67%. Almost all ED's increased their THN kit distribution from year to year, though there was one urban community site that dispensed fewer kits in the second year of the program. **Conclusion**: Edmonton Zone ED's dispensed 686 THN kits over two calendar years. Almost every ED distributed more kits in 2017 than 2016, which likely reflects successful uptake of this harm reduction intervention by frontline ED staff. However, there is still evidence of some imbalance in THN kit allocation as the percent increase in kits distributed varied widely based on the type of ED. This data can be used to pinpoint areas in the Edmonton Zone where barriers to THN access may still exist and guide continued quality improvement interventions to increase distribution and education.

Keywords: take home naloxone, opioid, overdose

P082
Predictive ability of the quick Sepsis-related Organ Failure Assessment score among patients with infection transported by paramedics: a Bayesian analysis

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Introduction: The quick Sepsis-related Organ Failure Assessment (qSOFA) score was developed to provide clinicians with a quick assessment for patients with latent organ failure possibly consistent with sepsis at high-risk for mortality. With the clinical heterogeneity of patients presenting with sepsis, a Bayesian validation approach may provide a better understanding of its clinical utility. This study used a Bayesian analysis to assess the prediction of hospital mortality by the qSOFA score among patients with infection transported by paramedics. **Methods**: A one-year cohort of adult patients transported by paramedics in a large, provincial EMS system was linked to Emergency Department (ED) and hospital administrative databases, then restricted to those patients with an ED diagnosed infection. A Bayesian binomial regression model was constructed using Hamiltonian Markov-Chain Monte-Carlo sampling, normal priors for each parameter, the calculated score, age and sex as the predictors, and hospital mortality as the outcome. Discrimination was assessed using posterior predictions to calculate a "Bayesian" C statistic, and calibration was assessed with calibration plots of the observed and predicted probability distributions. The independent predictive ability of each measure was tested by including each component measure (respiratory rate, Glasgow Coma Scale, and systolic blood pressure) as continuous predictors in a second model. **Results**: A total of 9,920 patients with ED diagnosed infection were included. 264 (2.7%) patients were admitted directly to the ICU, and 955 (9.6%) patients died in-hospital. As independent predictors, the probability of mortality increased as each measure became more extreme, with the Glasgow Coma Scale predicting the greatest change in mortality risk from a high to low score; however, no dramatic change in the probability supporting a single decision threshold was seen for any measure. For the calculated score, the C statistic for predicting mortality was 0.728. The calibration curve had no overlap of predictions, with a probability of 0.5 (50% credible interval 0.47-0.53) for patients with a qSOFA score of 3. **Conclusion**: Although no single decision threshold was identified for each component measure, a calculated qSOFA score provides good prediction of mortality for patients with ED diagnosed infection. When validating clinical prediction scores, a Bayesian approach may be used to assess probabilities of interest for clinicians to support better clinical decision making. Character count 2494

Keywords: Bayesian analysis, prediction, sepsis

P083
Innovative use of AED by RNs and RTs during in-hospital cardiac arrest (Phase III)

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Introduction: In-hospital cardiac arrest (IHCA) most commonly occurs in non-monitored areas, where we observed a 10min delay before defibrillation (Phase I). Nurses (RNs) and respiratory therapists (RTs) cannot legally use Automated External Defibrillators (AEDs) during IHCA without a medical directive. We sought to evaluate IHCA outcomes following usual implementation (Phase II) vs. a Theory-Based educational program (Phase III) allowing RNs and RTs to use AEDs during IHCA. **Methods**: We completed a pragmatic before-after study of consecutive IHCA. We used ICD-10 codes to identify potentially eligible cases and included IHCA cases for which resuscitation was attempted. We obtained consensus on all data definitions before initiation of standardized-piloted data extraction by trained investigators. Phase I (Jan.2012-Aug.2013) consisted of baseline data. We implemented the AED medical directive in Phase II (Sept.2013-Aug.2016) using usual implementation strategies. In Phase III (Sept.2016-Dec.2017) we added an educational video informed by key constructs from a Theory of Planned Behavior survey. We report univariate comparisons of Utstein IHCA outcomes using 95% confidence intervals (CI). **Results**: There were 753 IHCA for which resuscitation was attempted with the following similar characteristics (Phase I n = 195; II n = 372; III n = 186): median age 68, 60.0% male, 79.3% witnessed, 29.7% non-monitored medical ward, 23.9% cardiac cause, 47.9% initial rhythm of pulseless electrical activity and 27.2% ventricular fibrillation/tachycardia (VF/VT). Comparing Phases I, II and III: an AED was used 0 times (0.0%), 21 times (5.6%), 15 times (8.1%); time to 1st rhythm analysis was 6min, 3min, 1min; and time to 1st shock was 10min, 10min and 7min. Comparing Phases I and III: time to 1st shock decreased by 3min (95%CI -7; 1), sustained ROSC increased from 29.7% to 33.3% (AD3.6%; 95%CI -10.8; 17.8), and survival to discharge increased from 24.6% to 25.8% (AD1.2%; 95%CI -7.5; 9.9). In the VF/VT subgroup, time to first shock decreased from 9 to 3 min (AD-6min; 95%CI -12; 0) and survival increased from 23.1% to 38.7% (AD15.6%; 95%CI -4.3; 35.4). **Conclusion**: The implementation of a medical directive allowing for AED use by RNs and RRTs successfully improved key outcomes for IHCA victims, particularly following the Theory-Based education video. The expansion of this project to other hospitals and health care professionals could significantly impact survival for VF/VT patients.

Keywords: automated external defibrillator, cardiac arrest

P084
The sky is not the limit! Protocol for a rapid systematic review on the use of drones in emergency medicine

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Introduction: Drones are already being used in medicine. They are employed to transport blood products and laboratory samples in rural and remote areas and they are increasingly being tested to deliver external defibrillators outside the hospital to patients with cardiac

arrest. As this technology rapidly develops and attracts the attention of the scientific community, we present a rapid systematic review protocol that aims to synthesize the scientific evidence that has tested the use of drones to provide emergency medical care. **Methods**: A search strategy incorporating the concepts of 'drone' and 'emergency medicine' was launched in 52 bibliographic databases, including CINAHL and PubMed. Using the artificial intelligence module included in DistillerSR, a reviewer completed the first screening phase by reading the title and abstract of the retrieved articles. To be included, articles had to report empirical research projects that tested the potential uses of drones to improve the quality and accessibility of emergency medical care. These selection criteria were applied to the full text of the included articles during the second screening phase by a single reviewer. The results of these two screening phases will be validated by a second independent reviewer. The bibliography of included studies, relevant scientific journals and literature reviews will be manually searched for relevant articles. **Results**: The search strategy retrieved 1809 articles, of which 22 met our inclusion criteria in the first and second screening phases. Of these, one study used an empirical research design (qualitative interviews) to evaluate the usefulness of drones in emergency medicine, 17 used simulations or scenarios, and four were comprehensive literature reviews on the use of drones to provide healthcare. The final review will synthesize evidence related to the use of drones in emergency medicine and its impact on emergency medical services: nature of the emergency situation (cardiac arrest, blood transfusion), type of drone (fixed wing, quadcopter), tasks performed by drones (transport, surveillance), improvement in access or quality of care (patient's health, time saved in providing services). **Conclusion**: Drone technology is evolving rapidly and the indications for its use in providing emergency care is increasing. This rapid systematic review will focus on scientific studies aimed at testing the effectiveness of drones to improve the quality and access to emergency medical care.

Keywords: drones, emergency medicine, review protocol

P085
What do community paramedics assess? An environmental scan and content analysis of patient assessment in community paramedicine

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Introduction: Patient assessment is a fundamental feature of non-emergency community paramedicine (CP) home visit programs. In the absence of a recognized standard for CP assessment, current assessment practices in CP programs are unknown. Without knowing what community paramedics are assessing, it is difficult to ascertain what should be included in patient care plans, whether interventions are beneficial, or whether paramedics are meeting program objectives. Our objective was to summarize the content of assessment instruments used in CP programs in order to describe the state of current practice. **Methods**: We performed an environmental scan of all CP programs in Ontario, Canada, and employed content analysis to describe current assessment practices in CP home visit programs. The International Classification on Functioning, Disability, and Health (ICF) was used to categorize and compare assessments. Each item within each assessment form was classified according to the ICF taxonomy. Findings were compared at the domain and sub-domain of the ICF. **Results**: Of 54 paramedic services in Ontario, 43 responded to our request for information. Of 24 services with CP home visit programs, 18 provided their intake assessment forms for content analysis. Assessment forms contained between 13 and 252 assessment items (median 116.5, IQR 134.5). Overall, most assessments included some content from each of the domains outlined in the ICF, including: Impairments of Body Functions, Impairments of Body Structures, Activity Limitation and Participation, and Environmental Factors. At the sub-domain level, only assessment of Impairments of the Functions of the Cardiovascular, Haematological, Immunological and Respiratory systems appeared in all assessments. Few CP home visit program assessments covered most ICF sub-domain categories and many items classified to specific categories were included in only a few assessments. **Conclusion**: CP home visit programs complete multi-domain assessments as part of patient intake. The content of CP assessments varied across Ontario, which suggests that care planning and resources may not be consistent. Current work on practice guidelines and paramedic training can build from descriptions of assessment practices to improve quality of care and patient safety. By identifying what community paramedics assess, evaluation of the quality of CP home visit programs and their ability to meet program objectives can be improved and benchmarks in patient care can be established.

Keywords: community paramedicine, patient assessment, quality improvement and patient safety

P086
Awareness and barriers to access of a Ministry of Health mandated 'Do Not Resuscitate' confirmation form: An interim analysis

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Introduction: Elderly patients with comorbid illness have poor meaningful recovery after out of hospital cardiac arrest. Many elderly patients decide that if they have a cardiac arrest, they would want not want resuscitation. In Ontario, prehospital personnel must provide resuscitation to all patients regardless of previously stated wishes or legal documentation unless they are presented a Ministry of Health mandated 'Do Not Resuscitate' Confirmation Form (MOH-DNRCF). This study aimed to evaluate the awareness of this form as well as any barriers to its completion. **Methods**: Patients over 70 years of age presenting to the Emergency Department were approached to complete a short survey about their wishes regarding resuscitation, awareness of the MOH-DNRCF, as well as any barriers to completion. Standard demographic variables were also collected. Patients, with critical illness, with severe dementia, a language barrier or from a nursing home were excluded. The primary outcome was awareness of the MOH-DNRCF. Standard descriptive statistics were summarized using median [IQR] and simple proportions. **Results**: Preliminary data of 96 patients has been collected. The median [IQR] age of patients recruited was 81 [75-88] years and 54% were female. 49/96 (51%) have wishes to not be resuscitated in the event of cardiac arrest and of those 42 (86%) are not aware of the existence of the MOH-DNRCF. Of the 7 patients who were aware of the form only 1 had completed one. Barriers to completion included the patient being unsure where to access the form and difficulty in discussing the topic. **Conclusion**: The majority of patients with wishes to be DNR are unaware of the MOH-DNRCF. This has severe