

Introduction: Le syndrome aortique aigu (SAA) est une condition rare et généralement mortelle qui demeure difficile à diagnostiquer. Le Score de détection de la dissection aortique (DDA) et le ratio de neutrophiles sur lymphocytes (NL) ont été proposés comme des éléments pouvant contribuer à exclure le diagnostic du SAA. L'objectif primaire de cette étude est de déterminer la valeur diagnostique (sensibilité et spécificité et rapport de vraisemblance négatif [RV-]) de ces deux éléments de façon indépendante et combinée chez les patients suspectés de SAA au département d'urgence. **Methods:** Les patients ayant subi une angiographie par tomographie à densité (angioCT) à la recherche d'une dissection aortique entre 2008 et 2014 à l'urgence d'un hôpital tertiaire montréalais ont été inclus dans cette étude de cohorte rétrospective. Le score DDA a été établi à partir des dossiers médicaux et le ratio NL calculé à partir de la première formule sanguine prélevée chez ces patients. Pour le score DDA, un score de 1 ou plus et de 2 ou plus ont été évalués comme seuils de positivité. Pour le ratio NL, une valeur de plus de 4,6 a été choisie comme seuil puisqu'il sagissait du ratio proposé afin de différencier les patients atteints d'un SAA de ceux souffrant d'un anévrisme chronique. Pour l'évaluation de la combinaison des deux tests, afin de maximiser la sensibilité, un score DAA de 1 ou plus ou un ratio NL de plus de 4,6 serait considéré comme positif. Le test de référence pour tous les patients était l'angiographie par tomographie à densité. À partir de cela, la sensibilité, la spécificité et le rapport de vraisemblance négatif de chacun de ces tests/combo de tests et leurs intervalles de confiance (IC) ont été calculés. **Results:** Un total de 198 patients (99 hommes et 99 femmes) d'un âge moyen de 63 ans (± 16) ont été inclus dans l'étude, parmi lesquels 26 (13%) souffraient d'un SAA. Un score DDA de 1 ou plus avait une sensibilité de 84,6% (IC 95% 65,1-95,6), une spécificité de 65,7% (IC 95% 58,1-72,8) et un VR- de 0,23 (IC 95% 0,09-0,58). Un score DDA de 2 ou plus avait une sensibilité de 23,1% (IC 95% 9,0-43,7), une spécificité de 95,3% (IC 95% 91,0-98,0) et un VR- de 0,81 (IC 95% 0,65-1,00). La sensibilité d'un ratio NL de plus de 4,6 était de 42,3% (IC 95% 23,4-63,1), la spécificité de 58,7% (IC 95% 51,0-66,3) et le VR- de 0,98 (0,69-1,40). La combinaison du score DDA et du ratio NL avait une sensibilité de 88,5% (IC 95% 69,9-97,6), une spécificité de 38,4% (IC 95% 30,9-46,0) et un VR- de 0,30 (IC 95% 0,10-0,89). **Conclusion:** Avoir un score de DDA inférieur à 1 diminue significativement les chances d'avoir un SAA, n'élimine pas cette possibilité et ne devrait pas être utilisé, sauf chez les patients ayant une probabilité pré-test déjà très faible. Le ratio NL en utilisant un seuil de 4,6 n'a aucune utilité diagnostique pour le SAA.

Keywords: aortic dissection, diagnostic

P024

Sharing evidence, experiences and expertise: the value of networking to standardize emergency care for kids in Canada

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Introduction: TREKK is a national knowledge mobilization network of clinicians, researchers and parents aimed at improving emergency care for children by increasing collaborations between general and pediatric emergency departments (ED). This study aimed to determine patterns of knowledge sharing within the network and identify connections, barriers and opportunities to obtaining pediatric information and training. **Methods:** Social network analysis (SNA) uses network theory to understand patterns of interaction. Two SNAs were conducted in 2014 and 2015 using an online network survey distributed to 37 general EDs.

Data was analyzed using UCI Net and Netdraw to identify connections, knowledge sharing and knowledge brokers within the network. Building on these results, we then conducted 22 semi-structured follow-up interviews (2016) with healthcare professionals (HCPs) at General EDs across Canada, purposefully sampled to include individuals from connected and disconnected sites, as identified in the SNA. Interviews were analyzed by 2 reviewers using content and thematic analysis. **Results:** SNA data was analyzed for 135 participants across the network. Results from 2014 showed that the network was divided along provincial lines, with most individuals connecting with colleagues within their own institution. Results from 2015 showed more inter-site interconnectivity and a reduction in isolated sites over time from 17 to 3. Interview participants included physicians (59%) and nurses (41%) from 18 general EDs in urban (68%) and rural/remote (32%) Canada. HCPs sought information both formally and informally, by using guidelines, talking to colleagues, and attending pediatric related training sessions. Network structure and processes were felt to increase connections, support practice change, and promote standards of care. Participants identified personal, organizational and system-level barriers to information and skill acquisition, including resources and personal costs, geography, dissemination, and time. Providing easy access to information at the point of care was promoted through enhancing content visibility and by embedding resources into local systems. There remains a need to share successful methods of local dissemination and implementation across the network, and to leverage local professional champions such as clinical nurse liaisons. **Conclusion:** This study highlights the power of a network to increase connections between HCPs working in general and pediatric EDs. Findings reinforce the critical role of ongoing network evaluation to improve the design and delivery of knowledge mobilization initiatives.

Keywords: knowledge sharing, pediatric emergency care, social network analysis

P025

Are we ready for a gunman in the emergency department? A qualitative study of staff perceptions of risk and readiness to respond

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Introduction: Hospital-based gun violence is devastatingly traumatic for everyone present and recent events in Cobourg, Ontario underscore that an active shooter inside the emergency department (ED) is an imminent threat. In June 2016, the Ontario Hospital Association (OHA) added Code Silver to the list of standardized emergency preparedness colour codes and advised member hospitals to develop policies and train staff on how best to respond. Given that EDs are particularly susceptible to opportunistic breach by an active shooter, the impact of a Code Silver on ED functioning and staff members may be particularly acute. We hypothesized that there may not be a simple, one-size-fits-all-hospital-staff solution about how best to prepare EDs to respond to Code Silver. In order to inform and support future staff training initiatives related to Code Silver and other disaster situations in hospitals, we sought to investigate staff perspectives and behaviour related to personal safety at work and, in particular, an active shooter. **Methods:** We undertook a qualitative interview study of multi-disciplinary ED staff (MDs, RNs, clericals, allied health, administrators) at a single tertiary care centre in Toronto. The primary methods for data collection were in-depth qualitative interviews and focus groups. Participants were recruited using stakeholder and maximum variation sampling strategies. Data collection and analysis were concurrent and standard thematic analysis techniques

were employed. **Results:** Sixteen (16) staff members participated in interviews and 40 participated in small focus group discussions. Data analysis revealed workplace violence and personal health risks have been normalized as expected, acceptable features of everyday life at work in the ED given that patients are perceived to be sick people in need of help that ED staff are trained for and prepared to provide. In contrast, weapons and active shooters challenge the boundaries of professional responsibility and readiness to respond to Code Silver is perceived by staff as a fallacy. **Conclusion:** Knowledge from this study gives us crucial insight into important areas for targeted training and opportunities for knowledge translation on the topic of implementing Code Silver in EDs across the country. Future interventions must include how to overcome normalization of workplace violence in the ED setting and negotiating competing professional obligations during crisis situations. Attention to these are crucial if we are to truly keep our staff safe during these traumatic events.

Keywords: workplace violence, code silver, qualitative research

P026

Opioid use and dependence three months after an emergency department visit for acute pain

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Introduction: Most studies evaluating prescription opioid dependence or misuse are retrospective and are based on prescription filling rates from pharmaceutical databases. These studies cannot evaluate if opioids are really consumed nor differentiate if used for a new pain, chronic pain, or for misuse/dependence. The aim of this study was to assess the opioid consumption in emergency department (ED) patients three months after discharge with an opioid prescription. **Methods:** This prospective cohort study was conducted in the ED of a tertiary care centre with a convenience sample of patients aged 18 years and older, recruited 24/7, who consulted and were discharged for an acute pain condition (2 weeks). We excluded patients who: did not speak French or English, were using opioid medication prior to their ED visit, with an ED stay >48 hours, or suffering from cancer or chronic pain. Three months post-ED visit, participants were contacted by phone for a structured interview on their past two-week opioid use, their reasons for consuming them, and also answered the Rapid Opioid Dependence Screen (RODS) questionnaire. **Results:** In the 524 participants interviewed at three months (mean age \pm SD: 51 \pm 16 years, 47% women), 44 (8.4%) patients consumed opioids in the previous two weeks. Among those, 72% consumed opioids for their initial pain, 19% for a new unrelated pain, and 9% for another reason. In this entire cohort, only five patients (1%) tested positive to opioid dependence from the RODS test. The low dependence incidence could be affected by a social desirability bias. **Conclusion:** This study suggests that opioid use at 3-month, for patients initially treated for acute pain, is associated with opioid dependency in 1% or possible misuse in only 9%. Additional prospective studies using multiple methods to measure opioids consumption, misuse, and dependence are needed.

Keywords: opioids, dependence, misuse

P027

A descriptive needs-based assessment of paramedic continuing education

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Introduction: Objective: To identify self-perceived knowledge deficits of paramedics, barriers to training and desired methods of self-directed continuing education. **Methods:** A written 58 question survey was delivered to all 1262 paramedics under the jurisdiction of a single base-hospital in Ontario, Canada. Respondents were asked to select deficit, no deficit or not applicable from a 37-point, anatomic systems-based list. They were then asked to identify from a 15-point list which educational modalities they would choose to address any knowledge deficits. Finally, they were asked which factors they took into consideration when choosing their self-directed continuing education. **Results:** Seven hundred forty-six of 1262 paramedics (59.11%) completed the surveys. Of these respondents, 82 (10.99%) were advanced care paramedics, while 664 (89.01%) were primary care paramedics. Of the 645 who responded with their primary geographical setting: 136 (21.09%) listed a primary urban practice, 126 (19.53%) listed a primary rural practice and 287 (44.50%) reported a split urban and rural practice. The most common perceived deficits (respondent number, percentage); were electrolyte disturbance (418, 56.03%), neonatal resuscitation (386, 51.74%), pediatric respiratory disorder (381, 51.07%), arrhythmia (377, 50.53%), and pediatric cardiac arrest (317, 42.49%). The top 5 educational opportunities they were most likely to choose included online module (464, 62.20%), in-class lecture (423, 56.70%), web-based review (403, 54.02%), webinar (301, 40.35%) and peer consult (237, 31.77%). The top 3 barriers to choosing continuing education were work scheduling (479, 64.21%), location/ease of attending (382, 51.21%), and cost (305, 40.88%). **Conclusion:** Paramedics in this base hospital system identified pediatric critical care situations, electrolyte abnormalities and cardiac arrhythmia as self-perceived deficits. The most commonly selected educational opportunities included online learning, in-person training and peer consult. These preferred modalities are consistent with the identified barriers of work scheduling, ease of attending and cost. Targeted educational needs based assessments can help ensure that appropriate topics are delivered in a fashion that help overcome identified barriers to self-directed learning.

Keywords: paramedic, prehospital, education

P028

Self-directed learning in advanced care paramedics: perceived deficits and completed activities

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Introduction: In Ontario, Advanced Care Paramedics (ACPs) are required to perform a minimum of 24 educational credits per year of Continuing Medical Education (CME). Of these 24 credits, 12 are chosen by the paramedic, while 12 credits are mandated by the Base Hospital. The combined mandatory and optional CME frame is used so paramedics can target their personal needs appropriately, while ensuring new medical directives and global knowledge deficits identified by Quality Assurance (QA) means can be addressed by the Base Hospital. Objective: To determine if there is a difference between what ACPs identify as their knowledge deficits and what CME they complete. **Methods:** Methods: Request for participation in a written survey was delivered to all ACPs in an Ontario Base Hospital, prior to the CME cycle for the year. Respondents were asked to identify deficits from a 37-point, organ systems-based list, with free-text option for any deficits not itemized. Following the annual cycle, CME credits were evaluated by the Regional Base Hospital education coordinator, and Base Hospital medical directors for content. The deficits identified prior to the CME cycle were then compared to the CME attended for each respondent. In