

environment. The study supports the usage of multiple intervention strategies within a holistic approach that acknowledge these factors to prevent any future home injuries.

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### BRAIN INJURIES AND FRACTURES FROM FALLS ON STAIRS AMONG CHILDREN AND YOUTH IN CANADA: EPIDEMIOLOGY AND PREVENTION

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**Background** Stairs and steps have in some countries become the leading source of brain injury, with children and working age adults as the main populations at risk. Risk factors and trends were assessed for hospitalizations of children and youth  $\leq 19$  years in Canada.

**Methods** Non-nominal hospital admission data were obtained from the Canadian Institute of Health Information for the years 1994–2009. Hospitalisations of children and youth 0–19 years of age due to falls on stairs and steps were extracted using appropriate ICD 9 and 10 codes. Trends by age group were analysed and hospitalizations cross classified using external cause and nature of injury codes. Statistical evaluation included  $\chi^2$  for univariate and bivariate analysis and Poisson or negative binomial regression for trend analysis of hospitalizations and injuries.

**Results** There were 13,500 hospitalisations from falls on stairs and steps among 0–19 year olds. Rate of hospitalisation decreased by 55% over the study period from 16.8/100,000 to 7.5/100,000. Infants less than <1 year old had the highest rate at 33.2/100,000, and the greatest improvement correlating in time with banning of baby walkers. Males represented 55% of patients. The home was the site of 60% of incidents, with 60% of falls resulting in a fracture and 30% in intracranial injury. For infants <1 year, 50% of stair falls resulted in an intracranial injury. Income quintiles were highly correlated ( $p < 0.001$ ), especially for lowest, at 25% of total, versus highest 16%.

**Conclusions** Home stairs present serious hazards, especially for infants and children. While rates of stair falls have declined in the last two decades, much work remains to make stairs safer and prevent injuries, especially of the brain. Home stairs can be made less steep by adopting the 7–11 configuration widely adopted for public places, and other building code measures to correct frequent design and construction hazards.

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### PATIENT SAFETY THROUGH DOCUMENTATION: BARRIERS IDENTIFIED BY HEALTHCARE PROFESSIONALS AND STUDENTS

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10.1136/injuryprev-2016-042156.211

**Background** Effective communication and accurate documentation is critical to delivering quality outcomes and patient safety in municipal elderly care. Yet it is becoming increasingly apparent that healthcare providers struggle to coordinate health information exchange, and are more likely to have inaccurate and

incomplete clinical information. The aim of the study was to explore healthcare professionals' and students' perceptions of barriers to patient safety and quality in their documentation practice. This knowledge could facilitate the development and implementation of improved documentation practice and information exchange among healthcare professionals.

**Methods** A qualitative exploratory design with six focus group interviews were used. The study included a purposive sample of nurses and social educators ( $n = 12$ ) from primary care, and nurse- and social educator students (at Bachelor's level) ( $n = 11$ ). The data were analysed by content analysis.

**Results** Four main themes about barriers to patient safety emerged from the analysis: "Individual factors", "Social factors", "Organisational factors", and "Technological factors". Each theme included several sub-themes. A conceptual model was developed to illustrate the relationships between the themes.

**Conclusions** According to the findings, several barriers negatively influence documentation and information exchange and may put the patients in primary care in a vulnerable and exposed situation. To achieve successful documentation, more awareness and effort from the individual professional is required. However, it is critical that primary care services facilitate this through adequate resources, clear missions, and understandable policies.

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### OIL SPILLAGE EFFECTS ON HEALTH AND SAFETY AMONG THE LOCAL COMMUNITIES – EXPERIENCE FROM BANGLADESH

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10.1136/injuryprev-2016-042156.212

**Background** on 9<sup>th</sup> December 2014 an oil tanker collided with a cargo vessel at Sundarban, the largest mangrove forest in the world. About 350, 000 litres of furnace oil spilled into the Shela river. No major oil clean-up was in placed due to lack of equipments and experiences. However, most of the local people including children came to the place without any safety measures to collect oil so that they could sell it later.

**Methods** Qualitative method was used to explore the situation. IDI, FGD, observation technique and relevant daily national and international newspapers were reviewed to collect the information.

**Results** The disaster affected both on health and safety of the community. Primarily local people, who do not have any previous experience, were involved to collect the oil from the river and government showed interest to procure the furnace oil at a fix rate. This lead local community to start collecting oil and later on faced various health problems like diarrhoea, skin diseases, abdominal pain and headache etc. A child drowning case was found due to collecting oil. Though 7-year old kid was rescued he suffered from diarrhoea for four days. To get the better quality of oil community people boiled the oil so that water evaporated and quality of it became better. Females were involved in boiling oil and they faced severe headache, irritation on eyes and nose and vomiting tendency.

**Conclusion** Disaster preparedness is essential for any country like Bangladesh. Government should take necessary initiative on awareness and safety before involving local community in any disaster management especially dealing with chemicals.

Community people's safety should be the priority to avoid or reduce health effects.

## Early Morning Sessions Tuesday 20.9.2016 8:30–9:15

### Experiences from 'the saving of lives from Drowning project' in Bangladesh; an implementation research study

TUE W 2

#### 213 EXPERIENCES FROM 'THE SAVING OF LIVES FROM DROWNING PROJECT' IN BANGLADESH: AN IMPLEMENTATION RESEARCH STUDY

10.1136/injuryprev-2016-042156.213

**Background** Drowning is the leading cause of injury deaths among under-five children globally. In Bangladesh, more than 15,000 under-five children drown annually, and drowning accounts for 43% of death from all-causes, and more than 90% of all injury deaths among the 1 – 4 year olds. With support of the Bloomberg Philanthropies, the Johns Hopkins International Injury Research Unit in collaboration with the Centre for Injury Prevention and Research, Bangladesh and the International Centre for Diarrhoeal Disease Research, Bangladesh is implementing a large-scale implementation research study, the Saving of Lives from Drowning (SoLiD) project, to address the burden of childhood drowning in Bangladesh. SoLiD is a three-year (2012 – 2015) study that aims to assess the effectiveness and cost-effectiveness of two child drowning prevention interventions (playpen and crèche), and their implementation activities. About 80,000 children are receiving the interventions and 1.2 million people are under an injury surveillance system as part of the project.

**Description** This session will comprise three presentations that focus on the entire spectrum of childhood drowning prevention in Bangladesh.

**Session chair** Adnan A Hyder, Johns Hopkins International Injury Research Unit, USA

- **Talk 1: Burden, trend and epidemiology of childhood drowning in rural Bangladesh** – Amin Rahman, Centre for Injury Prevention and Research, Bangladesh
  - **Abstract:** This talk will discuss and present results from a large population based baseline survey implemented as part of the SoLiD program. It will highlight data on trend, epidemiology and risk factors of childhood drowning in rural Bangladesh.
- **Talk 2: Effectiveness and cost-effectiveness of SoLiD interventions** – Olakunle Alonge, Johns Hopkins International Injury Research Unit, USA
  - **Abstract:** This talk will focus on the study design and interventions implemented as part of the SoLiD program. Initial results on effectiveness and cost-effectiveness of these interventions will also be presented.
- **Talk 3: Integrating childhood drowning prevention interventions to child health survival programs** – Fazlur

Rahman, Centre for Injury Prevention and Research, Bangladesh

- **Abstract:** This presentation will discuss issues related to integrating such programs into ongoing activities at the city or district level. Efforts to integrate the SoLiD interventions into health and rural government program/policies will be described. Early experiences, challenges and policy implications will be presented.
- **Discussion and Q&A** The session will end with a discussion on the implications of these lessons to the implementation of other drowning prevention strategies in low-and-middle-income settings.

#### 214 SEVERE TRAFFIC ACCIDENTS IN SOUTHERN FINLAND 2006–2015 AS SEEN FROM LEVEL 1 TRAUMA CENTRE

Lauri Handolin, Tim Söderlund, Tuomas Brinck. *Helsinki University Hospital Trauma Unit Finland*

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Session has four presentations on different types of severe traffic accidents: pedestrian, motor vehicle, motor bike, and bicycle accidents.

Helsinki University Hospital trauma unit (Töölö hospital) is a tertiary trauma centre providing trauma care in severe injuries for Helsinki and its quite densely populated surroundings, resulting in a catchment area of nearly 2 million people (about 35% of the total Finnish population). The total number of annual ISS >15 (severe trauma) trauma patents in Töölö hospital is around 450.

Töölö hospital's trauma registry was established in 2006. All trauma admissions to Töölö hospital have been reviewed by three trauma nurses and all patients with NISS (New Injury Severity Score) over 15 have been included in the registry. The data input includes demographic, process mapping, and outcome data. The registry data collected 2006–2015 on severe traffic accidents is presented in this session focusing in patient demographics, injury mechanisms and patterns, severity of injuries, outcome, and changes in incidences during past decade in the Southern Finland.

### Open Workshop to Improve Safety at Offroad Sports Offroad Safety Campaign

TUE W 3

#### 215 MX SAFETY MOVEMENT AND SAFETY PROJECT

Teija Piirto. *Mx Safety Project Founder and Leader, Finland*

10.1136/injuryprev-2016-042156.215

**Background** MX Safety campaign started 2014. Campaign is lead by Teija Piirto who's mission is very personal due to a loss of her own brother. MX Safety's aim is to create encouraging safety debate and advance safety at off road tracks with track users. Target is zero fatal accidents in basic training environment and national and club level races, worldwide. All the work is done through voluntary work. Project has a wide range of knowledge and a large spectrum of track users involved. Finnish Rescue