Current and future challenges for road accident data in Europe

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www.erso.eu
Challenges for accident data in Europe

1. More data available to the users
2. More data harmonized at EU level
3. More data harmonized at national level
4. Addressing the underreporting issue
5. Combining accident data with other data
6. Additional new data
7. More statistics published frequently
8. More analyses with the available data
9. More data combined with knowledge
1. More data available to the users
- The CARE system.
- A reference system for road safety analysis in Europe.
- An effort of more than 20 years.

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The CARE System
Community database on Accidents on the Roads in Europe

All accidents & casualties recorded at the EU countries since 1991, in disaggregate form.
(≈ 22,5m road accidents, ≈ 30m road accident injuries, ≈ 925k road accident fatalities).

Objectives
Provide a powerful tool which would make it possible to:
i) Identify and quantify road safety problems in Europe
ii) Evaluate the efficiency of road safety measures
iii) Determine the relevance of Community actions
iv) Facilitate the exchange of experience
2. More data harmonised at EU level

- Development of appropriate transformation rules, based on the CAREPLUS methodology.
- Extension of the CARE system by incorporating harmonised data for all 27 EU countries (plus NO, CH, IS).
Data from EU countries in the CARE database
3. More data harmonised at national level

- The recommendation for a Common Accident Data Set (CADaS).
- Gradual implementation of the CADaS at the EU countries.

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## CADaS (Common Accident Data Set)

<table>
<thead>
<tr>
<th>Variable category</th>
<th>Code</th>
<th>Number of Variables</th>
<th>Number of Values</th>
</tr>
</thead>
<tbody>
<tr>
<td>Accident</td>
<td>A</td>
<td>12</td>
<td>97</td>
</tr>
<tr>
<td>Road</td>
<td>R</td>
<td>34</td>
<td>159</td>
</tr>
<tr>
<td>Vehicle</td>
<td>V</td>
<td>17</td>
<td>146</td>
</tr>
<tr>
<td>Person</td>
<td>P</td>
<td>20</td>
<td>106</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td></td>
<td><strong>83</strong></td>
<td><strong>508</strong></td>
</tr>
</tbody>
</table>
4. Addressing the Underreporting Issue

- Identification of the underreporting level at national level per person/road/vehicle category.

- Elaboration of appropriate correction coefficients per person/road/vehicle category (serious & slight injuries).

- Making existing non-fatal accident data comparable at EU level.

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### Estimation of the real number of serious casualties

<table>
<thead>
<tr>
<th></th>
<th>Serious casualties</th>
<th>Slight casualties</th>
<th>Serious* = N1+N2</th>
<th>Serious* Serious*</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>CARE factor 1 N1</td>
<td>CARE factor 2 N2</td>
<td></td>
<td></td>
</tr>
<tr>
<td>FR</td>
<td>19.898 0.68 13.612</td>
<td>100.587 0.061 6.157</td>
<td>19.768</td>
<td>0.99</td>
</tr>
<tr>
<td>EL</td>
<td>2.338 0.46 1.081</td>
<td>18.650 0.121 2.259</td>
<td>3.339</td>
<td>1.43</td>
</tr>
<tr>
<td>HU</td>
<td>8.320 0.83 6.897</td>
<td>19.185 0.069 1.325</td>
<td>8.223</td>
<td>0.99</td>
</tr>
<tr>
<td>NL</td>
<td>10.881 0.39 4.254</td>
<td>29.608 0.016 474</td>
<td>4.728</td>
<td>0.43</td>
</tr>
<tr>
<td>ES</td>
<td>23.323 0.26 6.084</td>
<td>117.286 0.018 2.059</td>
<td>8.143</td>
<td>0.35</td>
</tr>
<tr>
<td>UK</td>
<td>32.445 0.34 11.130</td>
<td>254.253 0.009 2.298</td>
<td>13.428</td>
<td>0.41</td>
</tr>
</tbody>
</table>
5. Combining accident data with other data

• Amalgamation of the CARE accident data with other data (risk exposure data, performance indicators, etc.) in road accident analysis.

• Establishment of reliable and comparable accident indicators (i.e. fatalities per million veh-kms).

• Better description of the road accident phenomenon.

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From data to knowledge

Legend:
- High availability
- Medium availability
- Low availability

Source: Sunflower+6
6. Additional new data

- New challenges beyond SafetyNet data.
- Road safety data and information to support needs-driven analyses.
- Emphasis on behaviour data through targeted surveys (e.g. SARTRE) or systematic monitoring (e.g. naturalistic driving experiments).

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Social costs

Per system component

Number killed and injured

Safety performance indicators

Safety measures and programmes

‘Structure and culture’

Source: Sunflower+6
A complete set of road safety data and information

<table>
<thead>
<tr>
<th>Data</th>
<th>Information</th>
<th>Sources</th>
</tr>
</thead>
<tbody>
<tr>
<td>Road Accident Data</td>
<td>Programmes</td>
<td>National Administrations</td>
</tr>
<tr>
<td>Risk Exposure Data</td>
<td>Measures</td>
<td>International Data Files</td>
</tr>
<tr>
<td>Performance Indicators</td>
<td>Rules</td>
<td>Research Project Data</td>
</tr>
<tr>
<td>Behaviour Data</td>
<td>Behaviour/Attitude</td>
<td>Stakeholders data</td>
</tr>
<tr>
<td>Causation Indicators</td>
<td>Social Cost</td>
<td>In-Depth Investigation</td>
</tr>
<tr>
<td>Health Indicators</td>
<td></td>
<td>Naturalistic Driving Experiments</td>
</tr>
</tbody>
</table>
7. More data published frequently

- Production of a comprehensive set of statistics:
  - Annual Statistical Reports
  - Basic Fact Sheets
  - Aggregate Data Files Available online.

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Annual Statistical Report 2007

- Basic characteristics of road accidents in 18 member states of the European Union for the period 1996-2005.

- Selection of basic characteristics of fatal road accidents in the EU member.

- 56 Tables and 28 figures with the most interesting combination of road accident data.

DOWNLOAD IT NOW
Basic Fact Sheets – Example: Motorways

Traffic Safety Basic Facts 2007

Motorways

More than 25,000 people were killed in traffic accidents on motorways in 14 European Union countries (EU-15, without Germany) between 1996 and 2005. This number represents about 7.7% of all traffic accident fatalities in those countries.

There were 2,515 traffic accident fatalities in 1996, and the number had fallen by 16.8% by 2005. The total number of traffic accident fatalities in the 14 European Union countries also fell significantly over the same decade, by 25%.

There were 7.4% more accident fatalities on motorways in 1999 than in 1998, although the overall number of fatalities fell by 1.2%. It is also worth noting that the number of fatalities on motorways in the 14 countries scarcely changed between 2000 and 2002 (0.0% reduction), whereas the overall number of road accident fatalities decreased by 5.2%.

Appendix 1 also shows that the number of fatalities fell less in 2005 than in 2003 and 2004, both overall and on motorways.

TABLE 1 provides an overview of the changes in the number of fatalities on motorways split by country.

Download it now
http://www.erso.eu/data/Content/basic_facts.htm#Basic_Facts
Traffic Safety Basic Fact Sheets 2007

- Main Figures
- Children (Aged <16)
- Young People (Aged 16-24)
- The Elderly (Aged >64)
- Pedestrians
- Bicycles

- Motorcycles and Mopeds
- Car Occupants
- Heavy Goods Vehicles & Buses
- Motorways
- Junctions
- Urban Areas

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- Time Series Analyses
- Multilevel Analyses
- International Comparisons
- Ad-hoc Analyses

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Example of analyses
9. More data combined with knowledge

- The European Road Safety Observatory (www.erso.eu).
- A comprehensive system with data, knowledge, statistical reports and analysis notes.
- A European platform for exchange of information and international comparisons.

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European Road Safety Observatory

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Presentation by Jeremy Broughton
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Presentation by Constantinos Antoniou
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