= -0.51, p < 0.001). This observed association persisted in a linear mixed model (-0.48 [95% confidence interval {CI}-0.61 to -0.36], p < 0.001). The sex of the volunteers also influenced the inter-oximeter agreement (Women:-5.77 [95%CI -8.43 to -3.11], p < 0.001), as well as the forearm sites (Left forearm: −7.16 [95%CI -9.85 to −4.47], p < 0.001; right forearm: −7.01 [95%CI -9.61 to −4.40], p < 0.001). **Conclusion**: The quantity of subcutaneous fat, as well as the sex of the volunteers and the measurement sites, impacted the inter-device agreement of two commonly used oximeters. Given these findings, monitoring using tissue oximetry should be interpreted with great care when there is a significant quantity of subcutaneous fat.
Keywords: inter-device agreement, near-infrared spectroscopy, tissular oximetry

MP14

Use of conventional cardiac troponin assay for diagnosis of non-ST-elevation myocardial infarction: 'The Ottawa Troponin Pathway'

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Introduction: Guidelines recommend serial conventional cardiac troponin (cTn) measurements 6-9 hours apart for non-ST-elevation myocardial infarction (NSTEMI) diagnosis. We sought to develop a pathway based on absolute/relative changes between two serial conventional cardiac troponin I (cTnI) values 3-hours apart for 15-day MACE identification. **Methods**: This was a prospective cohort study conducted in the two large ED's at the Ottawa Hospital. Adults with NSTEMI symptoms were enrolled over 32 months. Patients with STEMI, hospitalized for unstable angina, or with only one cTnI were excluded. We collected baseline characteristics, Siemens Vista cTnI at 0 and 3-hours after ED presentation, disposition, and ED length of stay (LOS). Adjudicated primary outcome was 15-day MACE (AMI, revascularization, or death due to cardiac ischemia/unknown cause). We analysed cTnI values by 99th percentile cut-off multiples (45, 100 and 250ng/L). **Results**: 1,683 patients (mean age 64.7 years; 55.3% female; median ED LOS 7 hours; 88 patients with 15-day MACE) were included. 1,346 (80.0%) patients with both cTnI ≤45ng/L; and 58 (3.4%) of the 213 patients with one value≥100ng/L but both <250ng/L or ≤20% change did not suffer MACE. Among 124 patients (7.4%) with one value >45ng/L but both <100ng/L based on 3 or 6-hour cTnI, one patient with Δ<10ng/L and 6 of 19 patients with Δ≥20ng/L were diagnosed with NSTEMI (patients with Δ10-19ng/L between first and second cTnI had third one at 6-hours). Based on the results, we developed the Ottawa Troponin Pathway (OTP) with a 98.9% sensitivity (95%CI 96.7-100%) and 94.6% specificity (95%CI 93.4-95.7%). **Conclusion**: The OTP, using two conventional cTnI measurements performed 3-hours apart, should lead to better identification of NSTEMI particularly those with values >99th percentile cut-off, standardize management and reduce the ED LOS.
Keywords: chest pain, non-ST elevated myocardial infarction (NSTEMI), troponin

MP15

Blood transfusion in upper gastrointestinal bleeding: evaluating physician practices in the emergency department

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Introduction: Acute upper gastrointestinal bleeding (UGIB) is a common presentation to emergency departments (ED). Of these patients, 35-45% receive a blood transfusion. Guidelines for blood transfusion in UGIB have been well established, and recommend a hemoglobin (Hb) level below 70 g/L as the transfusion target in a stable patient. There is no consensus on a transfusion threshold for unstable UGIB. There is limited data regarding physician practices in the ED. The aim of our study is to determine the appropriateness, by expert consensus, of blood transfusions in UGIB in a tertiary care hospital ED. **Methods**: We retrospectively reviewed patients presenting with UGIB to the University of Alberta Hospital ED in 2016. These patients were then screened for blood transfusions. Data were obtained from the patient records. Chart derived data were verified with records obtained from the blood bank. For each patient, the history, vitals, Glasgow Blatchford Score (GBS), relevant labs, and record of blood transfusions were collected and organized into a case summary. Each patient summary was presented individually to a panel of three expert clinicians (2 Gastroenterology, 1 Emergency Medicine), who then decided on the appropriateness of each blood transfusion by consensus. **Results**: Blood transfusions (data available 395/400) were given to 51% (202/395) of patients presenting with UGIB. Of these, 86% (174/202) were judged to be appropriate. Of the 395 patients, 34% (135/395) had a Hb of <70 g/L. Of these, 93% (126/135) were transfused, and all of these were considered appropriate. 18% (70/395) had a Hb between 71-80. 74% (52/70) of these patients were given blood, and 79% (41/52) were considered appropriate. 13% (50/395) of the patients had a Hb between 81-90, with 28% (14/50) receiving a transfusion. Of these, 36% (5/14) were deemed to be appropriate. 35% (140/395) of patients had a Hb of >90. 7% (10/140) of these received blood. 20% (2/10) were considered appropriate. **Conclusion**: The panel of expert clinicians judged 86% of the blood transfusions to be appropriate. All transfusions under the recommended guideline of 70 g/L were considered appropriate. In addition, the majority of transfusions above a Hb of 70 g/L were considered appropriate, but 37% were not. Further studies evaluating the feasibility of current guideline recommendations in an ED setting are required. Educational interventions should be created to reduce inappropriate blood transfusions above a Hb 70 g/L.
Keywords: blood transfusion, upper gastrointestinal bleeding

MP16

Which PoCUS skills are retained over time for medical students?

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Introduction: Point-of-care ultrasonography (PoCUS) is being incorporated into Canadian undergraduate medical school curricula. The purpose of this study was to evaluate novel PoCUS education sessions to determine what aspects of the sessions benefitted from hands-on training and which PoCUS skills were retained over time. **Methods**: Second year medical students voluntarily received three different PoCUS training sessions, each lasting three hours. Prior to the sessions, participants prepared independently with pre-circulated online learning materials. After a 15-minute lecture, experienced PoCUS providers led small group (1 instructor: 5 students), live