

from the drone and initiated resuscitative efforts on a manikin. The second phase (2 scenarios) were done in a similar manner save for the drone being dispatched from a regionally optimized location for drone response. **Results:** Phase 1: The distance from dispatch location to scene varied from 6.6 km to 8.8 km. Mean (SD) response time from 911 call to scene arrival was 11.2 (+/- 1.0) minutes for EMS compared to 8.1 (+/- 0.1) for AED drone delivery. In all four simulations, the AED drone arrived before EMS, ranging from 2.1 to 4.4 minutes faster. The mean time for trained responders to retrieve the AED and apply it to the manikin was 35 (+/- 5) sec. No difficulties were encountered in drone activation by dispatch, drone lift off, landing or removal of the AED from the drone by responders. Phase 2: The ambulance response distance was 20km compared to 9km for the drone. Drones were faster to arrival at the scene by 7 minutes and 8 minutes with AED application 6 and 7 minutes prior to ambulance respectively. **Conclusion:** This implementation study suggests AED drone delivery is feasible with improvements in response time during a simulated SCA scenario. These results suggest the potential for AED drone delivery to decrease time to first defibrillation in rural and remote communities. Further research is required to determine the appropriate distance for drone delivery of an AED in an integrated EMS system as well as optimal strategies to simplify bystander application of a drone delivered AED.

Keywords: defibrillation, emergency medical services, out-of-hospital cardiac arrest

LO20

The characteristics, clinical course and disposition of long-term care patients treated by paramedics during an emergency call: Exploring the potential impact of community paramedicine

S. Leduc, G. Wells, PhD, V. Thiruganasambandamoorthy, MSc, MBBS, Z. Cantor, P. Kelly, M. Rietschlin, C. Vaillancourt, MD, MSc, Ottawa Paramedic Service, Ottawa, ON

Introduction: An increasing number of Canadian paramedic services are creating Community Paramedic programs targeting treatment of long-term care (LTC) patients on-site. We explored the characteristics, clinical course and disposition of LTC patients cared for by paramedics during an emergency call, and the possible impact of Community Paramedic programs. **Methods:** We completed a health records review of paramedic call reports and emergency department (ED) records between April 1, 2016 and March 31, 2017. We utilized paramedic dispatch data to identify emergency calls originating from LTC centers resulting in transport to one of the two EDs of the Ottawa Hospital. We excluded patients with absent vital signs, a Canadian Triage and Acuity Scale (CTAS) score of 1, and whose transfer to hospital were deferrable or scheduled. We stratified remaining cases by month and selected cases using a random number generator to meet our a priori sample size. We collected data using a piloted standardized form. We used descriptive statistics and categorized patients into groups based on the ED care received and if the treatment received fit into current paramedic medical directives. **Results:** Characteristics of the 381 included patients were mean age 82.5 years, 58.5% female, 59.7% hypertension, 52.6% dementia and 52.1% cardiovascular disease. On arrival at hospital, 57.7% of patients waited in offload delay for a median time of 45 minutes (IQR 33.5-78.0). We could identify 4 groups: 1) Patients requiring no treatment or diagnostics in the ED (7.9%); 2) Patients receiving ED treatment within current paramedic medical directives and no diagnostics (3.2%); 3) Patients requiring diagnostics or ED care outside current paramedic

directives (54.9%); and 4) patients requiring admission (34.1%). Most patients were discharged from the ED (65.6%), and 1.1% died. The main ED diagnoses were infection (18.6%) and musculoskeletal injury (17.9%). Of the patients that required ED care but were discharged, 64.1% required x-rays, 42.1% CT, and 3.4% ultrasound. ED care included intravenous fluids (35.7%), medication (67.5%), antibiotics (29.4%), non-opioid analgesics (29.4%) and opioids (20.7%). Overall, 11.1% of patients didn't need management beyond current paramedic capabilities. **Conclusion:** Many LTC patients could receive care by paramedics on-site within current medical directives and avoid a transfer to the ED. This group could potentially grow using Community Paramedics with an expanded scope of practice.

Keywords: community paramedic, long-term care, reducing emergency department visits

LO21

Consistency of CTAS scores by presenting complaint pre and post eCTAS implementation in 35 emergency departments across Ontario

S. McLeod, MSc, PhD, C. Thompson, BSc, MSc, B. Borgundvaag, MD, PhD, L. Thabane, PhD, H. Ovens, MD, S. Scott, MBA, T. Ahmed, MBA, K. Grewal, MD, MSc, J. McCarron, B. Filsinger, BA, N. Mittmann, PhD, A. Worster, MD, MSc, T. Agoritsas, MD, PhD, G. Guyatt, MD, MSc, Schwartz/Reisman Emergency Medicine Institute, Sinai Health, University of Toronto, Toronto, ON

Introduction: eCTAS is a real time electronic triage decision-support tool designed to improve patient safety and quality of care by standardizing the application of the Canadian Triage and Acuity Scale (CTAS). The tool dynamically calculates a recommended CTAS score based on the presenting complaint, vital signs and selected clinical modifiers. The primary objective was to assess consistency of CTAS score distributions across 35 emergency departments (EDs) by 16 presenting complaints pre and post eCTAS implementation. **Methods:** This retrospective cohort study used population-based administrative data from January 2016 to December 2018 from all hospital EDs in Ontario that had implemented eCTAS with at least 9 months of data. Following a 3-month stabilization period, we compared data for 6 months post-eCTAS implementation to the same 6-month period the previous year (pre-implementation) to account for potential seasonal variation, patient volume and case-mix. We included triage encounters of adult (≥ 18 years) patients if they had one of 16 pre-specified high-volume, presenting complaints. A paired-samples t-test was used to determine consistency by estimating the absolute difference in CTAS distribution for each presenting complaint, by each hospital, pre and post eCTAS implementation, compared to the overall average of the 35 EDs. **Results:** There were 183,231 triage encounters in the pre-eCTAS cohort and 179,983 in the post-eCTAS cohort from 35 EDs across the province. Triage scores were more consistent with the overall average after eCTAS implementation in 6 (37.5%) presenting complaints: chest pain (cardiac features) ($p < 0.001$), extremity weakness/symptoms of cerebrovascular accident ($p < 0.001$), fever ($p < 0.001$), shortness of breath ($p < 0.001$), syncope ($p = 0.02$), and hyperglycemia ($p = 0.03$). Triage consistency was similar pre and post eCTAS implementation for the presenting complaints of altered level of consciousness, anxiety/situational crisis, confusion, depression/suicidal/deliberate self-harm, general weakness, head injury, palpitations, seizure, substance misuse/intoxication or vertigo. **Conclusion:** A standardized, electronic