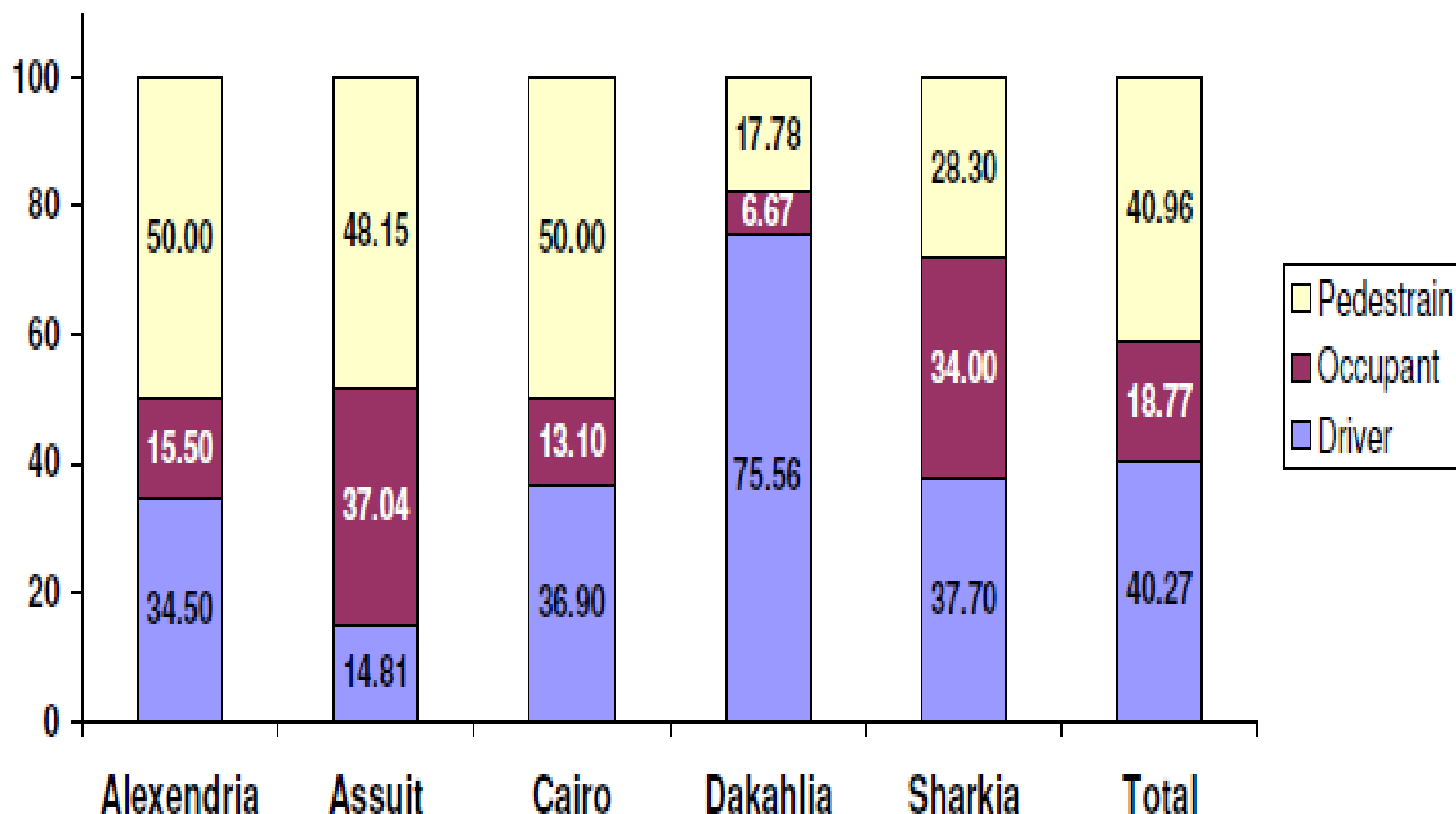
■ Males ■ Females ■ Total



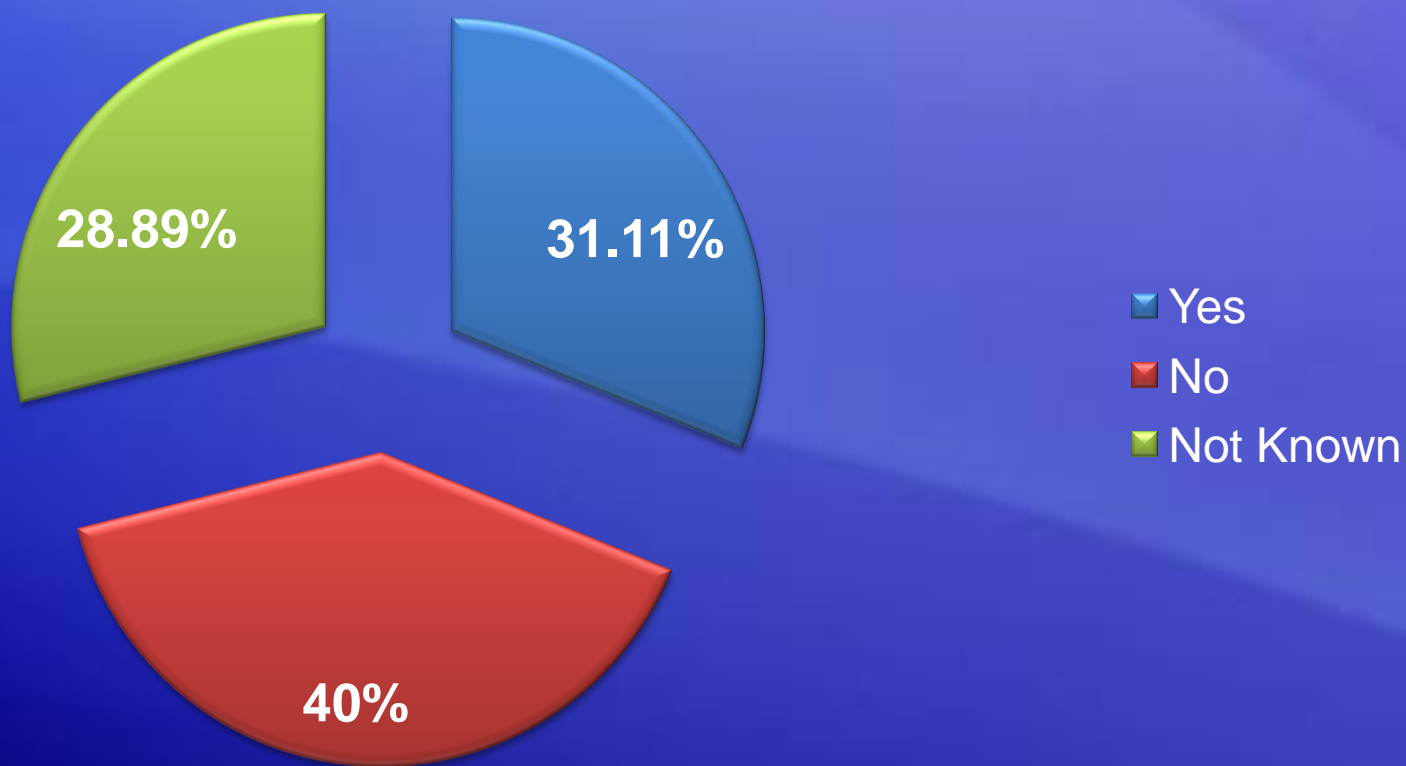
# External Causes of Injuries (per 100 000 Pop)



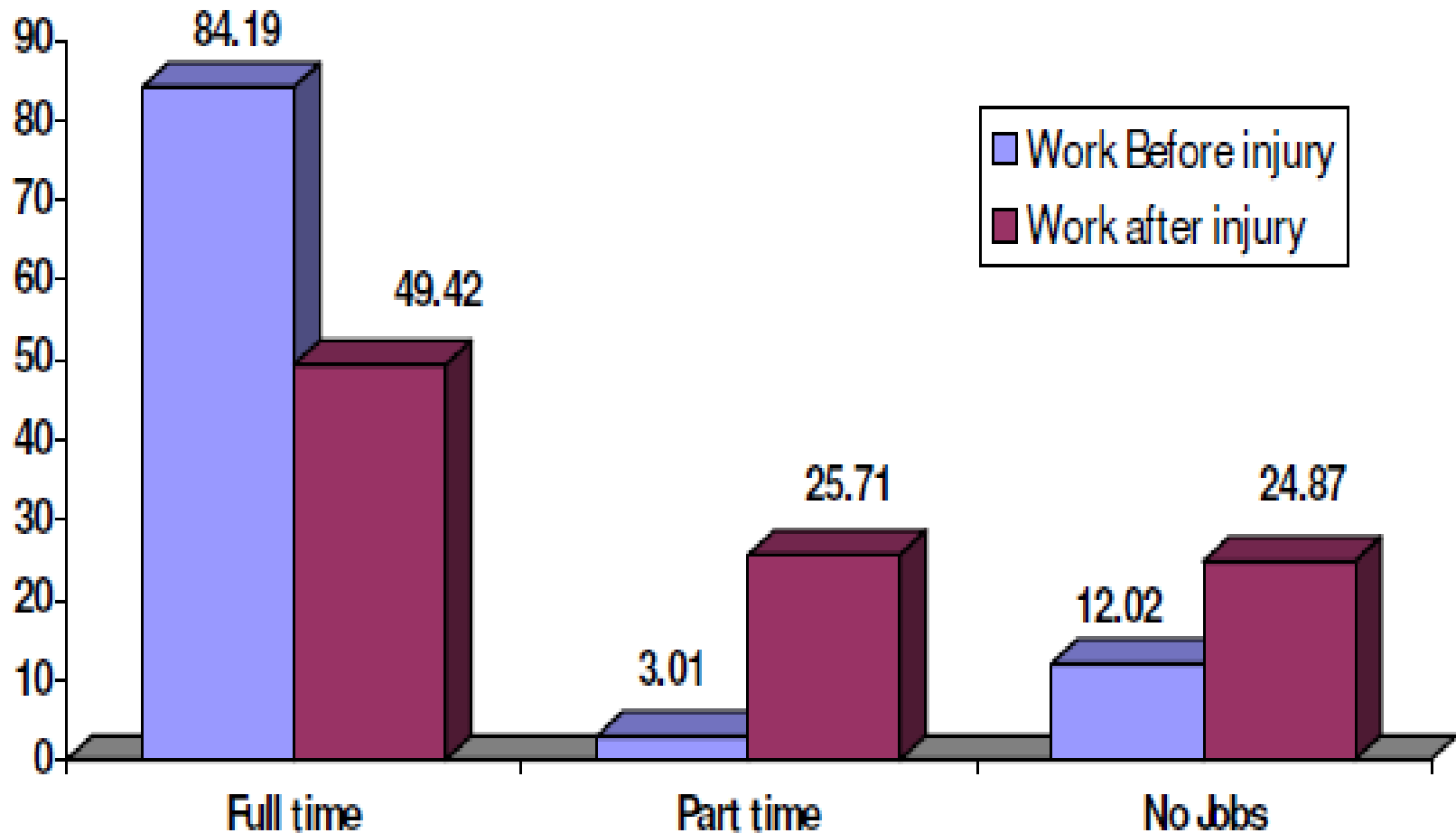
# Type of Road User Affected (per 100 000 Pop)



# Seat Belt Use by Drivers at the time of Crash



# Impact of injuries on work status of injured persons





# Conclusion

- Injury cause a huge burden of mortality and morbidity in Egypt
- Of all the injury causes, RTI outnumbers both mortality and morbidity due to any other cause
- Road safety, home safety and work safety needs to be given greater importance in all existing and future programmes
- The national mechanisms for implementing road safety policies and programmes needs to be strengthened to incorporate enforcement, engineering, emergency care and education to reduce deaths and injuries
- Research should be strengthened to identify focussed risk factors for road crashes, falls, burns and poisoning.
- Similar surveys can be conducted in other EM Member States



# Thank you



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