



THE GEORGE INSTITUTE
for Global Health



Use of verbal autopsy for determining mortality due to road traffic injuries in LMIC settings

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Sources of mortality data in India

- **Vital registration system**
Only one-third deaths recorded
Ill defined cause
- **Medical certified cause of death**
Urban settings
Inconsistent physicians coding
- **Sample registration system**

Sources of injury data

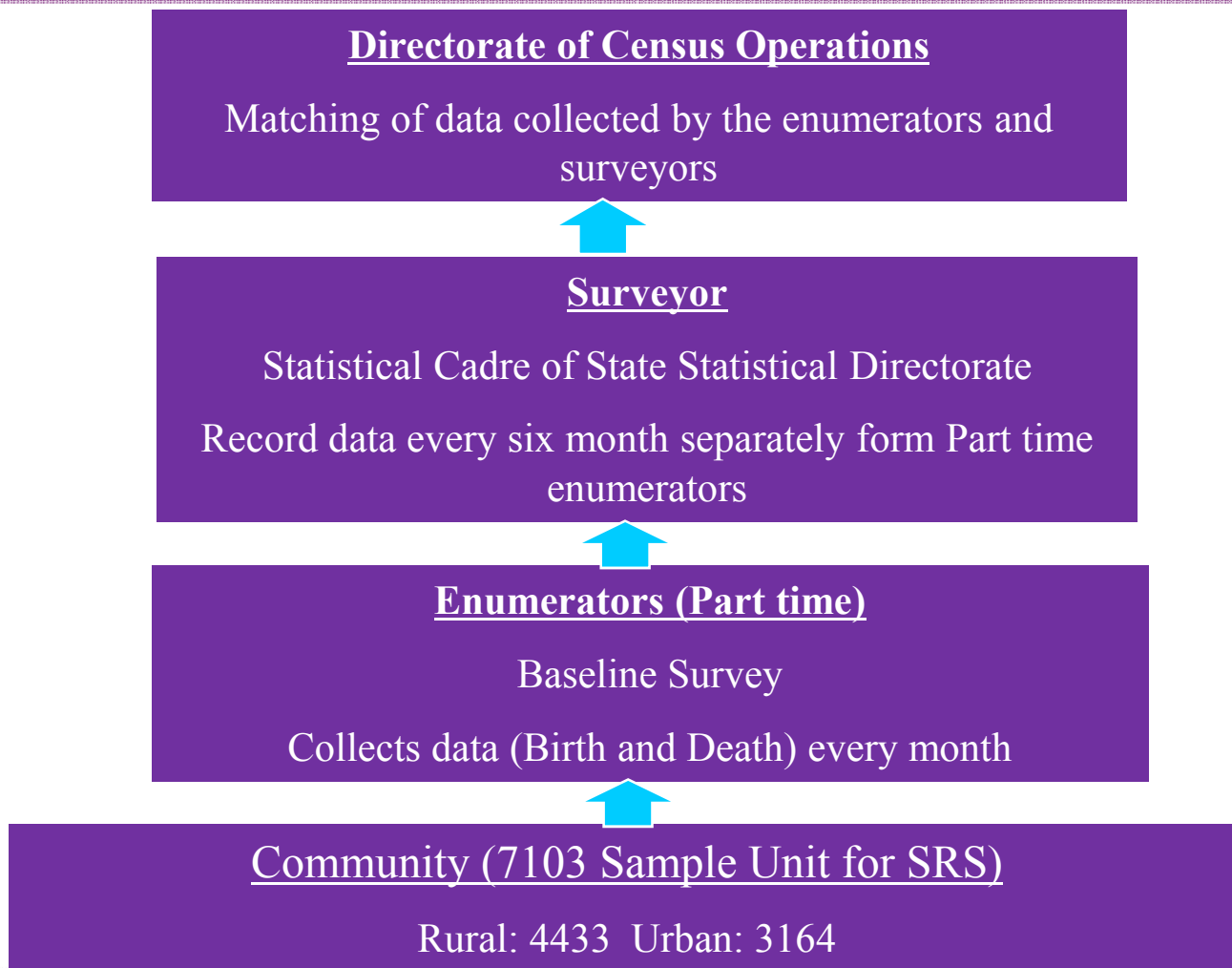
- **National Research Crime Bureau**

Based on police records

Logistics of reported and registered cases

Gross under reporting

SRS Structure



Cause of death

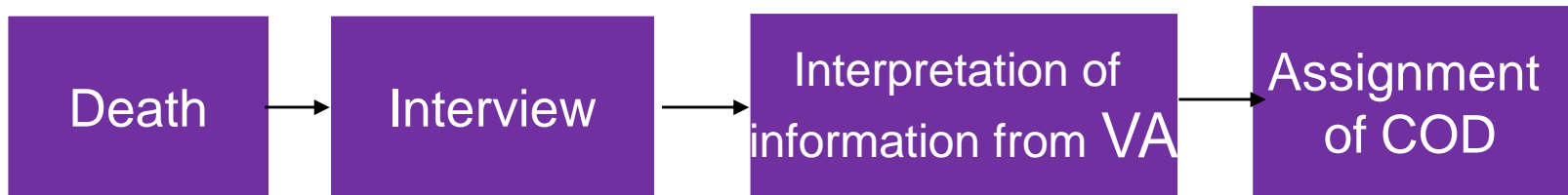
SRS gave reliable estimates on number of deaths but no information on cause of death...

Partnership – Million death study

- **Registrar General of India**
- **Centre for Global Health and Research**
- **Academic institutions across India**

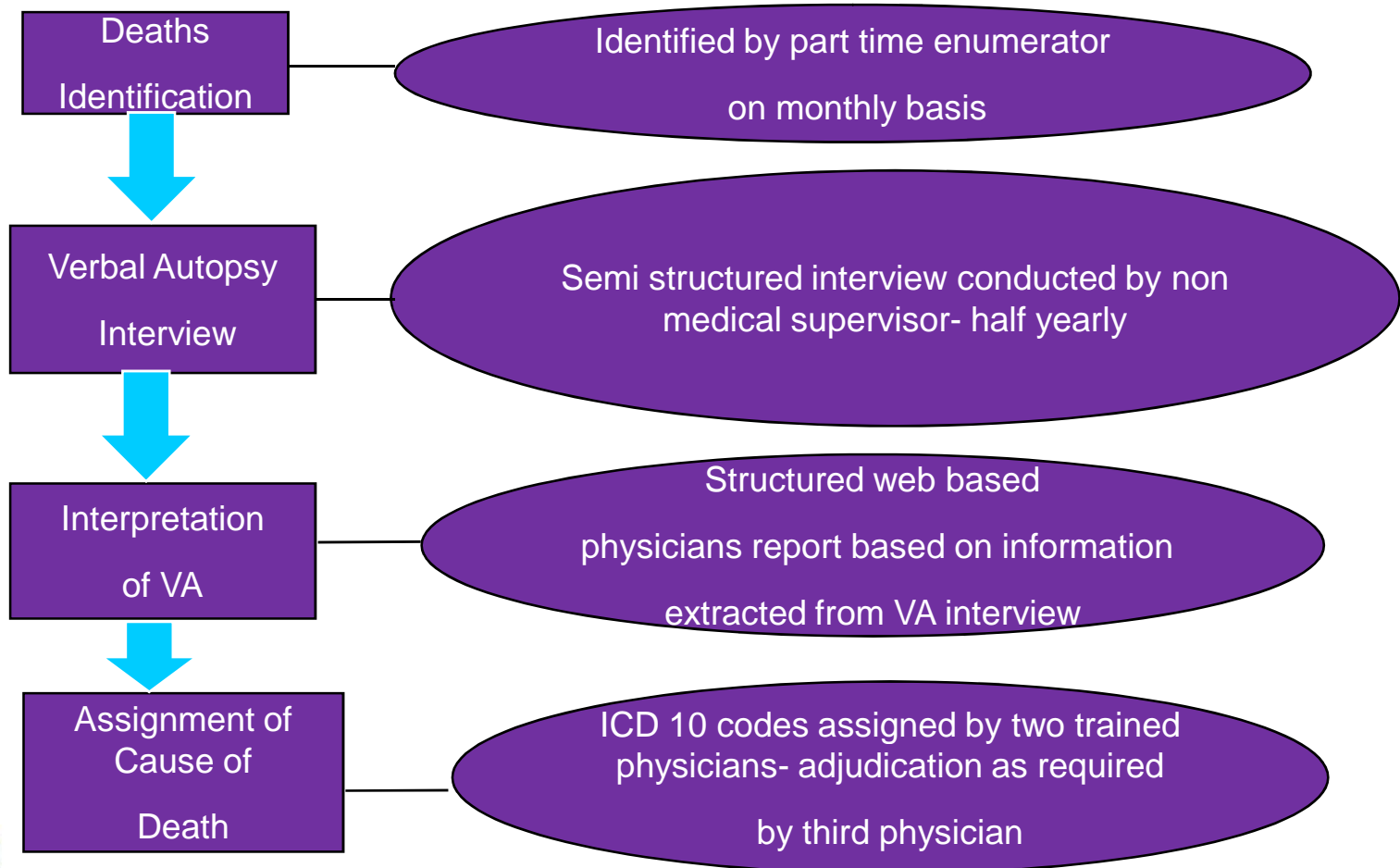
Verbal Autopsy

- **Indirect method of ascertaining cause of death through an interview seeking information on mode of death and circumstances preceding death from a family member or person in contact at the time of event**



- **Validation – high Injury specificity and sensitivity**

Verbal Autopsy within SRS



Challenges

- **Collecting information**

Ensuring quality – details in narrative

legibility

Language

Information on mode of the victim

Unclear if it is collision or non collision incident

Details on post event events

ICD- International Classification of Disease Codes

- **Why use coding?**
- **International Statistical Classification of Disease and Related Health Problems, Version 10**

Chapter XX- External causes of morbidity and mortality

Transport accidents – V01-V99 codes

12 Sub blocks

Identifies victims mode of transport and type of event

Each character has a significance

Challenges

- **Only 12% narratives for injuries required adjudication**
- **Issues with separating falls to road traffic injuries**
- **Coding traffic injuries involving agricultural vehicles**
- **Other limitations**

Difficult to access risk factors

Road traffic injury deaths



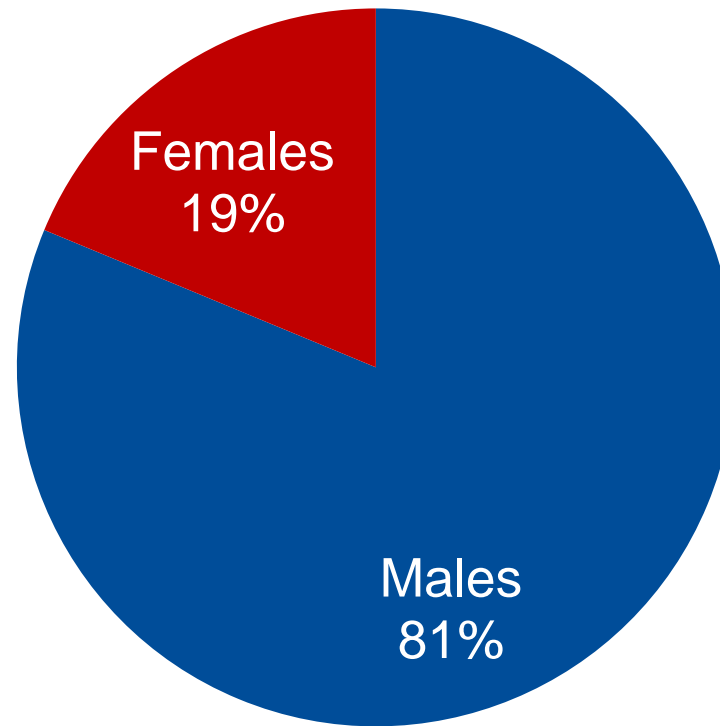
Pautrat/Fotolia



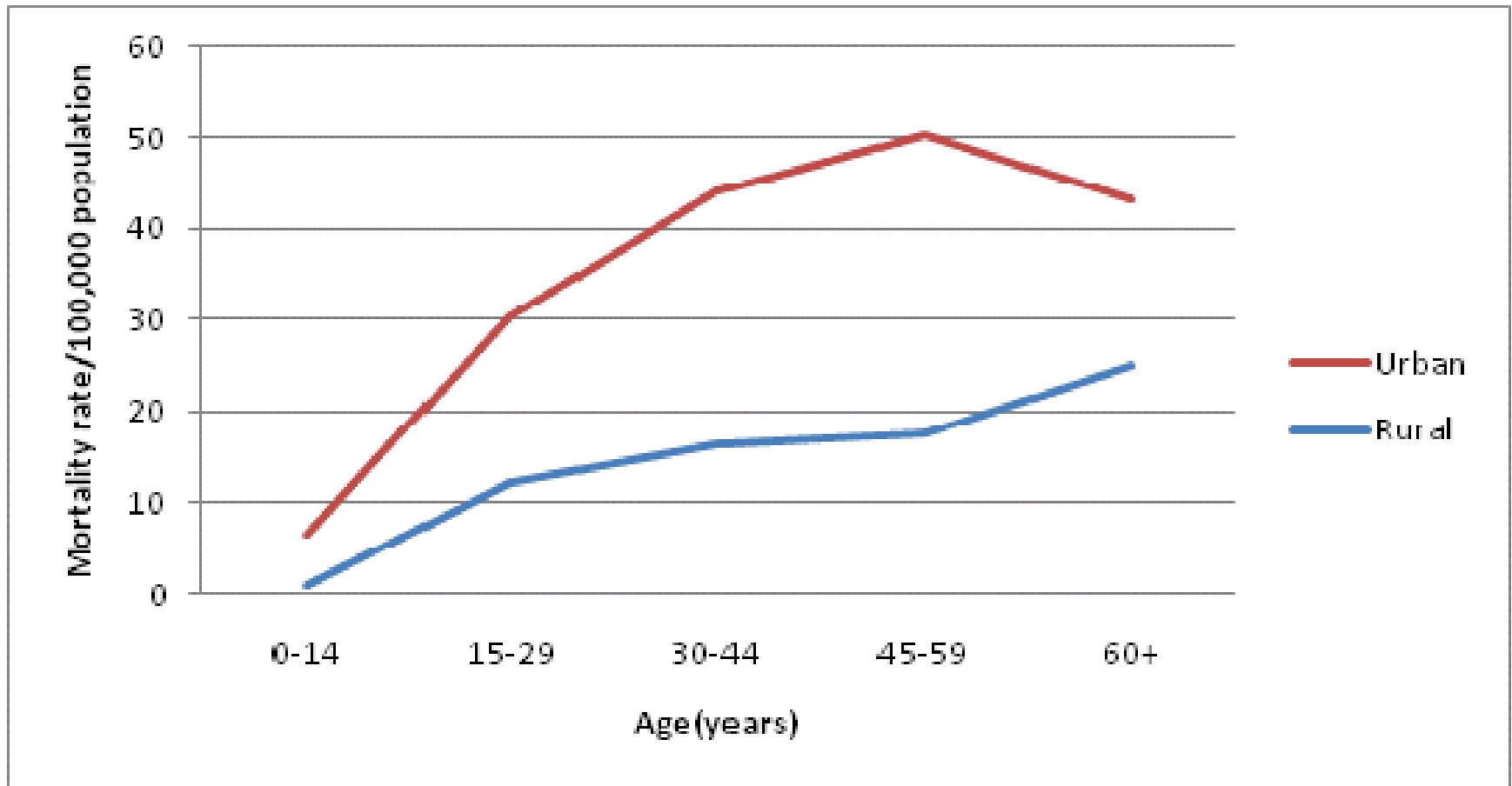
Mortality

- **30% of all unintentional injury deaths are due to Road traffic injuries.**
- **1,85,000 people died on Indian roads in 2005.**
- **Mortality rate of 16.5/100,000 population**

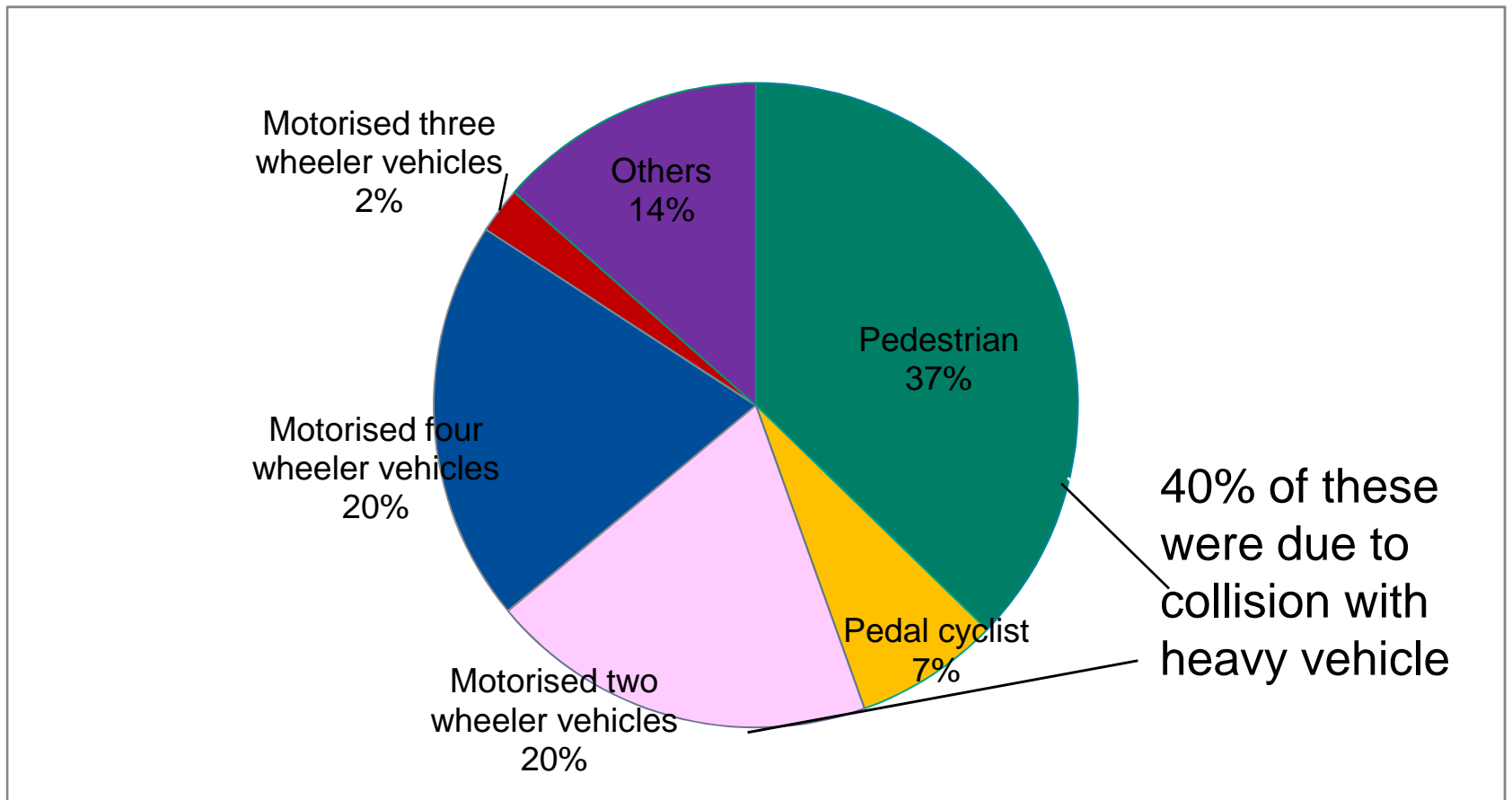
Who died?



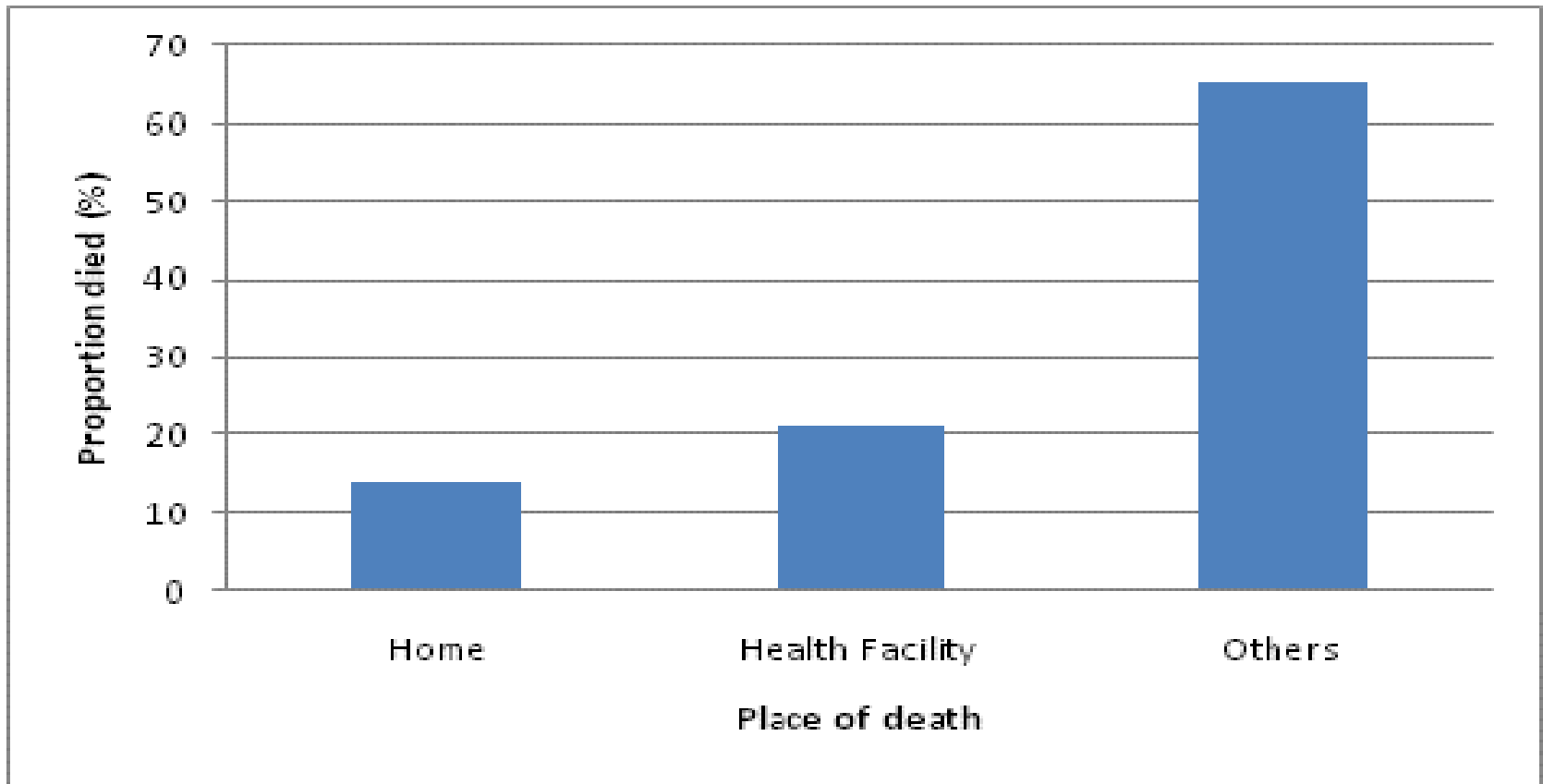
Age and place of residence?



Proportion of death by type of road user



Where did people die?



Conclusion

- **Evidence based - Better surveillance**
 - Morbidity
 - Understanding risk factors
 - Data linkages
- **Better trauma care/ emergency services/access to medical facilities**