

fractures to the wrist or hand had shorter ED LOS (mean = 2.50, SD  $\pm$  5.83) than those without (mean = 10.95, SD  $\pm$  92.54),  $t(3478) = 2.64$ ,  $p = 0.008$ . Among admitted patients, results were similar, with elevated inpatient LOS for patients over the age of 65 (mean = 171.71, SD  $\pm$  508.35) compared to younger patients (mean = 45.45, SD  $\pm$  39.53),  $t(3478) = -3.41$ ,  $p = 0.001$ . Patients with radius fractures had shorter LOS (mean = 61.87, SD  $\pm$  210.37) compared to those without (mean = 288.83, SD  $\pm$  632.29),  $t(3478) = 3.87$ ,  $p < 0.001$ . With respect to volume and weather, night-freezing events (below-freezing temperatures the preceding day, followed by freezing temperatures prior to 0600 hours the following day) were more likely to result in high FI volume (OR, 8.08; 95% CI, 5.14, 12.07;  $p < 0.001$ ) as were recent Chinook events (OR, 1.39; 95% CI, 1.06, 1.81;  $p = 0.017$ ).

**Conclusion:** Chinook-induced meteorological mass-casualty events can be severe, but do not target populations distinct from winter averages. They can be predicted based on forecasted weather variations and should be considered for population-level alerts utilizing cellular technology.

**Keywords:** fall, mass-casualty incident, weather

#### P146

##### Does a communications skills intervention improve emergency department staff coping skills and burnout?

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**Introduction:** Emergency department (ED) staff carry a high risk for the burnout syndrome of increased emotional exhaustion, depersonalization and decreased personal accomplishment. Previous research has shown that task-oriented coping skills were associated with reduced levels of burnout compared to emotion-oriented coping. ED staff at one hospital participated in an intervention to teach task-oriented coping skills. We hypothesized that the intervention would alter staff coping behaviors and ultimately reduce burnout.

**Methods:** ED physicians, nurses and support staff at two regional hospitals were surveyed using the Maslach Burnout Inventory (MBI) and the Coping Inventory for Stressful Situations (CISS). Surveys were performed before and after the implementation of communication and conflict resolution skills training at the intervention facility (I) consisting of a one-day course and a small group refresher 6 to 15 months later. Descriptive statistics and multivariate analysis assessed differences in staff burnout and coping styles compared to the control facility (C) and over time.

**Results:** 85/143 (I) and 42/110 (C) ED staff responded to the initial survey. Post intervention 46 (I) and 23 (C) responded. During the two year study period there was no statistically significant difference in CISS or MBI scores between hospitals (CISS: (Pillai's trace = .02,  $F(3,63) = .47$ ,  $p = .71$ , partial  $\eta^2 = .02$ ); MBI: (Pillai's trace = .01,  $F(3,63) = .11$ ,  $p = .95$ , partial  $\eta^2 = .01$ )) or between pre- and post-intervention groups (CISS: (Pillai's trace = .01,  $F(3,63) = .22$ ,  $p = .88$ , partial  $\eta^2 = .01$ ); MBI: (Pillai's trace = .09,  $F(3,63) = 2.15$ ,  $p = .10$ , partial  $\eta^2 = .01$ )).

**Conclusion:** We were not able to measure improvement in staff coping or burnout in ED staff receiving communication skills intervention over a two year period. Burnout is a multifactorial problem and environmental rather than individual factors may be more important to address. Alternatively, to demonstrate a measurable effect on burnout may require more robust or inclusive interventions.

**Keywords:** burnout, emergency department

#### P147

##### Why emergency department journey: piloting a patient poster explaining the emergency department care process

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**Introduction:** Qualitative research with emergency department (ED) patients in Alberta has revealed that some patients have limited understanding of the ED care process and that this increases the anxiety, frustration and confusion experienced throughout their visit. The objective of this study was to design, implement, and test the usefulness of a poster explaining the ED care process.

**Methods:** As part of a stepped-wedge ED intervention trial in Alberta, a 4' x 3' poster portraying the patient ED care process was developed and posted in 15 study site waiting rooms. Trained research assistants approached patients in 3 urban ED waiting areas and invited them to complete a short paper-based survey on the acceptability and usefulness of the poster. Results are reported as proportions.

**Results:** A total of 316 patients agreed to participate in this study. Approximately half of the participants were male and 60% were between the ages of 17 and 49. The majority of participants identified themselves as white (72%) and nearly half (49%) were accompanied by someone. A third (37%) of patients had read the wall poster prior to being approached to complete the survey. Most patients (62%) who had not read it prior to being approached hadn't noticed the poster or couldn't see it because of its location. Once patients reviewed the poster, the vast majority (92%) reported completely or largely understanding the information and most (84%) found it at least moderately helpful in preparing them for their ED journey. Approximately 45% of respondents agreed that they learned something new about the ED care process by reading the poster and 20% wanted additional information added to the poster; largely, wait time estimates (53% of responses).

**Conclusion:** Placing posters in the ED is one method for equipping patients for their ED care process; however, this study revealed the potential limited utility of this engagement method by the small number of patients who noticed the poster and read the information. Location and content (e.g., time estimates) were identified as key factors for implementation. Condition-specific guides may need to supplement general ED process guides to better prepare patients for their individual ED journey and to actively engage them in their ED care.

**Keywords:** care process, emergency department, patient education

#### P148

##### Emergency physicians' perception on engaging patients in their emergency department care

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**Introduction:** Patient engagement in health decision-making is an important research area within emergency medicine. Studies suggest that patients are often not highly engaged in care decisions, and may not be aware that there are decisions in which they can be involved. This study explored emergency physicians (EPs) perceptions of their patient engagement practices.

**Methods:** As part of a stepped-wedge randomized controlled trial, an introductory seminar was

held at 15 emergency department (ED) sites in Alberta. Seminars highlighted physician-patient communication and expectation gaps documented in local studies. As part of the seminar evaluation, EPs were asked to reflect on their engagement of patients in their practice. Descriptive results are reported. **Results:** A total of 114 EP surveys were returned. The majority of respondents were male (68%) and nearly 40% of respondents have practiced emergency medicine for 5 years or less. Less than half of the EPs (43%) reported always or usually asking their patients about their ED visit care expectations. Approximately one-third (32%) reported always or usually checking their patients' understanding of management options (e.g., tests, treatments and/or procedures). Patients management preferences were always or usually elicited 24% of the time. Despite limited consistency in ascertaining patients' preferences, 39% of EPs indicated that they always or usually considered their patients' preferences when choosing a management plan. Half of the EPs (51%) reported that they always or usually involved their patients in decision-making. Yet, when asked whether other EPs involved their patients in decision-making, only 15% reported that they believed their fellow clinicians did this always or usually. On average, 68% of respondents believed their patients wanted to be completely or mostly involved in their ED and decision-making; however, 16% believed patients were actually completely or mostly involved in the ED care and decision-making. **Conclusion:** EPs agreed that patients want to be actively involved in their ED care decisions. Yet, their reflection on their own practice, and especially their perception of their colleagues', highlight large gaps between physicians' perception of what patients would like and what patients actually receive. Further research should explore these interactions in depth, understand what constrains EPs from involving patients and explore patient perceptions of these interactions.

**Keywords:** decision-making, patient engagement

#### P149

##### **Benign headache management in Alberta emergency departments: a chart review study to explore gaps in practice**

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**Introduction:** Variation in medication management and image ordering for HA presentation to emergency departments (ED) has been documented. This study examined benign HA (i.e., migraine, cluster, tension) management in order to identify the consistency and appropriateness of HA management in EDs in Alberta. **Methods:** Patients were identified by primary discharge diagnosis in the National Ambulatory Care Reporting System using ICD-10-CA codes for benign HA (G43, G44, R51). Patients presenting to study sites from January 1, 2017 to September 30, 2017 were eligible for inclusion, provided they were adults ( $\geq 18$  years), were not transferred from another institution or directly admitted to a service, and had an active HA at presentation. One hundred eligible patients were randomly selected for chart review. Data were extracted on standardized forms. Preliminary data on 50 patients ( $n = 150$ ) from three Edmonton study sites is presented. **Results:** Most patients arrived to the ED via personal transportation (93%) and were assigned a Canadian Triage and Acuity Scale (CTAS) score of 3 (71%). The majority of patients were female (75%); mean age was 45 years (standard deviation: 18). Triage pain score was not documented for 21%. When documented, pain scores were most frequently between 4 and 7 (49%). Nearly 10% of patients left without being seen. For those who were assessed, physicians most frequently used ketorolac and metoclopramide as first or second line treatments or as a combination treatment. Consults were infrequent (14%). Nearly half of the patients (47%) had computed tomography (CT) in the ED. Pain re-assessment was completed for 69% of patients. Most patients were discharged from the ED (88%) and given some form of discharge instruction (78%). The most common instructions were to return to ED as needed (45%) and follow-up with their primary care physician (28%). Across all patients, 13% returned to the ED with headache within 30 days. **Conclusion:** Physicians treat patients with benign headaches appropriately and hospitalization is infrequent; however, one in eight patients relapse. Missing pain scale documentation reveals a potential problem for ED clinicians in assessing management effectiveness and ensuring patients leave the ED following pain relief. Half of the patients received a CT scan, highlighting the urgent need for an intervention to address CT overuse for patients with benign HA within this geographic region.

**Keywords:** benign headache, computed tomography