

Child Injury Prevention: a European challenge

Programme and Abstracts

European Seminar
Milan Congress Centre,
Milano, Italy
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1. Seminar programme

Setting the scene (9.00-10.30)

Chair: Anne Lounamaa, president EUPHA/ Injury Section

Generating evidence for action: data collection and analysis

Mag. Dr. Peter Spitzer, Grosse schützen Kleine – Safe Kids

Balancing the benefits and emerging risk associated with consumer products and user behaviour

Errol Taylor, Royal Society for the Prevention of Accidents

A social marketing approach in safety promotion-

Creating supporting environments for child safety practices

Julie Huibregtsen, Huibregtsen Training & Advies Sociale marketing

Panel discussion

Coffee break (10.30-11.00)

Short five minute presentations (11.00-12.30):

Progress made in countries and at local level

Moderator: Wim Rogmans, EuroSafe

Czech National Paediatric trauma registry – a Necessity in Children's Injury Prevention,

Ladislav Plánka, Faculty Hospital Brno, Czech Republic

Preventing small children burns in Italy: the PRIUS project

Alessio Pitidis, Italian National Institute of Health, Rome, Italy

Injuries by animals among children and adolescents – data for a nationwide campaign,

Gabriele Ellsaesser, Health Department, Federal State of Brandenburg

Developing national and local programmes

Elizabeth Lumsden, RoSPA-Scotland

Products in a child's sleep environment: Baby nests and sleep positioners

Tania Vandenberghe, European Association for the Co-ordination of Consumer Representation in Standardisation, Brussels

Mandatory Bicycle Helmets for Children in Austria – Initial Trends and Effects

Monica Steiner, KFV-Kuratorium für Verkehrssicherheit, Vienna

Safe Children Community - An effective example in fulfilling the International Safe Children Indicators

Sabine Distl, GROSSE SCHÜTZEN KLEINE/ SAFE KIDS Austria

Examples how to address disadvantaged families: The German Programme “Beware: Poisonous!” - Avoid poisoning in immigrant families

Martina Abel, Bundesarbeitsgemeinschaft Mehr Sicherheit für Kinder e.V., Safe Kids Germany

Scotland's Home Safety Equipment Scheme - What work has been undertaken to reach high risk families, including new parents and the disadvantaged?

Christie Burnett, RoSPA-Scotland

Activities to reduce child injuries through primary health care in Croatia

Aida Mujkic, University of Zagreb, School of Medicine-Andrija Štampar School of Public Health

Injury prevention in Finland among people under 25 in 2009–2014

Ulla Korpilahti, National Institute for Health and Welfare, Finland.

Lunch break (12.30-13.30)

Safety communication challenges (13.30-15.00)

Chair: Brigitte Buhmann, Swiss Council for Accident Prevention

Electrical safety: best practices in awareness raising

Phil Buckle, Electrical Safety First

Safe transportation: addressing improper use of safety equipment

Remco Schouten, Dorel Juvenile Europe

Reaching out to new parents: new communication tools and social media

Ine Buuron, Dutch Consumer Safety Institute

Safety culture and safety education in schools

Brita Somerkoski, National Institute for Health and Welfare

Discussion

Tea break (15.00-15.30)

The way forward (15.30-17.00)

Chair: Eva Vaagland, EuroSafe Executive Board member

Intersectoral action for child injury prevention: which sectors to involve?

Beatrice Scholtes, University Maastricht

Secrets to successful partnerships and national leadership

Morag Mackay, European Child Safety Alliance (tbc)

Panel discussion on the way ahead

All seminar participants

Close (17.00)

About the organisers

EUPHA

The European Public Health Association (EUPHA) aims to contribute to the improvement of public health in Europe. The 8th European Public Health Conference offers a unique opportunity for exchanging information and for debate among researchers, policy makers, and practitioners in the field of public health.

The EUPHA Injury Section aims to: a) increase awareness of injury and violence prevention and safety promotion in the broader public health community, b) increase the visibility of issues related to injury and violence prevention beyond the community of injury researchers, c) strengthen the links between researchers, policy makers and practitioners; d) support the dissemination of research results and their implementation into practice.

EuroSafe

The European Association for Injury Prevention and Safety Promotion (EuroSafe) is a non-governmental organisation, representing organisations and individuals working in fields of injury prevention and safety promotion.

EuroSafe is the lead organisation for the exchange good practices in injury research and prevention in Europe through its networking programmes, publications and the series of annual European Injury Seminars. It is in official relationship with the World Health Organization's programme for violence and injury prevention and disability.

European Child Safety Alliance

The European Child Safety Alliance was launched by EuroSafe in 2000 with the ambition to make the lives of children living in Europe safer.

Today, more than 30 countries across Europe are working together to reduce the leading cause of death, disability and inequity to children in every Member State in the region. Child safety experts from across Europe come from diverse fields and settings, including medicine, public health, psychology, education, engineering and government, to share and advocate for what works in child injury prevention to benefit children and their families.

The European Child Safety Alliance is hosted and operates out of the Royal Society for the Prevention of Accidents in Birmingham, England since January 2011.

2. Abstracts of full paper presentations

Generating evidence for action: data collection and analysis
Mag. Dr. Peter Spitzer, Grosse schützen Kleine – Safe Kids

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Intersectoral action for child injury prevention: which sectors to involve?
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Morag Mackay, European Child Safety Alliance (tbc)

Generating evidence for action: data collection and analysis

Peter Spitzer, Head Research at GROSSE SCHÜTZEN KLEINE - Safe Kids Austria

In Austria relevant information on injuries is available in national data sets on mortality, traffic accidents (no medical information included) and on accidents at school. The IDB is also a good instrument to get an overview of accidents but there is no way to gain local relevant data.

In order to fulfil its injury prevention objectives, Safe Kids Austria is continuously looking forward to find effective ways of analyzing injury data for intervention and evaluation of injury prevention programs. In 2007 Safe Kids Austria introduced for instance a broad Safe Children Community Programme in the district of Deutschlandsberg (comprises 39 communities with 60,000 inhabitants, including 9,500 children aged 14 and under). Today this project is covering two additional nearby districts, which means that the intervention area has tripled.

To identify risk areas of local children and teenagers we analysed the national data first, but the information gained was not satisfactory. Therefore it was necessary for us to design a new way of gaining these data, of gaining detailed information about the accident and to program an interface for data analysis and for standardized reports.

Children who sustain an injury in a specific area are mostly treated in the local hospital or (seldom) by the general practitioner. Severe cases are referred to a children's trauma centre. Therefore, for identifying local risk areas or creating intervention strategies it is important to cooperate with these local practitioners and mainly with the local hospitals where the target group is treated.

In close cooperation with hospital departments a standardization of the data collecting process and an implementation in the medical documentation system is necessary – on the one hand for continuous and ongoing surveillance (as a basis for intervention activities) and on the other hand for the evaluation of comprehensive safe community projects.

By collecting and analysing all data available from these sources in the above mentioned districts, almost all injury cases that required medical treatment could be retrieved from the various hospital registration systems in the above mentioned districts.

As a result of the close and fruitful cooperation with (local and trauma center) hospitals it was possible to integrate an injury database in the medical documentation system on the basis of a three-level collecting concept. Furthermore we are able to match accident data with medical data and break them down to a local level.

Owing to our approach, we can now state that 95% of all injuries that happened to children in this specific area are covered by our surveillance system, and that within a time period of five years (2007 to 2011) a Safe Children Community project can decrease the number of injuries to children - in relation to the injury rate - by 7%. From an economic point of view, € 1 spent on the project saved at least € 2 on direct treatment costs and € 7 of the overall economic costs of child injury.

Balancing the benefits and emerging risks associated with consumer products and user behaviour

Errol Taylor, Deputy Chief Executive Royal Society for Accident Prevention, UK

The United Kingdom is now one of the world's safest countries in which to work, travel and play. This enviable record is the result of decades of investment by government, organisations and individuals in education, engineering and enforcement. However, while fatal road and workplace accidents have fallen to historically low levels, we are seeing a near exponential rise in the relatively neglected areas of fatal home and leisure accidents.

Home and leisure now account for 85% of fatal accidents in England & Wales. Although very few people under 19 years of age die, accidents account for 60-70% of these tragedies. Accidents are the leading cause of death up to 39 years of age and the leading cause of preventable years of life lost for most of our lives.

New RoSPA analysis shows that accidents are also the leading cause of preventable hospital admissions and attendances at hospital emergency departments, with children and young people again accounting for most of these.

The UK's first drowning prevention strategy highlights the challenge of making the most of water while limiting the number of drownings. Scotland, with its large amount of low temperature fresh and salty water, suffers from a disproportionate drowning problem among men. Local awareness campaigns and drowning prevention strategies are needed to address this challenge.

In the home, under 5s and over 75s are particularly vulnerable to falls. Parental education and equipment such as safety gates can reduce the risk, particularly among inquisitive toddlers. With the country's ageing demographic profile, far more people are now living well into their retirement. A combination of medication, dizziness caused by a drop in blood pressure, poor lighting and trip hazards can make a night time visit to the bathroom particularly hazardous. The severity profile of hospital Emergency Departments suggests that while road traffic accidents are particularly brutal, home accidents are almost as severe. In the case of many elderly people, falls are so severe that they are life-changing and take away independence.

The newly available Oxfordshire Emergency Department data is producing fascinating insights about leisure injuries. Many injuries are associated with popular participatory sports such as soccer, rugby, horse-riding, cycling and hockey, stressing the need for appropriate warming-up, refereeing, preparation, training and personal protective equipment such as helmets and padding.

Among 4-12 year olds, garden trampolining is associated with a significant number of hospital-treated injuries. Against this risk of injury, trampolining is fantastic fun and it encourages friends to socialise while exercising. It is therefore important not to frighten increasingly sedentary children from taking part.

Design and product specifications are changing the nature of injuries. The increased use of net enclosures has reduced the risk of falling off and fracturing legs but this has been offset by growing numbers of awkward landings causing upper limb fractures (elbow, wrist, fore arm and collar bone). RoSPA is working with the sector to improve product design and instructions while encouraging participants to learn from experts before attempting challenging jumps at home. Participants are also encouraged to bounce one at a time, not to mix alcohol with trampolining and not to let dads bounce at the same time as small children.

A social marketing approach in safety promotion - Creating supporting environments for child safety practices

Julie Huijbregtsen, Social marketing consultant, Founding member European Social marketing Association

Child safety prevention and Social Marketing, a natural partnership?

Are you a professional, facing the challenges of behavior change everyday? In health, environment, education, safety ...? With lot's of experience and skills, but still longing for more impact on your target audience? You're now probably wondering how Social Marketing can be of service to you. This presentation tells you surprisingly about elephant-trails and how they can help you understand the power of Social Marketing in child safety challenges.

First of all; Social Marketing is about creating something for your target audience that is truly valued. Professionals nowadays are looking for new ways to reach their target audience even better and increasing the effect of their programs. Social marketing helps you to invite and tempt people to adjust their behaviour with an offer they can't refuse.

"Social Marketing integrates marketing concepts with other approaches to influence behaviours that benefit individuals and communities for the greater social good" (European Social Marketing Association, 2014). In practice: Social marketing helps you to reach the right target audience at the right time, with the right advice or message. And what's right? When you attract those people who can really benefit from your service or advice, who otherwise would have made different and probably less safe choices, who now feel truly supported by your advice or service instead of being patronized.

In practices Social marketing searches for deep insights of a target audience in order to influence their behaviour in a positive way. By gaining more in-depth knowledge about the motivation and (perceived) barriers of the target audience. By observing, interviewing or participation. By using your true curiosity as a professional skill, really wanting to understand why people do not take your advice into account and act unsafe. Without judgement, out of a sincere need to understand their motivation, with respect for their barriers or perceptions. Taking these insights into account while designing an approach to really influence their behaviour. Which will make the final intervention even more consumer-based and therefor more actively adapted by the target audience.

This brings working on a client-friendly bases or demand-driven to a higher level. Taking the deep insights of your target audience very seriously, considering their motivation as the most important success factor in changing one's behaviour. Always hand in hand with the professional knowledge and experience you bring in.

The most famous example of a Social marketing approach is one on child safety seats (USA). This is not a coincidence, since child safety is all about behaviour, perception and self-efficacy of parents and their children. How marketing principles can broaden and deepen a child injury prevention approach is the subject of this presentation.

Electrical safety: best practices in awareness raising and improving safety

Phil Buckle, Director General Electrical Safety First

Electrical Safety First – the UK’s leading electrical consumer campaigning charity – uses a range of techniques so that its activities are targeted to provide the maximum benefit to consumers.

This can best be demonstrated through an example of a recent award-winning campaign ‘*beauty burns*’, which tackled the subject of burn injuries to children from hair straighteners.

Hair straighteners, and other electrical beauty products, are seen by many as essential must-have product but they can be very dangerous, particularly to children.

Straighteners can reach temperatures of over 220°C and can take up to 40 minutes to cool down after use. They can cause severe burns if they touch the skin, with children particularly vulnerable as their skin can be 15 times thinner than adults.

The number of hair straightener burns among children has doubled in recent years and they now account for nearly one in ten burns. The majority of these incidents are when toddlers touch, grab or tread on the hot hair straightener plates. Nearly half of all adults have also received a burn from a heated hair appliance.

Adopting a three stage approach, the Charity sought to:

- raise awareness of the issue and influence behavioral change amongst adults work with industry partners to provide protective heat-pouches free of charge
- build the case for influencing a change to the product standard

The presentation will go through each stage of the campaign, highlighting the approach taken and evaluating the impact the campaign had..

Significant progression still to be made in installing and using car seats

Remco Schouten, Product Manager, Maxi-Cosi / Béb  Confort

Car seats are needed to make travelling by car for children safe and comfortable, but they need to be installed carefully and used correctly in order to be effective. In fact the safety of children in cars is mainly dependent on three aspects: 1) using the correct type car seat for the child's stature, 2) installing the car seat correctly in the car and 3) installing the child correctly in the car seat.

Working together to improve child safety

Maxi-Cosi teamed up with the Task Force Child Safety in the Netherlands in 2013 with the mutual goal to reduce child-injuries and allowing children to grow up safely. Other members of the Task Force are the Erasmus MC Hospital Rotterdam, Wilhelmina Child Hospital Utrecht and VeiligheidNL (SafetyNL).

The Task Force decided to perform an observatory market research in order to acquire more information about the safety situation of young children (aged 0-4 years) in cars. At different locations in the Netherlands, a total of 238 cars were stopped on the road and the safety situation of 309 children was assessed.

The research showed that 99% of the parents were using a car seat and were convinced that their children were safe. However, examining the situation further revealed that 73% of the children were actually not in a safe situation:

- 14% of the children were not in the correct size car seat but often in a car seat that was too large for them.
- 33% of the children sat in a car seat that was not installed correctly in the car, the most problematic being car seats that are installed with the vehicle's seat belt.
- 41% of the children were not installed correctly in the car seat.

It is clear that this 73% is too high and that this gap must be closed. The Task Force Child Safety launched an extensive communication campaign to communicate the findings making parents aware and providing them useful tips. A dedicated website was built with clear instruction movies, and folders were created and distributed. As a market leader for car seats Maxi-Cosi also took a large part in the campaign by developing additional materials for baby stores and an important activation on the brand website.

After years of proven success of governmental awareness campaigns, today child safety campaigning is no longer a priority for the Dutch government. However such awareness campaigns are very effective to provide information and significantly change behaviour. This campaign was an important first step in continuing to make parents aware of the situation and providing them useful tips. Therefore it is a real pity that the government did not participate.

The introduction of i-Size (R129)

Another very promising development is the introduction of the new i-Size (R129) legislation for car seats. This legislation was launched at the end of 2013 next to, and not replacing, the existing ECE R44 legislation. i-Size (R129) increases child safety significantly and addresses many of the shortcomings that were revealed by this study. A length classification of car seats is introduced which determines correct fit much more accurately than weight. i-Size (R129) also introduces a mandatory ISOFIX installation for car seats that significantly reduces the chances of incorrect installation. In addition, the period in which children travel in a rearward-facing position is prolonged until 15 months where forward-facing travel from 9KG was possible before.

Further information:

- *Veilig vervoer van kinderen van 0-4 jaar in de auto - Rapport observatie onderzoek Task Force Child Safety (Chair: E.F. van Beek of the Erasmus MC)*
- <http://autostoeltjes.veiligheid.nl/autostoeltjes/>
- <http://maxi-cosi.com>

Reaching out to new parents. New communication tools and social media.

Ine Buuron, Senior Consultant, Consumer Safety Institute, the Netherlands

New customer insights from various studies conducted over the last few years among new parents, compelled the Dutch Consumer Safety Institute to change its strategy for child safety education, a strategy that had been successfully put in place over the past two decades. This led to the development of a new approach with the help of local health professionals, which was deployed nationwide as of January 2015.

Insights

The information need of parents on child safety issues is already prevalent during pregnancy. 'Customer journeys' show parents buy cots, sitters, CRS, etc. as of the 2nd month of pregnancy. Providing parents with product safety information when the child is born, is therefore simply too late. The second insight concerns the behaviour of parents when the child is born. Especially, new parents are f.i. nearly always too late installing a stairgate or safely storing cleaning products. Moreover, no child develops at the same pace. Information on child safety should therefore follow the child's development stage rather than the child's age.

The education practice of local health professionals is also changing. They have less time to educate parents on child safety, because other issues such as nutrition and the support to multi-problem families get priority. Professionals therefore ask us to make sure to reach as many parents as possible with basic safety information through all available media.

Previous approach

A nationwide top-down protocol was in place helping local nurses and pediatricians educate parents with age specific safety information leaflets. Parents could find further information on the website of Consumer Safety Institute. 80-90% of the local clinics still participate in this programme. Every year 280.000 leaflets are being handed out. With this approach 45% of parents with children aged 0-4 years is reached.

Although this approach seems pretty efficient, it is no longer as sufficient as we would want it to be. More and more parents search for (safety) information on the internet and social media. Professionals are not anymore their primary source of information for young parents, as parents rely more and more on the information they get from family and friends (both real time and online).

New approach

A two-pronged approach of parents is developed consisting of communication efforts directly aimed at new parents and an additional process of cascading information through a wider network of local health professionals:

-The direct communication efforts will focus more intensively than before on tailoring communication messages to the information need of new parents (demand-driven). For that purpose a well known Dutch online platform for pregnant women is daily monitored, on-site campaigns and columns/blogs in magazines are regularly launched, and our messages are being boosted on Facebook and Twitter with Google advert, facilitating for instance parent to parent campaigns. New products are developed, including a new set of safety information leaflets, Youtube films/animation, online tutorials, video press releases and apps.

-the second track aims to increase the cascading of information through networks of professionals. The network of paediatricians and nurses in the local clinics is being extended by including local networks of midwives and maternity care service staff. Each professional group is expected to hand out an appropriate safety information leaflet. The midwife provides parents with the leaflet on child safety products, the maternity care hands out the leaflet on safe sleeping (prevention of SIDS), and the clinical specialists the one on safety at home. We support all professionals with regular online newsletters, personal e-mails with updates on new child safety products and with training such as an e-learning on the prevention of SIDS.

Results

The previous approach was proven effective, as we managed to reduce injuries over the last decade by an average of 27% , saving the community nearly 6 million euro's every year. Our new approach was tested in 2 pilot regions in 2014. The now nation-wide deployment is being monitored again. For this year we aim at reaching an average of 60% of all professionals, hoping to expand in the next few years.

Safety culture and safety education in schools - Implementing safety culture in Finnish schools

Brita Somerkoski, Senior Research Fellow, National Institute for Health and Welfare, Finland

During the past few years the incidents of extreme violence and the increase of unintentional injuries and accidents have created situations where new safety procedures are needed. The Basic Education Act in Finland states that “A pupil participating in education shall be entitled to a safe learning environment.” Also according to the target programs and visions, safety and wellbeing can be seen as basic values of society.

Safety related topics are scattered across in the different school subjects such as environmental science, biology, physics, chemistry and health. A recent learning assessment (n=1198) of safety and traffic showed that the level of *knowledge* was fairly good but the *ability to act* was below average. It is stated that more effort should be put on safety *implementation*. In order to better enhance the values of the society there should be enough skill-related practical content in the basic core curriculum. Lately Finland completed the reform of the National Core Curricula for pre-primary education and for compulsory basic education (6–16 years). Schools will start working according to the new curricula in autumn 2016. The National Core Curricula were compiled in an extensive, open and transparent collaboration process where the Finnish National Board of Education worked side by side with municipalities, schools and teachers, and with teacher trainers, researchers and other key stakeholders.

The new national core curriculum contains broad-based competence issues such as *looking after oneself, managing daily activities and safety*. The renewed curricula also include more practical safety issues such as knowing the basic safety signs and symbols, conducting appropriate behavior in traffic and avoiding dangerous situations. There is a lot of autonomy for local authorities in providing education; municipalities may develop their own innovative approaches to implement the curricula. In addition

The Developing Network of Safety in Schools (OPTUKE) has been established. The aim was to advance/promote a wide, systematic and open safety culture in schools as well as to support the process of making safety culture more visible with the help of a pedagogic point of view on safety. Especially school, youth and fire authorities, social workers, NGOs and researchers are welcome to join this open network. The strength of the network comes from its multi-agency and multi science co-operation. The nation-wide network enhances safety related discussion, organizes events, such as seminars, has regular meetings and publishes newsletters and research reports.

Also the curricula for the University of Turku, teacher education in Rauma unit have been currently renewed. The new teacher education curricula include safety and security issues such as safety competence and school subject didactical safety as well as safety in practical training. As a part of their studies the prospective teachers participate to educational lessons or debates, safety walks, fire-drills and monitoring of unintentional injuries. This is preparing the teachers to act safely when working at the school.

Intersectoral action for child injury prevention: which sectors to involve?

Beatrice Scholtes¹, Senior Researcher, Department of International Health, University of Maastricht

Background

Child injury prevention is a complex task. Numerous and varied factors contributing to child injury such as socio-economic status, family composition and age mean that injury prevention is challenging. Evidence based interventions are proven to work, however, their diversity - from intelligent street design and post-natal visits to social housing renewal - position responsibility for injury prevention among many sectors. Identifying the relevant sectors and understanding the complexity of collaboration required can be difficult and time-consuming. As a first step to understanding this issue we systematically explored which policy sectors (e.g., health, transport, education) are implicated in child injury prevention in general and in each of four domains: road, water and home safety and intentional injury prevention.

Methods

The methodology was built upon an existing approach, known as 'organigraphs'. Mintzberg and van der Heyden developed the organigraphs methodology to depict how organisations actually work. We further developed the practical application of this method to explore how interventions in child safety are developed, implemented and monitored across the local, regional, national and EU levels. Professionals working in child safety in 25 European countries were asked to draw organigraphs for an intervention in one of four child injury domains: road/water/home safety or intentional injury prevention. In addition, an EU Brussels based NGO mapped EU level governance of child safety. Interventions were selected to maximise coverage of injury issues and child age groups, as well as to represent the governance level of implementation (e.g., national, regional or local). Using an analysis framework we identified, categorised and counted the sectors presented in the organigraphs for each of the domains and overall.

Results

We received 44 organigraphs in total from 31 participants in 24 countries; nine for intentional injury prevention, nine for water safety, 12 for road safety and 14 for home safety. Twenty-seven sectors were identified across the four domains. Nine of these (education, health, home affairs, justice, media, recreation, research, social/welfare services and consumers) were present in all four of the injury domains, we labelled these 'core sectors'. When looking at each domain separately we found a varied distribution of the 27 identified sectors.

Discussion

The organigraphs depict the complex and multi-sectoral nature of child injury prevention in practice. The results highlight the breadth of governance for child injury prevention, both vertically, from the local to international level and horizontally, across diverse sectors. The identification of 9 core sectors demonstrates the importance of key sectors across the issue. However, differences between the domains, reflect diversity within child injury prevention and some of the unique differences between the four domains. The results of this study provide professionals with concrete information regarding which sectors to involve in the planning, implementation and evaluation of child injury prevention interventions.

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(1) Department of International Health, Maastricht University
(2) European Child Safety Alliance, RoSPA, Birmingham

Secrets to successful partnerships and leadership

Morag MacKay, Senior Researcher, European Child Safety Alliance

Decision makers and relevant stakeholders looking to develop and implement a child injury prevention strategy – whether it is a policy or programme - frequently ask, “What do we need to do to increase the likelihood of success?” This question stems from the very real need to maximise limited resources and demonstrate success in order to ensure continued investment.

As part of the TACTICS project the European Child Safety Alliance undertook research with partners in 26 countries with this question in mind. We started by intentionally and systematically identifying a broad range of case examples of child injury prevention strategies covering road safety, water safety, home safety and intentional injury prevention that addressed different age groupings (pre-school, primary school and secondary school age children) and levels of implementation (national, regional and local). We then explored facilitators and barriers to successful adoption, implementation and monitoring in each of the case examples. We undertook a structured analysis which resulted in the conception of eight keys, each of which consists of a number of specific issues that if addressed should increase the likelihood of successful prevention strategies.

Our analysis suggests that all eight keys are critical components to successful adoption, implementation and monitoring (AIM), although some may have a greater or lesser influence depending on the prevention strategy and the specific circumstances in which it is being considered. However two of the keys - leadership and management & collaboration - are critical facilitators of success at every stage of the AIM process.

This presentation will introduce the 8 keys to success, with a particular focus on how leadership and management & collaboration are key to ensuring success and important to addressing the other six keys.

3. Abstracts of short paper presentations

Czech National Paediatric trauma registry – a Necessity in Children's Injury Prevention,
Ladislav Plánka, Faculty Hospital Brno, Czech Republic

Preventing small children burns in Italy: the PRIUS project
Alessio Pitidis, Italian National Institute of Health, Rome, Italy

Injuries by animals among children and adolescents – data for a nationwide campaign,
Gabriele Ellsaesser, Health Department, Federal State of Brandenburg

Developing national and local programmes
Jennifer Henderson, RoSPA-Scotland

Products in a child's sleep environment: Baby nests and sleep positioners
Tania Vandenberghe, European Association for the Co-ordination of Consumer Representation in
Standardisation, Brussels

Mandatory Bicycle Helmets for Children in Austria – Initial Trends and Effects
Monica Steiner, KfV-Kuratorium für Verkehrssicherheit, Vienna

Safe Children Community - An effective example in fulfilling the international safe children indicators
Sabine Distl, GROSSE SCHÜTZEN KLEINE/ SAFE KIDS Austria

Examples how to address disadvantaged families: The German Programme "Beware: Poisonous!" -
Avoid poisoning in immigrant families
Martina Abel, Bundesarbeitsgemeinschaft Mehr Sicherheit für Kinder e.V.,
Safe Kids Germany

Scotland's Home Safety Equipment Scheme - What work has been undertaken to reach high risk
families, including new parents and the disadvantaged?
Christie Burnett, RoSPA-Scotland

Activities to reduce child injuries through primary health care in Croatia
Aida Mujkic, University of Zagreb, School of Medicine-Andrija Štampar School of Public Health

Injury prevention in Finland among people under 25 in 2009–2014
Ulla Korpiolahti, National Institute for Health and Welfare, Finland.

Czech National Paediatric trauma registry – a Necessity in Children's Injury Prevention

Plánka L., Starý D., Gál P., Faculty Hospital Brno, Czech Republic

National registry of child accidents in the Czech Republic gradually developed since 2004. At that time the Czech Republic was among the countries with high mortality rates of children in injury. Every year about 300 to 400 children died on injury (Population 10,5 mil. Inhabitants). In 2004 the first database was established, which collected data on serious injuries to adults and children, and from the start it was obvious that the child's injuries are very specific and require detailed analysis.

Between 2004 - 2008 was carried gradual replenishment of the data set, and in the development of trauma database was involved in all of Pediatric Trauma Centres (total 8 established in the Czech Republic). In this period they were pediatric patients hospitalized for trauma in these centers entered into the registry and analysis grew in importance. It was in this period that authors were acquainted with the Injury Database (IDB) and included in the data set, the data IDB.

In 2010 there was pilot study, which was obtained data on child injuries from regional hospitals across the Czech Republic. Data collection was carried out without major problems, and between 2010 and 2011 to obtain about 9,000 records per year, which accounts for about 30% of all hospitalized injured children. From this period, the injury data in the IDB diagram used as a basis for prevention activities and their impact on the creation of the requested analysis (injuries at playgrounds, sports injuries at schools) and for periodic assessment of the state of children's injuries in the Czech Republic.

From the data collected much information could be derived about unknown or emerging risks, and helped to develop preventive measures across the country. This led to a gradual decrease in the number of child injuries over past few years.

All these injury data are also available online on the website www.detskeurazy.cz where you can perform basic screening and obtain standardized analysis. The authors present examples of preventive activities in the Czech Republic geared by the IDB data, in-depth data analyses and the public website.

Preventing small children burns in Italy: the PRIUS project

Alessio Pitidis², Alessandro Masellis³, Sabina Cedri (1).

PRIUS (prevention of burns in school aged children) is an experimental project aimed to raise the awareness on the risk of burns in children and educate the population to appropriate behaviors and first aid interventions. The educative intervention is aimed to children of primary school and kindergartens and their parents with the help of medical personnel from the network of the main Italian burn centers.

In consideration of the difficulties related to their cognitive-physiological stage of development, the smaller children (3-4 years old) are a particular target for this kind of intervention. The small children have peculiar personality traits (impulsivity, need to move and explore), lack of experience and knowledge (verbal capacity still in development) and limits to comprehend and act related to their level of sensory and mental maturation (limited field of vision, difficulty of lateralization in sound perception, inability to comprehend symbols and abstract concepts).

The project activities are based on four key concepts: 1) data driven evidence based prevention, 2) visual culture, 3) Haddon matrix, 4) effectiveness analysis.

With reference to the first concept we postulate the intervention should aim targets of population and their risks identified through the epidemiological evidence available in the specific context of application.

For this reason we did not refer to scientific literature only, but mainly on the results of the analysis of data from the Italian IDB injury surveillance (SINIACA-IDB) that can provide very detailed information on the external causes of injury according to the IDB coding.

As to the second concept we focused on the use of educational and communicative tools fitting the target population, particularly visual communication means. We privileged the visual communication because it is the more natural way for smaller children who did not have fully developed verbal, spatial and numerical abilities. We deemed it particularly important because the SINIACA-IDB epidemiological evidence indicates that children aged 1-4 years old are the main group at risk of burns: 61.4% (IC 99%: 56.8-66.0) of pediatric attendances to Emergency Departments because of burns. There is pedagogical evidence on the effectiveness of visual communication in combination with traditional verbal and textual teaching methods. Furthermore visual tools are more adapt to the contemporary social evolution given the wide use of visual messages reaching the children.

We based the contents of the educative intervention on the expertise of the health care personnel dedicated to emergency and treatment of burns (II and III level of prevention of injuries on the Haddon scale). The projects was based on the interaction between medical personnel from the burn centers (I level trainers) and teachers at school (II level trainers) and their support in educating the children. This choice is based on the idea that the capacity of reaching the target depends on both: the interest by the receiver (need for natural and attractive communication tools) and the authority of the bearer of the message in the recipient's eyes. For these reasons medical personnel was chosen for training teachers and parents and the latter ones for educating the children.

Finally the results of using the visual educational tools (based on comic strips) at school were assessed. In particular children of kindergartens and primary schools were assessed by mean of illustrated comic tables. In a first-after (the educational intervention) study we observed for 195 children in kindergartens a significant increase in the recognition of risky situations in each represented environment: > +17 increase ($p < 0.0005$) of risk recognition score (on a scale 0 to 100) in every environment. Similarly in 175 children of primary school we observed after the educative intervention: > +25 increase ($p < 0.0005$) of risk recognition score (on a scale 0 to 100) in every environment.

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Injuries by animals among children and adolescents – data for a nationwide campaign

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Background

The topic of children and animals is highly emotional among parents and owners of pets or other animals. Animals could act as companions, guardians or friends, providing valuable input to the development of children. At the same time animals could cause severe injuries, partly followed by life-long consequences.

But insufficient knowledge exists about animal behavior. Furthermore, official German statistics do not cover morbidity data on injuries caused by animals. Therefore, the whole German Injury Database (IDB) was explored to get in-depth information on risk factors and children most at risk.

The presented data highlights how data can be useful to build up a targeted nationwide injury prevention campaign.

Method

Analysis of German IDB covering 13,323 injuries in the age groups 0 – 4, 5 – 9, 10 – 14 and 15 – 17 years. An injury by animal was considered, when an animal was mentioned either as triggering or causing factor.

Results

Animals were involved in 2.5% of all injuries among children or adolescents. The rate differed significantly between sexes: Whilst animals were only involved in 1.6% of all injuries among boys, this rate was much higher for girls (3.9%). This might be due to the higher popularity of equestrianism among girls, which is also the cause of the general increase in the rate of injuries involving animals by age. Only five species accounted for 94% of all injuries caused by animals.

Dogs and horses alone featured in more than two thirds of the cases. Accidents mostly involved animals well known by the child. This might be due to the greater time of exposure, but it has to be acknowledged that familiarity could not be considered as a protective factor.

In all age groups, injuries by animals demanded more frequently an admission to a hospital than injuries without an animal as triggering or causing factor. Narratives change with age: e.g., children below the age of five years were mostly bitten into the head by dogs, causing life-long traumata and lasting scars.

Exploring accidents involving horses, the rate of falls and kicks decreases significantly between the two age groups 10-14 and 15-17 years. It is not clear if this decrease indicates enhanced riding skills or follows the presumably growing involvement in the care of horses. Kicks demand an average hospital admission of 10.1 days (falls: 5.2 days average). By excluding equestrian accidents, the number of injuries by animals are decreasing with the growth of children.

Conclusion

Based on the IDB results, the prevention of injury risks in specific age groups, the appropriate conduct towards animals and the importance of adults in supervising their young children became the focus of the German „Children Security Day 2015“, launched by the Association “Safe Kids”.

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Developing national and local programmes

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In 2012, a new trend in unintentional injuries was reported by clinicians at the Royal Hospital for Sick Children, Glasgow. Very young children were being brought into the Accident and Emergency department as a result of the ingestion of liquid pods. Liquid pods are brightly coloured capsules used as an alternative to washing powder in washing machines and dish washers. Young children can mistake them for sweets and the contents can be swallowed, inhaled or squirted into the eyes. This can result in breathing difficulties and swelling of the airway. The 'Not for Play...Keep them Away' campaign was an initiative aimed at tackling this growing concern of liquid pod ingestion injuries to children in the Greater Glasgow and Clyde health board area.

This health board area has a very proactive Unintentional Injury Strategy and Working Group made up of representatives from a number of bodies including Public Health, Health Improvement, Children and Families, Health Visiting staff and RoSPA. The Groups strategy focuses on safety of children at home, on the road and at play and it has its own detailed action plan. Through the Strategy Group it was agreed to look into more detail at the liquid pod issue.

Following the need to act on this new trend, it was agreed that a detailed partnership action plan was required to identify the key steps before progress could be made or a programme developed. All partners had a significant role in the development of the programme and the campaign fits in with the NHS Greater Glasgow and Clyde Child Safety Strategy which is based on Scotland's Child Safety Strategy.

The campaign '*Not for Play ... Keep them Away*' ran from July 2013 to July 2014 and saw 16,000 safety packs (containing an information leaflet, cupboard latch and an evaluation questionnaire) delivered to every parent with a baby at 12-16 weeks of age. This ensured that all high risk families were reached, as well as all other parents. Health Visiting Teams distributed the packs and this provided an opportunity to discuss the safe storage of household cleaning products.

The campaign was evaluated and the evaluation report highlights the design and approach of the campaign as well as the outcomes and impact on staff and families involved. This evaluation could provide valuable information for future work. In addition, its framework may help to inform other interventions on liquid pods across the country, and indeed, further afield.

During the period of the campaign, the number of ingestion related admissions fell from nine (pre campaign year), to one. This admission took place in the first month of the campaign and since then, no cases have been reported. Following the success of this campaign, the safety packs continue to be funded by NHS Greater Glasgow and Clyde for distribution across this health board area to families with new babies.

Products in a child's sleep environment: Baby nests and sleep positioners

Tania Vandenberghe and David Bruno, European Association for the Co-ordination of Consumer Representation in Standardisation, Brussels

There are no European standards for the following two products and they are neither on the work programme of the European standardisation committee CEN TC 252 'Child use and care articles'. There are however safety concerns with both products.

BABY NESTS



This is a product that is shaped like a nest with the baby lying inside, the sides of which are often filled/padded and soft. A baby nest is sold primarily to prevent the parent lying on top of the baby when used in an adult bed. Research has indicated that babies are more relaxed if sleeping near a parent, however some doctors advise against co-sleeping.

Safety concerns:

- If the sides are soft the parent may roll over on to the baby. Parents often consider that this would not be the case as the sides would not flatten and the baby would be protected;
- The baby could roll over and its face could become pressed against the side of the nest which could lead to breathing difficulties and potential suffocation;
- There is the potential for the baby overheating (hyperthermia);
- The materials used may present a flammability hazard;
- Flame retardants may have been used;
- Entanglement may occur in over-long drawstrings often used to adjust the size of the nest;
- Choking and ingestion of small parts which become detached; and
- Potential for choking if filling materials are released from soft sides.

SLEEP POSITIONERS



As parents are instructed to lay a child on its back when sleeping in a cot or bed this product is sold to keep the child lying on its back and to stop the child rolling over.

Safety concerns:

- If the product is made of soft material such as foam and the attempts to roll over its face may become pressed against the side of the product which could lead to breathing difficulties and potential suffocation
- If the product is fitted with a restraint system that encircles the child's torso and the child wriggles downwards there is the potential for the child to become trapped by the restraint positioned under its chin with the potential to limit the airflow to its lungs.
- Some products cover large areas of the child's body with the potential for overheating (hyperthermia)
- Choking and ingestion of small parts which become detached
- The materials used may present a flammability hazard
- Flame retardants may have been used

Mandatory Bicycle Helmets for Children in Austria – Initial Trends and Effects

M. Steiner, R. Bauer and K. Robatsch, KFV-Kuratorium für Verkehrssicherheit, Vienna

In Austria, bicycle helmets have been mandatory on public roads for children under 12 years of age since May 31, 2011 (23rd amendment to the road safety act). The regulation specifies that bicycle helmets are mandatory for children under 12 when biking themselves as well as when being transported with a bike in a child seat or in a bike trailer.

The regulation was introduced as an awareness measure and is primarily designed to protect children from head injuries. Thus, there are no consequences for violation of the regulation.

Acceptance of bicycle helmets for children among Austria's public is rather high: 98 % believe that children under 12 should wear a helmet and 96 % support this being mandatory.

The introduction of the regulation led to a significant increase in the target group wearing a helmet: before the introduction, about 65 % of children under 12 wore a helmet, which has increased to 87 % by 2014.

As intended by the regulation, the positive trend in helmet wearing is mirrored in the development of head injuries: before the helmets became mandatory, 47 % of the children under 12 years of age suffered head injuries, which has been reduced to 38 % by 2014.

A remaining issue and point of discussion is the specific age limit that was introduced by the regulation. Now, helmet wearing seems to be considered something for "children" by those older than 12 years and the helmet wearing rate in this group is still low, accordingly.

Safe Children Community - An effective example in applying international safe children indicators

Sabine Distl, Peter Spitzer Ph.D., Gudula Brandmayr, M.A., GROSSE SCHÜTZEN KLEINE/ SAFE KIDS Austria

Objectives

Injury is the leading cause of death and disabilities for children in Austria. In 2013 160.600 childhood accidents occurred, 20 children died.

In 2007 GROSSE SCHUETZEN KLEINE/Safe Kids Austria introduced a broad Safe Children Programme in the district of Deutschlandsberg (40 communities with 60.000 inhabitants, 9.500 children aged 14 and under) with the aim of reducing the number of child injuries.

Methods

The Indicators for Safe Children Communities developed by the WHO Collaborating Centre on Community Safety Promotion provided the basic principle for the Steering group Safe Children Community Deutschlandsberg to design its intervention programmes., which targeted child safety at home, road safety, safety in schools and in leisure time.

Based on the analysis of child injuries in the community and an assessment of risk-awareness of parents towards child injuries, a variety of child safety activities in different settings (information for authorities and public, child safety training for children and personnel working with children, education of the public and the development of checklists and other tools which support behavioural changes and environmental modification) was developed involving as many organisations, institutions, schools, professional groups as possible as well as local media.

Results

Through constant data surveillance in the intervention district a decline of child injuries in Deutschlandsberg by 16% between 2007 and 2011 could be proven. As result the Safe Children Community Deutschlandsberg was designated as first Safe Children Community in 2011.

Since the Safe Children Community Deutschlandsberg was a big success, the project was enlarged to three districts (Safe Children Region South-West-Styria), funded by the federal state of Styria and the districts themselves.

Conclusions

With the Safe Children Community project GROSSE SCHUETZEN KLEINE wanted to supply evidence that the Indicators for Safe Children Communities work in practice. By educating children and families it is possible to change safety behaviour for the collective good.

Examples how to address disadvantaged families: The German Programme “Beware: Poisonous!” - Avoid poisoning in immigrant families

Martina Abel, Bundesarbeitsgemeinschaft Mehr Sicherheit für Kinder e.V.,
Safe Kids Germany, Bonn

Safe Kids Germany, the national umbrella organisation for injury prevention, started an immigrant-specific poisoning prevention initiative in 2009. By the programme “Beware: Poisonous!” funded by the Federal Ministry for the Environment, Safe Kids Germany sought to address families with a migration background in a targeted and multiple way.

A data analyses shows that per year in Germany more than 5.800 children are admitted to hospital due to poisoning. The number of calls in the 9 German poisoning control centres concerning children sum up to more than 117.000, a quarter of them needing medical treatment. From case studies we know that many severe poisonings – especially due to household chemicals and pharmaceuticals - occur among children with a migration background. In Germany no central multi-lingual poisoning hotline or specialised culture-sensitive poisoning centre for immigrant families is existent. Neither information resources in diverse foreign languages were available in 2010 to inform parents about poisoning hazards in the home environment.

The programme “Beware: Poisonous” tried to close this gap by a combination of educating and engineering measures, basing on the findings of evidence-based injury prevention. The elements of the programme were:

- to educate parents with various ethnic backgrounds in small groups about the hazards of poisoning and about poisoning prevention;
- to motivate the families to change their homes e.g. guarantee safe storage of household chemicals and pharmaceuticals (out of children’s reach, in lockable cupboards, in unreachable height, no use of inappropriate containers) and to choose safe products (awareness for hazardous substances, child resistant packaging and warning labels);
- to train practitioners about preventative measures and to teach them in training courses how to transmit information and to advise parents from diverse cultures;
- to empower professionals who work with migrant families by providing tools to communicate prevention in a well-adjusted culture-sensitive way (preparation of a manual, flyers, picture books and posters).

The personal educational measures ran from 2009-2011 and have not been continued because the funding ended. The production and distribution of printed material and the communication of the safety tips at several opportunities is still going on.

A new poisoning prevention programme supported by the Federal Ministry for the Environment in 2014 is focusing on consumer information about child resistant packaging and closures. The experience of addressing underprivileged families is included in the development of this program, and is one aspect of consumer information.

Scotland's Home Safety Equipment Scheme - What work has been undertaken to reach high risk families, including new parents and the disadvantaged?

Christie Burnett, Community Safety Development Officer, RoSPA Scotland

Scotland's Home Safety Equipment Scheme (SHSES) was funded by the Scottish government from April 2013- June 2014. It was hosted by RoSPA, and aimed to reduce home accidents to children under the age of five. Data from accident and emergency submissions for unintentional home injuries suggests children from disadvantaged households are most at risk to these kinds of accidents, SHSES was used to target those most in need.

The scheme worked with the early years collaborative who are committed to ensuring that "every baby, child, mother, father and family in Scotland have access to the best supports available". Through working in partnership with Care and Repair, the fire service and the Scottish government, RoSPA were able to design a scheme that could reach those living in some of the most deprived areas on Scotland. SHSES has enabled children and families to become educated in home safety and has provided their homes with safety measures to ensure children are protected from unintentional home accidents.

SHSES targeted 13 of Scotland's local authorities, reaching over 900 families and over 1752 children under the age of five. The cost of delivering the scheme was £276 per family; or £142 per child. The most recent available data on the cost of a non fatal, hospital treated home accident for children up to 4 years is £10,600.

The scheme built an individual home safety risk assessment into its delivery model, with every client (900) receiving a home safety risk assessment. The homes safety risk assessment included a 'prescription' for the provision and professional installation of equipment through the scheme (free of charge to clients). All 900 clients had equipment fitted, with an average of 9 items per family fitted. The scheme offered each family with a Home Fire Safety Visit: 494 families were provided with a visit. Most families engaged through the scheme were categorised as having a high risk fire home.

The scheme built family/parent awareness raising into its delivery model, with all families being provided with a home safety awareness input supported by the home safety information pack that was left with the family. The home safety awareness input was reinforced at the installation visit and Home Fire Safety Visits. The vast majority (85%) of professional stakeholders considered that it had enhanced families' awareness and understanding of home safety. "Some families were surprised (to learn) about home safety (issues); and some it reminded them how important it is. They were interested". The education package provided through SHSES was the most popular component, with parents quoting "(I was given) lots of useful information that I did not know", "it made me a lot more aware of dangers".

Scotland's Home Safety Equipment Scheme has expanded into the Scottish borders where the early stages of the initial home safety risk assessments are underway. The scheme has now reached 1000 families across Scotland and has trained more than 100 practitioners in home safety.

Activities to reduce child injuries through primary health care in Croatia

Aida Mujkic, University of Zagreb, School of Medicine-Andrija Štampar School of Public Health

Injuries are the leading cause of death among children after infancy in Croatia as well as in the other developed countries. Recognizing that and with the aim to increase the knowledge and capacity of the primary health care workers to work on the level of the primary prevention several activities were performed.

Health education materials were produced: booklet for professionals (pediatricians and gynecologists in the primary health care, family physicians, community nurses), two types of leaflets for parents (one for the primary gynecologists' waiting rooms with advices for expecting parents specially the pregnant women and infant safety and the other continuing one for primary pediatricians' waiting rooms for the preschool period), "meter" (adhesive tape) with educational messages which community nurses take to the homes of newborns during the first visit, posters.

Materials were distributed across the whole country. Also four regional educational seminars for community nurses were organized, as well as the continuing education course for physicians. The activities were jointly financed through the Croatian Ministry of Science project: Safety promotion and injury prevention for pre-school children, Ministry of health and UNICEF office for Croatia.

Regarding the data in 1995 there were 10 death cases because of injuries in the first year of life and 24 cases in the age group 1-4 years. In 2013. there were two cases in the first year and 8 case in the age group 1-4 years. That means that the rate went down from 12,2 per 100 000 in the younger of five years in 1995 to the rate 4,75 in 2013. The decrease is more than 2,5.

Public health meaning of injuries today is the same as it was the meaning of nutritional deficiencies and infectious diseases in the past and we all witness great results in decreasing that problems in the developed part of the world. Public health approach to injuries tailored on the similar way: with health education of parents and additional education of professionals about child injury prevention and safety promotion are effective in reducing child injury.

Injury prevention in Finland among people under 25 in 2009–2014

Ulla Korpilahti, National Institute for Health and Welfare, Helsinki, Finland.

National action plan: National action plan for injury prevention among children and youth in Finland, published in 2009, has the vision that Finnish children and young people live stimulating, but safe lives and health losses due to injuries are decreased.

National Institute for Health and Welfare (THL), has coordinated the program with support from the steering group. Action plan includes 216 objectives and proposed measures to promote and prevent unintentional and self-inflicted injuries.

During the drafting process of action plan, support was received from Ministry of Social Affairs and Health and two EU projects: the Child Safety Action Plan (CSAP) by the European Child Safety Alliance (ECSA) and Community Action on Adolescents and Injury Risk (AdRisk). THL has also been the partner of ECSA in TACTICS-project in 2011–2014.

Background and statistics

Every year around 122 Finnish children and young people under the age of 25 die in accidental injuries and 13,500 are hospitalized (2011–2013). Despite the continuous decrease in deaths from accidental injuries among children and young people in Finland since the 1970`s, injuries are causing major health losses and they remain the leading cause of death under the age of 25. Most accidental injuries causing death causing (83%) occur to 15–24 year olds.

Alcohol is a contributing factor in 25% of accidental deaths among age group 15–24 years. In Finland, up-to-date and reliable statistics are regularly collected and statistics on the causes of death and hospital care are regularly produced. These data are being used to monitor the injury situation in Finland.

Results and monitoring

National action plan for injury prevention of children and youth has been widely distributed. The target of the program, the responsibility of implementation and monitoring of it are distributed and responsibility taken by a number of partners.

According to the Finnish Child Safety Report Card 2012 in TACTICS-project, legislation and injury prevention policy in Finland in 2011 were at a good level when compared to other 31 European countries. Monitoring and the leadership to prevent accidental injuries in Finland still need to be improved, especially in local level.

Lessons

It is crucial for National action plan that it has been approved by the MSAH, because that have made possible and empowered the national level activities and promoted a network of cooperation between the different actors.

In order to be successful a national action plan requires high level recognition and adequate resources among with systematic coordination.

4. Abstracts of poster presentations

Monitoring road traffic injuries and assessing their burden for vulnerable road users in Italy,

Marco Giustini, Gianni Fondi, Carla Debbia, Marco Dalmasso, Carlo Mamo, Selene Bianco, Alessio Pitidis.

An innovative prevention strategy: a MOOC (Massive Open Online Course) to teach how to prepare food and reduce the risk of choking in pediatric age,

Dario Gregori, Hugo Rodriguez, Achal Gulati, Sebastan Van As, Giulia Lorenzoni, Solidea Baldas, Luca Rosati.

POSTER

Monitoring road traffic injuries and assessing their burden for vulnerable road users in Italy

Marco Giustini⁶, Gianni Fondi⁽¹⁾, Carla Debbia⁷, Marco Dalmasso⁸, Carlo Mamo⁽³⁾, Selene Bianco⁽³⁾ e Alessio Pitidis⁽¹⁾.

Objectives: The purpose of this investigation is to estimate severity of trauma and the burden of disability due to Road Traffic Accident (RTA) in vulnerable users (i.e. children, pedestrian and two wheeler users) from the data of the Italian IDB surveillance and by linking the data of Emergency Departments (EDs) and road traffic police.

Method; The SINIACA-IDB (S-IDB: Injury Database in Italy) population database was queried for all injuries due to RTA. Data recorded according to Full Data Set (IDB-FDS) format report in most cases (86%) diagnoses coded according to the 9th revision of the International Classification of Disease (ICD-9-CM).

The Italian National Institute of Health developed a methodology for the automatic univocal conversion of each ICD-9-CM code for trauma into a single score of Abbreviated Injury Scale dictionary (AIS). The maximum AIS was calculated S-IDB records of RTA. A cut off to separate minor (AIS=1-2) from the serious injuries (AIS≥3) was chosen. The calculation of RTA related disability was performed using a sample of 8,769 ED attendances of Piedmont region for which a record linkage with Police reports was possible.

According to the 39 EUROCCOST injury groups a cut off of 10% probability of long life consequences was used to split mild to severe disabilities. According to the FDS S-IDB data in 2013, total 30,103 ED attendances from 43 Hospitals in Piedmont, Province of Trento, Liguria, Umbria and Sardinia regions were selected.

Results: The distribution of the cases by age and severity level shows a significantly higher percentage of severe cases (AIS≥3) among children 0-14 years (4.3%) and elderly≥65 year (6.5%) comparing to adults 15-64 years (2.7%) ($\chi^2=68.7$; $p<0.01$). The situation about the proportion of severe disability is slightly different because data shown a trend ranging from 4.8% for children to 14.6% in the elderly group ($\chi^2=86.7$; $p<0.01$). Children have high incidence of severe cases (acute risk) but low incidence of disabling cases (long term risk). Males show more severe cases than females (3.90% vs 2.30, $\chi^2=23.7$; $p<0.01$) as well as higher proportion of cases with serious disability (7.7% vs 6.6% $\chi^2=2.7$; $p<0.1$ ns).

The proportion of cases with AIS≥3 is consistently higher in pedestrian (5.7%) bicyclists (4.7%) and mopedists/motorcyclists (4.5%) in comparison with car users (2.6%) ($\chi^2=27.7$; $p<0.01$). Children are more likely than adults to be seriously injured particularly if pedestrian (7.5% vs 2.0%; $\chi^2=35.6$; $p<0.01$). The same distribution we obtained according to disability probability with pedestrian, bicyclists and mopedists/motorcyclists more at risk of developing a serious disability (17.4%, 7.6% and 9.1% respectively), comparing to car users (4.5%) ($\chi^2=275.8$; $p<0.01$).

When some of the variables potentially affecting the result of being interested by severe trauma (AIS≥3) were controlled (age, sex and type of vehicle transporting the injured person), a multivariate analysis showed that the odds of serious trauma are 1.85 times greater for pedestrians and 1.54 for bicyclists respectively.

Conclusion: This study points out that severity combined to disability allows more accurate evaluation of the burden of injury resulting from RTA involving children and vulnerable road users.

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POSTER

An innovative prevention strategy: a MOOC (Massive Open Online Course) to teach how to prepare food and reduce the risk of choking in pediatric age.

Authors: Dario Gregori⁹, Hugo Rodriguez¹⁰, Achal Gulati¹¹, Sebastan Van As¹², Giulia Lorenzoni¹, Solidea Baldas¹³, Luca Rosati⁵.

Choking injuries are one of the leading causes of death in pediatric ages. In recent years, several initiatives have been taken to reduce the burden of this phenomenon.

The introduction of the “small parts” cylinder and the toys regulation, both in Europe and US, was proven to be effective in reducing the risk from industrial, non-food products and in particular toys. Nevertheless, the major burden of food injuries, representing between 70%-85% of the overall cases, has no analogous countermeasures. To try to respond, at least partially, to this need with an innovative and accessible communication format, a Mooc (massive open online course) for disseminating information on these injuries, has been realized. The project consists of a series of informative videos freely available on a dedicated website with a distinctly international feel: videos are available in English, Italian, Spanish and Italian Sign Language and will be available in Portuguese, French, Arabic, Russian, Chinese and Japanese.

The video contents, intended for an audience of parents, educators and childcare professionals, are realized on the basis of data provided by the Susy Safe registry, which is an International registry of foreign body injuries in children aged 0-14 for collecting and analyzing injury data and highlighting risks associated with consumer products. Currently, the registry has collected over 25.000 cases. Presently Food bones, Nuts and Seeds and grains have the highest incidence, accounting respectively for 32%, 22% and 21%. Nevertheless, less frequent but more severe injuries, which can cause death, are those due to meat, sweets and other foods which share certain characteristics: shape, size, and consistency.

US and Canada International Guidelines for food preparation have been used as a basis for developing food preparation instructions.

The videos provide basic information addressed to those who have the task of preparing food for children, explaining in a clear and as simple as possible manner how to reduce the risk presented by certain foods.

In each video specific topics on food choking in children are clearly addressed covering also different aspects of the problem: epidemiology, children anatomy, obstruction mechanism (partial and total), child's behavior at the table, food preparation.

Each topic is presented by a field expert: a Professor of Biostatistics and Epidemiology, an ENT Doctor, a Pediatrician, a Researcher, a professional Chef de cuisine. Furthermore, people of different ethnic and social backgrounds participated voluntarily to the realization of the videos.

Main objective of the project is to prevent injuries caused by food but also to disseminate information on this issue, involve stakeholders, realize international collaborations with consumer associations and provide valid supporting training material for child safety practices.

According to the data offered by the Susy Safe registry, almost 40% of injuries happened under adults' supervision. These data show a lack of information and the need to implement specific educational campaigns targeted to families and supervisors, free and accessible to anyone, capable of reaching people from diverse ethnic, social and cultural backgrounds including the disadvantaged.

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