

and only moderate agreement for neglect and negligence classifications. Discordance is related to missing or unknown information and the interpretation of identified risk factors. Due to these limitations, standardised death scene investigations for all infant and child deaths are invaluable and implementing a systematic decision tree metric is necessary to produce more reliable estimates.

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EFFECTIVE METHODS FOR IDENTIFYING CHILD MALTREATMENT WITHIN THE FAMILY – NATIONAL CLINICAL GUIDELINE

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Background Child maltreatment (physical or psychological abuse or neglect of young people, under 18 years of age) is a sensitive and complex issue both in terms of clinical practice and research. It is a matter of concern for both child protective services and health services and in all services dealing with children, and families with children.

Objective of our systematic review was to synthesise the best available evidence regarding the effectiveness of methods in identifying child maltreatment. The National Clinical Guideline (www.hotus.fi) was updated in 2015, based on the systematic review.

Results Risk factors concerning the child, parents and the family situation are presented. Methods for the examination, identification, and evaluation of rib fractures, abdominal injuries, bruises, and burns were found. Screening tools have been developed especially for emergency care and risk assessment. Evidence of the need to develop multiprofessional practice services (including policy and organisational development) was found. Educating staff concerning child maltreatment issues was found to be effective. Guidelines based on this evidence are presented.

Conclusions Methods for identification are often insufficient. However, several useful methods and tools were found. Professionals need continuous training, clinical supervision, attitude change at the individual level, and coherent tools to identify risks and cases of maltreatment and family violence in general. From the effectiveness point of view, research has been made to some degree so far.

Pedestrian and Cyclists Safety

Parallel Tue 2.3

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DEVELOPMENT AND EVALUATION OF A SOCIAL MARKETING APPROACH TO REDUCE PEDESTRIAN INJURY RISK

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Background Pedestrian injuries continue to be an intractable global public health. Engineering changes and enforcing traffic laws have considerable evidence supporting their effectiveness. Also important but less well understood is how to influence pedestrian and driver behaviour through educational campaigns.

Our purpose is to describe how we developed, implemented and evaluated a social marketing campaign to address this gap.

Methods The site was an urban academic medical centre campus where large numbers of students, staff, patients, and visitors drive and walk daily. Formative research included focus groups with the target audience. A two-phase, six-month campaign targeted both drivers and pedestrians, and was based on social marketing concepts of product, price, promotion, and place. Evaluation included baseline, mid-term, and follow-up online surveys of campus and community respondents. We analysed the proportion who reported: 1) exposure to the campaign and their reactions to it; and 2) driving and street crossing behaviours.

Results Online survey sample sizes were 3,928 at baseline, 2,705 at mid-term, and 3,017 at follow-up. At mid-term 82% reported having seen campaign materials and at follow-up this% was 78. At both time points the majority of respondents ($\geq 70\%$) rated the campaign positively. At follow-up the proportion reporting they often looked both ways before crossing an intersection was 94.5% for those reporting exposure to the campaign and 88.1% for those reporting no exposure to the campaign. The proportion reporting they often drove slowly through intersections to look for pedestrians was 50% for those reporting exposure to the campaign and 42% for those reporting no exposure to the campaign.

Conclusions Few pedestrian safety campaigns are systematically planned and evaluated. This work (which includes a free dissemination guide) provides a roadmap to developing such interventions, and results show promise for enhancing individuals' safety.

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PEDESTRIAN ADOLESCENTS: MOBILITY AND SAFETY AT SECONDARY SCHOOL IN FRANCE

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Background The road crash peak among children is around 11–12 years-old in France, as in many industrialised countries, at the time of entry in secondary school. The reasons why this vulnerability increases while the skills involved should have improved are not clear.

By linking two fields of analysis of road safety (fine spatial analysis of crashes and depth analysis of behaviours and psychosocial factors), our project aimed to finely identify the mobility and pedestrian accident involvement of the 10–15 years old and specify geographical, psychological and sociological determinants of both variables.

Methods and results A study of accident processes among pedestrians aged 10–15 years over France for the period 2002–2011 was conducted, based on the national accident file and on a sample of accident police reports. It was completed in the field of study of the Lille region (France) by the spatial analysis of local accident data (including the identification of accident scenarios) and the mobility of 10–15 years, using data from the 2006 household travel survey.

Two field surveys were then conducted. A first survey among 2500 junior high school students has identified the fine mobility practices and their socio-spatial determinants. It also explored the demographic and psychological variables (age, gender roles, perceptions of social norms, risks, rules, level of supervision) explaining the reported pedestrian risky behaviours. A second

survey among 300 junior high school students focused on their perceptions of known and unknown walking environments. It enabled to draw up a sensible mapping of their actual walking environment and a qualitative analysis of the elements using to judge the pleasantness and safety and characterise their representations of positive or negative actual and virtual travels as pedestrian.

Conclusions The results allow a better understanding of the phenomena and processes involved in the accident of pedestrian adolescents and to identify measures needed to overcome this problem.

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SAVING PEDESTRIAN LIVES IN BANGLADESH: A SUCCESSFUL PILOT TO PREVENT ROAD INJURIES

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Background Around 90% of the world's road traffic deaths occur in low and middle income countries (LMIC). Bangladesh has over 100 road traffic deaths per 10,000 motor vehicles, one of the highest rates in the world. Most of the crashes occurring at 'black spots' and about 70% of crash fatalities occur in rural areas. A pilot project has been implemented on the Dhaka-Sylhet (N2) highway of Bangladesh. This road has many black spots and a high number of pedestrian fatalities. The pilot is innovative in both the selection of implemented interventions (a combination of effective and relatively low-cost measures) and in the approach to monitor pre- and post-intervention data.

Methods The intervention program combines small-scale infrastructural measures for traffic calming (e.g., using speed humps, signs, and marking) with practical training (e.g., to school children) and active community involvement. Three methods are used for monitoring: development of own crash database with local record keepers, speed analysis, and conflict observation study using video (DOCTOR).

Results We understand now the precise causes of crashes and conflicts. Buses are involved in 71% of dangerous road situations. Speeding and overtaking are the main risk-enhancing factors. After implementation of the pilot, the crash database showed a 63% reduction in the number of crashes and a reduction of over 70% in the number of people killed and injured.

Conclusions The selected combinations of interventions is very effective to reduce road deaths and injuries at relatively low-cost. The selected methodologies for monitoring crash data and crash patterns provided a thorough overview and analysis of the causes of crashes and the impact of the selected interventions. Both the interventions and the monitoring methods are suitable for use in other LMICs.

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VISION ZERO TO PROMOTE CYCLING MOBILITY IN MEXICAN CITIES

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Background ITDP is an international NGO that promotes sustainable mobility, in Mexico we have been strongly promoting

the use of the bicycle as a mode of transportation. This would help in cities that are highly congested and also where people have sedentary lifestyles. Continuously we face the same problem, people are afraid to use the bicycle due to the lack of road safety. The philosophy behind Vision Zero has been helping to develop an integrated strategy to promote safer streets and the conditions to increase the number of bicycle trips.

Methods An international comparative study of different Vision Zero plans was developed, analysing the origin in Sweden, and looking at cases such as the one in New York and San Francisco. Interviews and field work has been developed with strategic actors of Mexico City with the support of international experts on road safety and street design.

Results Vision Zero has been a philosophy which helps to gather efforts from civil society and the government that before were disconnected. The main idea "No loss of life is acceptable" is a strong argument to put the topic on the agenda. A coalition Vision Zero of different groups of civil society in Mexico City has been formed. The concept also brings flexibility to adapt to the contexts of Mexican cities. It has been identified components of street design, regulation, and mobility culture and road safety management. Vision Zero has been promoted from civil society, and now it is a discourse taken by the Mayor, the Ministry of Mobility and the one of Public Safety of Mexico City. It was accomplished the publication of the new transit regulation, where civil society worked together with the government to define better regulation for pedestrians and cyclists. Now, the coalition is defining next actions to advocate for, in order to have an integrated road safety policy with activities, timelines and responsible persons.

Conclusions Vision Zero has gather efforts to reduce deaths in Mexico City from different actors. A Vision Zero Ranking at a national level could help to identify what needs to be done by civil society, the government and private sector in order to be able to say that the city has appropriated this strategy. It will also helped to avoid empty discourses from authority and also the provide elements to empower civil society.

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BICYCLE INJURIES IN OSLO: INJURY PATTERN IN 2014 TRENDS SINCE 2003

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Background Interest for bicycling is increasing for transport, and also for health promotion. In cities with demanding traffic pattern, bicycling might be a dangerous activity. Due to lack of knowledge health and traffic authority financed an in-depth investigation of bicycle injuries treated in Oslo University Hospital (OUH), both as in and out patients. Continuous injury monitoring in the AED since 2003 gave possibility to follow trends.

Methods The study was a one-year prospective in-depth investigation with 20 variables. All patients contacting the AED due to a bicycle injury filled in a one-page form with description of 14 variables of the accident and a free text. Health personnel collected relevant information for patients arriving by ambulance and those not able to fill in form themselves. Based on previous studies it is estimated that about 85% of all injured persons from the Oslo population are treated at OUH.

Results 2184 persons were treated due a bicycle accident in 2014, 71% were single accidents. 65% were men. Median age