Session 6.1 Road Safety Issues in Malawi
Topics

1. Introduction
2. Road accident statistics
3. Causes of accidents
4. Effects of road accidents
5. Interventions for improved road safety
6. Conclusions
1. Introduction

In this session we will characterise road traffic accident statistics, understand the causes and impacts of road accidents and develop interventions for improvement of road safety.
What scared you most when you left your homes / countries to Blantyre - MALAWI?

- Scorpion
- Fire
- Road accident
- Rainfall
- HIV - AIDS
- Armed robbers
2. Road traffic accident statistics

• Road crash injuries remain a major global public health problem

• Pedestrians, cyclists and motorcyclists are the most vulnerable road users and account for almost half of all people killed in road traffic accident every year (WHO, 2009)

• Worldwide about 1.3 million persons are killed and 50 million others sustain various degrees of injuries annually (WHO, 2009)
Road traffic accident statistics (continued)

- By 2030 road accidents is projected to be the 3rd leading cause of deaths globally (from about 9th currently)
- Developing countries account for 85% - 90% despite having only 35% of the world’s vehicle population
## Road traffic accident statistics by WHO regions

<table>
<thead>
<tr>
<th>WHO Region</th>
<th>Mortality rate (per 100,000 population)</th>
</tr>
</thead>
<tbody>
<tr>
<td>African</td>
<td>32.2</td>
</tr>
<tr>
<td>American</td>
<td>15.8</td>
</tr>
<tr>
<td>South-east Asia</td>
<td>16.6</td>
</tr>
<tr>
<td>Eastern Mediterranean</td>
<td>32.2</td>
</tr>
<tr>
<td>European</td>
<td>13.4</td>
</tr>
<tr>
<td>Western Pacific</td>
<td>15.6</td>
</tr>
<tr>
<td>Global</td>
<td>20.95</td>
</tr>
</tbody>
</table>

Source: Global status report on road safety. 2009
### Road traffic accident statistics – some African countries

<table>
<thead>
<tr>
<th>Country</th>
<th>Mortality rate (per 100,000 population)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Malawi</td>
<td>26.7</td>
</tr>
<tr>
<td>Zambia</td>
<td>25.6</td>
</tr>
<tr>
<td>Mozambique</td>
<td>34.7</td>
</tr>
<tr>
<td>Zimbabwe</td>
<td>27.5</td>
</tr>
<tr>
<td>Botswana</td>
<td>33.8</td>
</tr>
<tr>
<td>Kenya</td>
<td>34.4</td>
</tr>
<tr>
<td>Ethiopia</td>
<td>35.5</td>
</tr>
<tr>
<td>Tanzania</td>
<td>34.3</td>
</tr>
</tbody>
</table>

Source: Global status report on road safety, 2009
Road traffic accident statistics

Figure 1: Road traffic deaths by sex and age group, African countries, 2004

### Road traffic accident statistics in Malawi

<table>
<thead>
<tr>
<th>Category</th>
<th>Number of Victims</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>2007</td>
</tr>
<tr>
<td>Crashes</td>
<td>4473</td>
</tr>
<tr>
<td>Killed</td>
<td>902</td>
</tr>
<tr>
<td>Serious Injuries</td>
<td>764</td>
</tr>
<tr>
<td>Minor Injuries</td>
<td>2190</td>
</tr>
</tbody>
</table>

Trend of road accidents in Malawi; Source: National Road Safety Council of Malawi in Gibson Ngwira dissertation
3. Causes of road traffic accidents

- Technical factors
- Environmental factors
- System of laws, rules and regulations
- Human factors
a) Technical factors

- **Vehicle defects**
  - broken steering rod
  - tyre burst
  - electrical failures
  - engine defects

- **Poor road design**
  - Traffic speed calming measures
  - Safe pedestrian crossings
  - Separate paths for vulnerable road users
Technical factors (continued)

- Pavement defects
  - Potholes
  - Cut edges
  - Worn out surfacing material and bleeding
b) Environmental factors

- Poor visibility: haze, mist, fog, rainstorm, etc
- Topographical challenges: hills, mountains, deep valleys
- Land use challenges
- Poorly posted sign boards/markings or lack of the same
- Heavy vegetation cover on or along roads
c) Human factors

- Drunk - driving
- Visual impairment
- Over speeding
- Reckless overtaking
- Sleepiness
- Fatigue/Tiredness
- Poor knowledge of the highway code
- Inexperience, youthfulness
- Use of mobile phones on wheels
- Sensation seeking
- Attitudes of pedestrians
- Cat and mouse game between drivers and police
Typical crash

He was OK – low urban speeds involved...
4. Effects of road traffic accidents

1. Social effects
   • Loss of loved ones
   • Emotional trauma and burden on family members
   • Loss of jobs

2. Economic & financial effects
   • Loss of labour hours
   • Increased expenditure on medical and other bills
   • Effects on family and individual income and livelihood
   • Loss of GDP
Effects of road traffic accidents

3. Environmental and health effects
   - Accident damaged vehicles a nuisance to the environment and unroadworthy
   - Increased morbidity and mortality rates
   - Worn out surfacing material and bleeding
   - Disability and impairment

4. Political???
5. Interventions for improved road safety

✓ What are your experiences on interventions to improve road safety?

✓ Any complexity in terms of advocacy, implementation etc?

(Group discussions for about 20 – 30 minutes)
Interventions for improved road safety

The 3E Model

Road Safety = f (Engineering measures; Education measures; Enforcement measures)
Interventions for improved road safety

1. Engineering measures
   • Good road design appropriate to speeds
   • Maintenance of road network according to standards
   • Proper maintenance of vehicle defects
   • Changing the shape and function of the existing road
     e.g. traffic calming
Examples of interventions to improve conditions for pedestrians and cyclists: Ref: Productive and Liveable cities: marius de Langen and Rustica Tembele (2001)

Low-cost separation of road shoulder from the carriageway at an intersection (local collector road)
Bus bay, combined with proper pavement at pedestrian side, and a raised crossing (traffic calming)
Pedestrian safe crossing depends on:

- Crossing distance
- Traffic density
- Speed (ability) of the pedestrian

- The waiting time (safe) gap in the vehicle flow increases exponentially with increasing traffic density

- To reduce waiting time
  - Median or Large crossing islands

- To reduce risk of accident
  - Reduce vehicle speed at the crossing point
Low-cost separation of road shoulder from carriageway
Raised zebra crossing
Low-cost re-arrangement of junction, shape and raised crossing (collector road)
Example of a new road in an urban area, designed without considering urban road design standards requirements. Result: nice new pavement, but dangerous and inefficient road.
2. **Education measures**
   - Train people to drive through driving schools
   - Education on limits of the supernatural & mystical beliefs
   - Sensitize mechanics/fitters on their responsibilities towards certification of vehicle fitness
   - Promote radio road safety awareness programs
Interventions for improvement of road safety

3. **Enforcement measures**
   - Enforce discipline on roads (responsible ministries and organizations)
   - Arrest and prosecute offenders
   - Review and adopt proper licensing system
   - Review policy on importation of second hand vehicles and tyres

   - Major and most rapid improvements will come from proper enforcement of existing rules e.g.
Interventions for improved road safety

3. Enforcement measures

- Major and most rapid improvements will come from proper enforcement of existing rules e.g.
  - Do not drive under the influence of alcohol/drugs
  - Put on seatbelts/helmets
  - Do not drive over speed limits
  - Vehicles on the road should be certified fit for the road
6. Conclusions

- Political will and prioritization of road safety
- Funding of road safety interventions
- Implementation
- Monitoring, evaluation and research
Now look at Session 6.1 Notes!