WP.1 guidance for Improving Road Safety by use of alternative measures showing the long term burden of road traffic injuries on global public health

Hans Berg and Luciana Iorio
A public health approach to prevention

1) define the problem,
2) identify risk and protective factors,
3) develop and test prevention strategies and
4) assure wide spread adoptios

But what is the problem and how to measure it….?
Many measures with different purpose

- Number of fatalities
- Description and diagnosis of injuries and diseases
  - International Classification of Diseases (ICD)
- Classifying the trauma, injury severity and body part(s)
  - Abbreviated Injury Scale (AIS, MAIS, ISS)
- Long term consequences of an accident/injury
  - International Classification of Functioning and Disease (ICF)
  - Functional Capacity Index (FCI)
  - Disability and Quality Adjusted Life Years (DALY or QALYS)
  - Permanent medical impairment (PMI)
  - Time to recover to going back to work
  - Loss of Quality of life (QoL or HRQoL)
Decided use of data source(s) will/can show different problem(s)

Number of fatalities and injured by road user category, 2010–2019, STRADA

Threat-to-life

AIS (Abbreviated Injury Scale)
1971, updated several times, latest 2015
Injuries are categorized by nine different body parts and its severity.

MAIS (Maximum AIS)
The highest AIS-score

Abbreviated injury Score

<table>
<thead>
<tr>
<th>AIS-Code</th>
<th>Injury</th>
<th>Example</th>
<th>AIS % prob. of death</th>
</tr>
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<tbody>
<tr>
<td>1</td>
<td>Minor</td>
<td>superficial laceration</td>
<td>0</td>
</tr>
<tr>
<td>2</td>
<td>Moderate</td>
<td>fractured sternum</td>
<td>1 – 2</td>
</tr>
<tr>
<td>3</td>
<td>Serious</td>
<td>open fracture of humerus</td>
<td>8 – 10</td>
</tr>
<tr>
<td>4</td>
<td>Severe</td>
<td>perforated trachea</td>
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</tr>
<tr>
<td>5</td>
<td>Critical</td>
<td>ruptured liver with tissue loss</td>
<td>5 – 50</td>
</tr>
<tr>
<td>6</td>
<td>Maximum</td>
<td>total severance of aorta</td>
<td>100</td>
</tr>
<tr>
<td>9</td>
<td>Not further specified (NFS)</td>
<td></td>
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Number of injured persons by MAIS in Strada, 2018

The prevention paradox

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Introducing a new type of road traffic injury will change the problem – "pedestrian fall"

https://doi:10.1016/j.jsr.2022.02.007
Using loss of quality of life give another picture of the problem

Percental difference in HRQoL, divided by MAIS and injured body part compared to a reference group, represented by 0%

Females

Males

WP.1 are invited to discuss:

• What perspective should WP.1 have towards long-term burden of road traffic injuries as contribution to the global public health?
• If and how to further elaborate with alternative measures and related needed policies?
• Gender, regional etc. differences?