these patients at risk. Validation and reliability assessments of the FRM tool are warranted.
Keywords: fall risk, risk management, emergency nursing

P132

Developing and piloting a nurse-initiated falls risk screening tool in the emergency department

R. Tomlinson, BScN, T. Yokota, MD, P. Jaggi, MSc, M. Bullard, MD; University of Alberta, Edmonton, AB

Introduction / Innovation Concept: With aging, increasing complexity, and prolonged emergency department (ED) stays, patient falls are an increasing problem. Accreditation Canada recently listed falls risk management (FRM) as a required operational practice (ROP). The University of Alberta ED had no screening tool or education program specific to falls. Gaps in identifying patients with altered consciousness, intoxication, or are undergoing procedural sedation were noted in the Alberta Health Services (AHS) recommended tool. This gap led to the development piloting of an ED specific FRM screening tool. **Methods:** A literature review was completed to assess current fall assessment tools and their applicability to the ED. No ED specific tools were identified leading to the development of the FRM tool. Prior to the FRM tool being piloted, nursing staff were asked to respond to a voluntary survey on their perceived knowledge of falls management followed by a survey testing their actual knowledge. They were then educated on the FRM and protocol through in-services, power point presentations, and fact sheets. A post education knowledge survey was then sent out. Multidisciplinary working groups provided feedback throughout the pilot, resulting in modifications prior to final implementation. **Curriculum, Tool, or Material:** The FRM tool consists of 10 variables with a maximum score of 20. Variables included are: falls in the last 12 months? Mechanical (1), Physiological (2), Multiple (3); age ≥70 or frail (2); mobility assist device (1) confusion or disorientation (5); impaired gait (1); incontinence (1); intoxicated (3); procedural sedation (3); and unconscious (5). All except for the last 3 variables were adapted from inpatient risk tools. Patients were categorized as low (1-2 points), moderate (3-4 points), or high risk (5+ points) and those scoring ≥3 had a safety protocol implemented. The survey regarding perceived knowledge for management of falls led to an average score of 86.6% (n = 46). When tested on their actual knowledge they scored 48.8% (n = 29). Following training on the FRM tool and protocol, the actual knowledge of 18 respondents averaged 83%. **Conclusion:** The FRM screening tool has been implemented and a comparative study looking at ED risk predictability matched to existing falls risk scores. Based on research findings the FRM will be considered for a provincial implementation.
Keywords: fall risk, risk prevention, nurse screening

P133

Characterizing how institutionalized and community-dwelling elderly patients use emergency department services in Regina, Saskatchewan

S. Trivedi, BSc, MD, C. Roberts, BSc, MD, E. Karreman, PhD, K. Lyster, BSc, MD; University of Saskatchewan, Saskatoon, SK

Introduction: In light of recent local initiatives aimed at improving emergency department (ED) patient flow, we sought to characterize how patients aged 65 and older who reside in long term care (LTC) facilities utilize the services of the EDs in Regina, Saskatchewan as compared to an age-matched comparison of community dwelling individuals. **Methods:** A retrospective chart review was performed with a convenience sample of the first 50 patients who presented to each ED at both hospitals in Regina starting January 1, 2012 for each population. Two separate patient populations were included: those who reside in the health region run LTC facilities and those who live in the community. We abstracted data from a variety of different clinical, demographic and administrative parameters. **Results:** The charts of 100 patients were reviewed for the LTC population (54 females, mean age 82.6) and 99 patients for the community dwelling population (55 females, mean age 77.3). The CTAS distribution for the LTC patients was found to be CTAS 1: 5%, CTAS 2: 9%, CTAS 3: 43%, CTAS 4: 33% and CTAS 5: 10%. For the community dwelling individuals, the distribution was CTAS 1: 1%, CTAS 2: 21%, CTAS 3: 44%, CTAS 4: 22%, CTAS 5: 10%. This is a significantly different distribution ($p = 0.047$). From the LTC population, we found that 50% of patients were admitted, with 46% being discharged and 4% leaving without being seen. Furthermore, we also noted that 75% of patients were brought to the ED by EMS. From the community dwelling population, we noted that 43% of patients were admitted, with 55% being discharged and 1% leaving without being seen. This population used EMS services 41% of the time. With respect to length of stay, LTC patients had a mean duration of 5.7 (±4.3 hours) compared to 4.8 (±4.0) hours for the non-LTC population ($p = 0.111$). **Conclusion:** Our findings suggest that the highest volume of acuity for the LTC patients falls within the CTAS 3 or 4 categories whereas there is a higher proportion of CTAS 2 acuity patients in the community dwelling population. Exactly half of our LTC sample was admitted as compared to 43% of the community population. The LTC population also required EMS services for a considerably higher proportion of their presentations to the ED (75% compared to 41%). It is our intent that the findings of this study will help guide future quality improvement initiatives.
Keywords: geriatrics, long term care, quality improvement

P134

Evaluating barriers to clinical decision rule integration: a qualitative analysis

D.E. Trumble, BSc; University of Alberta, Edmonton, AB

Introduction: Clinical decision rules for computed tomography (CT) ordering in pulmonary embolism and mild traumatic brain injury have been shown to be under-used in clinical practice. Current literature does not explain why these validated decision rules continue to be under-used despite evidence of inappropriate use and increased costs. To better evaluate potential barriers to their use, qualitative methods involving focused interviews were conducted amongst emergency department (ED) physicians. **Methods:** Physicians were recruited via a brief presentation at Calgary Zone ED rounds. Ten attending and resident physicians (4 female, 6 male) were interviewed. Questions were designed to evaluate potential barriers to the integration of decision rules into the computerized order entry system. Interviews were audio-recorded and transcribed manually. A high-level thematic analysis was conducted to draw primary themes from open-ended questions, and responses were totaled for closed-ended questions. **Results:** Emerging themes suggest concerns surrounding timing of rule application in relation to test ordering, patient influences on ordering, and overuse reporting. All 10 physicians believed decision rules for CT ordering play a large role in the ED, and 8 were in favor of integration into the order entry system. However, over half expressed concern, noting that their thought process begins before order entry. A majority prioritized shared decision-making with patients. However, 8 indicated that patient expectations influence their ordering. A majority agreed that there is CT overuse in the ED, but many were hesitant in concluding that overuse

was primarily physician dependent. **Conclusion:** Primary barriers to decision rule integration are timing of application, hesitation surrounding patient input, and uncertainty over data. Physicians often make decisions prior to order entry. Mobile copies of decision rules should be available to better facilitate compliance. Concerns over patient influence on ordering are common. Patient-friendly materials on clinical decision rules should be available to better facilitate shared decision making while still promoting decision rules. While overuse is agreed upon, many prefer to see and track their own ordering data before supporting a physician-targeted intervention. Data reports to physicians may help affirm physician-associated overuse, and reinforce their role in responsible resource utilization.
Keywords: clinical decision making, resource utilization, imaging

P135

Canadian emergency medicine residents' training and competency in end-of-life care: a needs assessment

C.J. Turner, BSc, MD; University of Toronto, Toronto, ON

Introduction: Emergency Physicians (EPs) face growing numbers of palliative care patients presenting to the emergency department (ED). Formal training for EM residents across Canada in this area is not well described. We sought to describe the training Canadian emergency medicine (EM) residents receive in end of life care issues, their attitudes toward it, self-reported knowledge and skills, and the importance they place on further training in this domain. **Methods:** We conducted an electronic survey across Canada. We collected demographic data, previous education in palliative care, attitudes toward end of life care, and a self-assessment of competency and desires for further training in the main components of palliative care pertinent to EM. We used simple descriptive statistics, a Mann-Whitney test to assess whether previous formal training in palliative care affected current comfort level, and a combination of self-reported knowledge and importance levels placed on key areas. **Results:** We received 112 responses from 17 different Universities in Canada, with 42% from the CCFP training stream, and 58% from the FRCP stream. Fifty-four percent of respondents had not completed a palliative care rotation during residency or fellowship, which was overwhelming accounted for by FRCP residents (13%, vs. 82% among CCFPs). Having completed formal training in palliative care was significantly associated with general comfort in managing terminally ill patients ($p < 0.0001$). Sixty percent of subjects felt a lack of knowledge and skills was their main limiting factor in providing ideal care for terminally ill patients in the ED. The skills deemed highest priority with lowest comfort level among residents included discussing withdrawing and withholding care, prognosticating, pharmacology and other symptom control. Preferred methods of receiving palliative care teaching included simulation, bedside teaching and small groups. **Conclusion:** The care of acute illness among palliative care patients is substantially underrepresented in the Canadian EM curriculum, particularly for FRCP trainees. Formal training is associated with increased comfort in caring for patients at the end of their life. High yield teaching interventions could be directed toward knowledge of withdrawing, prognosticating and symptom control. Simulation, bedside teaching and small groups are the preferred method for receiving such teaching.
Keywords: palliative care, end-of-life care, education

P136

A quality improvement initiative to optimize appropriate testing for venous thromboembolism in the emergency department

S. Vaillancourt, MD, MPH, X.Y. Wang, BSc, B. Leontowicz, BSc, M. Sholzberg, MDCM, K. McIntyre, MD, MSc; St. Michael's Hospital, Toronto, ON

Introduction: Venous thromboembolism (VTE) is a common diagnostic consideration among patients presenting to the emergency department (ED) and often requires the use of diagnostic testing. A normal d-dimer (DD) blood test can exclude VTE and eliminate the need for costly imaging and the associated contrast medium and radiation exposure. The purpose of this quality improvement initiative was to increase the use of DD testing for patients with a low and intermediate clinical pretest probability of VTE, increase the use of ventilation perfusion scans (VQ) as an alternative to CT pulmonary angiogram (CTPA) and decrease the use of CTPA and venous doppler ultrasound (VDUS) at St. Michael's hospital. **Methods:** A multi-specialty team developed an ED specific algorithm set for appropriate VTE testing that were posted on the ED online portal along with a poster in each zone of the ED after an ED launch campaign with request for feedback. A run chart was used to track DD, CTPA, VQ and VDUS utilization. Two-sided T-test comparison was conducted to compare pre- and post-implementation utilization. **Results:** Physician feedback was positive regarding the use of: DD in VTE intermediate risk patients and the VTE algorithm set. Feedback was negative for DD turnaround time. We found a significant increase in DD use (77 tests per month to 93; $p = 0.013$), but no significant change in the use of CTPA (27.3 per month to 30; $p = 0.38$), VDUS, or VQ. Number of monthly ED visits remained constant. **Conclusion:** This intervention increased DD utilization, but measuring appropriateness will require prospective collection of clinical pre-test probability. Integrated risk stratification and decision aids into computer physician order entry may be necessary to track and improve appropriateness.
Keywords: quality improvement, venous thromboembolism, utilization

P137

Emergency department discharge information sheets - a prescription for success?

S.D. VandenBerg, MD, G. Ruhl, PhD, E. Lang, MD; University of Calgary, Calgary, AB

Introduction / Innovation Concept: Effective communication between health providers and patients is central to patient safety, health education and patient empowerment. Previous studies in the Calgary Zone demonstrated that less than fifty percent of emergency department patients thought discharge handouts communicated health information well and even fewer thought the handout information would aid them in care at home. A partnership between the Department of Information Design, Mount Royal University and the Department of Emergency Medicine, University of Calgary, seeks to provide an innovative solution to this problem. **Methods:** The Calgary Zone Department of Emergency Medicine has partnered with the Mount Royal University Department of Information Design community service learning course. Information design students will work to develop infographics based on the "Choosing Wisely Alberta" Campaign Topics, with content expertise provided by the Department of Emergency Medicine. **Curriculum, Tool, or Material:** The five "Choosing Wisely Alberta" topics are: CT scans for adults with head injuries, CT scans to find Blood Clots in the lung, Imaging Tests for Headaches, Imaging tests for lower back pain, Treating Sinusitis. The target audience for the project will involve staff physicians, patients, public and government. Student involvement will direct their individual projects to these target audiences and will consider important issues such as non-English speaking patients, patients with low health-

https://doi.org/10.1017/cem.2016.308 Published online by Cambridge University Press