

survey will be repeated in November 2015. According to the survey 54% of the PE and HE teachers knew TEKO. 50% estimated that the content they use in sports safety education has been expanded and the methods are now more diverse. Teachers who had used TEKO material at schools were pleased to it, mean grades (scale of 4–10): expertise 9.0, exterior 8.7, feasibility 8.6 and suitability for the target group 8.3.

Conclusions The reach of teachers has been rather good with the used methods and financial investment 120000 € per year (mostly funded by the Ministry of Education and Culture). The repeated survey will give more information about the stabilisation of TEKO to the basic school work.

Traffic Safety

Parallel Mon 1.3

75 THE RISING GLOBAL BURDEN OF ROAD INJURIES

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Background The Global Burden of Diseases, Injuries, and Risk Factors Study, 2010 was established to provide reliable estimates on the leading causes of death and morbidity in populations worldwide and how these are changing over time. The aim of this paper is to present the findings of the study in relation to road injury in order to inform policy debates in the area of road safety.

Methods Information on death and morbidity was obtained from various sources (vital registration, verbal autopsy, surveillance, censuses, surveys, hospitals, police records, etc.) for 187 countries. DALYs were calculated as the sum of years of life lost (YLLs) and years lived with disability (YLDs). YLLs were calculated from age-sex-country-time-specific estimates of mortality and death by standardised lost life expectancy at each age. YLDs were calculated as prevalence of disabling sequelae, by age, sex, and cause; and weighted by new disability weights.

Results The number of deaths related to road injury increased by 43.6% from 908,000 in 1990 to 1.329 million in 2010. This rise was mainly due to pedestrians deaths which increased by 62.3% from 284,000 in 1990 to 461,000 in 2010. Road injury was the leading cause of death among males aged 15–49 years in 2010. Road injury moved from being the 14th cause of YLL globally in 1990 to 8th in 2010. In term of DALYs, road injury also moved from 12th position in 1990 to 10th in 2010. Regional analysis shows road deaths in east Asia, south Asia, and eastern and western sub-Saharan Africa rapidly escalating over the past two decades, whereas in high-income areas with a history of road safety programmes such as western Europe, high-income North America, Australia and New Zealand road deaths have decreased.

Conclusions Despite various global road safety initiatives, the burden from road injury globally continues to rise, particularly amongst pedestrians. Continued efforts from all sectors are needed in order to address this growing challenge.

*List of all collaborators (a few hundreds) and their affiliations will be provided as part of the presentation at the conference, if the abstract is accepted.

76 EUROPEAN FACTS AND THE GLOBAL STATUS REPORT ON ROAD SAFETY 2015

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Background Road traffic injuries are the leading cause of premature death in young people aged 5–29 years in the WHO European Region. The Decade of Action for Road Safety 2011–2020 was adopted by the United Nations General Assembly in 2010 to reduce the global toll of road traffic injuries by 2020.

Methods This fact sheet describes the status of road safety in 52 out of the 53 Member States of the WHO European Region, representing 95% of the Region's population. Experts from several sectors in each country reached consensus to complete a self-administered questionnaire. Furthermore, an independent expert analysis of national legislative documents was conducted.

Results In 2013, there were almost 85 000 deaths from road traffic injuries in the WHO European Region. Although the regional mortality rate is the lowest when compared to other WHO regions, with 9.3 deaths per 100 000 population, there are wide disparities in the rates of road traffic deaths between countries of the Region. This requires more systematic efforts if the global target of a 50% reduction in road crash deaths is to be achieved by 2020. Laws and practices on key risk factors such as regulating speed appropriate to road type, drink-driving, and use of seat belts, motorcycle helmets and child restraints are assessed to reduce the risk of road traffic injury. While 95% of the population in the Region is covered by comprehensive laws in line with best practice for seat belts, only 47% of the population is adequately protected by laws for speed, 45% for helmet use, 33% for drink-driving and 71% for use of child restraints.

Conclusions Many countries need to further strengthen their road safety legislation and enforcement in order to protect their populations, improve road user behaviour and reduce the number of crashes. Much can be gained from improving the safety of vehicles, having better road infrastructure and promoting sustainable physically active forms of mobility as alternatives to car use. Concerted policy efforts with systems approaches are needed to protect all road users in the Region.

77 REPORTING ROAD TRAFFIC SERIOUS INJURIES IN EUROPE. GUIDELINES FROM THE SAFETYCUBE PROJECT (H2020)

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Background Reliable data on the number of serious road injuries is a prerequisite for monitoring and evaluation purposes. In January 2013, the High Level Group on Road Safety representing all EU Member States established the definition of serious injuries as in-patients with an injury level of MAIS3+ (Maximum Abbreviated Injury Scale). Since then it is recommended that all EU countries provide data of serious injuries. The High Level Group identified three main ways Member States can estimate the

number of serious road traffic injuries: 1) by applying correction factors on police data, 2) by using hospital data and 3) by using linkage between police and hospital data. Quality of data and method differ between Member States. The impact of this heterogeneity on final estimations is unknown. We aim to analyse the impact of a) the criteria used to select hospital casualties, b) on the converter to derive MAIS, and c) on the method used on the reliability of the estimation and the comparability across countries.

Methods Three sub-studies will be carried out:

- A cross-sectional study of Hospital Discharge Data. This study will define criteria for inclusion/exclusion based on codes of the classification of diseases/injuries used (ICD9, ICD10, and AIS).
- A sensitivity analysis to assess the impact of obtaining MAIS from different methods (codifying directly with AIS, or converting from ICD diagnosis with Icdpic (stata), ICDMAP-90, ECIP-Apollo, or EU-AAAM).
- Comparison of the three methods to estimate number of serious injured.

Results The future results will help to report serious road traffic injuries by EU Member States with standard criteria that would allow comparisons.

Conclusions It is expected to provide specific guidelines for reporting serious road traffic injuries and to allow comparability between countries.

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IMPROVING ROAD SAFETY IN THE BALTIC STATES- ROLE OF STRATEGIES

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Background In the beginning of 90's the Baltic states' road safety fatality records were among the worst in Europe. After that period, the situation has been improved essentially, but despite of that the Baltic states still remain not the safest countries in Europe. An important role here played the road safety strategies, first developed already in 1990's. This paper analysis the safety situation developments in the Baltic states as well the role of road safety strategies, which have been slightly different in three countries.

Methods Statistical analysis on road safety data gives us a rather clear picture about the safety situation in three Baltic states- Lithuania, Latvia and Estonia. The background data hereby has been included, in order to explain the transportation situation and it's impacts on safety. The content analysis of the strategies shows the similarities and differences of the strategies introduced in different countries, as well as the impact on the safety records.

Results The results of this research shows clearly that in spite of the different strategic approach towards the road safety, the basic trends of the road safety in three Baltic states have big similarities. It proves that even the measures introduced in three Baltic states and written in strategies are different ones, the basic safety trends are influenced not only by the strategies, but also by the social impact, like motorization or spatial planning.

Conclusions The role of road safety strategies have been important in order to evaluate the safety situation as well as to rank the countries with other countries. The numeric goals, included in the strategies are important in order to follow the main safety

trends. But in spite of that, some general impact factors have been estimated to be as important as strategies. Here the main important could be listed – motorization, road network data, population, road user attitudes, etc.

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THE CRIMINAL LAW AND UNAUTHORISED AND MALICIOUS INTERFERENCE WITH AUTOMATED AND CONNECTED CARS

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Background Driverless cars are no longer a science fiction and is clearly looming in the transport horizon. Software and wireless networks are increasingly controlling all aspects of transport's landscape. Advances in technology have outpaced research in human factors and policy therefore serious questions must be asked about the legal protections of the integrity of these new systems to guarantee community's safety. Furthermore the research knowledge to understand and define the key safety issues that the community required to advance a policy action plan is still in its infancy. Specifically we do not know how effective are the deterrence and penalties within Australia's criminal law in respect to the unauthorised and malicious interference with in-vehicle computer systems?

Method We discuss existing and near-future scenarios where there might be unauthorised and malicious interference with in-vehicle computer systems. Examples range from a malcontent hacking a vehicle's system to cause it to crash, to a third-party installing spyware on a vehicle to gather private data about the vehicle's movements. We then articulate the range of criminal provisions, at a state and federal level that cover the unauthorised and malicious interference with in-vehicle computer systems. The lack of detailed case law (reflecting a very low level of prosecutions) suggests that overarching difficulties might lie with the forensics of investigation and known problems with the policing of cybercrimes.

Results We show how Australian criminal law could cover future scenarios. We demonstrate a lack of case law suggesting that overarching difficulties might lie with the forensics of investigation and known problems with the policing of cybercrimes.

Conclusion This paper will help policy makers to build up a clear understanding of the adequacies of Australian state and federal criminal law successfully support transitioning into future of cooperative and autonomous transport systems.

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DEVELOPING THE EUROPEAN ROAD SAFETY DECISION SUPPORT SYSTEM

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Background The European Road Safety Decision Support System (DSS) is one of the key objectives of the European co-funded research project SafetyCube in order to better support evidence-based policy making. The SafetyCube project results will be assembled in the form of a Decision Support System that will present for each suggested road safety measure: details of the risk factor tackled, the measure itself, the best estimate of casualty