



ETSC Pin Report 26.2.18 www.etsc.eu/PINFlash34

Reducing child deaths on EU roads

More than 8000 children have been killed in road traffic collisions over the last ten years in the EU.

8100 CHILDREN DIED ON EU ROADS IN THE LAST TEN YEARS

Countries with a good child road safety record tend to have a good overall road safety performance characterised by a well-established and integrated approach.

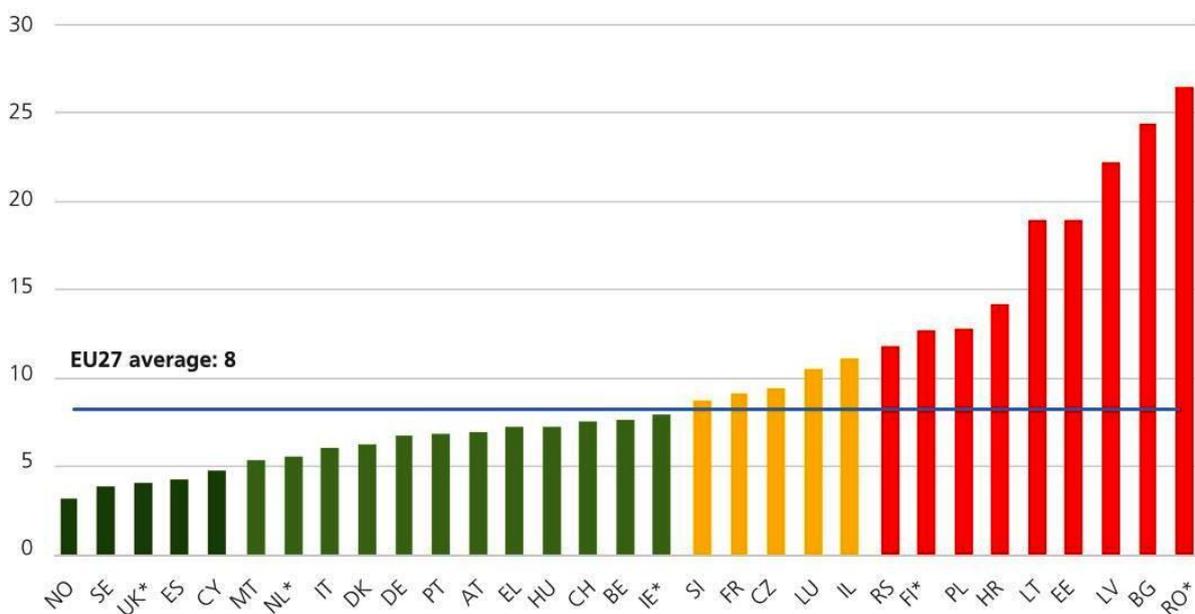


Fig.1: Child Road Death per Million child population (average 2014-2016)

“Children are always the innocent victims of a transport system not so well designed by adults” Jeannot Mersch FEVR president

Every year 48% of all children killed on EU roads die as motor vehicle passengers

Incorrect fitment of child restraints:

Many parents are either unaware how to fit seats or given incorrect advice at the point-of-sale.

According to the ESRA survey, 27% of road users think that instructions for using child restraints are unclear. The survey revealed that unclear instructions are linked to lower usage of child restraints.

The impact of these deaths and life-changing injuries on families and communities is immeasurable. But they also carry an economic cost, which diverts resources that could have been used for education, improving health

“Lucky Child road deaths have decreased faster than other road deaths.”

Mortality increases steeply after 13 Children aged 10-13 have higher road mortality than children aged 5-9. As part of normal child development, children aged 10-13 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 powered two wheelers and cars, their road mortality starts to increase steeply

Figure 11 8 (www.etsc.eu/PINFlash34) shows that in Slovenia, Luxembourg, Poland, Croatia, Israel, Denmark and Hungary the reduction in serious child road injuries was over 3.5% more each year than the reduction in other serious road injuries over the last ten years

All child car seats currently sold in the EU must conform to the **European Union Directive 2014/37/EU17** on the compulsory use of safety belts and child-restraint systems in vehicles. According to this Directive, child-restraint systems used in the EU have to comply with UN Regulation no.4418 or UN Regulation no.12919, also known as i-Size. Even though two regulations co-exist together, the EU is encouraging a preference for ISOFIX-based i-Size seats for children up to about 105 cm (about 4 years old)

To encourage the use of child restraints, **EU Directive 77/388/EEC** includes child seats in the category ‘essential product’ on which VAT can be charged at a lower rate. However, just a few EU Member States took advantage of the possibility to reduce VAT for child restraints and make them more affordable for all parents. The VAT level for child seats in Portugal and the UK is 5%, in Cyprus and Poland 8%, in Croatia 13%. To ETSC’s knowledge, other EU countries have not introduced a VAT reduction for child restraints.

Rear-facing child seats provide better protection: More children under 4 years would survive collisions if they were seated in rearward facing child seats.

Children’s bodies are small, the head is large and heavy in relation to the body, the neck is weak and fragile. In the case when the child is seated in a forward-facing seat and a car is involved in a frontal collision, the child’s head and arms are thrown forward and backward with a violent force stretching or even breaking the spinal cord. In such a collision scenario, a rearward-facing seat absorbs the violent forces better as it keeps the child’s sensitive head and neck fully aligned

Euro NCAP pedestrian protection tests evaluate the most important vehicle frontend structures such as the bonnet and windshield, the bonnet leading edge and the bumper. In these tests, the potential risk of injuries to child and adult pedestrian head, adult pedestrian pelvis, upper and lower leg are assessed. In 2016 Euro NCAP started testing and rewarding an Automated Emergency Braking System with pedestrian detection. However, in general, car manufacturer improvements in pedestrian protection have been slower than those for occupant protection

Some ETSC Recommendations:

Conduct nation-wide awareness campaigns educating parents about the importance of child restraints and correct fitment.

Set enforcement targets and enforcement plans for child seats and seatbelt use.

Make rear-facing child seats mandatory for as long as possible, preferably until 4 years of age pending such action by the EU.

Support health and non-governmental organisations to include child restraint usage information in their programmes.

Within the framework of the 5th EU Road Safety Action Programme, adopt a separate target for reducing road deaths and serious injuries among children and develop accompanying measures.

Develop mandatory requirements for safer goods vehicles for improved cabin design and direct vision.

Extending the size and positioning of mirrors, introducing cameras and detection systems that can detect and warn of cyclists and pedestrians in 2020 for new types.

Mobility and child road safety Concerns over child safety and security have contributed to the **increase in the number of parents driving their children to school. When car traffic increases, pedestrian and cyclist safety is reduced, together with the quality of life of children exposed to a polluted environment.** This decline in safety in turn leads to more parents driving their children to school, resulting in a vicious cycle. Another cause of concern is that habits children develop in their youth may determine how they choose to travel later in their adult lives.

By walking or cycling to school, children can become more aware of their surroundings and develop road safety skills, and also improve their ability to anticipate other road users' actions.

Besides the road safety benefits, walking and cycling contribute to improved physical and mental health of children by tackling child obesity and increased socialisation. Keeping children healthy, safe and mobile requires a balance between encouraging and allowing them to move about freely and safeguarding them in the road environment.³¹ Safe walking and cycling routes in a wide area around schools, with low speed road design for motorised traffic are essential for keeping children in traffic safe

30% of all children killed are pedestrians and 13% are cyclists

Most serious collisions involving child pedestrians and cyclists are collisions with motorised vehicles.

Due to their small stature, children are less visible to drivers



The banner features a green header with the text "FOURTH UNITED NATIONS GLOBAL ROAD SAFETY WEEK" and "8-14 May 2017". Below this, a white box contains the text: "Every year 100,000 children are injured in road traffic crashes in Europe, and more than 1,300 die of it. Please drive carefully and help make our roads and streets safer. A message from the European Federation for Road Traffic Victims. www.fevr.org". At the bottom of the banner are four logos: a red heart with "30 km/h", the United Nations logo, a blue and green "Save Lives #SlowDown" logo, and the FEVR logo.

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A leading recommendation of both the OECD and UNICEF is to reduce **speed limits to 30 km/h** in residential areas and around schools and playgrounds, a practice that has proved to be effective. A combination of traffic calming measures, such as roundabouts, road narrowing, chicanes and road humps are helpful in 30km/h zones to make it easier for vehicle drivers to adhere to the legal speed limit. 30km/h zones should be set up on routes to schools and around bus stops, pedestrian crossings, dedicated pedestrian and cycling paths and safe drop-off and pick-up points. A number of European countries are introducing 30 km/h zones supported by speed calming measures around schools.

ETSC Recommendation: Design road environments in ways that recognise children’s capabilities and limitations. This will also benefit other road users. Implement **30 km/h zones together with traffic calming measures to reduce vehicle speeds** in residential areas, on the way to schools and around bus stops.

Young children are not little adults. They have physical and cognitive limitations that make them more vulnerable in road traffic than adults.

ETSC is also calling for EU Member States to introduce well-enforced 30 km/h / 20 mph zones in areas with high levels of walking and cycling, and around schools.

Difficulties for children arise when dealing with complex situations which require simultaneous processing of more than one feature. Children also find it challenging to apply abstract knowledge to concrete situations and to use what they have learned in new situations.

Adult road users have to be educated to understand the limitations of child behaviour in traffic and the responsibility for keeping children in traffic safe has to be shifted towards adults.

ETSC Recommendation: Shift the focus of responsibility for child road safety towards drivers and other adult road use.

Pre-hospital care

At the scene of a collision, prompt high-quality pre-hospital care can save many lives after a road traffic collision has occurred. Pre-hospital care is most effective if their equipment, training, infrastructure and operations are standardised. Medical emergency vehicles need to be equipped with supplies and medical devices for children as well as for adults.

In addition, staff needs to be trained on how to evaluate and manage child injury. What is normal for an adult treatment may not necessarily be normal for a child treatment and vice versa. Pre-hospital clinicians should understand the patterns of injury seen in children. These patterns vary according to age and, by understanding what they are, morbidity and mortality can be reduced. The early initial treatment in the pre-hospital setting and subsequent informed advanced warning to the hospital will lead to better preparation and the deployment of appropriate resources to deal with the injuries, so improving clinical outcomes.

ETSC Recommendation: Train medical pre-hospital care staff to evaluate and manage child injury.

The report also shows that absent, inappropriate or incorrectly fitted child seats remain a significant problem across the EU.

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HALF OF CHILD DEATHS ARE CAR OCCUPANTS



ONE THIRD ARE PEDESTRIANS



13% ARE CYCLISTS



ONE IN EVERY 13 CHILD DEATHS IS THE RESULT OF A ROAD COLLISION

TECHNOLOGIES THAT CAN IMPROVE ROAD SAFETY FOR CHILDREN



INTELLIGENT SPEED ASSISTANCE



AUTOMATED EMERGENCY BRAKING (with pedestrian and cyclist detection)



CORRECTLY FITTED AND APPROPRIATE CHILD RESTRAINT SYSTEMS



ETSC RECOMMENDS

PROPERLY ENFORCED 30 KM/H ZONES IN AREAS WITH LARGE NUMBERS OF PEDESTRIANS AND CYCLISTS AND NEAR SCHOOLS.

