

clinical impressions, glycemic issues (OR 4.8; 99.9% CI 3.9-5.7) and wellness checks (OR 6.5; 99.9% CI 5.7-7.3) are more likely to have a non-transport. Non-transporters are more likely at a detention facility (OR 4.1; 99.9% CI 3.2-5.1) or a roadway (OR 2.4; 99.9% CI 2.1-2.8). 5.6% ( $n = 798/14094$ ) of non-transport patients were classified as a potentially adverse non-transport. **Conclusion:** This study demonstrated that a significant portion of patients (18.9%) had a non-transport outcome, but only a small percentage (5.6%) were considered potentially adverse. The results of this study provide timely information to policy makers and healthcare practitioners on the scope of this issue, and suggest potential directions for future study and clinical decision making.

**Keywords:** non-transport, emergency medical services (EMS), transport

#### LO020

##### **Obstacle course runs: review of acquired injuries and illnesses at a series of Canadian events (RACE)**

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**Introduction:** The growing popularity of obstacle course runs (OCRs) has led to significant concerns regarding their safety. The influx of injuries and illnesses in rural areas where OCRs are often held can impose a large burden on first responders, Emergency Medical Services (EMS) and local Emergency Departments. Literature concerning these events is minimal and mostly consists of media reports. Recognizing the lack of epidemiologic data, we sought to accurately determine the patterns and frequency of injuries and illnesses that occur at OCRs, the treatments required, and what proportion require further medical care or transfer to hospital. **Methods:** Data were extracted from medical charts completed for all patients presenting to the on-site medical team at OCR events across Canada from May to August, 2015. Frequency and patterns of injuries and illnesses were determined as well as treatments and disposition. There were 45 285 OCR participants in 8 events. There were 572 total patient contacts and 557 patients were included in the study. 15 patients were excluded because they were not race participants. **Results:** Less than 2% of participants at any event required on-site medical care. 11 patients (1.97%) required transfer to hospital by EMS. The majority of injuries were musculoskeletal in nature (74.71%). 495 patients (88.87%) returned to the event with no need for further medical care. The majority of treatments could be provided with first aid training and basic medical equipment. **Conclusion:** Injury and illness rates at this series of OCRs was similar to other mass gathering events. Injuries were mostly musculoskeletal in nature and required minor treatment. Having a medical team on site likely reduced local hospital and EMS volume from these events. This study raises the question of whether having a physician on site at OCRs could significantly reduce the number of patients advised to seek further medical care or the number of ambulance transfers. Prospective research is needed in order to develop plans for more appropriate resources, safety protocols, and medical staffing, thereby improving patient care and reducing the burden on local EMS and rural hospitals.

**Keywords:** prehospital, sports medicine

#### LO021

##### **Use of health services among non-institutionalized frail elderly with fracture: preliminary results**

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**Introduction:** Frail older adults experience an increased risk of a number of adverse health outcomes such as comorbidity, disability,

dependency, institutionalization, falls, fractures, hospitalization, and mortality. Identification of frail adults is important. The objective of this study is to examine the association between frailty and use of health services (emergency, general practitioner, hospitalization) prior to and following a visit for a fracture in non-institutionalized seniors. **Methods:** This study is a population-based cohort build from the Quebec Integrated Chronic Disease Surveillance System, an innovative chronic disease surveillance system linking five health care administrative databases. Algorithms using data from this system are accurate and reliable for identifying fractures. The sample includes 179,734 seniors  $\geq 65$  years old, non-institutionalized in the year before the fracture. Their frailty status was measured using the elderly risk assessment index. Poisson regression models were used to compare use of health services (emergency, general practitioner, hospitalization) 1 year before and 1 year after a visit for a fracture (adjusting for age, sex, comorbidities, social deprivation, material deprivation and site of fracture). **Results:** Overall, preliminary results show that the use of health services increased significantly in the year following the fracture in frail non-institutionalized elderly vs the non-frail one ( $p < 0.05$ ). **Conclusion:** This study suggests that frail seniors with a fracture require more health services after their incident fracture. Furthermore, using a frailty assessment index in health administrative databases can help identify seniors that are at high risk of needing more health services and, therefore, improve their care.

**Keywords:** frailty, fracture, health administrative databases

#### LO022

##### **Incidence and impact measurement of delirium induced by ED stay - INDEED**

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**Introduction:** Delirium is a dreadful complication in seniors' acute care. Many studies are available on the incidence of delirium, however ED-induced delirium is far less studied. We aim to evaluate the incidence and impact of ED-induced delirium among older non-delirious admitted ED patients who have prolonged ED stays ( $\geq 8$  hours). **Methods:** This prospective INDEED study phase 1 included patients recruited from 4 Canadian EDs. **Inclusion criteria:** 1) Patients aged 65 and over; 2) ED stay  $\geq 8$  hours; 3) Patient is admitted to the hospital; 4) Patient is non-delirious upon arrival and at the end of the first 8 hours; 5) Independent or semi-independent patient. Eligible patients were assessed by a research assistant after an 8 hour exposition to the ED and evaluated twice a day up to 24h after ward admission. Patients' functional and cognitive status were assessed using validated OARS and TICS-m tools. The Confusion Assessment Method was used to detect incident delirium. Hospital length of stays (LOS) were obtained. Univariate and multivariate analyses were conducted to evaluate outcomes. **Results:** Of the 380 patients prospectively followed, mean age was 76.5 ( $\pm 8.9$ ), male represent 50% and 16.5% very old seniors ( $> 85$  y.o.). The overall incidence of ED-induced delirium was 8.4%. Distribution by the 4 sites was: 10%, 13.8%, 5.5% & 13.4%. The mean ED LOS varied from 29 to 48 hours. The mean hospital LOS was increase by 6.1 days in the delirious patients compared to non-delirious patient ( $p < 0.05$ ). Increase mean hospital LOS distribution by site was by: 6.9, 8.5, 4.3 and 5.2 days for the ED-induced delirium patients. **Conclusion:** ED-induced delirium was recorded in nearly one senior out of ten after a minimal 8 hour exposure in the ED environment.