telle association n'a cependant pas été observée par rapport à la survie au congé hospitalier. **Conclusion:** L'administration de bêtabloquants semble associé à un meilleur devenir chez les patients en ACR avec un rythme initial défibrillable. Étant donné la nature du devis de ces études et leur petite taille, une étude prospective de qualité serait nécessaire afin de déterminer l'efficacité de cette classe de médicament et de faire une recommandation forte à ce sujet.
Keywords: arrêt cardiaque, bêtabloquant, rythme défibrillable

P119

Emergency department census is useful as a real-time measure of crowding

R. Clouston, MD, M. Howlett, MD, D. Canales, MA, J. Fraser, BN, D. Sohi, BSc, S. Lee, MD, P. Atkinson, MBChB, Dalhousie University, Saint John, NB

Introduction: Crowding is associated with poor patient outcomes in emergency departments (ED). Measures of crowding are often complex and resource-intensive to score and use in real-time. We evaluated single easily obtained variables to establish the presence of crowding compared to more complex crowding scores. **Methods:** Serial observations of patient flow were recorded in a tertiary Canadian ED. Single variables were evaluated including total number of patients in the ED (census), in beds, in the waiting room, in the treatment area waiting to be assessed, and total inpatient admissions. These were compared with Crowding scores (NEDOCS, EDWIN, ICMED, three regional hospital modifications of NEDOCS) as predictors of crowding. Predictive validity was compared to the reference standard of physician perception of crowding, using receiver operator curve analysis. **Results:** 144 of 169 potential events were recorded over 2 weeks. Crowding was present in 63.9% of the events. ED census (total number of patients in the ED) was strongly correlated with crowding (AUC = 0.82 with 95% CI = 0.76 - 0.89) and its performance was similar to that of NEDOCS (AUC = 0.80 with 95% CI = 0.76 - 0.90) and a more complex local modification of NEDOCS, the S-SAT (AUC = 0.83, 95% CI = 0.74 - 0.89). **Conclusion:** The single indicator, ED census was as predictive for the presence of crowding as more complex crowding scores. A two-stage approach to crowding intervention is proposed that first identifies crowding with a real-time ED census statistic followed by investigation of precipitating and modifiable factors. Real time signalling may permit more standardized and effective approaches to manage ED flow.
Keywords: crowding, emergency department, scoring

P120

A survey of Ontario Family Health Teams: Family physicians are reliant on emergency services for complicated early pregnancy loss

J. Cirone, BSc, C. Thompson, MSc, S. McLeod, MSc, C. Varner, MD, MSc, University of Western Ontario, Windsor, ON

Introduction: The majority of first trimester pregnancy care in Canada is provided by family physicians and emergency departments (EDs). Early pregnancy loss occurs in approximately 30% of pregnancies, and the majority take place in first trimester when many patients do not yet have an obstetrical care provider. In Ontario, nearly 70% of patients are rostered to a family physician, many of whom practice in Family Health Teams (FHTs). The objective of this study was to determine how Ontario family physicians manage early pregnancy complications and explore the services available for patients experiencing early pregnancy loss or threatened early pregnancy loss. **Methods:** Family physician leads from 104 Ontario FHTs were contacted by email and invited to complete a 19-item, online questionnaire using modified Dillman methodology. The survey was developed by investigators based on a review of relevant literature and consultation with clinical experts. Prior to distribution, the questionnaire was peer reviewed and tested for face and construct validity, as well as ease of comprehension. **Results:** Respondents from 50 FHTs across Ontario completed the survey (response rate 48.1%). Of the respondents, 45 (90.0%) reported access to an ED in their community, 45 (90.0%) had access to an obstetrician/gynecologist, 33 (66.0%) had access to an early pregnancy clinic, and 18 (36.0%) reported comprehensive obstetrical care from first trimester to delivery within their FHT. The following services were only accessible through the ED: administration of RhoGAM (n = 28; 56.0%); surgical management of spontaneous or missed abortion (n = 22; 44.0%); same day serum quantitative beta human chorionic gonadotropin (n = 21; 42.0%); same day radiologist-interpreted ultrasound assessment (n = 15; 30.0%); and medical management of spontaneous or missed abortion (n = 12; 24.0%). Forty (80.0%) respondents stated physicians in their practice would provide urgent follow-up care for patients with spontaneous abortion, 35 (70.0%) would provide care for threatened abortion, and 26 (52.0%) would provide urgent care for missed abortion. For patients with a stable ectopic pregnancy, 37 (74.0%) respondents would refer to the ED. **Conclusion:** This study suggests FHTs in Ontario provide comprehensive care to patients with uncomplicated early pregnancy loss such as spontaneous abortion, yet rely on the ED for management of complicated early pregnancy loss, when medical or surgical management is indicated or for ectopic pregnancy.
Keywords: early pregnancy complications, miscarriage, primary care

P121

A quality improvement project to improve medical imaging ordering workflow in the emergency department

J. Choi, MD, MPH, R. Bhayana, MD, D. Wang, BHSc, MD, E. Bartlett, MD, MPH, R. Menezes, PhD, University Health Network, Toronto, ON

Background: Many computerized tomography (CT) scans ordered after-hours from the emergency department (ED) at our institution required a discussion between the emergency physician (EP) and radiology resident (RR), leading to workflow inefficiency. **Aim Statement:** The aim was to improve workflow efficiency and provider satisfaction, and reduce CT turnaround time, without significantly affecting CT utilization within six months. **Measures & Design:** We created a new workflow by creating an electronic list of ED CT requests that RRs monitor. RRs protocolled all requests and only called the ED physician for more details when required. The intervention was implemented in a stepwise fashion via plan-do-study-act cycles. An electronic survey measured qualitative outcomes, and quantitative outcomes were analyzed via statistical process control (SPC) charts and other statistical methods. **Evaluation/Results:** Survey response was high (76% EP, 79% RR). Most EPs and RRs felt more efficient (96.3%, 73.3%), RRs felt fewer disruptions (83.3%), and most EPs felt that scans were done faster (84.1%). We analyzed CT turnaround times and utilization using SPC charts and segmented regression analyses. Turnaround time trended to improvement (33 mins vs 29 mins on weekdays [WD], 37 mins vs 33 on weekends [WE]), but was not statistically significant. There was background rising CT utilization over time (+0.7 and + 1.9 CT/100 ED visits/year on WD and WE, respectively, $p < 0.0005$), but the intervention itself did

https://doi.org/10.1017/cem.2020.327 Published online by Cambridge University Press

not cause a significant change. The total number of pages to RR (a measure of workflow disruption) decreased significantly on the WDs (23 vs 19 pages, p = 0.0011), but not on WE (79 vs 75 pages, p = 0.1663). However when adjusting for number of scans ordered, there was a decrease in paging rates (0.73 vs 0.54 pages per scan ordered on WD [p < 0.00005], 3.24 vs 2.63 pages per scan ordered on WE [p = 0.0012]). **Discussion/Impact:** Our intervention led to improved work satisfaction and perceived efficiency experienced by both EPs and RRs. It did not statistically significantly affect imaging turnaround times or utilization rates. Our project shows that calling for preapproval of imaging studies does not seem to provide any benefit in our setting.

Keywords: computerized provider order entry, quality improvement and patient safety, workflow optimization

P122

The evaluation of various point of care ultrasound features in Stanford type A aortic dissections

T. Chiang, MD, BMLSc, G. Puri, BSc, MD, University of Toronto, Toronto, ON

Introduction: Type A aortic dissection(AD) is one of the most lethal diseases in medicine. Its mortality rate increases 1-2% per hour from the onset of symptoms to treatment. Timely diagnoses of ADs, therefore, are crucial to improve survival and decrease morbidity. There are various proposed clinical guidelines to help emergency physicians decide when a CTA is urgently needed with most widely quoted being the validated Aortic Dissection Detection Risk Score (ADD-RS) recommended by the American Heart Association. The addition of D-Dimer for further risk stratification has also been entertained. A recent article published in the American Journal of Emergency recommends using point of care ultrasound(POCUS) to expedite diagnosis. With the rising use of POCUS in the emergency department, it can be the missing link to timely AD diagnoses. This project aims to elucidate the prevalence of positive POCUS findings (pericardial effusion and dilated aortic root) in type A AD via a retrospective chart review. **Methods:** This study is a retrospective chart review of 200 patients with the diagnosis of AD treated at Southlake Regional Hospital. We included patients diagnosed with type A AD and excluded those diagnosed with type B AD. We collected data on their demographics, ADD-RS scores, investigation results, treatments, and clinical outcomes. The main focus of the chart review was on the presence of pericardial effusion or dilated aortic root on echocardiograms. Binomial statistical analysis was used to analyze the collected data. **Results:** We identified 126 patients with type A AD out of 200 charts reviewed. Thirteen (14% CI 8-23%, n = 93 p = 0.05) had wide mediastinum on their chest X-rays; twenty (95% CI 75-100%, n = 21 P = 0.05) had elevated D-dimer levels; and ninety-one (72% CI 64-80%, n = 126 p = 0.05) had positive ADD-RS. Only 88 out of 126 AD cases had documented echocardiograms. Sixty-eight (77% CI 67-86%, n = 88 p = 0.05) had either pericardial effusions or dilated aortic roots on their echocardiograms. Eighty-one (92% CI 84-95%, n = 88 p = 0.05) had either positive ADD-RS or positive echocardiogram findings, which is 20 (23% CI 14-33%, n = 88 P = 0.05) more cases than ADD-RS would have picked up alone. **Conclusion:** The absence of both pericardial effusion and dilated aortic root on echocardiogram in combination with a negative ADD-RS has a high sensitivity for ruling out type A AD. Our data support further research into the use of POCUS to expedite the diagnosis of type A AD in the emergency department.

Keywords: aortic dissection, diagnosis, point-of-care ultrasound

P123

Emergency department utilization by patients with advanced chronic kidney disease and dialysis: A population based study

R. Chhibba, BSc, MD, S. Leon, MD, MSc, C. Rigatto, MD, MSc, T. Ferguson, MSc, P. Komenda, MD, N. Tangri, MD, PhD, University of Manitoba, Winnipeg, MB

Introduction: Chronic Kidney Disease (CKD) is a potent risk factor for kidney failure, cardiovascular events and all cause hospitalizations. In addition to higher outpatient resource use, patients with CKD may present more frequently to the emergency department (ED) and may be more likely to be admitted for hospitalization. In Manitoba, we previously demonstrated an 8-fold increase in the frequency of ED presentations by patients on dialysis as compared to a non-dialysis population. Comparable data on ED visits remain sparse for patients with CKD G3-G5, not on dialysis. Here, we aim to describe the frequency of ED visits and highlight differences in reasons for visit in patients with CKD stages G3-G5 and those on dialysis when compared to a non-CKD population. **Methods:** We performed a retrospective cohort study using administrative health data from the Winnipeg Regional Health Authority, Canada. We included all adults (≥ 18 years) with CKD stages G3-G5 and patients undergoing dialysis between January 1st, 2010 and December 31, 2014. Secular trends in the in the rates of ED visits were calculated for those with CKD, those on dialysis and in the non-CKD population. **Results:** Over the study period, patients undergoing dialysis had the highest incidence of ED visits, followed by patients with CKD and those with normal kidney function (150 vs 106 vs 34 per 100 persons per year respectively). These rates were stable over the period studied. Among the non-CKD population, the most common reasons for an ED visit were musculoskeletal complaints (25.6%), followed by gastrointestinal (11.04%) and cardiovascular complaints (10.26%). In the CKD and dialysis cohort, ED visits were more commonly secondary to cardiovascular complaints (21.54% and 18.99% respectively), followed by respiratory and gastrointestinal complaints. . Admission to hospital was higher in CKD and dialysis populations than in the non-CKD population (29.56%, 26.07% vs 10.61%, respectively). **Conclusion:** Patients with CKD present frequently to the ED, and are often admitted after presentation. Cardiovascular and respiratory complaints are more common in the CKD population when compared to the general population.

Keywords: chronic kidney disease, dialysis, glomerular filtration rate

P125

Low dose intravenous ketorolac in renal colic, a pilot randomized controlled trial

J. Chao, BSc, MD, MSc, P. Brasher, PhD, K. Cheung, MD, MPH, R. Sharma, MD, BSFN, K. Badke, BScPharm, PharmD, C. Hohl, BSc, MDCM, MHSc, University of British Columbia, Vancouver, BC

Introduction: Non-steroidal anti-inflammatory drugs (NSAIDs) are first-line analgesics for emergency department (ED) patients with renal colic. Lower doses of intravenous (IV) ketorolac may provide similar pain relief to standard dosing in patients with acute pain. Patients with renal colic may be at increased risk of acute kidney injury; exposing them to lower doses of NSAIDs may put them at lower risk while providing equally effective analgesia. We conducted a pilot study to determine the feasibility of a randomized trial

https://doi.org/10.1017/cem.2020.327 Published online by Cambridge University Press