HOW TO ADDRESS ACCIDENTS WITH CHILDREN
- FROM EUROPEAN TO LOCAL PERSPECTIVE

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SUMMARY

The paper presents a framework for upgrading the safety for children using European, national and local accident statistics. It draws the conclusion that programmes and campaigns must address national habits and behaviour, engineering measures can benefit from European comparison.

It shows that it is necessary to compare accidents on European and national level to highlight the main problems and discuss programmes on political and organisational level. Education, training programmes and campaigns must address the national problems. As a follow up it is important to work locally to upgrade the safety on local networks such as roads, cycle lanes and footpaths, and implement the programmes and campaigns.

BACKGROUND

Within Europe each year more than 40,000 people die and 1,7 Mio. get injured in 1,3 Mio. road accidents. Although there is a downward trend in deaths per million inhabitants in Europe from 229 in 1970 to 108 in 2000, much has to be done to improve roads, vehicles and drivers within a complicated "road transport system" to further improve road safety.

The European Commission states at his new Road Safety Website: "In its 2001 Transport White Paper, the Commission proposed the ambitious goal to save yearly 25.000 lives on European roads by the target date of 2010. This target has meanwhile been endorsed by the European Parliament and all Member States. In 2003, the European Road Safety Action Programme was tabled, containing many concrete measures proposed to achieve this goal. And in February 2006, the Commission has issued a mid-term review on our common endeavours to halve road fatalities. Summing up, Europe has achieved a lot in the last five years, but we need to do more together to achieve our objective."

The challenge seems to sustainably improve road safety in an enlarging Europe without reducing mobility.

One specific aspect in European and national programmes is to improve child road safety. Within Europe each year more than 1,300 children die and 134,000. get injured. Compared with the overall figure of deaths the child deaths account for 3%. Although there is a downward trend in child deaths per million inhabitants in Europe, some national figures and comparisons between countries do suggest that this topic has to coped with with more attention. In
Germany for example the number of children killed in road accidents increased in 2005 for the first time.

Within the European Road Safety Action Programme and national programmes (e.g. Germany) the need to improve child safety is mentioned explicitly. In the UK the target is quantified to reduce children KSI by 50% until 2010.

The framework of risk assessment includes analysis, target setting, adoption of the targets, communicating targets and initiating cooperation on different levels, implementing measures and monitoring. The most crucial point is to find appropriate performance indicators and monitor the success of measures. The measures are usually a mixture of road, vehicle and driver related measures and therefore need to be addressed specifically.

Even if specific performance indicators are agreed, they must take into account the situation on European, national and local level and will serve partly different aims. European figures will help to monitor progress between countries. This will probably be the same for national governments if regions should be compared. But to monitor progress within countries or regions or towns more specific data must be considered such as by user group (within car, cyclist, pedestrian) or by age group.

DO WE KNOW ABOUT THE ROAD RELATED RISK?

Most people do not have a clear understanding of risk in road transport. Even simple questions about the number of road related deaths cannot be answered in most countries. The EuroRAP survey, 2005, shows that except for France and Ireland there is little knowledge about deaths on the road.

![Figure 1: Percentage of people able to accurately (within 10%) estimate the number of people killed in road accidents (EuroRAP, 2005)](image)
The more detail is asked the less knowledge is available. This is specifically true if one asks about risk for certain user groups.

Figure 2: Estimation of risk for children aged under 6 years (ADAC)

Figure 3: Estimation of risk for children aged 6 to 14 years (ADAC)
A representative survey of the German Automobile Club ADAC shows that the knowledge of car drivers about road related risks of children is poor: Only 20% of the 1000 interviewees knew that most children aged under 6 years are injured as car passengers. Only 25% knew that most children aged 6 to 15 years are injured outside normal school times; most people think that in contrast children of that age are normally injured on their way to school.

The risk to be injured in cars for children under 6 and the risk to be injured during leisure time for children from 6 to 14 years is underestimated.

**CAN WE LEARN FROM EUROPEAN AND NATIONAL ACCIDENT FIGURES ONLY?**

Within Europe each year more than 1,300 children die and 134,000 get injured. Compared with the overall figure of deaths the child deaths account for 3%. To compare countries the number of killed or injured children per inhabitants is used. The ranking shows great differences within Europe.

The ranking shows that a country like Germany can be under the top performers in Europe considering deaths / inhabitants or the least performer at all if injured / inhabitants is used. Nevertheless monitoring the change over time will be useful to see how the risk changes over time.

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Figure 4: Risk for children (StatBA, 2005)
Figure 5: Risk for children (StatBA, 2005)
Analysing age groups and user groups shows also that there are significant differences within Europe: In Spain 70% of the injured children aged under 15 years were injured within cars, while this figure in Germany and UK is significantly lower (40% and 45% respectively). In the Netherlands the number of injured children when cycling is three times higher than when walking; the pattern in Ireland, France or UK is the opposite. The number and structure of accidents in the new EU countries differs considerably. Of course use of transport mode, travel behaviour and traffic density vary within Europe and contribute strongly to risk.

![Figure 6: Risk for children by mode (StatBA, 2005)](image)

**WHAT BENEFIT DO WE GET FROM LOCAL ACCIDENT FIGURES?**

But using European or national accident figures only is not sufficient, if problems have to be assessed and measures to be taken. Our survey confirms that there are also significant differences on accident structure on local level. Taking into account all towns above 20,000 inhabitants in one of the federal states in Germany shows that the worst towns have 10 times higher risk for children compared with the best ones.

The total number of accidents varies for the three year period from 3 to 260 children getting injured when cycling or walking. The total number of these types of accidents is 2677 in the German federal state of Bavaria.
Figure 7: Risk for children in selected communities (ADAC)

But for the towns we currently do not know

- the participation of children in transport (traffic demand)
- the land use structure in detail (schools, shopping, leisure...)
- the road infrastructure in the towns (cycle paths, footpaths, crossings)
- current programmes of different stakeholders like authorities, police, schools, private organisations.

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HOW CAN WE USE IT AND IMPROVE SAFETY?

Setting targets and support programmes

Road safety targets will have to consider the appropriate performance indicators, the time scales, coverage and the ability to achieve the target. European, national and regional level should be linked and be comparable.

It seems necessary to set quantitative targets for Europe, the member states and regions within member states. One specific requirement for the European and national level is to achieve a common accident database structure and support this also financially.

In addition linked with setting targets on European and national level authorities should support activities with road safety programmes addressing the specific issues. Concerning child road safety, the European task could be to promote and support activities to reduce accidents with children. The member states will then address the problem more specifically, e.g. support activities to improve safety when cycling. Others will concentrate to upgrade child safety within cars. Partners will then specify measures such as campaigns to wear cycling helmets or upgrading cycling infrastructure. It is necessary to involve as much stakeholders as possible during the process.

Promoting targets

If the targets have been adopted, it is necessary to promote them in public. This will involve more partners, develop public understanding and commitment. Especially the topic child safety is obviously an "easy to agree" area of work. Nevertheless, because short term success will be difficult to monitor, the promotion strategy should be at least a three to five year activity. Results from monitoring should be used at later stages to attract public interest.

Introducing programmes and measures

To improve safety for children measures and programmes will include enforcement, engineering, education and encouragement. Funk and Wiedemann, 2002, also show that there are significant potentials if measures are compared with accident figures: Most measures / programmes to improve cycling are addressing the age group between 6 and 10 years, while the peak of injured children when cycling is between 10 and 14 years.

All other user groups will also benefit from infrastructure upgrading programmes or campaigns concerning correct driving behaviour in residential areas. The effect of single measures for the overall performance indicator "accidents / population" is sometimes hard to assess. Nevertheless tools to include effects should be in place to take into account effects from small scale initiatives.
**Monitoring success**

If targets have been set, adopted and promoted it is necessary to systematically monitor success. To achieve interest results should be published on regular basis and as detailed as possible.

On higher level monitoring will fulfill the task of benchmarking between countries or regions and thus initiate a fruitful competition. It also provides the possibility to learn from other "best practice" even if measures are not fully transferable.

The measures on local level will contribute to achieve the overall targets. As discussed above it will sometimes be difficult to monitor the success of measures with the performance indicator specified at higher level: The number of injured children when cycling will show a statistical range over time, especially in smaller towns. Engineering measures and effects should be made available to ensure knowledge and transfer of best practice in Europe.

**Future plans for the case study**

Within the case study accidents on European and national level are compared to highlight the main problems and discuss programmes on political and organisational level. Education, training programmes and campaigns must address the national problems.

The performance indicators of towns will be used to compare the situation and specify "good" and "bad" performers. These will be addressed and asked to cooperate within the project. As a follow up we will work locally to upgrade the safety on local networks such as roads, cycle lanes and footpaths, and implement the programmes and campaigns. All stakeholders, authorities, police, schools and citizens, will have to be involved.
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