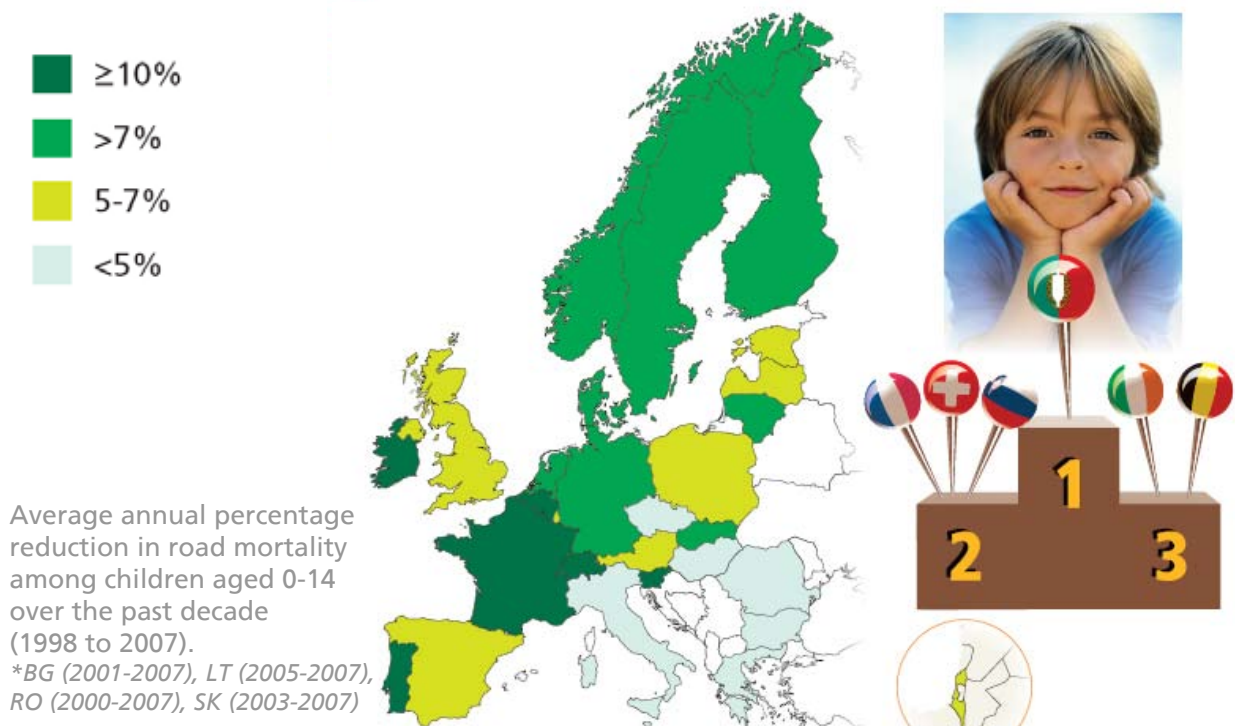




## Reducing Child Deaths on European Roads

Some **18,500** children aged 0 to 14 have been killed in road traffic over the past ten years in the EU-27. In 2007 alone, the lives of more than **1,200** families were torn apart by the loss of a child killed in traffic. Every tenth child death is a result of a road collision. Road collisions are also a major cause of disability among children, which can have a long-lasting impact on their physical and psychological growth.

Yet, there is cause for hope. Commitment to prevent child deaths on the road has progressively increased, along with awareness of the need to reduce other causes of child injuries, and initiatives are starting to pay off. Road safety of children has improved considerably in all 30 countries covered by PIN over the past decade. **Portugal** achieved the best annual average reduction, of almost 15%, in road mortality among children, followed by **France, Slovenia** and **Switzerland** with just over 10% and **Ireland** and **Belgium** with just under 10%.



Road safety of children under 15 has improved even faster than their safety in other widespread everyday activities and from fatal illness. Today, children aged 0 to 14 experience only about one-sixth of the mortality on the roads experienced by the rest of the population. Still, children in **Lithuania** have 7 times higher probability of being killed in traffic than children in **Sweden**, the best performing country in terms of road mortality of children. At least 600 child deaths could be avoided each year if the level of child mortality from road collisions were the same across Europe as in **Sweden**.

In its Blueprint for the EU's 4th Road Safety Action Programme 2010-2020<sup>(1)</sup>, ETSC proposes a **separate target for reducing road deaths amongst children**. As population forecasts predict that the proportion of the EU population aged 0 to 14 is likely to continue falling steadily in the next decade, ETSC argues that a single target for all ages would be less challenging in respect of children than other age groups. ETSC therefore recommends the EU to adopt a target of a 60% reduction between 2010 and 2020 in child deaths on the roads (compared to a 40% overall reduction).

<sup>(1)</sup> ETSC Blueprint (2008), Road Safety as a right and responsibility for all.

## Children are a lot safer today than ten years ago

Road safety of children has improved considerably in all PIN countries over the past decade. **Portugal** deserves special praise with an average annual reduction in child road mortality of almost 15% (Fig.1). **France, Slovenia, Switzerland, Ireland** and **Belgium** also rank highly with reductions close to 10%.

**Lithuania, Sweden, Germany, Norway, Slovakia, Finland, Denmark** and the **Netherlands** follow with better than average reductions.

**Bulgaria, Hungary, Italy, Czech Republic, Greece** and **Romania** performed poorly with reductions of less than 5%.

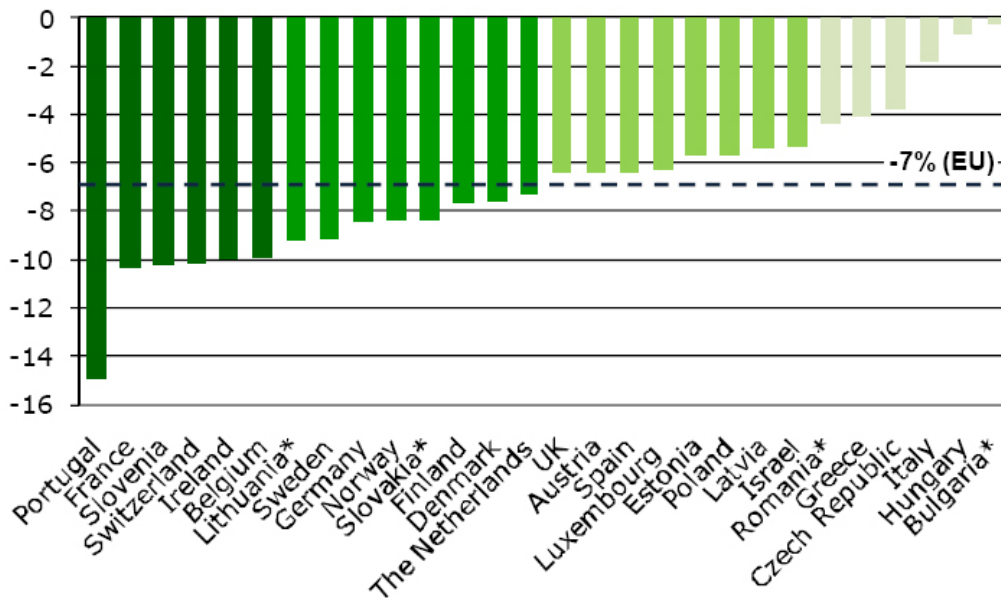


Fig.1: Average annual percentage change in road mortality among children aged 0-14 over the past decade (1998 to 2007).

\*BG (2001-2007), LT (2005-2007), RO (2000-2007), SK (2003-2007),

Note: MT and CY are excluded from this ranking because the numbers of deaths in those countries are so small as to be subject to substantial random fluctuation.

### Why children and why up to 14 years old only?

In this report we consider children to be those aged 0 to 14 (inclusive). While this definition is somewhat arbitrary, 15 is in many EU countries the age at which one finishes compulsory school attendance. Up to 14, the ways children travel are often dictated by the choice of parents, environment and policies in general. Moreover, in some countries, 15 is the age at which you are considered to be responsible of your acts (legal responsibility).

At least 1,219 children were killed in 2007 representing around 3.5% of overall road deaths, while they make up almost one sixth of the population. Children are therefore relatively safer than other age groups probably because of lower exposure to road traffic. But children are extremely vulnerable on roads because of their lack of experience, reduced visibility and bodily fragility. Children also are often unaware of the risks they take unintentionally and more easily become innocent victims in road traffic collisions. Therefore it is essential that the road system is adapted to account for their limited capabilities and for their limited access to alternatives.

## The indicator

The safety of children on the road is expressed here in terms of **mortality**, i.e. the number of children 0 to 14 killed in road collisions divided by their population size (in millions). Road deaths by population give a good estimate of the overall impact of road safety on the age group, while taking account of changes of birth rates in time.

Data concerning children killed are from the national statistics supplied by the PIN Panellists and are available in all PIN countries. The full dataset is available in the PIN Flash 12 Background tables on [www.etsc.be/PIN-publications.php](http://www.etsc.be/PIN-publications.php). Population figures were retrieved from the Eurostat database.

Child mortality from road collisions is compared with child mortality from all other causes of death. Data concerning general mortality among children were retrieved from the Eurostat database. We have not compared road mortality with the mortality from other unintentional injury.

Children in this age group are mainly killed as car passengers, pedestrians or cyclists. Unfortunately, estimation of time spent in traffic or the amount of travel by children is available for only few countries<sup>(2)</sup>. Exposure in traffic resulting from different mobility needs and patterns is therefore not taken into consideration in this publication when comparing countries.

The method used to estimate the average annual percentage change in child mortality over the past decade is described in the PIN Flash 12 Methodological Note on [www.etsc.be/PIN-publications.php](http://www.etsc.be/PIN-publications.php).

## Road safety of children has improved faster than overall road safety

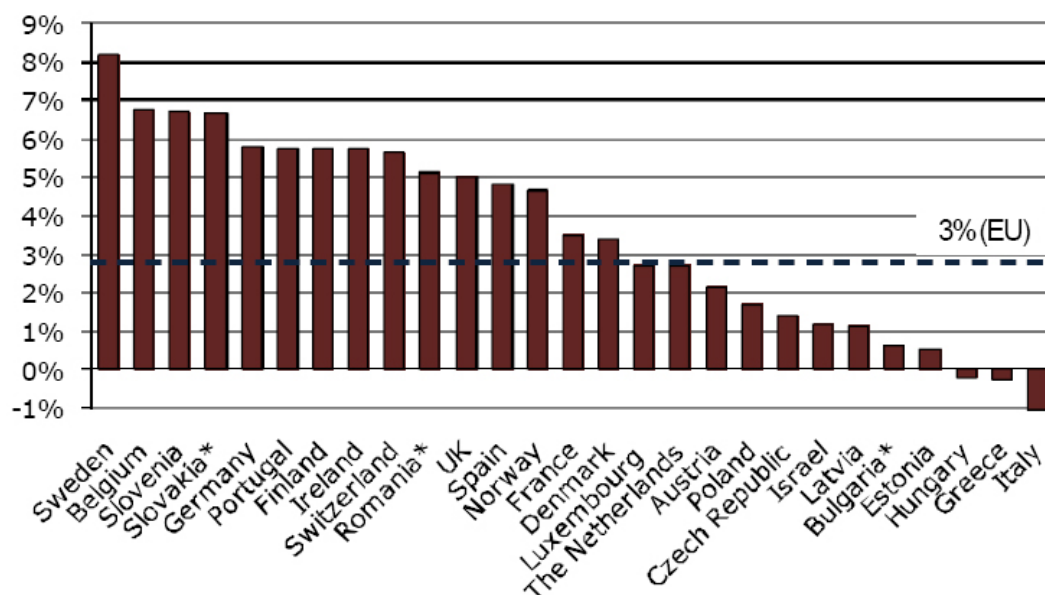


Fig.2: Difference between the average annual reduction in road mortality among children aged 0-14 and the corresponding reduction for the rest of the population (aged 15+) over the period 1998-2007.

\* BG: 2001-2007, RO: 2000-2007, SK: 2003-2007

Note: Malta and Cyprus excluded because the numbers of deaths in those countries are so small as to be subject to substantial random fluctuation.

<sup>(2)</sup> Christie N., Cairns S., Towner E, Ward H. How exposure information can enhance our understanding of child traffic death leagues, Injury Prevention 2007; 13:125-129.

On average in the EU-27, road safety of children has improved faster than road safety of the rest of the population over the past decade (Fig. 2). In **Sweden, Belgium, Slovenia and Slovakia**, the annual average reduction in road mortality among children is more than 6 percentage points higher than the corresponding reduction for the rest of the population.

In **Italy, Greece and Hungary**, the opposite is true and the road safety of the population aged 15 and above has improved faster than road safety of children. Governments of these three countries need to attend to this trend and adopt a comprehensive strategy to reduce child deaths.

*"We have been able to reduce steadily child deaths on the road, from 25 in 1998 down to 6 in 2008. Since the 1970s, most of the children under 4 years old are seated in rear-facing seats which we believe played a major role".*

Claes Tingvall, Swedish Road Administration

*"Sadly, Italy is developing in the opposite direction compared to the rest of the EU. The road mortality of children aged up to 14 is improving at a lower pace than that for the rest of the population. We need to reach higher levels of child restraint use and, to achieve that, we need to increase awareness of parents. Secondly we need to generally reduce driving speeds in urban areas where pedestrians are particularly at risk. The introduction of a mandatory practical training test for moped drivers would also help improving their safety."*

Umberto Guidoni, Fondazione ANIA.

The annual average reduction in child mortality over the decade was 7% on average in the EU compared to 4.3% for all other age groups. Road safety of children has improved even faster than their safety in other widespread everyday activities and from illness. Indeed, mortality from other causes of deaths among children has been decreasing by some 5% per year.

## Half of the 1,200 children dying on EU roads could be saved

The mortality of children from road collisions is about one-sixth of the corresponding mortality for road users aged 15 and above. In the EU, there are 16 child deaths per million inhabitants, compared to 95 deaths for the rest of the population.

But children do not benefit from the same level of safety everywhere in Europe. Children in **Lithuania** have 7 times higher probability of

being killed in road traffic than their **Swedish** counterparts.

About half of all road related child deaths in EU-27 could be avoided each year if the level of child mortality from road collisions were the same across Europe as in **Sweden**, the best performing country in terms of child road mortality. This means that for 2007 alone around 600 children would have been killed instead of 1,219.

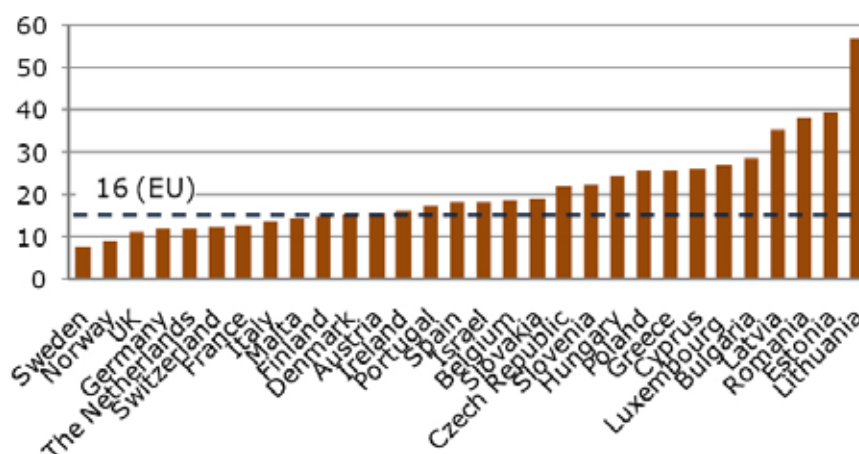


Fig.3: Child road mortality. Average values for years 2005, 2006 and 2007  
\*LT (2006-2007).

## Recent child road mortality versus annual reduction over last decade

In Fig. 4 the recent level of road mortality among children in the 30 PIN countries is plotted horizontally against the average annual reduction over the decade plotted vertically. The EU averages of the two indicators are used to divide the diagram into four quadrants.

Sweden, Switzerland, France, Germany, Norway, the Netherlands, Finland and Denmark achieved lower than average mortality after higher than average reduction. The above-average progress made by Portugal, Slovenia, Belgium

and Ireland over the past decade has not been quite sufficient to bring them into the favourable lower left quadrant. Italy and the UK have lower than average mortality despite lower than average (in Italy much lower) reduction.

Romania, Latvia and Estonia, have achieved appreciable reductions but still have the highest mortalities. Bulgaria and Hungary not only have high mortality rates, but were also scarcely able to reduce them over the past decade.

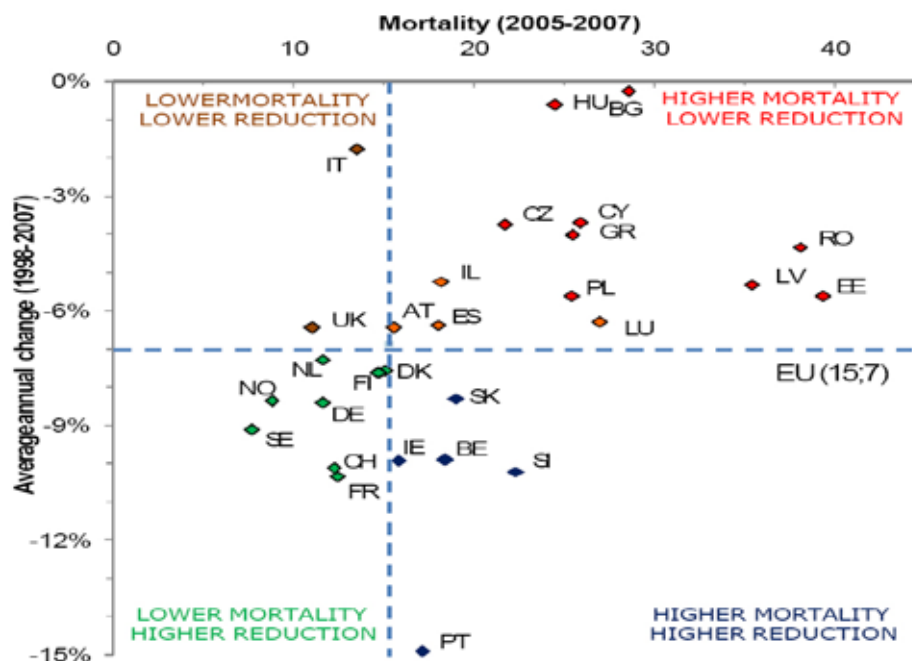


Fig.4: Road mortality among children plotted against the annual average % change (1998-2007).

*"There is a relatively close correlation between the level of overall road safety and that of children. Unfortunately, Hungary has had a deteriorating trend in road deaths since 2001. Yet, provisional results for 2008 (-24% for overall road deaths) give us some reasons to hope. We also welcome the announcement by the government that our Child Safety Action Plan will be elaborated in the near future in close co-operation with all ministries involved".*

Peter Hollo, KTI, Hungary

*"We were already aware of the alarming road mortality among children in Estonia. Yet, for the first time our performance was compared against other EU countries' and the results clearly cannot satisfy us. The National Road Safety Committee already met and informed other actors involved. We hope the new measures adopted in the Road Safety Action Plan 2007-2011 aiming at improving the safety of vulnerable road users, in particular children, will be fully implemented and results will come soon. Provisional figures from 2008 already show a decrease in overall road deaths and in child deaths compared to 2007".*

Dago Antov, Stratum Consultancy, Estonia

## Every tenth child death results from a road collision

While on average in the EU every tenth child death after their first birthday results from a road collision, this share varies from 5% in **Norway** and **Sweden**, to almost 20% in **Luxembourg**

and **Slovenia** (Fig.5). Infants up to 1 year old are excluded from this calculation because they are particularly vulnerable to deaths from natural causes.

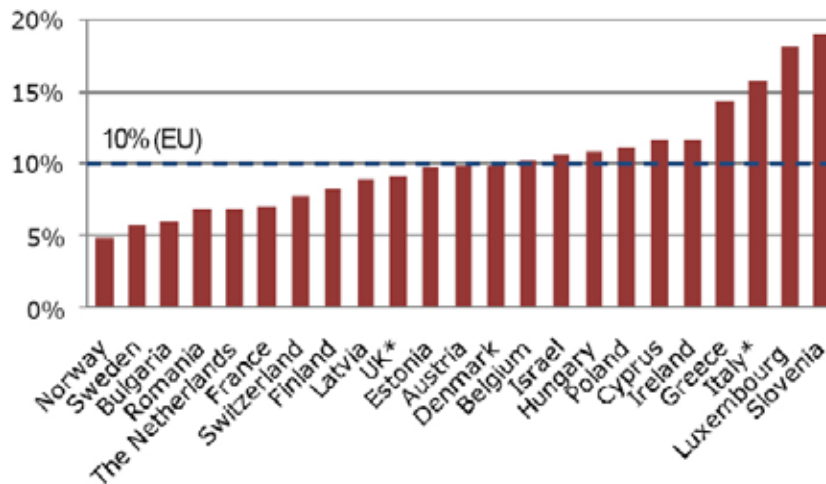
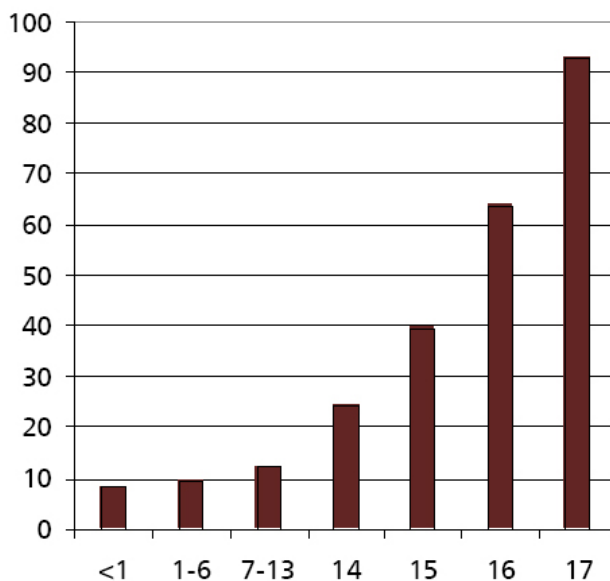


Fig.5: Road deaths as a percentage of deaths from all causes in age group 1-14.

\* UK (2004-2005), \*IT (2004-2005),

Note: CZ, DE, LT, PT, SK, ES are excluded because of different age groupings for all causes of deaths.

## Mortality increases dramatically after 14



Children aged 7-14 have higher road mortality than children aged 0-6 (Fig. 6). This is in part because, as part of normal child development, children aged 7-14 are more likely to move around unaccompanied by adults, in particular travelling to and from school. But, once they reach the age of 14 and progressively acquire access to motorcycles and cars, their road mortality starts to increase dramatically.

Fig.6: Road mortality for different age groups.

Average values for years 2005, 2006 and 2007 for the EU-27.

Still, big differences exist between countries (Fig. 7). In **Austria, Denmark, France, Ireland, Italy, Norway, Sweden** and the **UK**, adolescents older than 14 represent more than 60% of all road deaths under 18.

The access at an earlier age to moped driving in **France, Italy, Spain** (from the age of 14) and **Poland** (from 13) could probably partly explain

that adolescents older than 14 represent a higher share of all road deaths under 18 in some of these countries<sup>(3)</sup>.

Similarly, only the adolescents in the **UK, Ireland** and **Poland** can nowadays hold a full driving licence permitting independent driving of cars from 17-years old.

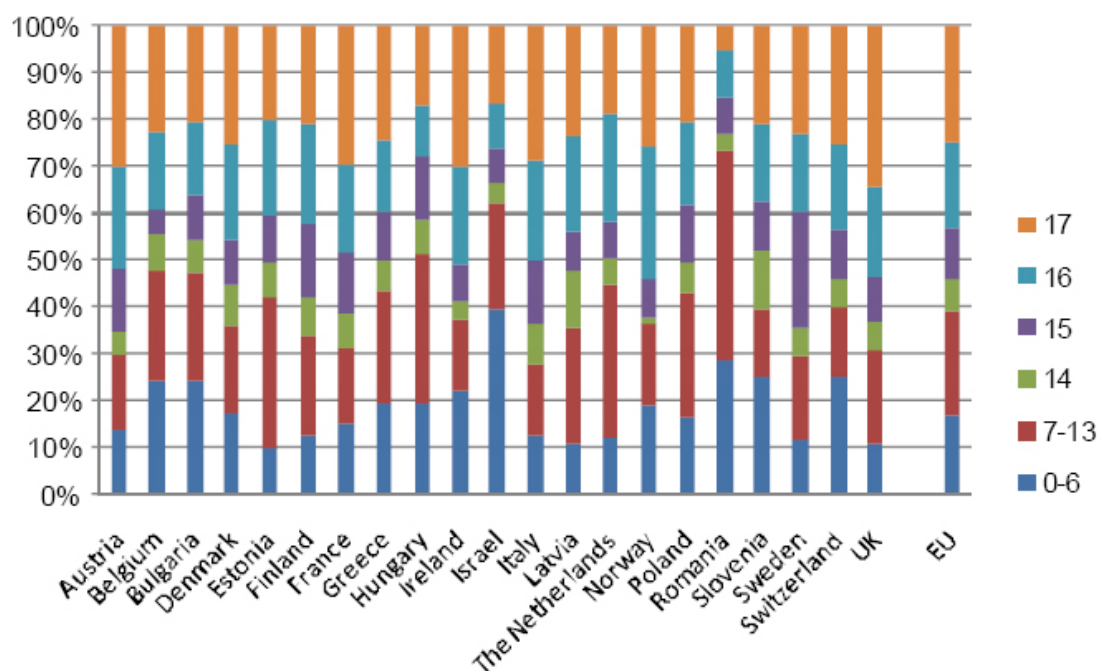


Fig.7: Percentage share of road deaths in age groups among all road deaths under 18 presented in alphabetical order. Average value for the years 2005, 2006 and 2007.

Note: CZ, DE, ES, PT, MT, LT excluded because of different age groups.

LU and CY excluded because of too low numbers in age groups

*"In Sweden, you can drive a moped from the age of 15. That can be part of the explanation of the relative higher share of 15-17 year olds (in particular 15 year old) in Fig. 7. Reducing road deaths from the age group 15-17 will be a challenge for Sweden in the next*

*coming years! There are ongoing discussions about whether to keep the age limit of 15 or to raise it to 16 to comply with the upcoming EU Directive on Driving Licences".*

Anna Vadeby, VTI, Sweden

Driving a moped with no driving licence as it is the case in Sweden or Italy will no longer be possible after 2013. **EU Directive 2006/126/EC on Driving licences** (replacing Directive 91/439) introduces a new category AM and a mandatory theory driving test for moped riders. Minimum age for category AM will be 16 years but Member States may lower it down to 14 years or raise up to 18 years. Minimum age for driving a car will be 18 but Member States may lower it down to 17 years.

<sup>(3)</sup>ACEM, Yearbook 2008 (2009): Facts and figures on PTWs in Europe

## Background

Efforts in improving child safety need to incorporate a variety of different measures. Survey findings from 2004 indicated that most OECD countries had had national plans for reducing children's death and injury in road traffic for at least ten years, but that the best-performing countries had adopted a holistic approach<sup>(4)</sup>.

Success stories suggest that improving road safety for children is most likely to be achieved through

combining measures to address the behaviour of all road users, improve the road environment, design vehicles that better protect both their occupants and those at risk outside the vehicle, and promote the use of appropriate restraint systems by children.

EU legislation, including the Directive on seat belts and child safety restraints, also played a key role in contributing to improvements in road safety among children over the past decade.

## Experience from best performing countries

### Setting a separate target for children: success story from Great Britain

In 2000, **Great Britain** set a target to reduce the number of children aged 0-15 killed and seriously injured while on the road by 50% by 2010 and is well on target. Children, in particular child pedestrians, were identified as amongst the most vulnerable road users. Great Britain's safety strategy for children also cited the ethical concern for preventing children's deaths<sup>(5)</sup>.

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*"2007 results show considerable improvement across all categories of child casualties, an area where historically we have been worse than the European average. Still, more than 9,000 children were killed or injured on our roads in 2007. I am delighted to see that the UK Government is taking new measures on child road safety using bolder and more forthright communication about road danger than ever before".*

Robert Gifford, PACTS, UK.

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The UK Government is also investing £140m in the Travelling to School project and another £140m in cycling, which includes funding for an extra 500,000 10 year-olds across England to take part in Bikeability cycle training. The THINK! Copycat campaign reminds parents of the need to set a good example to their children on road safety.

Deprivation has also been found to be a risk factor, particularly for child pedestrians. The reasons for this are multi-factoral but a significant factor is speeding. Families in deprived communities have also less resource, such as education, professional knowledge and economic power, with which to articulate demands for safety improvements. An additional target for a faster rate of improvement in deprived areas was therefore set in 2002 matched by further government funding. This was achieved in 2005, with child casualties in neighbourhood renewal areas falling by over 6% more than in the rest of England.

### Setting a holistic approach: success story from the Netherlands

SWOV recently surveyed the safety of children in traffic in **the Netherlands** and identified success factors and room for improvement. The recent decrease in deaths among children is likely to stem from a combination of measures in spatial and urban planning, infrastructure, vehicles and education. Especially important was the generalisation of 30 km/h zones in

residential areas, initiated by the Sustainable Safety programme. Improvements of passenger car safety and increased use of child safety restraints and seat belts by children also made a contribution. In its study, SWOV recommends increasing the awareness among parents about the effectiveness of cycle helmets for children<sup>(6)</sup>.

<sup>(4)</sup>OECD (2004), Keeping children safe in traffic.

<sup>(5)</sup>DETR (2000) Tomorrow's Roads – Safer for Everyone.

<sup>(6)</sup>Rijk, A. (2008). The road safety of children: A crash analysis and literature study. SWOV report R-2008-06 (report in Dutch, abstract in English).



*“On the basis of such recommendations and others, our new Strategic Road Safety Plan for 2008-2020 identifies a number of priorities for children. Among them: to increase the use of helmet for cyclists, increase the*

*use of child seats, increase awareness of the blind spot on the nearside of trucks and exchange best practices on safe school environment”.*

Peter Mak, Ministry of Transport, the Netherlands.

### The story of Goochem, the Armadillo

The Armadillo (or Goochem) campaign, launched in 2004 in the Netherlands, has since been taken as a model by many other European countries. The Armadillo concept was also a key element in the European Commission funded campaign Euchiress on seat belts and child restraints.

The campaign aims at increasing the use of seat belts among children. A rubber gadget in the shape of an Armadillo is offered to 1 to 12 year old children that are fastened correctly. Attached to the seat belt with Velcro, the soft latex toy is the children’s cheerful little mate for safety in the backseat. In case of danger, the real armadillo rolls up to protect itself. The toy too can be folded.



### Vision Zero for children: Success story from Sweden

Sweden also implemented a holistic approach to protect children from road dangers. The approach was based on a new philosophy: it should no longer be the child that should adapt to traffic conditions but the traffic conditions that should be adapted -as far as possible- to children’ limitations. In the end, the responsibility to prevent children from road danger always lays with the adults.

Sweden also has had a history of high seat belt usage. In addition, parents place children in rearward facing restraints up to the age of 4, as recommended by the government. As a result, only two children (0-6) were killed in a car in 2008.

The compulsory curriculum for schools does not stipulate a minimum number of hours of road safety education but only mentions that traffic should be integrated into other subjects. *“There has been intensive discussion in Sweden about traffic education for children. The prevalent view is that it is not feasible to educate small children about traffic, at least not up to the age of 12, and trust them to take their responsibility. They are simply not developed enough to handle complex situations such as road traffic. Instead the Swedish Road Administration and Local Authorities are trying to improve the environment to make it more suitable for them. Since the 1960s, road safety education in school has been reduced by more than 50%, while road deaths of children 0-14 decreased from 120 down to 6 in 2008. This supported the idea that there is no direct con-*

*nection between road safety education and low child road mortality. Having said that, it is of course of the utmost importance to continue passing direct, concrete information about the importance of, for instance, using a cycle helmet or putting their seat belt on. Children will keep that habit as they grow up, and could also influence their parents”*, said Åsa Ersson, SRA, Sweden.

*“We are very proud to see that the positive trend among vulnerable road users has continued. In 2008 one child below 18 was killed as pedestrian; none as bicyclist. We believe that a Vision zero for children is realistic for a great number of EU countries. Countries can for example start by setting Vision zero targets for sub-groups, such as young children or children as cyclists and pedestrians.”*

Åsa Ersson, SRA, Sweden.

Those good results can be partly explained by the generalisation of speed reduction measures on roads often crossed by children, as well as the provision of separate pedestrian and cyclist lanes. Children are also less exposed to road traffic as parents more often drive them to school while they used to walk or cycle on their own. This is a cause of concern as habits children develop in their youths may affect how they choose to travel later in their lives.

The **Safe smart school bus** pilot project aims to better protect pedestrians crossing behind or in front of school buses by supporting the school bus driver. In order to communicate with the system children wear a tag that transmits the information to the bus unit, making it possible for the driver to know if the child is within 100 meters of the bus.

The tag is also connected to a bus stop unit warning other passing vehicles. The buses have also been fitted with technical equipment that provides the drivers with better visibility and improved opportunities for communicating with the children when they are outside the bus. An evaluation report should be available before summer 2009.

A new EU proposed **Action Plan and Directive on Intelligent Transportation Systems** includes the proposal to develop best practice guidelines concerning the impact of ITS applications and services on the safety and comfort of Vulnerable Road Users (VRUs). This could include promoting such best practice examples of safe route choice for children especially on their way to school such as the Swedish example shown above.

## Experiences from fast progressing countries

**Portugal** is at the head of the European Union in child mortality reductions. The Portuguese Road Safety Plan 2003-2010 helped to promote child road safety, albeit indirectly, with the adoption of a 60% reduction target in killed and serious injured in urban areas and for pedestrians. The Plan also targets a 70% use of child restraint systems and a 50% level of proper use. According to roadside surveys carried out by APSI, the Portuguese Association for Child Safety Promotion, the 70% target has been achieved, but still one adult out of two failed to use the child seat properly.

Child safety has been for some time an important item in Portuguese road accident prevention activities, being carried out by both national government agencies and NGOs, in schools and nationwide<sup>(7)</sup>. Since 2006, children on organised trips in buses and coaches must be provided with seat belts and child seats. The adoption of this new law was accompanied with special training courses for bus and coach drivers. Yet, more efforts are needed to further reduce child road mortality, in particular by improving the infrastructure in urban areas.

*"We have been very active in Portugal on all fronts to improve road safety among children. Together with others, we lobbied the government for lower urban speeds, targets for higher use of child safety restraints and higher seat belt use and safer transport of children in buses and coaches. We are also working closely with hospitals and paediatricians to make sure parents of newborns*

*receive information on the importance of using child safety restraints and how to use them properly. We are also putting pressure on retailers to increase the offer of rear-facing seats for children up to 4 years old".*

Sandra Nascimento, APSI, Portugal.

**Slovenia** achieved the third best reduction in child mortality from road collisions over the past decade. This is the result of the implementation of a 'policy mix' of different legislative, educational and infrastructural actions. Along with strict legislation, one of the most important measures was the introduction of free school buses for students having to cross dangerous areas on their way to school. The Armadillo campaign and other projects targeted parents and children in schools and kindergartens. As a result, the use of child restraint systems has increased from 53% in 2005 to almost 70% in 2008.

Infrastructure measures have also been highly prioritised during the past several years with the introduction of 30 km/h zones, speed bumps and traffic lights at pedestrian crossings in the proximity of schools and kindergartens. In addition to that, road safety is part of the educational objectives for children in nursery, elementary and high schools.

The current legislation requires:

- Adult supervision of children in traffic until they reach the age of 7;
- Supervision of children as cyclists in traffic until the age of 14, unless they have passed the cycle training;

<sup>(7)</sup> For more information on safety campaigns (in Portuguese only): [www.prp.pt/informacao/campanhas/index.asp](http://www.prp.pt/informacao/campanhas/index.asp) and [www.apsi.org.pt](http://www.apsi.org.pt).

- Compulsory use of the child restraint system until the age of 12 and of bicycle helmet until the age of 14;
- Free school bus service for 6 and 7-year olds (paid for by local communities);
- Free school bus service for children that have to cross unsafe areas on their way to school.

## Other examples of good practice

### Occupant safety

Trends across Europe indicate an increase in journeys to school by car, which mirrors the rise in the level of car ownership in European countries, particularly in the Eastern and Central European countries<sup>(8)</sup>. Priority should therefore be given to enforcement of seat belt and child restraints legislation and proper use of child restraints.

### EU legislation on child safety restraints

Directive 91/671/EEC requires that all children under 12 years of age have to be restrained by an approved restraint system suitable for the child's height and weight. The legislation was later reinforced by Directive 2003/20/EU, which requires that all children up to 150 cm in height must use a child restraint appropriate to their size<sup>(9)</sup>.

The EU Directive 77/388/EEC enhances the affordability of safety restraints by including them in the category "essential product" on which VAT can be charged at only 5%. According to a 19-country review by APSI in 2007, only one EU Member State – the UK – has passed on the benefit of reduced VAT to consumers<sup>(10)</sup>.

### Drivers fail to protect child passengers

TISPOL, the European Traffic Police Network, regularly organises Europe-wide seat belt checks. At the last 'Operation Seat Belt', "Save Your Children. Adults have a choice, children do not" organised in February 2008, police forces were concerned to observe over 4,000 children who were not properly buckled up. "It was worrying to find that so many adults are prepared to take such a risk with the lives of their children" said Adam Briggs, President of TISPOL at that time.

<sup>(8)</sup> European Environment Agency (2008), Beyond transport policy – exploring and managing the external driver of transport demand.

<sup>(9)</sup> All new child restraints sold in the EU must conform to UN-ECE Regulation 44/04 or Directive 77/541/EEC requirements.

<sup>(10)</sup> European Child Safety Alliance and Health and Environment Alliance Joint Press release (2007), Governments presented with opportunities to reduce child car seat prices, <http://www.env-health.org/a/2513>.

<sup>(11)</sup> Vis, M.A. and Eksler, V. (2008) Road Safety Performance Indicators: Country Comparisons 2008. SafetyNet.

*"We tried to make use of all the means available to protect our children from road dangers: legislation, education, campaigns, infrastructure measures. We are proud of the results achieved over the past decade. Still, there is more to be done if Slovenia wants to reach the performance of best-performing countries".*

Mateja Markl, Slovenian Roads Agency.

*"It is estimated that every euro spent on a child safety seat saves around 30 euros on health care costs. Our research shows that child restraint prices range greatly across Europe. We therefore urge Member States to apply the lowered VAT rate. Lower prices could increase affordability of child restraint equipment and reduce the use of second hand and old design seats. Rear facing and forward facing models range in cost from less than 20 to more than 300 euros and booster seats and cushions range in cost from less than 10 to more than 200 euros".*

Morag Mackay, European Child Safety Alliance.

Estimates of child safety restraint use are available in only a very few countries. According to roadside surveys, use varies between 20% and 93%. While this figure is worrying in itself, the failure to use them properly also remains an important issue<sup>(11)</sup>.



### Forward-facing child restraints questioned by consumer organisation ANEC

Rearward-facing restraints offer a higher level of safety over forward-facing restraints to children aged up to four years. The study by the British firm Vehicle Safety Consultancy Ltd., commissioned by the European Association for the Co-ordination of Consumer Representation in Standardisation (ANEC), showed that children in forward-facing seats suffered head, neck, chest and abdominal injuries in circumstances in which a rearward facing restraint would have provided much better protection.

Currently rearward facing restraints are used in Nordic countries up to the age of 3 or 4 years old, whereas in the rest of Europe children travel facing forwards already at one year of age or less, in accordance with the European legislation which implies that it is safe for a child to travel forward-facing from 9 kg onwards.

ANEC is urging legislators to revise the law on the use of child restraints, and calls on the manufacturers of child-restraint systems and cars to collaborate voluntarily in order to make Scandinavian-style rearward-facing seats for children up to 4 years available to consumers throughout the rest of Europe.  
<http://www.anec.eu/attachments/ANEC-R&T-2008-TRAF-003.pdf>

### Alcolocks in school buses

In France, all school buses will have to have alcolocks from the start of the new school year in 2009 onwards. This will ensure sober transport of children and is also seen as a first step towards rolling out alcohol interlocks to other target groups.

## Pedestrian and cyclist safety

Leading recommendations of both OECD and UNICEF are to reduce speed limits to 30 km/h in residential areas and around schools and playgrounds, a practice that has proved to be effective. Car manufacturers should also invest more in pedestrian protection to reflect the upcoming rating from EuroNCAP. A new **Pedestrian protection Regulation** will also soon replace Directive 2003/102/EC and Directive 2005/66/EC on frontal protection systems.

In some European countries, it is mandatory for children to wear cycle helmets. It is the case in **Malta, Finland** and **Israel** for all cyclists regardless of the age, and in **Sweden, Slovenia, Portugal** and the **Czech Republic** up to 15. Implementers of helmet law may wish to address concerns regarding decreased cycling following introduction of legislation as part of their promotional activities, citing the benefit of cycling to children's health as those not in favour have stated this as an argument against this strategy<sup>(12)</sup>.

### Safe routes to schools

Safe routes to schools programmes aim at encouraging and enabling more children to walk and bike to school safely. Implemented in numerous countries and cities, these community-based road safety programmes usually involve school jurisdictions, teachers, pupils, parents, local police, the municipality and local road operators.

For example, the **Safe route to school programme** of the **Barcelona** City Council involves the school community, the Municipal Institute of Education (IMEB), the Guardia Urbana and the City Council's Department of Mobility. All actors involved regularly meet to analyse the situation and decide upon next actions (traffic calming measures, extension of 30 km/h limits, infrastructure improvements, etc). Contact: Flor Majado, [fmajado@bulevard.bcn.cat](mailto:fmajado@bulevard.bcn.cat).

The Safe routes to school programme in **Riga** also gathered recommendations about how to teach traffic rules and guidelines for teaching staff and produced a traffic safety handbook with the help of EU funding. Contact: [Aldis.Lama@csdd.gov.lv](mailto:Aldis.Lama@csdd.gov.lv)

<sup>(12)</sup> European Child Safety Alliance (2006), Child Safety Good Practice Guide, <http://www.eurosafe.eu.com/csi/eurosafe2006.nsf/wwwContent/13childsaftygoodpracticeguide.htm>.

## Safer at which price? The issue of mobility

Concerns over children’s safety and security have contributed to an increased number of parents using cars to take their children to school. By driving cars to school, traffic increases, which reduces pedestrian and cyclist child safety and the quality of life of children. This in turn means more parents are inclined to use a car to take their children to school and thus the negative spiral continues<sup>(13)</sup>.

Concerns for the health of children, increased socialisation and a way to tackling child obesity would be counter arguments. In addition, walking and cycling to school increases children’s appreciation of road dangers and further assists in the development of key skills which are important for future independence<sup>(14)</sup>.

Data from ERSO for the age group 0-16 show that around 42% of children were killed on the roads when walking or cycling<sup>(15)</sup>. Around 40% were killed as car occupants compared to around 50% for adults (Fig.8). This probably reflects differential exposure to risk of injury as car occupants, pedestrians and cyclists, but also the increased susceptibility of pedestrian and cyclist children to fatal injury when hit by a car.

*“In many countries, child casualties are going down not only because of improved safety but also due to reduced exposure to risk as they are driven to school and spend less time out on the streets playing. Cycling and walking should instead be encouraged, but it should be made safe”.*

Ellen Townsend, ETSC.

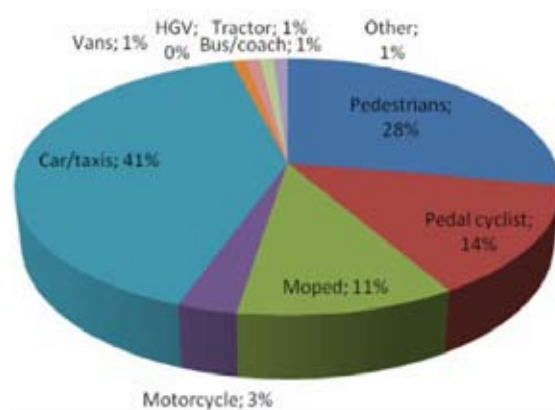


Fig.8: Percentage share of road deaths of children (0-16) according to road user group

## ETSC Recommendations<sup>(16)</sup>

### To Member States

- Adopt a separate target for reducing deaths amongst children and accompanying measures;
- Strengthen the emergency medical care and rehabilitation services and ensure that they are designed and equipped with the needs of children in mind.

### Road environment

- Design road environments in ways that recognise children’s capabilities and limitations. This will also benefit other road users, in particular older users;
- Implement 30 km/h zones together with traffic calming measures to reduce vehicle speeds in resi-

dential areas, on the way to schools and around bus stops;

- Implement safe bicycle infrastructure separated from motorised traffic to make cycling to school safer;
- Design parking areas in ways that the only option is not to walk behind cars that may reverse.

### Safety equipment

- Enforce child restraint and seat belt legislation;
- Make rear facing seats mandatory for children up to 4 years of age;
- Increase parental awareness of and the availability

<sup>(13)</sup> European Environment Agency, Beyond transport policy – exploring and managing the external drivers of transport demand.

<sup>(14)</sup> Cairns S, Sloman L, Newson C, Anable J, Kirkbride A & Goodwin P, 2004b. Smarter Choices — Changing the way we travel. Chapter 4: School Travel Plans: <http://www.dft.gov.uk/pgr/sustainable/smarterchoices/ctwww/chapter4schooltravelplans>, p. 34.

<sup>(15)</sup> ERSO, Traffic Safety Basic Facts (2008), Children, p.6.

<sup>(16)</sup> A comprehensive list of recommendations can be found in two international Reports:

OECD (2004), Keeping children safe in traffic and WHO/UNICEF (2008), World report on child injuries prevention.

of child restraints;

- Promote the use of bicycle helmets for children;
- Improve the visibility of children when walking or cycling (e.g.: promote the use of retro-reflecting clothing or stripes).

### Education, training and publicity

- Shift the focus of responsibility for child road safety more towards drivers;
- Increase drivers' awareness of children's limitations;

### To EU institutions

- Adopt a separate target for reducing road deaths among children and accompanying measures;
- Make rear facing seats mandatory for children up to 4 years of age;
- Launch a special effort to increase the use of child safety restraints in all EU countries. Health and community non-governmental organisations could be encouraged to include seat belt wearing informa-

tion in their programmes;

- Make the fitting of ISOFIX child restraint anchorages mandatory in vehicle type approval;
- Adopt the Cross border enforcement Directive to ensure high levels of enforcement of seat belt and child safety restraints;
- Implement swiftly the EC's commitment to prioritise actions improving child safety in its proposed ITS Action Plan and Directive.

### To car manufacturers

- Install advanced seat belt reminders on all seats;
- Improve the design of vehicles so that the injuriousness of any impact with pedestrians and cyclists is reduced;
- Accelerate the introduction of other in-vehicle technologies (alcohol-interlock systems, Intelligent Speed Assistance);
- Invest more in pedestrian protection to reflect the new rating from EuroNCAP;
- Install obstacle detectors (e.g. reversing radars, reversing cameras) in all buses and heavy vehicles.

## Interview The experience of the European Child Safety Alliance



The European Child Safety Alliance (ECSA) is a Programme of EuroSafe, the European Association for Injury Prevention and Safety Promotion, and is supported by the Consumer Safety Institute in the Netherlands. ECSA's aim is to make life safer for children. ETSC talked with Morag Mackay, Programme Manager at ECSA, where she is managing the Child Safety Action Plan (CSAP) project.

### *ETSC: Why focus on children?*

Children are not small adults. They have particular physical and psychological characteristics that put them at increased risk of injury. If we do not specifically focus on this age group, the solutions that we come up are less likely to prevent injuries in this age group.

While it is simple to say that children are our future, it is true and we therefore have a responsibility to protect them. Most countries have signed numerous declarations that acknowledge the need for preventing injuries, but investment has not been commensurate with the magnitude of the issue.

Children have no choice in where they live, they have little control over the environment and products they are exposed to and they have limited access to information. It is therefore impera-

tive that society ensure the safety of children as a fundamental right so that they can live, learn and play in safe environments and grow up to be contributing members to society.

### *ETSC: What do you do to improve road safety of children?*

The European Child Safety Alliance works to advance child injury prevention on the political agenda at all levels and to build capacity within Europe to address the child injury issue. We advocate for the use of evidence-based good practices and contribute to increase awareness of important injury issues through joint campaigns with our national partners.

Our biggest initiative is the Child Safety Action Plan (CSAP) project. We worked with our partners to assess current national policies related to child injury including road safety. National Child

Safety Report Cards were developed to inform decision makers of current gaps that needed to be addressed. We are now supporting our partners as they work with decision makers to develop national action plans. We also looked at the availability and affordability of safety equipment such as child passenger restraints and bicycle helmets across the 18 participating countries and the research showed huge differences.

We are now looking at how gaps between countries can be addressed by action at the EU level. This includes discussions with our partners and ANEC regarding the issue of how to support efforts to keep children rear-facing longer and how to monitor progress in vehicle safety.

Many of the proven good practices currently supported by evidence in Europe are not being implemented in all countries. Areas the Alliance is considering for further action include:

#### Data

- Increase the number of countries with data on exposure (e.g., child restraint use, seating position, helmet use, mode of transport to school, etc.), including the issue of standardisation of data to allow European comparisons;
- Increase the number of countries with valid data on injuries;
- Ensure access to timely data. Health sector data in international datasets are often 4-5 years behind which can limit the utility of the resulting information dismissed as being "old".

#### Passenger safety

- Increase the number of countries with legislation requiring children to remain in the rear seat until they reach the age of 12 and remain in rear facing child passenger restraint until the age of 4 years;
- Increase availability and affordability of child safety restraints, particularly for low income families.

#### Pedestrian safety

- Increase the number of countries with enhanced infrastructure to support safe walking (e.g., sidewalks, traffic calming measures, urban planning);
- Support efforts to require redesign of car fronts/bumpers;
- Encourage transfer of evidence-based practices that encourage safe walking (e.g., safe routes to school).

#### Cycling safety

- Increase the number of countries with legislation requiring use and correct fit of bicycle helmets.
- Increase the number of countries with enhanced in-

- frastructure to support safe cycling;
- Increase availability and affordability of helmets.

*ETSC: In some countries, children are safer simply because they travel more in cars. How can we encourage safe walking and cycling?*

Many countries do not have the infrastructure to support safe walking and cycling. With the growing issue of child obesity and the associated chronic diseases, it is important that all levels of government begin to plan how to transfer proven good practices to increase safe walking and cycling. Initiatives that have served to mobilise local communities and encourage multi-sectoral collaboration, such as Safe Communities and Healthy Communities, will aid and should be encouraged.

*ETSC: You are not only working on road safety. Which successful measures could be transferred from one area to the other?*

The greatest advances in child injury prevention have been made in the area of road safety. The multi-pronged approach that road safety has taken, developing strategies that include engineering, legislation, standards, enforcement and education provides a good example of how to combine approaches for success. Similar multi-pronged approaches are needed as well for other areas of child injury.

*ETSC: What are your hopes for the future?*

We hope to see all countries implementing and evaluating a national comprehensive government endorsed child safety action plan that covers all areas of child safety including road safety. We hope to see increased involvement of industry and other stakeholders in the development, implementation and evaluation of those plans. We hope to see strengthening of regulations and more accountability for adhering to those that exist. Ultimately we hope that more children in Europe will grow up injury free.



Morag is Programme Manager at the European Child Safety Alliance where she manages the Child Safety Action Plan (CSAP) project. The Child Safety Action Plan project is a large scale initiative whose aim is to develop government endorsed

national action plans in European countries and contribute to the uptake of proven prevention strategies.

<http://www.eurosafe.eu.com/csi/eurosafe2006.nsf/wwwVwContent/l2europeanchildsafetyalliance.htm>

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ETSC is grateful for the financial support provided for the Road Safety Performance Index (PIN) by Toyota Motor Europe and the Swedish Road Administration.

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