

**Background** Many injury victims die before reaching a hospital due to inadequate pre-hospital care and transport. Prompt emergency care can save lives and prevent disabilities but the inconsistent availability of formal Emergency Medical Services (EMS) makes it challenging. This is the case even in some high-income developing countries like Oman. For this study we analysed the trauma registry data from two large hospitals of Oman to understand the pre-hospital and hospital based emergency care in a rapidly developing country in the Arab Gulf.

**Methods** The data was collected from Khoula and Nizwa hospitals between November 2014 and April 2015. All patients admitted through the emergency department with a history of trauma were included. Information about mechanism of injury, mode of transport, time interval between injury and hospital, pre-hospital care and emergency department (ED) disposition was collected.

**Results** 2,340 patients were received in the ED during the study period. The majority (74%) were males, with a mean age 27 years. Transport injuries and falls accounted for 70% of all injuries. The most common mode of transport was private car (43%); only 13% of patients were transported via EMS. Only 30% of cases were transported to the hospital within an hour of injury; median transport time was 2.53 hours. Only 27% of patients received some form of pre-hospital care. Twenty-three ED deaths were recorded. Mean ED length of stay was 16.35 hours. In the study population, injury severity score in 85% of cases was  $\leq 9$ , mean revised trauma score was 7.6382 and overall mortality ratio was 2.35%.

**Conclusion** Despite rapidly developing health care services in the urban parts of Oman, EMS utilisation is low. Patients presenting to the hospital are those who have less severe injuries and thus have better chances of survival. A better-organised EMS system may provide a prompt transport and appropriate triage to patients with severe injuries.

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#### RECOVERY AFTER SERIOUS TRAUMA—OUTCOMES, RESOURCE USE AND PATIENT EXPERIENCES (RESTORE) STUDY: 3-YEAR OUTCOMES FOR ADULTS

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**Background** There is a worldwide shortage of population data about non-fatal injury burden. The aim of this population-based, nested, longitudinal study was to quantify patient outcomes in the first 5 years after injury.

**Methods** Adult (>17 years), major trauma patients registered by the population-based Victorian State Trauma Registry, injured between July 2011 and June 2012, were followed up by telephone at 6-months and 1, 2, 3, 4 and 5 years post-injury to collect function (GOS-E), health status (EQ-5D), return to work, environmental impact (CHIEF-SF) and post-traumatic stress disorder (IES-R) data. Data from the 3-year time point are presented.

**Results** Of 2,757 patients, 333 died in-hospital and 99 opted-out of follow-up. Of the remaining 2,325 patients, 10% died before 3 years. The mean (SD) age of surviving patients was 49 (21) years, 73% were male, 89% were unintentional cases. Road traffic injury (37%) and falls (32%) were common causes. 62% were working/studying before injury. 84% were followed up at 3 years. 29% reported upper good recovery on the GOS-E, and 69% of those working/studying before injury had resumed work/study. Prevalence of problems on the EQ-5D items varied; 37% for mobility, 21% for personal care, 47% for usual activities, 50% for pain/discomfort and 41% for anxiety/depression. Mean CHIEF-SF scores indicated greater problems than the CHIEF norms for the transport (0.77 vs 0.48), natural environment (1.26 vs 0.63), physical structure of other surroundings (1.00 vs 0.44), home help (0.51 vs 0.35) and health care (0.49 vs 0.34) items. IES-R scores for 43% showed no symptoms; 21% had some symptoms and 18% scored >33 which is indicative of a clinical diagnosis of PTSD.

**Conclusions** At 3-years post-injury, ongoing problems were prevalent. The data provides valuable information about the time course for recovery and key problems faced by patients in their recovery.

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#### EPIDEMIOLOGICAL TRENDS IN THE SWISS REHABILITATION SETTING FOR TRAUMATIC SPINAL CORD INJURY

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**Background** Dynamics of incident traumatic accidents, a case in point being traumatic spinal cord injury (TSCI), have changed over the past forty years in many high income countries due to changes in demographic structure, lifestyle and policy. Rehabilitation following a TSCI can result in significant improvements and prolongation of life and reduced societal and personal burden. Monitoring contemporary and historical trends can help inform future projections for targeted interventions towards prevention and resource allocation.

**Methods** TSCI cases admitted for first rehabilitation between 1970 and 2014 were identified in four specialised rehabilitation centres in Switzerland included in the Swiss Spinal Cord Injury (SwiSCI) cohort. Multinomial logistic regression was used to determine relative risk ratios (RRR) of admission to first rehabilitation. Incidence rate ratios (IRRs) were calculated using Poisson regression with reference to the Swiss general population.

**Results** There were 4,095 incident cases of TSCI. Between 1971–2000 there was an overall 2.1% increase in patient admission, followed by a 1.2% decrease in 2000–2014. The relative proportion of the elderly patient population increased from 1990 onwards in comparison with 1970–1974 (RRR range compared to the youngest: 4.2–14.6). Relative to the youngest patients, the oldest patients had a nearly 18-fold increase in odds for falls in comparison with transport-related accidents. Assessment of IRRs revealed an increase in risk of admission for sports-related accidents TSCIs among the youngest ages; risk of falls among older ages appeared to increase, especially after 2000.