

sites). Among patients with AKI, potential nephrotoxins were administered in 24.0% and 63.3% of the discharged and admitted cohorts, respectively, compared to 27.0% and 56.4% in patients without AKI. Nephrology consultation was initiated in 4.2% of admitted patients with AKI (3.0%, 2.7%, and 17.2% in stages 1, 2, and 3).

**Conclusion:** In this multisite retrospective analysis of AKI management in the ED, documented recognition of AKI was incomplete and substantial heterogeneity in management among AKI stages and ED sites was observed.

#### 491 | Automated Measures of Mis-triage to Assess Accuracy of the Emergency Severity Index Among Pediatric Patients

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**Background and Objectives:** The five-level Emergency Severity Index (ESI) is used in over 70% of emergency departments (ED) across the U.S. to sort patients based on predicted acuity and resource needs. Most studies assessing the validity of the ESI are based on expert opinion through chart review or case simulations with variable performance. Our multidisciplinary team developed objective measures using electronic health record data to define under- and over-triage for each ESI level among pediatric patients (age <18) to estimate the frequency of mis-triage.

**Methods:** We defined under- or over-triage of pediatric ED patients for each potential ESI level based on objective events that occurred during the ED visit. These events included counts of resource use, as well as a hierarchy and timing of critical outcomes, including procedures, medications dispensed, blood product transfusions, prolonged ED length of stay with social work consultations, and emergent transfers to higher levels of care. We then applied these measures to assess the mis-triage frequency among all pediatric ED patients presenting between 2016 and 2020 to 21 medical centers in Northern California by ESI triage assignment.

**Results:** Our cohort included 1,016,816 pediatric encounters; patient mean age was 7.3, 47% were female, and 72% were non-White. By ESI, 0.2%, 8.0%, 43.5%, 46.5%, and 1.9% were assigned ESI I, II, III, IV, and V, respectively. Applying our definitions of mis-triage, 34% of encounters were correctly triaged. We found 7.4% of encounters were under-triaged, and importantly, in 5.2% of ESI IV encounters (over 24,000 encounters), there was clinically meaningful under-triage with patients requiring significant resource use or experiencing critical events. Overall, 58.4% of all encounters, and 59.8% and 64.8% of ESI VI and III encounters respectively, were over-triaged, requiring limited or no resource use. In unadjusted analyses, younger patients (<8), Asian and Black patients (compared to White patients), patients arriving during evenings, nights, or weekends (compared to typical clinic hours), and patients with higher co-morbidity scores

(compared to those with lower co-morbidity scores) were more likely to be mis-triaged.

**Conclusion:** Use of the ESI was associated with high rates of mis-triage in a pediatric population, largely due to over-triage. These findings may have implications for emergency care quality, equity, and operational flow.

#### 492 | Increased Incidence of Stroke Codes at a Regional Stroke Center

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**Background and Objectives:** The treatment of strokes is time dependent. Stroke code guidelines are designed to rapidly identify patients eligible for advanced interventions. To ensure that all potential candidates are identified, stroke code criteria are sensitive, not specific. While it is important to identify patients with conditions with time dependent treatments, a stroke code is resource intensive. We have anecdotally seen an increase in the rate of stroke codes. To explore this, we examined the incidence of stroke codes and time-dependent stroke interventions compared to ED volume over time.

**Methods:** This was a retrospective review conducted at a regional stroke center. Stroke codes initiated in our center are referred to as "local stroke codes". At outside hospitals, our specialists consult via video; these are referred to as "remote stroke codes". Stroke codes were categorized by location—local ED stroke codes, local inpatient stroke codes, and remote stroke codes. Patient-level data, including stroke-specific treatments, were obtained for local ED stroke codes. A descriptive analysis was completed.

**Results:** Data for 2008 and 2021 were obtained. There were 22,293 stroke codes reported: 40% were local ED stroke codes, 9% were local inpatient stroke codes, and 51% were remote stroke codes. All categories increased over time. In 2008, there were 296 local ED stroke codes; in 2021 there were 1176. This is a 295% increase despite an increase in ED volume of only 38%. Local inpatient stroke codes and remote stroke codes increased 2290% and 164% respectively. The number of patients receiving intravenous thrombolytic therapy was steady and ranged between 29 and 43 annually without a consistent trend between years. Endovascular interventions gradually increased from 10 patients in 2014, to 34 patients in 2021.

**Conclusion:** In this retrospective review of data from our regional stroke center, we found a large increase in the incidence of stroke codes compared to ED volume. Despite this increase, acute interventions were rare and there was not a corresponding rise in their use. As an increased volume of stroke codes will influence the availability of imaging, personnel, and bed assets, it is important to consider the specificity of stroke codes for patients who are candidates for time-dependent interventions.