positive likelihood ratio (LR) was 10.6 (95% CI:7.8-14.5) and negative LR was 0.03 (95% CI:0.0-0.2). Moderate inter-rater agreement was seen between initial ECG interpretations (kappa = 0.42, 95% CI:0.29-0.54) by the fellow and prehospital physician, while agreement was higher (good) between the two prehospital physicians (kappa = 0.76, 95% CI:0.55-0.96). **Conclusion:** These results indicate that ACPs are adept at identifying PSVT, but are prone to false positives. Given the relatively good sensitivity and specificity seen in this investigation, future studies should investigate ACP recognition of specific rare arrhythmias (antidromic accelerated atrial fibrillation) that may require different management including avoidance of adenosine.

Keywords: paroxysmal supraventricular tachycardia, emergency medical services

MP03

The epidemiology of mortality in patients transported by emergency medical services (EMS)

I. E. Blanchard, MSc, D. Lane, MSc, T. Williamson, PhD, G. Vogelaar, BSc, B. Hagel, PhD, G. Lazarenko, MD, E. Lang, MD, CM, C. Doig, MD, MSc, Alberta Health Services Emergency Medical Services/ University of Calgary, Calgary, AB

Introduction: Outside of key conditions such as cardiac arrest and trauma, little is known about the epidemiology of mortality of all transported EMS patients. The objective of this study is to describe characteristics of EMS patients who after transport die in a health care facility. **Methods:** EMS transport events over one year (April, 2015-16) from a BLS/ALS system serving an urban/rural population of approximately 2 million were linked with in-hospital datasets to determine proportion of all-cause in-hospital mortality by Medical Priority Dispatch System (MPDS) determinant (911 call triage system), age in years ($\geq$18 yrs. - adult, $\leq$17 yrs. - pediatric), sex, day of week, season, time (in six hour periods), and emergency department Canadian Triage and Acuity Scale (CTAS). The MPDS card, patient chief complaint, and ED diagnosis category (International Classification of Disease v.10 - Canadian) with the highest proportion of mortality are also reported. Analyses included two-sided t-test or chi-square with alpha <0.05. **Results:** A total of 239,534 EMS events resulted in 159,507 patient transports; 141,114 were included for analysis after duplicate removal (89.1% linkage), with 127,867 reporting final healthcare system outcome. There were 4,269 who died (3.3%; 95% CI 3.2%, 3.4%). The proportion of mortality by MPDS determinant was, from most to least critical 911 call, Echo (7.3%), Delta (37.2%), Charlie (31.3%), Bravo (5.8%), Alpha (18.3%), and Omega (0.3%). For adults the mean age of survivors was less than non-survivors (57.7 vs. 75.8; p < 0.001), but pediatric survivors were older than non-survivors (8.7 vs. 2.8; p < 0.001). There were more males that died than females (53.0% vs. 47.0%; p < 0.001). There was no statistically significant difference in the day of week (p = 0.592), but there was by season with the highest mortality in winter (27.1%; p = 0.045). The highest mortality occurred with patients presenting to EMS between 0600-1200 hours (34.6%), and the lowest between 0000-0600 hours (11.8%; p < 0.001). Mortality by CTAS was category 1 (27.1%), 2 (36.7%), 3 (29.9%), 4 (4.3%), and 5 (0.5%). The highest mortality was seen in MPDS card 26-Sick Person (specific diagnosis) (19.1%), chief complaint shortness of breath (19.3%), and ED diagnoses pertaining to the circulatory system (31.1%). **Conclusion:** Significant all-cause in-hospital mortality differences were found between event, patient, and clinical characteristics. These data provide foundational and hypothesis generating knowledge regarding mortality in transported EMS patients that can be used to guide research and training. Future research should further explore the characteristics of those that access health care through the EMS system.

Keywords: emergency medical services, mortality, epidemiology

MP04

Analysis of a needs-based assessment of paramedic continuing education

M. Davis, MD, MSc, L. Leggatt, MD, K. Van Aarsen, MSc, S. Romano, MScEd, Division of Emergency Medicine, Western University, London, ON

Introduction: To determine trends in identified self-perceived knowledge deficits of paramedics, training barriers and desired methods of self-directed education. **Methods:** A written survey was delivered to all paramedics in an Ontario base-hospital. Respondents were asked to identify deficits from a 37-point, anatomic systems-based list. Preferred educational modalities to address knowledge deficits and factors taken into consideration when choosing self-directed education were captured. Top 5 perceived deficit topics, number of perceived deficits, top 5 factors associated with training modality chosen and factors taken into consideration for choosing training modalities, were compared against paramedic age, training (Advanced Care Paramedic; ACP, or Primary Care Paramedic; PCP) and primary location of practice (urban, rural, mixed setting). **Results:** Of 1262 paramedics, 746 (59.11%) completed the survey. PCPs had a higher report of deficit in both neonatal resuscitation and arrhythmia than ACPs (48.3% vs. 58.8%, p = 0.015; 40.3% vs. 58.5%, p < 0.001). Paramedics who listed rural as their primary practice location were more likely to report a deficit in pediatric respiratory disorder than those with a mixed urban/rural and primary urban practice (65.9% vs. 46.3%, p = 0.000; 65.9% vs. 45.9%, p = 0.001;) as well as a higher median number of listed deficits (9.00 vs. 6.00 vs. 6.00, p < 0.001). ACPs were more likely to consider scheduling, location/ease of attending and cost as barriers than PCPs (85.4% vs. 63.8%, p = 0.000; 69.5% vs. 51.4%, p = 0.002; 69.5% vs. 39.5%, p = 0.000) while reporting an increased desire for webinar material than PCPs (56.1% vs. 40.4%, p = 0.007). There were no significant differences found by age. **Conclusion:** Targeted educational needs-based assessments can help ensure appropriate topics are delivered in a fashion that overcomes identified barriers to self-directed learning. From our analysis, increased awareness of ease of attending sessions and preferred modalities, such as webinars may be beneficial; especially for ACPs who require more annual continuing educational hours. Paramedics in rural locations may require increased continuing education, especially for rarely encountered, high risk situations, such as pediatric critical care. These findings can help direct future education in our system and others.

Keywords: education, paramedic, prehospital

MP05

Injuries in refugee children presenting to a paediatric emergency department

E. Zhang, HBSc, MSc, F. Razik, HBSc, MBBS, S. Ratnapalan, MBBS, MEd, PhD, Sick Kids Hospital, University of Toronto, Toronto, ON

Introduction: The number of refugees accepted to Canada grew from 24,600 in 2014 to 46,700 in 2016. Many of these refugees have young families and the number of child refugees has increased accordingly. Although child refugee health care has been in the forefront of media and medical attention recently, there is limited data on injury patterns in this population. Canadian Hospitals Injury Reporting and Prevention