between 2010 and 2014. Patients were excluded if aged under 19. Multiple data were abstracted from charts using a standardized form. Regression analysis was used to compare criteria that predicted return of spontaneous circulation (ROSC) and survival to hospital admission (SHA). **Results:** 264 patients met the study inclusion criteria. Logistic regression was used to identify predictors of ROSC and SHA. The criteria that emerged as significant predictors for ROSC included; longer ED resuscitation time (Odds ratio 1.11 (1.06- 1.18)), witnessed arrest (Odds ratio 9.43 (2.58- 53.0)) and having an initial cardiac rhythm of Pulseless Electrical Activity (Odds Ratio 3.23 (1.07-9.811)) over Asystole. Receiving point of care ultrasound (PoCUS; Odds ratio 0.22 (0.07-0.69)); and having an initial cardiac rhythm of Pulseless Electrical Activity (Odds Ratio 4.10 (1.43-11.88)) were the significant predictors for SHA. Longer times for ED resuscitation was close to reaching significance for predicting SHA **Conclusion:** Our results suggest that both fixed and adaptable factors, including increasing resuscitation time, and PoCUS use in the ED were important independent predictors of successful resuscitation. Several commonly used criteria were unreliable predictors.

Keywords: cardiac arrest, resuscitation outcomes, prediction

P004

Simulation for emergency department quality improvement

J. B. Baylis, MD, J. Slinn, MN, K. Clark, MD, MMEd, University of British Columbia, Kelowna, BC

Introduction: There have been an increasing number of studies published since 2011 investigating the benefits of in situ simulation as a quality improvement (QI) modality. We instituted an emergency department (ED) in situ simulation program at Kelowna General Hospital in 2015 with the aims of improving inter-professional collaboration, improving team communication, developing resident resuscitation leadership skills, educating ED professionals on resuscitation medical expertise, and identifying QI action items from each simulation session. **Methods:** We applied the SMART framework. Our specific, measureable, and attainable goal was to select two QI action items discovered from each simulation session. Realistic and timely follow-up on each action item was conducted by the nurse educator group who reported back to the local ED network, pharmacy, or manager depending on the action item. This ensured sustainability of our model. **Results:** A total of 65 individuals participated in 2015 at program inception. This increased to 213 individuals in 2017 with an average of 24 participants/session. Attendants included nurses (31%), ED physicians (20%), ED residents (18%), paramedics (10%), and medical students, respiratory therapists, pharmacists, and others (21%). Our QI action items were grouped as (1) team/communication, (2) equipment/resources, and (3) knowledge/tasks. Examples of each category were: (1) Inability to hear paramedic bedside reports resulting in reinforcement of one paramedic speaking while the team remains quiet, (2) Difficulty in looking up medication information in the resuscitation bay resulting in installation of an additional computer in the resuscitation bay, and (3) Uncertainty of local process for initiating extra corporeal membrane oxygenation (ECMO) in the ED resulting in review of team placement, patient transfer, and initiation of ECMO lines in the ED. Inter-professional team members have reported through electronic feedback on the value of these sessions, including improved inter agency cooperation and understanding. **Conclusion:** This quality improvement initiative used in situ simulation as a QI tool. We were able to identify latent safety threats, test new patient care protocols, find equipment issues, and foster teamwork in a sustainable way to improve the quality of care in our ED. We hope that this serves as encouragement to others who are initiating a similar program. Our main suggestions after reflection include: (1) Engage a multidisciplinary team in the development of an in situ simulation program, (2) Start with aims and objectives, (3) Foster attendance and buy in by making it convenient for people to attend, (4) Celebrate your successes through interdepartmental communication, and (5) Recruit individuals with expertise in simulation based education.

Keywords: quality improvement and patient safety, simulation, emergency department

P005

Optimum accuracy of massive transfusion protocol activation criteria: the clinician's view

C. Bell, BSc MPT, P. Davis, MD, MSc, O. Prokopchuk-Gauk, MD, B. Cload, PhD, MD, A. Stirling, MD, College of Medicine, University of Saskatchewan, Regina, SK

Introduction: Massive Transfusion Protocol (MTP) activation allows for efficient delivery of a balanced transfusion strategy to exsanguinating patients, and should deliver a reasonable ratio of plasma and platelets to red blood cells. MTP activation should facilitate communication between care providers and laboratory services in order to minimize blood product wastage. Unfortunately, it is unclear which activation criteria are best to achieve this. Understanding of acceptable sensitivity and specificity, as well as reasons for blood component wastage, may provide refinement to MTP design. **Methods:** We surveyed clinicians, who were identified as content experts in their fields, using a snowball survey technique. Respondents were categorized into two groups: Group 1 included Emergency Medicine, Anesthesia, Critical Care, and Surgery; Group 2 included Hematology, Hematopathology and Transfusion Medicine. Between-group differences were examined using the Pearsons Chi-Square Test. Statistical significance was set at $p < 0.05$. **Results:** 50% of physicians in Group 1 considered an MTP under-call rate of 5-10% to be acceptable, whereas the majority (57.1%) of physicians in Group 2 considered an under-call rate of <5% to be acceptable. Both groups agreed on an acceptable over-call rate of 5-10%. A significantly greater proportion of physicians in Group 1 felt that MTP activation criteria including transfusion of an entire blood volume within 24 hours, loss of >50% blood volume within 3 hours and anticipated transfusion of >10U of PRBC in 24 hours were appropriate for MTP activation. Physicians in Group 2 were more likely to consider poor communication a reason for blood component wastage. **Conclusion:** Similarities in acceptable over- and under-call rates of MTP highlight the similar values in MTP activation between different medical specialties. Collaboration between the resuscitation team and consultants in transfusion medicine is necessary for MTP protocol development to improve patient outcomes and reduce blood wastage.

Keywords: transfusion, resuscitation, survey

P006

Patient passports in the emergency department: a scoping review

C. B. Bennett, BSc, J. Curran, PhD, Dalhousie Medical School, Halifax, NS

Introduction: Discharge communication in the emergency department occurs frequently and has been identified as an important, underestimated problem. Tools, such as patient or caregiver-held passports have been used in other departments to improve communication and facilitate provider and patient decision making. The objective of this review was to identify what modalities, methods and designs have been

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