

ROC, to calculate kinds of injury mortality rate by age, gender and cause. A 22-year trend of injury mortality rate was pictured then. The results and conclusions are as followed: In general, both of the counts of injury death and the injury mortality rate of male are higher than female in Taiwan. Injuries can be unintentional or intentional. The unintentional injury mortality rate decreased, but intentional one increased. Motor vehicle injury was the leading cause of injury death in Taiwan, followed by drowning. These two injury mortality rates decreased. Fall injury was ranked the third cause of death and has taken the place of drowning since 1996. The rate of fall mortality has remained stable. Suicide mortality rate significantly increased in study period, yet homicide mortality rate slightly decreased. While there is a downward trend in unintentional injury deaths, more effective measures to prevent motor vehicle injury, drowning and fall injury should be developed and fully implemented. On the other hand, to reduce suicide and homicide injury deaths should be most concerned in the future.

SP-077

An Epidemiologic Analysis of Suicide in Taiwan: 1986-2006

Wei-Ting Chang, Wu-Chien Chien

National Defense Medical Center, Taiwan

In Taiwan, suicide has become a serious problem, ranking among the top ten leading cause of death since 1997. Therefore, it is necessary to understand the high-risk groups and methods of suicide for making prevention strategies. Data were obtained from the Death Certification data file provided by the Department of Health from 1986 to 2006. The aim of this study was to examine the age, sex, methods, and long-term trends in suicide mortality. The results shown: (1) There were 49,269 deaths, and 66.9% of them were males. The 30-34 year-old was dominant age group and accounted for 9.8% (4832 deaths). However, the highest mortality rate among the 80-84 year-old group (44.24 per 100,000). Hanging (40.9%) and poisoning with solids/liquids (29.9%) were two common methods of suicide. (2) Total suicide mortality rate declined from 1986 to 1994, but increased from 1994 to 2006. The suicide rate of male is higher than female, and both increased since 1994. (3) Divided into three age groups (0-19, 20-64, and 65 above), the mortality rate of 20-64 year-old has been increased dramatically since 2000. (4) Except for poisoning with solids/liquids and firearms, all kinds of suicide mortality rates increased. As all results shown, the suicide rate has been rising since 1994. Therefore, in addition to economic environment and social welfare policies, the government has to promote health education and suicide prevention programs for high-risk groups.

SP-078

The Preliminary Study of Disability Certification for Patient with Traumatic Brain Injury by Using WHO ICF System

Hsin-Hsin Kuo, Tsan-Hon Liou, Yen-Nung Lin, Richard Yao-Chin Wang, Wen-Ta Chiu

Taipei Medical University, Taiwan

Traumatic brain injury (TBI) is an important public health problem which can result in death and permanent disabilities. Taiwan will start to use the International Classification of Functions, Disability and Health (ICF) for disability classification in 2012. The aim of this preliminary study is to try out ICF on TBI patients who have disability certificate. This study recruited 30 TBI patients with mean age of 47.4 ± 18.7 . The ratio of male to female is 9:1. There are 8 minor, 6 moderate, 12 severe and 4 critical disabled patients according to their certificates. At the time of injury occurrence, 27 patients had initial loss of consciousness, 28 intracranial hemorrhage, 14 amnesia, 22 neurological deficits and 6 co-morbidities. According to ICF core set, patients were evaluated separately for Body Function, Activities and Participation, and Environmental Factors. The result shows that 41 items may be relevant because more than 30% of patients had coded with these items. Relating ICF scores with TBI variables, it was found that disability classification and Body Function total score are statistically associated; Activities and Participation total score is significantly related to both disability classification and Glasgow Coma Score; convulsion, amnesia and neurological deficits are significantly associated with the Environmental Factors total score. In this study, we find ICF system and disability classification are positively related. Thus we can use the result of this study as a future reference for ICF core set for TBI patients in Taiwan.

SP-079

Factors Affecting the Outcome of Head Injury and Differences between Fall and Traffic Induced Head Injury

Dachen Chu^{1,2}, Ran-Chou Chen^{1,2}, Shi-Jye Duh¹, Pesus Chou²

1. Taipei City Hospital, Taiwan

2. National Yang-Ming University, Taiwan

Head injury is a major trauma to cause morbidity and mortality. Traffic accident and fall are two main mechanism to cause head injury. We evaluate factors affecting the outcome of head injury and differences between two major causes of head injury in a community based hospital. From 2006 to 2007, all victims admitted to intensive care unit in a community hospital under the diagnosis of head injury were collected. Among 325 cases evaluated, there were 138 cases of fall (42.5%) and 172 cases of traffic accident (52.9%), 72.9% were male, 24.6% were associated with alcohol consumption, and 37.3% received an operation. Outcome of head injury

was significantly related to age, mechanism of injury, combined spinal injury, associated complications, initial Glasgow Coma Scale (GCS) and TISS. Fall associated with higher percentage of ICH (60.4%) and more complications (57.7%) than traffic accident patients. Fall caused head injury is associated with older age (OR=8.69, 95% CI=3.08-24.57), alcohol consumption (OR=0.44, 95% CI=0.26-0.72) and poorer prognosis (OR=3.77, 95% CI=1.98-7.16) after controlling for clinical confounders. We demonstrate that fall account for almost half of the head injury in a community hospital. Prevention for fall and education to reduce alcohol consumption especially for older residents are crucial to reduce morbidity and mortality for head injury in a community.

SP-080

Influence of Pedestrian Environment Improvement on Fall Prevention Neihu Safe Community, Taipei, Taiwan

Tsui-Chuan Kang, Lu Pai

Taipei Medical University, Taiwan

Walking is the most healthy and energy-saving type of transportation. Residents of Neihu Safe Community walk a lot and put pedestrian's safety as one of their safety promotion goals. According to 2006 Neihu injury surveillance data, fall stood the third cause of injuries. Most of the injuries occurred on sidewalks. Therefore, a project aimed for better pedestrian's environment was come into operation in Neihu District, Taipei. The Neihu Safety and Health Promotion Association (NSHPA) and the Neihu District Office, Taipei City, co-conducted a field investigation to find out threats on sidewalks and skywalks in October 2006. After 3-hour inspection training, volunteers, including Neihu District officers, college students and local enthusiastic inhabitants, recorded every defect that might be dangerous to pedestrians. NSHPA collected the records and made a report to related official departments which were responsible for repair and maintenance. The same inspection was conducted again in April 2007. This study analyzed the data collected by NSHPA, and shows the results of the sidewalks safety inspection as well as the improvement effects. Number of defects found on sidewalks and skywalks before and after repair was compared. Fall injuries occurred in May through September in 2006 and 2007 were also compared to reveal the effect of the project. It was found that sidewalks and skywalks defects revealed 79% reduction at the second inspection. Fall injuries reduced 23.4%, mostly attributable to the improvement of sidewalks and skywalks. This is a good example of injury prevention with bottom-up and top-down. Pedestrians' environment has been improved, and fall injuries also decreased.

SP-081

Determinants of Participation in Fall Prevention Program among Elderly Fallers in Hong Kong

Eliza LY Wong, Jean Woo, Wl Cheung, Yeung Pui Yee
The Chinese University of Hong Kong, Hong Kong

Background: Fall injuries are one of the main causes nationally for the loss of independence at the old ages but they are preventable. The acceptance of fall prevention program is therefore the key element to reduce the risk of falling.

Aims: The study aims to estimate the uptake of fall prevention program among elderly fallers and explore the factors related to the participation of the fall prevention program.

Methods: A telephone survey was conducted to the elderly who aged ≥ 65 who were given a referral of fall prevention program after attending at the Department of Accident & emergency (A&E) due to fall at the NT East Cluster in 2007. The inter-relationships between the socio-demographics characteristics and related factors were explored using multivariate analysis. Results: Total 969 elderly (mean age 80 years) were contacted and 70% of them joined the program. The participation rates were lower (65.8%) in the older age group than the younger group aged under 80 (74.9%) and female (68.5% vs. 73.9% for male). The factors associated with the participation of the fall prevention program included higher education level (OR = 1.79; 95% CI [1.00-3.22]), with chronic illness (OR = 12.31; 95% [6.86-22.12]) and without any aid for walking (OR = 1.78, 95% [1.25-2.53]) after adjusted age and sex of the participated elderly. Conclusions: Elderly without the identified characteristics of participation may not receive the benefit from the fall prevention program. It is an important indication for the future development of prevention program in Hong Kong for elderly.

SP-082

Applying Root Cause Analysis to Improve Patient Safety: Decreasing Falls in Postpartum Women

Kuo-Hu Chen¹, Li-Ru Chen², Syi Su¹

1. *National Taiwan University, Taiwan*

2. *Mackay Memorial Hospital, Taiwan*

Objective: To investigate the effectiveness of interventions to prevent falls designed through root cause analysis.

Methods: Under preceding root cause analysis, root factors were classified into four major categories: environment and facilities, procedure, individual, and communication. Among them, communication, environment and facilities were recognized as the most vital factors to facilitate intervention accordingly. The fall prevention program included first intervention with adding live demonstrations and offering a printed education sheet, and second intervention with adjusting rails at the bedside and in the ward, placing anti-sliding pads on the floors of the bathrooms, and enhancing local