## 7 A Study of the Korea Triage and Acuity Scale Using National Emergency Department Information System analysis

*Han JH,*[1] Lee SM,[1*] , Song KH[2] / [1]Department of Emergency Medicine, Chonnam National University Hospital, Gwangju, Korea; [2]Department of Emergency Medicine, KS Hospital, Gwangju, Korea.

**Introduction:** The Emergency Severity Index plays an important role in the initial evaluation and treatment of emergency patients. In 2016, Korea initiated the KTAS (Korean Triage and Acuity Score) system in emergency departments (ED) nationwide. If its usefulness is verified, KTAS will be extended to the prehospital setting, which we believe will improve the nation's emergency medical services (EMS) system.

**Methods:** This is a retrospective study that uses the National Emergency Department Information System (NEDIS) database. From January - December 2016, we used NEDIS data from patients who visited EDs nationwide. We looked to verify the usefulness of KTAS on the KTAS distribution for Modified Early Warning Score (MEWS), length of stay in ED, and admission duration. We also analyzed KTAS in various conditions to determine the current status of KTAS.**Results:** A total of 5,506,071 patients were enrolled in the study. The KTAS distribution according to the MEWS score shows that the score of the first grade is the highest (8.5 ± 3.6), and the score decreases significantly as it goes down to the second, third, fourth, and fifth grades. And the fifth grade showed the lowest (2.3 ± 2.2). Considering that MEWS is a useful tool for emergency physicians to measure the hospitalization and mortality rate of patients, this indicates that KTAS is a useful tool for severity classification.

**Conclusion:** KTAS is an effective tool for classifying the severity of injury or illness of ED patients. We believe KTAS will improve the Korean EMS system nationwide.

## 8 Multi-Institutional Implementation of the National Clinical Assessment Tool in Emergency Medicine

*Hiller KH*[1]*,* Franzen D[2], Jung J[3], Lawson LJ[4] / [1]University of Arizona; [2]University of Washington; [3]Johns Hopkins University; [4]East Carolina University

**Objective:** The National Clinical Assessment Tool in Emergency Medicine (NCAT-EM) was created at a consensus conference in 2016, and has been adopted within emergency medicine (EM) clerkships across the United States (U.S.). The objective of this study was to collect reliability and validity evidence from multiple sites. We analyzed and described score distributions, effects of student and evaluator characteristics, and rating tendencies of specific institution and evaluator types.

**Design:** Clerkship directors were recruited from geographically and academically diverse sites across the U.S. Each institution used NCAT-EM for assessment of their students' clinical performance and collected demographic data on students and assessors. A secure online database was developed that allows users to assign unique identifiers for students and assessors, and to enter de-identified demographic and NCAT-EM data.

**Method:** We performed descriptive statistics by site, clerkship type, and demographic group; and we also performed reliability, internal consistency, and factor analysis. The study was approved by the University of Arizona Institutional Review Board (IRB). All participating sites either underwent individual IRB review and approval, or ceded review to the University of Arizona.

**Results and Conclusion:** Thirteen sites input data on 748 students from 704 assessors, from 6402 discrete assessment forms. All subcategories on all ratings scales were used, as were all professionalism subdomains. There was a significant "right shift" of entrustability domains and global assessment, similar to other commonly used assessments. Professionalism lapses were noted on <1% of forms. All sites had a Cronbach's alpha >0.8; however, factor analyses revealed significant inter-institutional variability. We found no differences in scores by gender. There was an increase in scores in fourth-year compared to third-year medical students, but no significant increase in students' scores on subsequent rotations. While we found differences in assessor scores based on faculty rank and resident training year, there were no differences by years in practice.

This study is the first large-scale implementation of a consensus-derived, specialty-specific clinical assessment tool for medical students in the U.S. Analysis across multiple diverse settings allows for rigorous assessment of reliability and validity. This benefits all stakeholders. Students receive more accurate and useful feedback on their performance, clerkship directors can assign grades and rankings with greater confidence, residency programs can compare students across institutions, and ultimately patient safety is ensured through improved competence of providers.

## 9 Public Health in Acute Care Settings: Acute HIV in Six Urban Emergency Departments

*Mammen P*[1]*,* White D[2], Giordano T[3], Jacobson K[4], Feaster D[5], Glick N[6], Sha B[7], Moreno-Walton L[8], Pasalar S[9], Hunt B[6], Adomolga V[10], Favaloro III E[11], Todorovic T[2], and Branson B[12] / [1]Drexel University; [2]Alameda Health System - Highland Hospital; [3]Baylor College of Medicine; [4]University of Southern California, Keck School of Medicine; [5]University of Miami; [6]Sinai Health System, Chicago IL; [7]Rush University Medical Center, Chicago; [8]Louisiana State University Health Science Center, New Orleans, LA; [9]Harris Health System; [10]Houston Department of Health, Houston, TX; [11]Louisiana State University Health Science Center, New Orleans, LA; [10,11,12]Scientific Affairs, LLC, Atlanta, GA.

**Background and Objective:** Emergency departments (ED) play a critical role in acute care delivery and are at the interface of the community and the medical system. Some have capitalized on this role by implementing public health initiatives, such as human immunodeficiency virus (HIV) screening. Lab-based, fourth-generation testing detects acute HIV infection (AHI) when patients are highly infectious, may have symptoms, and often are unaware of exposure.

We describe newly diagnosed HIV from EDs across the U.S. with focus on the prevalence of AHI and the proportion of AHI among all newly diagnosed.

**Methods:** We collected data from six urban EDs in geographically distinct areas that have implemented HIV screening algorithms using fourth-generation testing capabilities. Data was aggregated to determine the total number of HIV tests performed, new HIV diagnoses and number of AHI. We defined AHI based on a reactive HIV Ag/Ab assay, negative HIV ½ antibody differentiation test, and detectable HIV-1 RNA.

**Results:** During the study period ending December 31, 2015, 159,102 HIV Ag/Ab tests were performed. In total, 2100 patients were identified with HIV; 605 (0.38%) were new HIV diagnoses, of which 98 (16.3%) were AHI. Total prevalence of AHI was 0.06%, and the percentage of newly diagnosed HIV that were AHI ranged from 13.1%-55.6% in the six EDs.

**Conclusion**: EDs are the central component of the acute care delivery system in the U.S. The percentage of AHI among ED patients is likely secondary to these patients seeking care for symptoms attributable to AHI and provides a valuable opportunity for early interventions.

## 10 Predicting Admission at Triage: Comparison of the Sydney Triage to Admission Risk Tool (START) and the Glasgow Admission Prediction Score (GAPS)

*Yigit O*[1], Bilge G[2] / [1]Akdeniz University Faculty of Medicine, Department of Emergency Medicine, Konyaaltı/Antalya, Turkey; [2]Emergency Department, Isparta State Hospital, Isparta, Turkey

**Introduction**: Emergency departments (ED) are the units where patient flow is intense, fast, and accurate. In recent years because of increased ED intensity, patient management became more complicated, patient satisfaction decreased, and emergency service expenditures increased. Current triage systems can predict the urgency of patients' needs but cannot predict hospitalization requirements. In this study we evaluated two established clinical scores, the Glasgow Admission Prediction Score (GAPS) and the Sydney Triage to Admission Risk Tool (START), for hospitalization predictions and compared them for superiority in predicting hospitalization requirements.

**Methods**: In this prospective observational study, all patients admitted to the Akdeniz University Hospital Emergency Department adult triage area between June 1-8, 2018, were evaluated. We calculated GAPS and START scores of patients during triage, and then patients were checked for their final management in the ED if they were hospitalized or discharged. The ability of both scoring systems for predicting hospitalization were calculated. We analyzed these comparisons with area under the receiver operating characteristic curve (AUC) values.

**Results:** A total of 2117 patients were enrolled to the study and 236 (11.1%) were hospitalized. The AUC value of GAPS was 0.894 (95% confidence interval [CI], 0.881 to 0.907) and the AUC value of START was 0.819 (95% CI, 0.801 to 0.835). The prediction of admission was high for both scoring systems; however, GAPS was a significantly better predictor for admission than START ($p<0.0001$).

**Conclusion:** In predicting hospitalization during triage in ED evaluation, both GAPS and START could be used; however, GAPS is a better predictor for hospital admission than START.

## 11 Implementing a Social Media-Based Curriculum for Newly-Matched Interns

*Huls TA*[1], McLean ME[1],Park JC,[1] Anana MC,[2] Klein MR,[3] Kulkarni ML[1] / [1]St. John's Riverside Hospital, Department of Emergency Medicine, Yonkers, NY; [2]Rutgers New Jersey Medical School, Department of Emergency Medicine, Newark, NJ; [3]Northwestern University Feinberg School of Medicine, Department of Emergency Medicine, Chicago, IL.

**Objective:** Transitioning to emergency medicine (EM) internship from medical school can be difficult. While prior investigations have evaluated pre-graduation or early internship boot camps to ease the transition, there is no previously described curriculum for the time between Match Day and start of internship. To address this gap, we designed a curriculum to be administered using the social media platform Slack. With our Slack curriculum, newly-matched interns can refresh their clinical knowledge before internship with collaborative learning via clinical cases. Our objective was to test the hypothesis that the Slack curriculum would increase the self-reported comfort of newly-matched interns with several EM learning objectives.

**Design and Method**: This was a prospective, observational study at St. John's Riverside Hospital, Northwestern University, and Rutgers New Jersey Medical School EM residency programs. The population was newly-matched EM interns, with no exclusion criteria, and participation was voluntary. The curriculum is published at (https://jetem.org/socialmedia_inn/). Subjects completed a