high-risk findings associated with a central cause; history of IS/TIA (OR 3.8 95%CI 1.7-8.2), cancer (OR 3.2 95%CI 1.4-7.2), dyslipidemia (OR 2.3 95%CI 1.2-4.4), symptoms of visual changes (OR 2.1 95%CI 1.5-6.3), dysarthria (OR 9.1 95%CI 3-27.4), vomiting (OR 2 95%CI 1-3.7), motor deficit (OR 7.7 95%CI 2.9-20.2), sensory deficit (OR 28.9 95%CI 7.4-112.9), nystagmus (OR 3.3 95%CI 1.6-6.7), ataxia (OR 2.5 95%CI 1.3-4.9) and unable to walk 3 steps unaided (OR 3.4 95%CI 1.4-8.5). Absence of these findings had a sensitivity of 100% (95%CI 92.5-100%) for ICH, IS, Tumour and 95.2% (86.5-98.9) if including TIA and MS. Specificity was 51.5% (95% CI 49.4-53.6%). **Conclusion**: Clinical exam is highly sensitive for identifying patients without a central etiology for their dizziness.
Keywords: clinical exam, decision aid, vertigo

LO51

Does my dizzy patient need a computed tomography of the head?

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Introduction: Dizziness is among the most common presenting complaints in the emergency department (ED). Although the vast majority of these cases are the result of a benign, self-limiting process, many patients undergo computed tomography (CT) of the head. The objective of this study was to define the yield of and diagnostic accuracy of CT in dizziness in addition to defining high-risk clinical features predictive of an abnormal CT. **Methods**: At a tertiary care ED we performed a medical records review from Jan 2015-2018 including adult patients with a triage complaint of dizziness (vertigo, unsteady, lightheaded), excluding those with symptoms >14days, recent trauma, GCS < 15, hypotensive, or syncope/loss of consciousness. Five trained reviewers used a standardized data collection sheet to extract data. Our outcome was a central cause defined as: cerebrovascular accident (CVA), brain tumor (BT) or intracranial haemorrhage (ICH) diagnosed on CT or magnetic resonance imaging. Univariate analysis/logistic regression were performed and odds ratios reported. A sample size of 796 was calculated based on an expected prevalence of 5% with an 80% power and 95% confidence interval to detect an odds ratio greater than 2. **Results**: 2310 patients were recruited, 800 (35%) underwent CT head, 471(59%) female and a mean age of 62.8 years (+/−17.5 years). The top three diagnoses for patients undergoing CT were peripheral vertigo/benign positional vertigo (153 – 19%), vertigo not-otherwise-specified (137 – 17%) and dizziness not-otherwise-specified (137 – 17%). The number of CT scans considered abnormal was 30 (3.7%). The top three diagnoses for patients with an abnormal CT were CVA (22 – 75%), BT (9 – 26%) and ICH (6-17%). High risk clinical findings associated ($p < 0.001$) with an abnormal head CT were dysmetria, objective motor neurological signs, positive Rhomberg, ataxia and inability to walk 3 steps. Objective motor neurological signs (OR 8.4 [95% CI 3.27-21.72]) and ataxia (OR 3.4 [95% CI 1.62-7.41]) were both independently associated with an abnormal CT. Patients without any high risk findings on exam had a 0.7%(3/381 – 2 CVA,1 Tumour) probability of an abnormal CT. Sensitivity of CT for a central cause of dizziness was 71.43%(95%CI 55.4-84.3%), specificity 100%(95%CI 99.5-100%). **Conclusion**: Current rate of imaging in dizziness is high and inefficient. CT should be the first imaging test in those with high-risk clinical features, but a normal result does not rule out a central cause.
Keywords: cerebrovascular accident, computed tomography, vertigo

LO52

Classification versus prediction of mortality using the Systemic Inflammatory Response score and quick Sepsis-related Organ Failure Assessment scores in patients with infection

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Introduction: Despite their widespread use, measures of classification accuracy (i.e. sensitivity and specificity) have several limitations that conceals relevant information and may bias decision-making. Assessing the predictive ability of clinical tools instead may provide more useful prognostic information to support decision-making, particularly in an Emergency setting. We sought to contrast classification accuracy versus predictive ability of the Systemic Inflammatory Response Syndrome (SIRS) and quick Sepsis-related Organ Failure Assessment (qSOFA) Sepsis scores for determining mortality risk among patients with infection transported by paramedics. **Methods**: A one-year cohort of patients with infections transported to the Emergency Department by paramedics was linked to in-hospital administrative databases. Hospital mortality was determined for each patient at the time of discharge. We calculated sensitivity and specificity of SIRS and qSOFA for classifying hospital mortality across different score thresholds, and estimated discrimination (assessed using the C statistic) and calibration (assessed visually) of prediction. Prediction models for hospital mortality were constructed using the aggregated SIRS or qSOFA scores for each patient as a predictor, while accounting for clustering by institution and adjusting for differences in patient age and sex. Predicted and observed risk were plotted to assess calibration and change in risk across levels of each score. **Results**: A total of 10,409 patients with infection who were transported by paramedics were successfully linked, with an overall mortality rate of 9.2%. The median SIRS score among non-survivors was 2, while the median qSOFA score was 1. SIRS score had higher sensitivity estimates than qSOFA for classifying hospital mortality at all thresholds (0.11 – 0.83 vs. 0.08 – 0.80), but the qSOFA score had better discrimination (C statistic 0.76 vs. 0.71) and calibration. The risk of hospital mortality predicted by the SIRS score ranged from 6.6-24% across score values, whereas the risk predicted by the qSOFA score ranged from 8.6-53%. **Conclusion**: Assessing the SIRS and qSOFA scores predictive ability reveals that the qSOFA score provides more information to clinicians about a patient's mortality risk despite having worse sensitivity. This study highlights important limitations of classification accuracy for diagnostic test studies and supports a shift toward assessing predictive ability instead. Character count 2490
Keywords: diagnostic accuracy, risk prediction, sepsis

LO53

The correlation of workplace-based assessments with periodic performance assessment of emergency medicine residents

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Introduction: Competency-based medical education (CBME) relies on pragmatic assessment to inform trainee progression decisions. It is unclear whether face-to-face workplace-based assessment (WBA) scoring by faculty reflects their true perception of trainee competence, as many factors influence individual assessments. To better defend competence committee decisions, it is critical to understand how

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accurately WBAs reflect the faculty's honest perception of resident competence and entrustment. **Methods**: To best capture faculty perception of trainee competence, we created a periodic performance assessment (PPA) tool for anonymous faculty assessment of residents after repeated clinical interactions. PPA surveys were distributed to full-time EM faculty at a single Canadian FRCPC-EM training site. Faculty were asked to score residents on entrustable professional activities (EPAs) based on encounters over the previous 6-months, and were advised that all data would be anonymized. All WBA scores for FRCPC-EM residents (N = 21) were collected from the 6-months preceding PPA completion. Analysis compared paired WBA and PPA entrustment scores for an individual resident, faculty, and EPA using Wilcoxon Signed Ranks tests and Spearman correlations. Data were analyzed across faculty, EPAs, and both faculty and EPA. **Results**: About half (17/33) of all invited full-time EM faculty participated. Overall, anonymous PPAs had a significantly lower mean score compared to face-to-face WBAs (3.61-3.69 vs. 3.92-4.06, $p < 0.001$ for all) across all groupings. Individual WBAs had a low-moderate correlation with individual PPAs (rho = 0.44). When scores were averaged across 1) faculty or 2) EPA, there was an increase in correlation, but it remained moderate (rho = 0.53 and 0.54, respectively). When scores were averaged for an individual resident across 3) faculty and EPA, there was a strong correlation between WBA and PPA (rho = 0.86). **Conclusion**: There is only moderate correlation between an individual faculty's WBAs and their anonymous longitudinal entrustment for a given resident on a specific EPA. These results may signal caution when interpreting WBA scores in the context of high stakes decisions. Aggregated scores from multiple faculty and/or multiple EPAs substantially increased the correlation between WBA and PPA. These findings highlight the importance of using aggregated WBA scores across multiple assessors and EPA for high-stakes resident progression decisions, to minimize the noise and bias in individual assessment.

Keywords: competency-based medical education, periodic performance assessment, workplace-based assessment

LO54

The CanadiEM Junior Editor program: a quantitative study and program evaluation

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Introduction: CanadiEM.org is a multi-author open access medical education website which aims to improve emergency care in Canada by building an online community of practice for healthcare practitioners and providing them with high quality, freely available educational resources. It is used by physicians, allied health professionals, and trainees globally. Junior (medical student and/or resident) Editors are key members of the community who are mentored to advance their academic skills and knowledge for their careers and the healthcare field. The program also aims to increase the sustainability of the CanadiEM project by supporting the creation and publishing of online content. We aimed to assess the impact and efficacy of this program while discovering ways to improve it. **Methods**: The experience of all current and previous Junior Editors were assessed through a survey developed by the authorship team for this purpose. The survey consisted of 48 questions, including 15 multiple choice questions rated using a Likert Scale, 10 open-ended questions, and 23 demographic or binary yes/no questions. The participants' perceptions of their experience, desire for future involvement, and opinions regarding implementation of the program at other medical education websites were assessed using open-ended qualitative questions. These responses were thematically analyzed. **Results**: A total of 28 Junior Editors responded (71.7% of those surveyed). They listed their responsibilities as uploading/copyediting posts, authorship of posts, infographic creation, social media promotion, authorship of podcast summaries, editing of podcasts, and logo design. Results revealed a positive experience across all domains, with participants citing a better experience when compared to previous similar roles. 85.7% (24/28) stated they achieved their expectations from the program, and 82.1% (23/28) would incorporate this program into another medical education website if given the opportunity. **Conclusion**: Junior Editors reported positive experiences across all responsibilities, with particular value placed on digital and authorship skills development, inspiration for future FOAMed, research engagement, and mentorship/networking. Through collaboration with current team members, we will implement improvement initiatives. Based upon these results, we believe that the Junior Editor model may also be viable within other medical education communities.

Keywords: free open access medical education, medical education, program evaluation

LO55

Signal & noise – do professionalism concerns impact decision-making of competence committees?

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Introduction: Competence committees (CCs) struggle with incorporating professionalism issues into resident progression decisions. This study examined how professionalism concerns influence individual faculty decisions about resident progression using simulated CC reviews. **Methods**: In 2017, the investigators conducted a survey of 25 program directors of Royal College emergency medicine residency training programs in Canada and those faculty members who are members of the CCs (or equivalent) at their home institution. The survey contained twelve resident portfolios, each containing formative and summative information available to a CC for making progression decisions. Six portfolios outlined residents progressing as expected and six were not progressing as expected. Further, a professionalism variable (PV) was added to six portfolios, evenly split between those residents progressing as expected and not. Participants were asked to make progression decisions based on each portfolio. **Results**: Raters were able to consistently identify a resident needing an educational intervention versus those who did not. When a PV was added, the consistency among raters decreased by 34.2% in those residents progressing as expected, versus increasing by 3.8% in those not progressing as expected ($p = 0.01$). **Conclusion**: When using an unstructured review of a simulated resident portfolio, individual reviewers can better discriminate between trainees progressing as expected when professionalism concerns are added. Considering this, educators using a competence committee in a CBME program must have a system to acquire and document professionalism issues to make appropriate progress decisions.

Keywords: education, professionalism, residency

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