patients in the pain group were registered to the acute area, while 71.2% of the patients in the non-pain group were registered to the acute area ($p < 0.001$). And the proportion of emergency procedure, admission, ICU admission, and mortality was also higher in patients with pain group. Similarly, in the patients of KTAS 3, the proportion of urgent patients was higher in the non-pain group except emergency operation. The odds ratio for the occurrence of urgent patients decreased as the KTAS value increased in both groups, however, the difference between the odds ratios of each KTAS was more evident in the non-pain group. In pain group, compared to patients with KTAS 3, the odds ratio (95% CI) for acute area registration were 2.32 (1.92-2.80), 0.61 (0.51-0.73), and 0.35 (0.23-0.53) for patients with KTAS 2, 4, 5, respectively; in non-pain group, odds ratio were 5.59 (5.09-6.13), 0.28 (0.25-0.32), and 0.13 (0.10-0.16). The non-pain group showed better predictive power of KTAS for acute area registration than pain group; AUC (95% CI), 0.864 (0.861-0.867) vs. 0.810 (0.802-0.818), $p < 0.0001$). The predictability of KTAS was also higher in non-pain group for emergency procedure, emergency operation, admission, and ICU admission. **Conclusion:** We have confirmed that the use of pain severity as a modifier in KTAS is a factor affecting accuracy. The acuity level is overestimated when pain severity is used as modifier in KTAS evaluation.

Keywords: triage, patient acuity, pain

MP14

Community paramedic point of care blood analysis: validity and usability testing of two commercially available devices

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Introduction: Community Paramedics (CPs) require access to timely blood analysis in the field to guide treatment and transport decisions. Point of care testing (POCT), as opposed to traditional laboratory analysis, may offer a solution, but limited research exists on CP POCT. The objective of this study is to compare the validity of two POCT devices (Abbott i-STAT® and Alere epoc®) and their use by CPs in the community. **Methods:** In a CP programme responding to 6,000 annual patient care events, a split sample validation of POCT against traditional laboratory analysis for seven analytes (sodium, potassium, chloride, creatinine, hemoglobin, hematocrit, and glucose) was conducted on a consecutive sample of patients. The difference of proportion of discrepant results between POCT and laboratory was compared using a two sample proportion test. Usability was analysed by survey of CP experience, an expert heuristic evaluation of devices, a review of device-logged errors, coded observations of POCT use during quality control testing, and a linear mixed effects model of Systems Usability Scale (SUS) adjusted for CP clinical and POCT experience. **Results:** Of 1,649 CP calls for service screened for enrollment, 174 had a blood draw, with 108 patient care encounters (62.1%) enrolled from 73 participants. Participants had a mean age of 58.7 years (SD16.3); 49% were female. In 4 of 646 (0.6%) individual comparisons, POCT reported a critical value that the laboratory did not; with no statistically significant difference in the number of discrepant critical values reported with epoc® compared to i-STAT®. There were no instances of the laboratory reporting a critical value when POCT did not. In 88 of 1,046 (8.4%) individual comparisons, the a priori defined acceptable difference between POCT and the laboratory was exceeded; occurring more often in epoc® (10.7%;95% CI:8.1%,13.3%) compared to i-STAT® (6.1%;95% CI:4.1%,8.2%) ($p = 0.007$). Eighteen of 19 CP surveys were returned, with 11/18 (61.1%) preferring i-STAT® over epoc®. The i-STAT® had a higher mean SUS score (higher usability) compared to the epoc® (84.0/100 vs. 59.6/100; $p = 0.011$). Fewer field blood analysis device-logged errors occurred in i-STAT® (7.8%;95% CI:2.9%,12.7%) compared to epoc® (15.5%;95% CI:9.3%,21.7%) although not statistically significant ($p = 0.063$). **Conclusion:** CP programs can expect valid results from POCT. Usability assessment suggests a preference for i-STAT.

Keywords: community paramedic, point-of-care testing

MP15

Innovative use of simulation to consolidate pediatric didactic curriculum. A pilot in emergency department continuing medical education

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Introduction: Our emergency department (ED) sees a low volume of high acuity pediatric cases. A needs assessment revealed that 68% of our Emergency Physicians (EP) manage pediatric patients in less than 25% of their shifts. The same percentage of EPs as well as ED nurses indicated they were uncomfortable managing a critically unwell neonate. Thus, an interprofessional curriculum focused on pediatric emergencies for ED staff was developed. In-situ simulation education was chosen as the most appropriate method to consolidate each didactic block of curriculum, and uncover important system gaps. **Methods:** Needs assessment conducted, and emerging themes informed IPE curriculum objectives. A committee of experts in simulation, pediatric emergencies and nursing education designed a full-day, RCPSC accredited, interprofessional in-situ simulation program. **Results:** Progressive segmental strategy maximized learning outcomes. The initial phase (2 hrs) comprised an" early recognition of sepsis" seminar and 4 rotating skills stations (equipment familiarity, sedating the child, IV starts, and mixing IV medication). This deliberate, adaptive, customized practice was enhanced by expert facilitation at each station, directly engaging participants and providing real-time feedback. The second phase allowed interprofessional teams of MDs, RNs and Physician Assistants to apply knowledge gained from the didactic and skills stations to in-situ simulated emergencies. Each group participated in two pediatric emergency scenarios. Scenarios ran 20 minutes, followed by a 40 minute debrief. Each scenario had a trained debriefer and content expert. The day concluded with a final debrief, attended by all participants. Formalized checklists assessed participants knowledge translation during simulation exercises. Participants assessed facilitators and evaluated the simulation day and curriculum via anonymous feedback forms. Debriefing sessions were scribed and knowledge gaps and system errors were recorded. Results were distributed to ED leaders and responsibilities assigned to key stakeholders to ensure accountability and improvement in system errors. Results All participants reported the experience to be relevant and helpful in their learning. All participants requested more frequent simulation days. System gaps identified included: use of metric vs imperial measurements, non-compatible laryngoscope equipment, inadequate identification of team personnel. As a result, the above-mentioned equipment has been replaced, and we are developing resuscitation room ID stickers for all team roles. **Conclusion:** Simulation as a culmination to a didactic curriculum provides a safe environment to translate acquired knowledge, increasing ED staff comfort and familiarity with rare pediatric cases. Additionally, is an excellent tool to reveal system gaps and allow us to fill these gaps to improve departmental functioning and safety.

Keywords: innovations in emergency medicine education, interprofessional simulation, curriculum

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