technology was considered as important as the characteristics of physical space to optimize learning. **Conclusion:** This study demonstrates the importance and the impact of physical space design on trainees learning in a dynamic clinical environment. It provides teachers and policy-makers with a basis for developing criteria of the physical characteristics of a healthcare facility to maximize learning.
Keywords: clinical learning environment, emergency department, health care facility design

P065

Development and implementation of a postpartum hypertension recognition and management protocol for use in the emergency department.

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Introduction: Hypertensive disorders of pregnancy (HDP), including preeclampsia, can develop or worsen in the early postpartum period, often following discharge from hospital, resulting in severe preventable maternal morbidity and mortality. Due to a lack of routine early out-patient follow-up, many women with postpartum HDP present to the emergency department (ED) with severe hypertension or symptoms of preeclampsia (e.g., headache). In the ED, postpartum HDP can be difficult for clinicians to recognize (due to vague presenting symptom) and manage (due to lower blood pressure targets and concern of medication safety). ED clinicians recognized a need for timely recognition and effective treatments for postpartum HDP in the ED to improve maternal outcomes. As such, as part of a multi-step quality improvement initiative, an interdisciplinary team developed and implemented a postpartum HDP management protocol (consisting of nursing and physician protocols and an electronic order set embedded in the electronic medical record). The aims of this specific project were to assess: 1) the use of this clinical management protocol in the ED; and 2) its impacts on clinical care. **Methods:** This quality improvement project used electronic medical records to identify: 1) ED visits for postpartum HDP for postpartum women ages 20-50; 2) utilization of the postpartum HDP order set; and 3) clinical care outcomes (consultation and admission). Patient population characteristics and clinical care measures were summarized with descriptive statistics and compared using a before and after design. Changes in the utilization of the protocol were assessed using run charts. **Results:** 540 women with postpartum HDP were seen in the four Calgary EDs in the 16-month period following protocol implementation compared with 335 women in the preceding 12 months. The protocol was used in 46% of these 540 women, and increased over the 16 month follow-up period. We found an increase in the frequency of consultation of specialists (47% to 52%) and admissions (26% to 29%) amongst these women after protocol implementation. **Conclusion:** This initial assessment demonstrated good uptake of a postpartum HDP management protocol including referral for consultation and admission to hospital for blood pressure management. Future steps include evaluation of the impacts of this management protocol on important patient outcomes.
Keywords: quality improvement and patient safety, postpartum hypertension, preeclampsia

P066

Methotrexate in the management of suspected ectopic pregnancy

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Introduction: Early detection of ectopic pregnancy and careful management is critical to prevent adverse clinical outcomes, including fallopian tube rupture and future decreased fertility, in patients presenting to the ED with symptoms suggestive of ectopic pregnancy. Methotrexate therapy is widely accepted as a first line treatment of ectopic pregnancy, with success rates greater than 90% if used according to published guidelines. This study aims to determine the outcomes of pregnant women who presented to the ED with suspected ectopic pregnancy whom received methotrexate as first line treatment. **Methods:** This was a retrospective chart review of pregnant (<12 week gestational age) women from an academic tertiary care ED with a diagnosis of ectopic pregnancy, rule out ectopic pregnancy, or pregnancy of unknown location (PUL) over a 7 year period. **Results:** Of 612 included patients, 30 (4.9%) were diagnosed with a ruptured ectopic pregnancy at the index ED visit. Of the remaining 582 patients, 256 (44.0%) were diagnosed with an ectopic pregnancy at the index ED visit, the Early Pregnancy Clinic, or a subsequent ED visit. Of these patients diagnosed with ectopic pregnancy, their initial treatments at time of discharge from the index ED visit were as follows: 102 (39.8%%) received methotrexate, 132 (51.6%) underwent expectant management, and 22 (8.6%) underwent surgical management. Of the 132 patients discharged with an expectant management plan, only 42 (31.8%) had a final outcome of expectant management; the others went on to be treated surgically or with methotrexate. Of the 165 patients treated with methotrexate at index visit or in follow-up, 30 (18.2%) went on to require surgical management with 17 (10.3%) documented as having ruptured on surgical evaluation. Clinical characteristics of patients treated with methotrexate include the following: mean age 32.8 years (SD 5.7), gestational age of 6.2 weeks (SD 1.2) and serum beta human chorionic gonadotropin level of 2702 mIU/mL (SD 8800). **Conclusion:** The proportion of patients receiving methotrexate as first-line treatment that resulted in rupture or required further surgical management is higher than reported literature at this institution. Further investigation is needed to determine if there was a relationship between methotrexate failure and non-adherence to recommended guidelines. Given the risk of a possible rupture, patient education of these risks is critical on discharge from the ED.
Keywords: ectopic pregnancy, patient outcomes, emergency department

P067

Ectopic pregnancy outcomes in patients discharged from the emergency department

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Introduction: The objective of this study was to determine the proportion of women who had a ruptured ectopic pregnancy after being discharged from the ED where ectopic pregnancy had not yet been excluded. **Methods:** This was a retrospective chart review of pregnant (<12 week gestational age) women discharged home from an academic tertiary care ED with a diagnosis of ectopic pregnancy, rule out ectopic pregnancy, or pregnancy of unknown location (PUL) over a 7 year period. **Results:** Of the 550 included patients, 83 (15.1%) had a viable pregnancy, 94 (17.1%) had a spontaneous or missed abortion, 230 (41.8%) had an ectopic pregnancy, 72 (13.1%) had unknown outcomes and 71 (12.9%) had other outcomes which included therapeutic abortion, molar pregnancy or resolution of HCG with no location documented. Of the 230 ectopic pregnancies, 42 (7.6%) underwent expectant management, 131 (23.8%) were managed medically with

methotrexate, 29 (5.3%) were managed with surgical intervention, and 28 (5.1%) patients had a ruptured ectopic pregnancy after their index ED visit. Of the 550 included patients, 221 (40.2%) did not have a transvaginal US during their index ED visit, 73 (33.0%) were subsequently diagnosed with an ectopic pregnancy. **Conclusion:** These results may be useful for ED physicians counselling women with symptomatic early pregnancies about the risk of ectopic pregnancy after they are discharged from the ED.

Keywords: ectopic pregnancy, emergency department, patient outcomes

P068

Predictors of admission in unscheduled return visits to the emergency department

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Introduction: The 72-hr unscheduled return visit (URV) of an emergency department (ED) patient is often used as a key performance indicator in Emergency Medicine. Patients with unscheduled return visits and admission to hospital (URVA) may represent a distinct subgroup of URVs compared to unscheduled return visits with no admission (URVNA). **Methods:** A retrospective cohort study of all 72-hr URVs in adults across nine EDs in the Edmonton Zone (EZ) over a one-year period (Jan 1 2015 Dec 31 2015) was performed using ED information system data. URVA and URVNA populations were compared and a multivariable analysis identified predictors of URVA. **Results:** Analysis of 40,870 total URV records, including 3,363 URVAs, revealed predictors of URVA on the index visit including older age (>65 yrs, OR 3.6), fewer annual ED visits (<4 visits, OR 2.0), higher disease acuity (CTAS 2, OR 2.6), gastrointestinal presenting complaint (OR 2.2), presenting to a large referral hospital (OR 1.4), and more hours spent in the ED (>12 hours, OR 2.0). A decrease in CTAS score (increase in disease acuity) upon return visit was also a risk factor (-1 CTAS level, OR 2.6). ED crowding at the index visit, as indicated by occupancy level, was not a predictor. **Conclusion:** We demonstrate that URVA patients comprise a distinct subgroup of 72-hr URVs across an entire health region. Risk factors for URVA are present at the index visit suggesting that patients at high risk for URVA may be identifiable prior to admission.

Keywords: unscheduled return visit, performance metrics, triage risk stratification

P069

Hardened tendencies: persistence of initial appraisals following simulation-based stress training

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Introduction: Stress has been shown to impair performance during acute events. The goal of this pilot study was to investigate the effects of two simulation-based training interventions and baseline demographics (gender, age) on stress responses to simulated trauma scenarios. **Methods:** Sixteen (16) Emergency Medicine and Surgery residents were randomly assigned to one of two groups: Stress Inoculation Training (SIT) or Crisis Resource Management (CRM). Residents served as trauma team leaders in simulated trauma scenarios pre and post intervention. CRM training focused on non-technical skills required for effective teamwork. The SIT group focused on cognitive reappraisal, breathing and mental rehearsal. Training lasted 3 hours, involving brief didactic sessions and practice scenarios with debriefing focused on either CRM or SIT. Stress responses were measured with the State Trait Anxiety Inventory (anxiety), cognitive appraisal (degree to which a person interprets a situation as a threat or challenge) and salivary cortisol levels. **Results:** Because the pre-intervention stress responses were different between the two groups, the results were analyzed with stepwise regression analyses. The only significant predictor of anxiety and cortisol responses were the residents appraisal responses to that scenario, explaining 31% of the variance in anxiety and cortisol. Appraisals of the post-intervention scenarios were predicted by their appraisals of the pre-intervention scenario and gender, explaining 73% of the variance. Men were more likely than women to appraise the scenarios as threatening. There were no differences in subjective anxiety, cognitive appraisal or salivary cortisol responses as a result of either intervention. **Conclusion:** Male residents, as well as those who appraised an initial simulated trauma scenario as threatening, were more likely to interpret a subsequent scenario as threatening, and were more likely to have larger subjective (anxiety) and physiological (cortisol) responses a subsequent scenario. Both CRM and SIT training were not effective in overcoming initial appraisals of potentially stressful events.

Keywords: stress, crisis resource management, simulation

P070

Excluding ectopic pregnancy in patients presenting to a community emergency department with first trimester bleeding

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Introduction: Current guidelines recommend patients with first trimester bleeding without previously documented intrauterine pregnancy undergo urgent transvaginal ultrasound (TVUS) to exclude ectopic pregnancy. However, in Canadian practice to receive urgent TVUS, particularly out of daytime hours is difficult, if not impossible. Thus, when TVUS is not available to exclude ectopic pregnancy, providers use point of care ultrasound (POCUS) or their best clinical judgment to determine if the patient can be safely discharged home while awaiting outpatient follow-up. The objective of this study was to determine what proportion of first trimester patients presenting to a community hospital emergency department (ED) with vaginal bleeding undergo either TVUS or POCUS to exclude ectopic pregnancy. **Methods:** This is an ongoing retrospective chart review of pregnant women gestational age (GA) less than 20 weeks presenting to a community hospital ED (103,000 visits/year) with a discharge diagnosis of vaginal bleed, first trimester bleed, threatened abortion, spontaneous abortion, missed abortion, rule out ectopic pregnancy, and ectopic pregnancy from January 2016 - January 2017. Patients are excluded if they are diagnosed with a ruptured ectopic pregnancy during their index ED visit. To date, 98 patient charts have been reviewed. **Results:** Of the 98 included patients, 13 (13.3%) had a viable pregnancy, 37 (37.8%) had a spontaneous or missed abortion, 4 (4.1%) had an ectopic pregnancy, and 45 (45.9%) had unknown outcomes. Of included patients, 4 (4.1%) only had POCUS, 66 (67.4%) only had a radiologist-interpreted TVUS, and 3 (3.1%) had both POCUS and radiologist-interpreted TVUS during their ED index visits. Thus, 73 (74.5%) had either a radiologist-interpreted TVUS or ED provider-performed POCUS during their index ED visit. After their index ED visits, 2 (2.0%) patients returned with ruptured ectopic pregnancies, 1 of whom had not undergone initial US investigations. **Conclusion:** Although TVUS is standard of care to exclude ectopic pregnancy in patients presenting with first trimester

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