

**Methods** The study was carried out in Federal Medical Center, in South East Nigeria. Questionnaire and checklist was used to assess hand washing practice among 240 care providers and hand washing facilities in clinics and wards.

**Result** The health workers surveyed included nurses (54.0%), interns (19.0%), resident doctors (12.7%) and medical officers (9.5%). Majority of them (96.8%) knew the importance of hand-washing in the prevention of hospital-acquired infections. More than 50% had good knowledge of hand hygiene. About 54% of them will always wash their hands between direct contact with patients, and 68% after an invasive procedure, 92% when hands are visibly soiled, 67% after removal of gloves and 77% after personal body functions. Most common barriers to hand hygiene practice identified included, unavailability of water (61.9%) and alcohol-based agent (69.8%). About 14% of them did not wash their hands when an opportunity to do so presented. Among those that washed their hands the mean duration of hand washing was  $39.6 \pm 24.4$  s. Facility assessment showed that all the wards and clinics had designated place for hand washing. Only one clinic had alcohol cleaning agent and running water, 50% soap, 83.3% liquid detergent, 75% re-usable towel and 91.7% water storage container.

**Conclusion** The study supports earlier findings that hand hygiene practice in developing countries is relatively low and lack of supplies are barriers to its practice.

**SP6-61 RISK ASSESSMENT OF OCCUPATIONAL ACCIDENTS AND PSYCHOLOGICAL STATUS AMONG EMPLOYEES IN THE MILITARY INDUSTRY IN NORTHWEST RUSSIA**

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**Introduction** Occupational health and psychological comfort at work is important part of occupational safety promotion and reflects quality of life of employees. The aim of the study is to perform qualitative risk assessment of accidents and to study psychological status of employees in military industry in Northwest Russia.

**Methods** A cross-sectional questionnaire-based study was conducted in one of the military enterprises in the city of Arkhangelsk in 2010 in a random sample of employees (n=331) who reported on lifestyle, work experience and psychological comfort at work. Occupational hazards were analysed by criteria for risk assessment of accidents at working place (Tampere, 1994). Proportions were analysed by  $\chi^2$  tests.

**Results** Most of the responders were males (70.1%, n=232) aged 29.6 years on average. There were no differences by gender in psychological comfort at working place (p=0.76). Only 16.9% of the responders estimated psychological comfort at the high level. Altogether, 71.0% responders considered their working place as dangerous (n=235). Among males this proportion was higher than among females (81.9% vs 45.5%, p<0.001). Substantial and intolerable risks of accidents were found in 14.2% and 11.8% of the responders, respectively. Substantial risk was estimated in 18.1% of males and 5.1% of females (p<0.001). Corresponding proportions for intolerable risk were 13.8% vs 7.1% (p<0.001).

**Conclusions** Employees in Russian military industry have high risks of occupational accidents in combination with absence of psychological comfort at working place.

**SP6-62 "PRECISE-A MODEL OF COMMUNITY PARTICIPATION IN CHILD INJURY PREVENTION IN BANGLADESH, IMPLICATION FOR OTHER LOW INCOME COUNTRY"**

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**Introduction** Community participation is an important component of a community based health intervention especially in designing, implementing and sustainability issue. A model of community participation was developed and practiced in child injury prevention project PRECISE (Prevention of Child Injury through Social Intervention) in Bangladesh.

**Objective** To describe the process of development and role of community groups in injury prevention project in Bangladesh.

**Methods** Behavioral change issues act as a major factor in injury prevention initiatives so community participation was identified as one of the guiding principle in PRECISE. Village was identified as unit for developing a community group in PRECISE. Prior to develop group 100 people were invited in a meeting; magnitude and consequences of injury and prevention issues were discussed. Discussion also took place how the community people can contribute in injury prevention. After that a 7–10 members Village Injury Prevention committee (VIPC) was formed by the community people. All of the members voluntarily expressed their interest to work for community.

**Results** 389 VIPC formed and each of the committee has 30% is female representative. Committee members meet in every month to reviewing present functional status and previous month implementation status of injury prevention initiatives in their village. In the meeting they identify their individual and group responsibilities and set plan of action accordingly. PRECISE has a regular program for the capacity development of the members.

**Conclusion** PRECISE was found as an effective child injury prevention program in Bangladesh and community participation have a significant contribution in this program.

**SP6-63 ANALYSIS OF NEWBORN MORTALITY DUE TO CONGENITAL ANOMALIES ASSOCIATED WITH PERINATAL PERIOD RISK FACTORS**

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**Background** Congenital anomalies play a significant role in perinatal mortality. Congenital anomalies are a cause of death in a third of all babies that die in the first year of life in Latvia.

**Methods** The Register of Newborns was used to identify all babies born 2000–2007 and who were diagnosed with a congenital anomaly (Q00-Q99). HRs with 95% CI were estimated using Cox regression model adjusted for mother's age, newborns' gender, different complications during deliveries and pregnancies, gestational time, newborns' birth weight and antenatal care factors.

**Results** Congenital malformations of the circulatory system were diagnosed in 41.9% (95% CI 32.7% to 51.7%) of all babies that died in the first year of life; 13.2% (95% CI 7.8% to 21.2%) had musculoskeletal malformations. Multiple anomalies and serious anomalies, such as diaphragmatic hernia and malformations of the digestive system were found in 7.9% (95% CI 4.1% to 14.9%). The risk of death in newborns with congenital malformations of the

circulatory system was greater in mothers aged 20–34 years compared to mothers under 19 years of age (HR 5.64 95% CI 1.65 to 19.27;  $p=0.01$ ) and in babies with low birth weight (HR 3.09; 95% CI 1.27 to 7.51). For digestive system anomalies mortality was associated with complications during pregnancy (HR 1.67; 95% CI 1.11 to 2.52;  $p=0.01$ ). For musculoskeletal system malformations mother's disease in pregnancy (HR 11.04; 95% CI 1.31 to 9.30;  $p=0.03$ ) and complications during delivery (HR 18.98; 95% CI 2.39 to 15.04;  $p=0.00$ ) were associated with mortality.

**Conclusions** The risk factors identified highlight the importance of careful antenatal care.

#### SP6-64 MORTALITY IN THE ELDERLY, DUE TO PROXIMAL FEMUR FRACTURE: 1-YEAR FOLLOW-UP STUDY

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**Objectives** Identify risk factors for mortality after hip fracture.

**Material and Methods** Patients admitted in the orthopaedics service of the main hospital in Porto city, from 1 May 2008 to 30 April 2009, with a low-energy hip fracture were selected. During admission a questionnaire was applied and phone interviews to the patients or a close relative were done at 3, 6, 9 and 12 months after the fracture. From hospital registers, fracture type, surgery date, surgical treatment, co-morbidities and ASA score were obtained.

**Results** At admission, patients ( $n=252$ , 79% women, mean age of  $80.3 \pm 9.5$  years and  $76.3 \pm 11.3$  years ( $p<0.05$ ), women and men respectively) lived mainly with someone (67%); 1% were confined to bed, 65% had difficulties in walking or doing daily activities and 34% had a life without restrictions. The most common co-morbidities were hypertension for women (52% vs 38%) and respiratory disease for men (36% vs 11%),  $p<0.05$ . Death was 22%, 25%, 30% and 37% for men and 8%, 14%, 20% and 23% for women, respectively at 3, 6, 9 and 12 months of follow-up. Death was higher among institutionalised patients. Survival analysis using Kaplan–Meier curve and Cox regression analysis showed that the risk of death increased 6% for each age-year older, 151% if patient was a man, 94% for ASA score III/IV and 7% for each day of delay to the surgery.

**Conclusion** Older age, male sex, ASA scores III/IV and delay to surgery are good predictors of mortality after a hip fracture.

#### SP6-65 EMERGENCY MEDICAL SERVICE THROUGH COMMUNITY BASED VOLUNTEERS IN RURAL AREAS BANGLADESH

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**Background** Emergency medical service (EMS) cannot only lessen the severity of an illness but can also save lives. In this study we accessed the emergency medical services provided by trained community based volunteers in rural areas of Bangladesh. The objectives of this study were (1) To access the volunteer based emergency medical services and (2) To describe the types of emergency medical care services provided by the volunteers.

**Methods** In 2008, we trained community volunteers to deliver EMS within limited areas. A special emergency medical service manual

was developed. We selected volunteers from the community and trained them for 3 days intensively. After training all volunteers were provided a first aid box fully equipped with medicine and materials. The first 1 to 3 months of data about medical services were collected from the volunteers.

**Results** A total of 136 volunteers worked and 1403 patients were provided emergency medical services. After burn injuries all patients were treated first with water, 72 patients mostly injured with cuts and falls were treated with clean water before starting other treatment. 1175 patient received an antiseptic wash among them 75% had a cut injury and 11.5% a fall injury. Among all patient 58% were provided with bandage and these patients mostly had a cut injury. The volunteers treated 8 patients with Cardiopulmonary Resuscitation. Analgesia was given mostly in cuts (60.2%), falls (15.1%) and RTI (3.5%) patients and patients with fever (5.3%). About 249 (18%) of all patients were referred for further treatment.

**Conclusion** Expanding emergency medical service through community volunteers will be very effective in reducing mortality, morbidity and progression of any complications after injury.

#### SP6-66 THE RELATIONSHIP BETWEEN DENTAL DECAY AND CAREGIVER NEGLECT IN CHILDREN

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Despite all the public health policies, dental decay continues to be one of the most prevalent diseases in children (Siqueira *et al*, 2009). Among the factors related to dental decay in children is the lack of care from caregivers towards their children (Talekar *et al*, 2005), which can be seen as neglect (Chaves *et al*, 2003). However, not much is known regarding the relationship between dental decay and neglect, which is the aim of this research.

**Methods** 5-year-old children in a small city (Pacoti, Ceará, Brazil) with a public and well organised dental care assistance program were evaluated for dental problems, utilising the dmft index (number of decayed, missing, or filled teeth in a person), and signs of neglect (general hygiene: dental, hair, fingernail hygiene), through a visual inspection by the same investigator.

**Results** All 5-year-old children from the municipality were included. A total of 149 children (with parents and their children's consent), from all socio-economic levels, were examined. Only 34.9% were caries free, and more than 20% had five or more cavities. 32.9% had a dmft index of 4 or more. 64.5% had bad or partially bad oral hygiene. There was a strong and significant relationship between bad oral hygiene and dental decay experienced (dmft) ( $p=0.001$ ). There was also a relationship between general hygiene and hair and fingernail hygiene ( $p<0.005$ ).

**Conclusion** These findings suggest that children that are not properly taken care of (that have neglected their general hygiene) are more prone to have dental decay.

#### SP6-67 TB TRAINING ON DOTS STRATEGY FOR PRIMARY CARE'S HEALTHCARE WORKERS IN 2010, SAO PAULO STATE, BRAZIL

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**Introduction** Since establishment of DOTS Strategy in 1998, the Sao Paulo State TB Control Program has always been emphasising the need to sensitise and train healthcare workers (HCWs) in