framework and an inductive analysis. **Results:** 95/480 (19.8%) staff completed free text survey questions on simulation. Deductive analysis of data from this narrative survey results using the RC framework domains identified examples of shared goals, shared knowledge, communication, and mutual respect. Two major themes from the inductive analysis – "Behaviour, process and system change", and "Culture and relationships" - aligned closely with findings from the RC analysis, with additional themes of "Personal and team learning" and the "Impact of the simulation experience" identified. **Conclusion:** Our findings suggest that an established trauma simulation program can have a profound impact on the relational aspects of care and the development of a collaborative culture, with perceived tangible impacts on teamwork behaviours and institutional systems and processes. The RC framework – shared knowledge, shared goals and mutual respect in the context of communication that is timely, accurate, frequent and problem-solving based – can provide a common language for simulation educators to design and debrief simulation exercises that aim to have a translational impact.

Keywords: ethnography, simulation, trauma

MP22

Using galvanic skin response to identify resuscitation expertise in a pulmonary embolism simulation exercise

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Introduction: As physicians gain expertise in clinical settings, they are able to handle progressively more information, in both complexity and magnitude, as an organized schema. Expert physicians then, will be more likely to function with less cognitive load —the amount of mental effort someone exerts within their short-term working memory. Expert physicians will also retain more working memory capacity to process information during medical emergencies than novice physicians. While a physician's ability to process medical information may have implications for handling medical emergencies, there is a paucity of empirical research examining the link between physicians' expertise and biometric measures of cognitive load. Using galvanic skin response (GSR) as a surrogate measure of cognitive load, we assess whether average cognitive load differs significantly between expert and novice physicians in a pulmonary embolism simulation exercise. **Methods:** We analyzed GSR data (n = 39) from a 10-minute simulated pulmonary embolism exercise among 18 faculty physicians and 21 residents. Cluster and factor analyses were used to identify novice, intermediate, advanced, and expert physicians with based on participants' GRS scores. One-way ANOVA was used to analyze group differences. Descriptive statistical techniques were also used to describe the distribution of GRS expertise by participants' level of training. **Results:** Contrary to expectation, we found more than two groups of resuscitation expertise in the simulation exercise. Respectively, we identified 7.7% and 20.5% of participants as novice and expert physicians. About 36% of participants were classified as intermediate (35.9%) physicians while another 36% were classified as having an advanced (35.9%) expertise in resuscitation. All the novice physicians identified were found to be PGY1 and PGY2 resident residents. A third (33.3%) of faculty physicians and 9.5% of residents were identified as experts. As expected, average GSR score for experts ($\bar{x}$ = 0.60μS, SD = 0.26) was significantly (F = 137.6, p < 0.001) lower than the average GSR for novices ($\bar{x}$ = 5.55μS, SD = 0.99), intermediate ($\bar{x}$ = 2.84 μS, SD = 0.40), and advanced ($\bar{x}$ = 1.57 μS, SD = 0.28) physicians. **Conclusion:** GSR measures of cognitive load may be used to identify resuscitation expertise in managing pulmonary embolism and related medical conditions through simulation exercises.

Keywords: cognitive load, resuscitation, simulation

MP23

Mixed methods analysis of an automated e-mail audit and feedback intervention for fostering emergency physician reflection

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Innovation Concept: Emergency physicians (EP) rarely receive timely, iterative feedback on clinical performance that aids their reflective practice. The Calgary zone ED recently implemented a novel email-based alert system wherein an EP is notified when a patient whose ED care they were involved in is admitted to hospital within 72-hours of discharge from an index ED visit. Our study sought to evaluate the general acceptability of this form of audit and feedback and determine whether it encourages practice reflection. **Methods:** This mixed methods realist evaluation consisted of two sequential phases. An initial quantitative phase used data from our electronic health record and a survey to examine the general features and acceptability of 72-hour readmission alerts sent from May 2017-2018. A subsequent qualitative phase involved semi-structured interviews exploring the alert's role in greater depth. Quantitative data were summarized using descriptive statistics and qualitative data were analyzed using thematic and template analysis techniques. Results of both phases were used to guide construction of context-mechanism-outcome statements to refine our program theory. **Curriculum, Tool, or Material:** 4024 alerts were sent over a 1-year period, with each physician receiving approximately 17 alerts per year (Q1: 7, Q3: 25, IQR: 18). The top five CEDIS complaints on index presentations were abdominal pain, flank pain, shortness of breath, vomiting and/or nausea, and chest pain (cardiac features). The majority of re-admissions (78.6%) occurred within 48 hours after discharge. Immediate alert survey feedback provided by EP's noted that 52.65% (N = 471) of alerts were helpful. Thematic analysis of 17 semi-structured interviews suggests that the alert was generally acceptable to physicians, However, certain EPs were concerned that the alert impacted hire/fire decisions even when leadership didn't endorse this sentiment. Physicians who didn't believe alerts were involved in hire/fire decisions, described greater engagement in the reflective process. Conversely, physicians, who believed alerts were involved in hire/fire decisions, were more likely to defensively change their practice. **Conclusion:** Most EPs noted that timely notification of 72-hour readmissions made them more mindful of documenting discharge instructions. Our implementation of a 72- hour readmission alert was an acceptable format for audit and feedback and appeared to facilitate physician reflection under certain conditions.

Keywords: feedback methods, innovations in EM education, mixed methods

MP24

Contagion: An innovative approach to learning the Orange Book and Choosing Wisely Canada guidelines around antimicrobial treatment

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Innovation Concept: The Orange Book (OB) identifies drugs approved on the basis of safety and effectiveness by the FDA and