

We Want POCT... but we don't trust it: managing the disconnect between providers' perceived needs and actual acceptance of point-of-care testing in the emergency department and hospital.

Christine Snozek, Josephine Uy, and James Hernandez

Department of Laboratory Medicine and Pathology, Mayo Clinic Arizona, 5777 E Mayo Blvd, Phoenix AZ 85054 USA

Background: Point-of-care (POC) testing is an integral component of the emergency department (ED), given the need for rapid turnaround of a relatively limited number of tests used in initial patient evaluation. Our institution, like many others, has seen continuously increasing demand for additional POC capability within the ED and other acute areas. However, pre-implementation discussions and post-implementation data review have demonstrated that providers frequently overestimate the anticipated utility of POC testing, and do not always use POC optimally within the ED and inpatient practices. In addition, some providers profess distrust of POC results, preferring to repeat using standard lab tests. We present three case examples of 1) unnecessary duplication of POC and standard lab testing, 2) underutilization of a POC test with high anticipated demand, and 3) negotiation of a highly-demanded POC test with questionable utility.

Methods: We evaluated duplicate test orders for the chem-8 panel, under-utilization of blood lactate, and provider demand for troponin-I, all on the Abbott i-Stat platform. Both the chem-8 and lactate were implemented after significant clinical demand from the ED, in addition to concerns around changing regulations regarding early lactate testing for septic patients.

Results: 1) POC chemistries were frequently duplicated with standard lab chemistries upon ordering in the ED and also upon admission to the hospital. Soft-stop pop-ups at ED order entry decreased duplication by 36%. Separate approaches with ED and internal medicine leadership were created to address duplication by each group of providers. 2) Despite urgent implementation of POC lactate at provider request, the ED only averaged 40 POC lactate tests/month, compared to 300-400 standard lab lactate tests/month. Lab and ED leadership are collaborating to evaluate the appropriate utilization of lactate testing. 3) Discussions amongst lab, ED, and inpatient leadership regarding triage of patients with positive POC troponin-I were unable to reach agreement on how to handle discrepancies between the POC and lab-performed troponin tests.

Conclusions: We have taken a data-driven, collaborative approach to managing ED and inpatient provider expectations and utilization of POC and other laboratory testing. ED and internal medicine providers and leadership have worked together with the laboratory on studies and interventions to optimize utilization of POC and standard lab testing at our institution.