

treated for UTI that were ASB decreased from 28.4% (range 0-63%) to 18.6% (range, 0-33%;  $p=0.055$ ) (Figure 5). **Conclusions:** Case abstraction with use of the ID-UTI measure was feasible and reliable to implement with modifications for CAHs. Data collection by untrained staff was as reliable as physician adjudication. Though the ID-UTI standard definition undercounted ASB cases (low sensitivity), cases reported as ASB were always ASB when adjudicated (high specificity). The program, including performance feedback using the ID-UTI measure, was associated with a trend toward lower treatment of ASB.

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**Does Serial Procalcitonin Monitoring predict Clinical Outcomes in Children with Sepsis? A diagnostic stewardship study**

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**Background:** In the management of children with sepsis, inflammatory markers are often obtained upon admission and repeated frequently. It is unclear if serial monitoring of procalcitonin is useful for predicting patient outcomes. The focus of our study is to identify if the trend of procalcitonin levels was predictive of the clinical outcomes in children with sepsis. **Methods:** We performed a retrospective diagnostic study to evaluate the association between change in procalcitonin levels and clinical outcomes. Encounters for children 1 to 8 years old with a sepsis ICD 10 diagnosis code and meeting the clinical sepsis criteria from May 2020 to May 2022 at one quaternary care pediatric hospital were included. Encounters with fewer than two procalcitonin values and children with autoimmune diseases, trauma, new onset malignancy, and fungal infections were excluded. Procalcitonin clearance at 48 hours (CL-PCT48) was defined as the difference in procalcitonin values drawn on admission and at 48 hours divided by initial procalcitonin value. The primary outcome was good early clinical response, defined as composite measure of temperature, hemodynamic stability, supplemental oxygen requirement, and need for renal replacement therapy at 120 hours of admission. All-cause in-hospital mortality was a secondary outcome. ROC analysis was performed to measure the correlation of CL-PCT48 and initial procalcitonin value (PCT0) with the outcome. **Result:** There were 320 unique encounters for children who met the clinical criteria of sepsis. The median number of procalcitonin measurements was 4 (Range 2 - 111). Of these encounters, 187 had procalcitonin measurements done at eligible times. The mean age of the study participants was 9 years and 8 months, 103 (55%) were male, and the majority (54%) were Caucasian. Fifty-seven

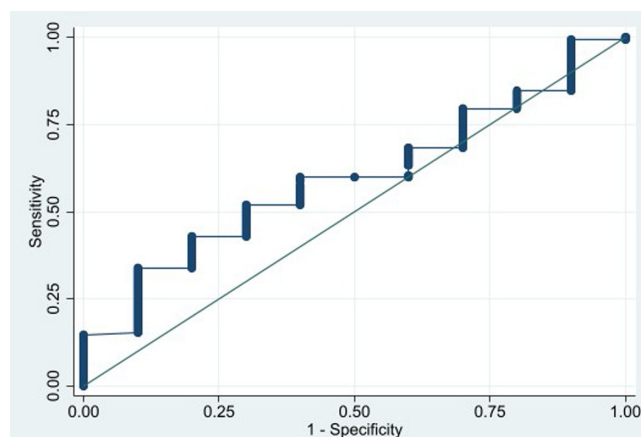


Figure 2: ROC curve for procalcitonin clearance at 48 hours predicting in-hospital mortality

(30%) individuals had bacterial growth from a culture from sterile body fluid or urine. 78 (41.7%) individuals had good early clinical response and 177 (94.7%) survived to hospital discharge. There was no correlation identified between CL-PCT48 and good early clinical response (area under ROC curve [AUC] = 0.57, 95% CI 0.48-0.65, Figure 1) or mortality (AUC = 0.60, 95% CI 0.43-0.76, Figure 2). There was also no correlation between PCT0 and good early clinical response (AUC = 0.47, 95% CI 0.39-0.56) or and mortality (AUC = 0.50, 95% CI 0.29-0.72). **Conclusion:** Procalcitonin clearance at 48 hours after admission did not predict early clinical response in children with sepsis.

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**It Takes a Village: Leveraging a Multidisciplinary Team and Technology for Urine Culturing Stewardship**

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**Background:** Patients without urinary tract infection (UTI) symptoms but with a positive urine culture are considered to have asymptomatic bacteriuria (ASB). This often represents colonization and treatment is not recommended or clinically beneficial. Treatment of ASB can promote antimicrobial resistance and increased rates of *Clostridies difficile* infections. Many cases of ASB are incorrectly assigned as CAUTIs due to over-culturing practices. We hypothesized that a urine culture algorithm, embedded within a best practice alert (BPA) in the electronic medical record (EMR), would reduce urine culturing practices for ASB. **Methods:** From Feb 2022 through May 2023, a multidisciplinary team implemented an Inpatient Urine Culturing Stewardship Guideline. A BPA fired when a provider placed a urinalysis with reflex to culture (UACC) or urine culture (UC) order for patients who met criteria (Image 1). The BPA directed providers to remove the order, select the appropriate pathway from the guideline, or provide a rationale for placing the order. The intervention was piloted on three intensive care units and two progressive care units, containing both medical and surgical patients. Monthly ordering practices, CAUTI rates, and gram-negative rod (GNR) bacteremia rates from a 13-month pre-intervention baseline period were compared to a 16-month intervention period. Over the same time periods, we also assessed changes

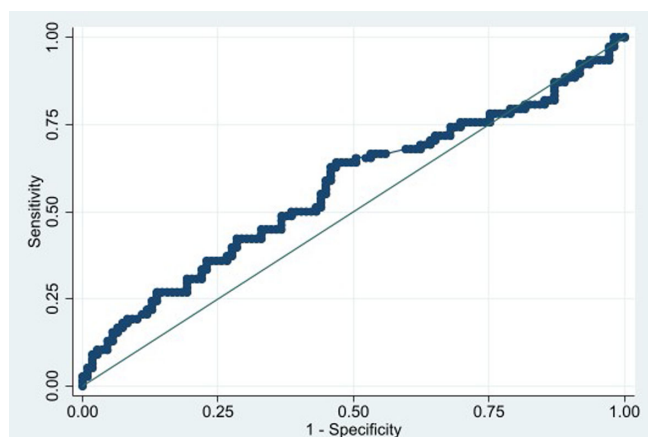


Figure 1: ROC curve for procalcitonin clearance at 48 hours predicting early clinical stability