Safer City Streets – Global Benchmarking for Urban Road Safety

Alexandre Santacreu

4th meeting of the Safer City Streets network, London, UK – 20 Nov 2018
Intergovernmental Organisation
59 member countries

Think Tank
Policy analysis
Research
Statistics

Annual Summit
Forum for Ministers, industry
“The Davos of Transport"
2018
ITF Roundtable on Cycling Safety

33 Experts
16 Countries
International Traffic Safety Data and Analysis Group
Alcohol-Related Road Casualties in Official Crash Statistics

published in 2018
Speed and Crash Risk

published in 2018
Safer City Streets
the global traffic safety network for liveable cities

Global database
Network of experts
Safer City Streets
the global traffic safety network for liveable cities

49 cities
1st meeting in Paris

28 cities

20 other organisations
20-21 November 2018

4th meeting in London and Manchester

Event articulated with >POLIS Conference
Ministerial Summit
23-25 May 2018
Leipzig

transport safety & security
Safer City Streets database

31 cities
One publication for seven key questions

1. Are city streets dangerous?
2. Can we measure urban road safety performance?
3. Can we monitor performance?
4. Which factors are driving road safety performance?
5. Are cities confronted with specifically urban road safety challenges?
6. What is the impact of mode shift on public health?
7. Which recommendations can we make?
Top level results
Fatalities per 100,000 population, 2011-2015

- Rate per 100,000 resident population
- Rate per 100,000 daytime population
- Whole country

Logarithmic scale

Cities
- Stockholm
- Berlin City
- Copenhagen
- The Hague
- Greater London
- Inner London
- Zurich
- Montreal
- Paris City
- Paris area
- Lisbon
- Vancouver
- Brussels
- Calgary
- Melbourne
- Edmonton
- Auckland
- New York City
- Milan
- Buenos Aires
- Warsaw
- Riga
- Rome
- Belgrade District
- Bogota D.C.
- Mexico City
- Fortaleza
- Guadalajara
Road fatalities, changes from 2006-10 to 2011-15
Analysis by mode
Modal shares of road fatalities, 2013-2015

- Paris City
- Inner London
- Barcelona
- Madrid
- Dublin City
- Bogotá D.C.
- Stockholm
- Paris area
- Copenhagen
- The Hague
- Milan
- Greater London
- Fortaleza
- Warsaw
- Riga
- New York City
- Berlin
- Vancouver
- Buenos Aires
- Zürich
- Mexico City
- Rome
- Montreal
- Guadalajara
- Lisbon
- Brussels
- Edmonton
- Melbourne
- Calgary
- Auckland

- Pedestrian
- Bicycle
- Powered-2-wheeler
- Other road users
Are cities confronted with specifically urban road safety challenges?

• Vulnerable Road Users (VRUs) represent 8 out of 10 urban traffic fatalities – but 4 out of 10 at a national level, typically.

• Consequently, specific topics take precedence: traffic calming, speed limits, direct vision lorries, etc.
Risk of fatality per unit distance travelled, 2011-2015
Are city streets dangerous?

• Living and travelling in cities appear to be safer, regardless of the choice of indicator, in comparison to rural areas.
• Yet most urban populations express a fear of cycling and a fear of letting their children walk to school.
• In this sense, we recommend creating an environment where people are and feel safe.
Fatalities per billion passenger-kilometre

<table>
<thead>
<tr>
<th>Mode</th>
<th>Rate per billion km</th>
<th>Cities</th>
</tr>
</thead>
<tbody>
<tr>
<td>Powered-2-Wheeler</td>
<td>45</td>
<td></td>
</tr>
<tr>
<td>Pedestrian</td>
<td>14</td>
<td>Median</td>
</tr>
<tr>
<td>Pedal Cycle</td>
<td>11</td>
<td>/5 cities: Auckland, Barcelona, Berlin, Greater London, Paris Area</td>
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<tr>
<td>Passenger Car</td>
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<tr>
<td>Bus</td>
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</table>
Fatalities per billion passenger-kilometre

2011-2015 average
ITF Safer City Streets database

- Powered-2-Wheeler
- Pedestrian
- Pedal Cycle
- Passenger Car
- Bus

Median /5 cities:
- Auckland
- Barcelona
- Berlin
- Greater London
- Paris Area

Risk to VRUs analysed in Bogota, Paris City, Inner London
What is the impact of mode shift on public health?

• The answer requires the collection of mobility data and the analysis of crash matrices

• Provisional results highlight the risk of using P2W (not only to riders themselves but also to third parties, namely pedestrians)

• The true answer requires the consideration of physical activity benefits from active travel
Gender and age
Ratio between male and female fatalities per unit population, 2011-2015
Casualty rate per billion kilometres travelled by age and by mode

Source: Transport for London
http://content.tfl.gov.uk/safe-streets-for-london.pdf
Can we measure urban road safety performance?

• All indicators have limitations but contribute to building the performance picture
• We see much value in the estimation of risk per user group, controlling for the amount of travel
Can we **monitor** performance?

- Year-on-year changes in fatalities rarely are statistically significant
  
  - Relying on fatality data alone makes it impossible, in most cities, to monitor safety year-on-year

- Changes in casualties in some user groups often reflect the changes in the size of this group
  
  - Without mobility data, we can’t monitor road user risk
Beyond fatality counts
<table>
<thead>
<tr>
<th>City</th>
<th>Ratio between serious injuries and fatalities, 2011-2015</th>
<th>Ratio between MAIS3+ injuries and fatalities, 2011-2015</th>
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</thead>
<tbody>
<tr>
<td>Berlin</td>
<td>43</td>
<td>16.2</td>
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<tr>
<td>Melbourne</td>
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<td>Zürich</td>
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<td>7</td>
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<tr>
<td>Copenhagen</td>
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<td>7</td>
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<tr>
<td>Paris area</td>
<td>23</td>
<td>6</td>
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<tr>
<td>Inner London</td>
<td>21</td>
<td>6</td>
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<tr>
<td>Calgary</td>
<td>19</td>
<td>6</td>
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<tr>
<td>Vancouver</td>
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<tr>
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<tr>
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<tr>
<td>Melbourne</td>
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<tr>
<td>Barcelona</td>
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</tbody>
</table>
Serious injuries

• International Classification of Diseases (ICD)

• Abbreviated Injury Scale (AIS)
One publication for seven key questions

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Which recommendations can we make?

- Set ambitious targets on fatal and serious injuries
- Focus on VRUs and develop meaningful VRU safety indicators
- Collect robust and comparable serious injury data
- Consider safety as a key to mode shift and vice versa
Safe streets unlock alternative transport modes

- Reduce dominance of motor traffic
- Mode shift away from private vehicles
- Reduce danger, fewer casualties, people feel safe
- People feel confident to walk, cycle and use public transport

Thank you

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