

moderate correlation between physicians predicted and actual practice with respect to viral testing ($r=0.67$), but minimal correlation for CXR (0.05), steroids ($r=0.17$) or Ventolin ($r=0.33$) ordering. **Conclusion:** The finding that physicians have a limited ability to accurately predict their own performance emphasizes the importance of providing physicians with feedback. However, our results suggest that the consent process may be a potential barrier to effective A & F.

Keywords: bronchiolitis, audit and feedback

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Organ and tissue donation from poisoned patients in the emergency department: a Canadian perspective

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Introduction: Screening for organ and tissue donation is an essential skill for emergency physicians. In 2015, 4564 individuals were on a waiting list for organ transplant and 242 died while waiting. As Canada's donation rates are less than half that of other comparable countries, it is crucial to ensure we are identifying all potential donors. Patients deceased from poisoning are a source that may not be considered for referral as often as those who die from other causes. This study aims to identify if patients dying from poisoning represent an under-referred group and determine what physician characteristics influence referral decisions. **Methods:** In this cross-sectional unidirectional survey study, physician members of the Canadian Association of Emergency Physicians were invited to participate. Participants were presented with 20 organ donation scenarios that included poisoned and non-poisoned deaths, as well as one ideal scenario for organ or tissue donation used for comparison. Participants were unaware of the objective to explore donation in the context of poisoning deaths. Following the organ donation scenarios, a range of follow-up questions and demographics were included to explore factors influencing the decision to refer or not refer for organ or tissue donation. Results were reported descriptively and associations between physician characteristics and decisions to refer were assessed using odds ratios and 95% confidence intervals. **Results:** 208/2058 (10.1%) physicians participated. 25% did not refer in scenarios involving a drug overdose ($n=71$). Specific poisonings commonly triggering the decision to not refer included palliative care medications ($n=34$, 18%), acetaminophen ($n=42$, 22%), chemical exposure ($n=48$, 27%) and organophosphates ($n=87$, 48%). Factors associated with an increased likelihood to refer potential donors following overdose included previous organ and tissue donation training (OR = 2.6), having referred in the past (OR = 4.3), available donation support (OR = 3.9), greater than 10 years of service (OR = 2.1), large urban center (OR = 3.8), holding emergency medicine certification (OR = 3.6), male gender (OR = 2.2, CI), and having indicated a desire to be a donor on government identification (OR = 5.8). **Conclusion:** Scenarios involving drug overdoses were associated with under-referral for organ and tissue donation. As poisoning is not a contraindication for referral, this represents a potential source of donors. By examining characteristics that put clinicians at risk for under-referral of organ or tissue donors, becoming aware of potential biases, improving transplant knowledge bases, and implementing support and training programs for the organ and tissue donation processes, we have the opportunity to improve these rates and reduce morbidity and mortality for Canadians requiring organ or tissue donation.

Keywords: organ donation, poisoning, tissue donation

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Clinical characteristics and system factors of elderly treated for agitation in the emergency department: a data driven approach

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Introduction: Aligning health systems appropriately to the needs of the elderly is an urgent global priority, according to the WHO. In Canada, ED length of stay has risen 16% for elderly patients in the last year. Agitation requiring chemical restraint is a common, high-risk problem for elderly in the ED. Improving outcomes in this heterogeneous population remain difficult due to inability to effectively identify and evaluate delirium, frailty, multi-morbidity, and incompatibility with the ED system. A data-driven approach to complex health problems is a recognized emerging tool for healthcare innovation. New opportunities for targeted quality improvement in the ED will be uncovered by identifying the clinical characteristics of elderly patients with agitation, and the system process factors that influence their outcomes. **Methods:** We studied 400 patients in a case-control study at two tertiary-care EDs over five years. Patients were randomly selected if age was greater than 75 years. 200 cases of patients who received an intravenous dose of haloperidol, midazolam and/or lorazepam were selected as a surrogate data marker for having agitation. Controls were randomly matched by age and ED diagnosis. Standardized clinical, systems and process variables were collected. We conducted a univariate analysis. **Results:** Elderly given intravenous medications for agitation had increased mortality (OR 3.8 CI: 1.6-10.7, $p < 0.001$) and ED length of stay (27 vs. 15 hours, $p < 0.001$). No statistical significance was found in clinical characteristics, CTAS scores, PRISMA7 frailty scores nor sentinel or return visits. There was no statistical difference in median hospital length of stay (8 vs. 6 days, $p < 0.70$). No differences were found in median time from ED physician seeing a patient to first consultant request (73 vs. 83 mins, $p=0.75$). The largest time intervals contributing to ED length of stay were from first consultant request to hospital request (15 vs. 12 hours, $p=0.056$) and hospitalization delay (13 vs. 7 hours, $p=0.45$). **Conclusion:** Identification of high-risk elderly patients for targeted intervention through a data-driven approach is feasible and informative. Traditional clinical characteristics remain unhelpful in identifying and evaluating outcomes in elderly with agitation. We have identified a process factor that is clinically relevant and pragmatic to evaluate in our ED system. Future research focused on optimizing systems process factors to improve quality of elderly care should be prioritized.

Keywords: elderly, agitation, data driven

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What do surgeons expect of the emergency department in the diagnosis and management of pediatric appendicitis?

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Introduction: The optimal diagnostic strategy for children presenting to the Emergency Department (ED) with suspected appendicitis (SA), the most common non-traumatic surgical emergency in children, remains unclear. This study aims to identify which investigations and management priorities are preferred by Canadian surgeons prior to consultation from the ED. **Methods:** An internet survey was extended to practicing surgeons who are members of the Canadian Association of Pediatric

Surgeons and Canadian Association of General Surgeons. Three case-based scenarios evaluated surgeons expected ED investigations and management for SA with varying severity of disease (simple - SA vs perforated - PA) and sex (male vs female). Differences across scenarios were determined by ANOVA and direct comparisons were reported using proportions and odds ratios with 95% confidence intervals. **Results:** Surveys were completed by 82 surgeons. Across the 3 cases, CBC (227/246, 92.3%) and urinalysis (188/246, 76.4%) were the sole investigations expected in >75% of responses. Expectations differed across cases for use of blood cultures ($p < 0.001$), electrolytes ($p < 0.001$), sexually transmitted infection testing (0.015) and ultrasound (US) ($p < 0.001$). Blood cultures (26/82, 31.7% vs. 4/82, 4.9%; OR 9.05 95% CI 2.88-37.33) and electrolytes (58/82, 70.7% vs. 33/82, 40.2%; OR 3.59 95% CI 1.79-7.24) were expected more often in severe disease. US was expected more often in females (58/82, 70.7% vs. 25/82, 30.5%; OR 5.51, 95% CI 2.68-11.38). Expected management differed across cases for fluid boluses ($p = 0.01$), intravenous (IV) analgesia ($p < 0.001$) and antibiotics ($p < 0.001$), with all differences attributed to severity of illness (fluids 73/82, 89.0% vs. 59/82, 72.0% OR 3.16 95% CI 1.28-8.33; IV analgesia 66/82, 80.5% vs. 42/82, 51.2% OR 3.93 95% CI 1.86-8.45; antibiotics 44/82, 53.7% vs. 10/82, 12.2% OR 8.34 95% CI 3.59-20.44). **Conclusion:** Severity of illness and sex of the child impact the ED investigations and management expected by surgeons consulted for suspected appendicitis. Further research focusing on how these expectations influence patient outcomes should be conducted. Collaborative ED-surgery protocols for the diagnosis and management of acute appendicitis in children should be established.

Keywords: appendicitis, children, physician expectations

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Do patients presenting to the emergency department with a mental health crisis have access to community healthcare resources?

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Introduction: The emergency department (ED) is often the first point of access to the health care system for patients with an acute mental health crisis. Outpatient resources are limited, typically do not operate after hours, and patients and their families often lack sufficient information on where and how to access mental health services within their communities. The objective of this study was to determine which community healthcare resources patients attempted to access for their mental health condition prior to presenting to the ED. **Methods:** Between April 2016 to June 2017, a convenience sample of adult (18 years) patients presenting to an academic ED (annual census 65,000) with a mental health complaint were invited to complete a 23-item, paper-based survey. The questionnaire was pilot-tested and peer-reviewed for feasibility and comprehension. **Results:** Of the 200 patients who completed the survey, mean (SD) age was 37 (16) years and 96 (48%) were male. 20 (10%) patients were brought to the ED involuntarily by police services. 175 (88%) had been previously diagnosed with a mental health condition, the most common being depression and/or anxiety ($n = 134$, 67%). 47 (24%) patients indicated they were currently only connected to a primary care provider, while 94 (47%) patients indicated they had existing relationships with multiple mental healthcare providers. 117 (59%) patients attempted to see an alternative healthcare provider prior to coming to the ED. 78 (39%) patients had a pending scheduled appointment with a healthcare provider for their mental health condition, 44 (56%) of which were within 7 days of their ED visit, but chose to seek care in the ED. 38 (19%) patients either had a referral with no

appointment date set, or had an impending mental health appointment scheduled more than 30 days from their ED visit. **Conclusion:** These findings suggest that most patients seeking ED care during a mental health crisis do so despite being connected to alternative healthcare providers and outpatient services. Future studies should attempt to determine reasons why patients with mental health conditions seek care in the ED, and examine barriers to mental health care in the community and outpatient setting.

Keywords: mental health, community healthcare resources, emergency department

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Emergency medicine resident perspectives on journal club as a community of practice and its impact on clinical medicine

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Introduction: Despite revolutionary changes in the medical education landscape, journal club (JC) continues to be a ubiquitous pedagogical tool and is a primary way that residency programs review new evidence and teach evidence-based medicine. JC is a community of practice among physicians, which may help translate research findings into practice. Program representatives state that JC should have a goal of translating novel research into changes in clinical care, but there has been minimal evaluation of the success of JC in achieving this goal. Specifically, emergency medicine resident perspectives on the utility of JC remain unknown. **Methods:** We designed a multi-centre qualitative study for three distinct academic environments at the University of British Columbia (Vancouver, Victoria and Kelowna). Pilot testing was performed to generate preliminary themes and to finalize the interview script. An exploratory, semi-structured focus group was performed, followed by multiple one-on-one interviews using snowball sampling. Iterative thematic analysis directed data collection until thematic sufficiency was achieved. Analysis was conducted using a constructivist Grounded Theory method with communities of practice as a theoretical lens. Themes were compared to the existing literature to corroborate or challenge existing educational theory. **Results:** Pilot testing has revealed the following primary themes: (1) Only select residents are able to increase their participation in JC over the course of residency and navigate the transition from peripheral participant to core member; (2) These residents use their increased clinical experience to perceive relevance in JC topics; and (3) Residents who remain peripheral participants identify a lack time to prepare for journal club and a lack of staff physician attendance as barriers to resident engagement. We will further develop these themes during the focus group and interview phases of our study. **Conclusion:** JC is a potentially valuable educational resource for residents. JC works as a community of practice only for a select group of residents, and many remain peripheral participants for the duration of their residency. Incorporation of Free Open-Access Medical Education resources may also decrease preparation time for residents and staff physicians and increase buy-in. To augment clinical impact, the JC community of practice may need to expand beyond emergency medicine and include other specialties.

Keywords: graduate medical education, qualitative research, knowledge translation

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Occupational therapy in the emergency department: sustaining results

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