

patients with cellulitis or erysipelas. Ceftriaxone was chosen for most patients receiving parenteral antibiotics, but it may not have been the most effective antibiotic in some cases. Overuse of antibiotics is common, and we believe medication choice should be justified based on disease severity, spectrum of activity, and regional antibiotic resistance patterns, among other factors. In conclusion, we found that emergency physicians could more closely align management plans with current guidelines to improve management of uncomplicated infection and reduce unnecessary administration of parenteral antibiotics.

**Keywords:** antibiotics, cellulitis, erysipelas

#### P088

##### **Emergency department utilization of point-of-care ultrasound in the assessment and management of shock**

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**Introduction:** Recent studies have shown that point of care ultrasound is a valuable tool in the assessment and management of shock in the Emergency Department (ED). Despite proven utility, data is limited on the current utilization and quality assurance of POCUS in ED management of shock. The aim of this study was to determine the rate of POCUS use, characterize data collection methods and determine rate of quality assurance in both the ED and Intensive Care Unit (ICU) of a tertiary care academic center. **Methods:** The study included all patients who visited the ED from Jan-Jun 2015 that were transferred to the ICU, and were in shock, as determined by sBP <90, diagnostic code or vasopressor use. Patient charts, as well as wirelessly archived ultrasound studies were reviewed to determine which patients had POCUS performed, and how the results were recorded. By reviewing formal worksheets archived online, it could be determined if a management change was recommended, if studies were over-read for quality assurance and if improvement was recommended to image acquisition or interpretation. **Results:** Both departments used POCUS in roughly half of patients presenting in shock (53% ED, 41% ICU) with no statistical difference in usage ( $\Delta 12$ , 95% CI -0.01 to 0.25;  $p = 0.06$ ). Most ED studies (87%), had some form of documentation either on paper or online, however few (9%) had a formal worksheet completed. In comparison 71% of ICU studies had a worksheet. There was no difference in the number of performed scans that were saved electronically (66% ED vs 71% ICU;  $\Delta 5\%$ , 95%CI -0.13 to 0.21;  $p = 0.60$ ). In the ICU the majority (77%) of the formal reports recommended a management change as a direct result of scan findings. Furthermore, of worksheets submitted for quality assurance (88%), over half the reviews (55%) suggested an improvement in image acquisition or interpretation. **Conclusion:** To our knowledge, our study is the first to demonstrate that POCUS is only utilized in about half of the shock cases in ED and ICU. Given that the majority of the formally reported studies in the ICU that were over-read for quality assurance found areas for potential improvement and given that the majority of ED studies were reported informally, it stands to reason that POCUS operators in the ED could benefit from a formalized quality assurance program. Future studies should explore potential barriers to implementation of such a program. **Keywords:** point of care ultrasound, shock, critical care

#### P089

##### **Does the use of ultrasound improve diagnosis during simulated trauma scenarios?**

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**Introduction:** Point of care ultrasound (US) is a key adjunct in the management of trauma patients, in the form of the extended focused assessment with sonography in trauma (E-FAST) scan. This study assessed the impact of adding an edus2 ultrasound simulator on the diagnostic capabilities of resident and attending physicians participating in simulated trauma scenarios. **Methods:** 12 residents and 20 attending physicians participated in 114 trauma simulations utilizing a Laerdal 3G mannequin. Participants generated a ranked differential diagnosis list after a standard assessment, and again after completing a simulated US scan for each scenario. We compared reports to determine if US improved diagnostic performance over a physical exam alone. Standard statistical tests ( $\chi^2$  and Student  $t$  tests) were performed. The research team was independent of the edus2 designers. **Results:** Primary diagnosis improved significantly from 53 (46%) to 97 (85%) correct diagnoses with the addition of simulated US ( $\chi^2 = 37.7$ , 1df;  $p = <0.0001$ ). Of the 61 scenarios where an incorrect top ranked diagnosis was given, 51 (84%) improved following US. Participants were assigned a score from 1 to 5 based on where the correct diagnosis was ranked, with a 5 indicating a correct primary diagnosis. Median scores significantly increased from 3.8 (IQR 3, 4.9) to 5 (IQR 4.7, 5;  $W = 219$ ,  $p < 0.0001$ ). Participants were significantly more confident in their diagnoses after using the US simulator, as shown by the increase in their mean confidence in the correct diagnosis from 53.1% (SD 22.8) to 83.5% (SD 19.1;  $t = 9.0$ ;  $p < 0.0001$ ). Additionally, participants significantly narrowed their differential diagnosis lists from an initial medium count of 3.5 (IQR 2.9, 4.4) possible diagnoses to 2.4 (IQR 1.9, 3;  $W = -378$ ,  $p < 0.0001$ ) following US. The performance of residents was compared to that of attending physicians for each of the above analyses. No differences in performance were detected. **Conclusion:** This study showed that the addition of ultrasound to simulated trauma scenarios improved the diagnostic capabilities of resident and attending physicians. Specifically, participants improved in diagnostic accuracy, diagnostic confidence, and diagnostic precision. Additionally, we have shown that the edus2 simulator can be integrated into high fidelity simulation in a way that improves diagnostic performance.

**Keywords:** point of care ultrasound (PoCUS), trauma, simulation

#### P090

##### **Electronic invitations received from predatory journals and fraudulent conferences: a 6-month young researcher experience**

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**Introduction:** Predatory publishing is a poorly studied emerging threat to scientists. Junior researchers are preferred targets as they are under academic pressure to publish but face high rejection rates by many medical journals. **Methods:** All electronic invitations received from predatory publishers and fraudulent conferences were collected over a 6-month period (28<sup>th</sup> April to 27<sup>th</sup> October 2016) following the first publication of a junior researcher as a corresponding author. Beall's list was used to identify predatory publishers and James McCrostie's criteria to assess if a conference should be considered as predatory. The content of electronic invitations was analyzed and is presented with descriptive statistics. **Results:** A total of 162 electronic invitations were received during the study period. Seventy-nine were invitations to submit a manuscript. Few invitations disclosed information related to publication fees (9, 11.4%) or mentioned any publication guidelines (21, 26.6%). Most invitations reported accepting all types of manuscripts (73, 92.4%) or emphasized on a deadline to submit (62, 78.4%). These invitations