

## POINT-OF-CARE TESTING ISSUE OVERVIEW

Every day, health care professionals are asked to work in increasingly complex and stressful environments with limited resources and constrained budgets to provide timely, effective patient care. In order to deliver on this mandate, clinicians are embracing technology such as point-of-care (POC) testing, which expedites the timely delivery of diagnostic information to accelerate patient decision-making. POC testing provides clinicians access to laboratory-quality results in a matter of minutes, enabling them to make rapid triage and treatment decisions when diagnosing a patient's condition or monitoring a treatment response. By simplifying the testing process, clinicians can focus on what matters most—providing quality and effective patient care.

The benefits of POC testing extend beyond the bedside by allowing users to improve efficiencies and productivity; simplify processes and procedures; meet regulatory guidelines and performance measures; and reduce staff burden by bringing the focus back where it belongs: on the patient.

In recent years, technological advances have greatly expanded the capabilities of POC testing systems. In addition to offering a growing menu of tests, devices can transmit results, wirelessly and in real-time, to the patients' electronic medical record for physician review. Some systems have been updated with features designed to help hospitals better manage their POC testing programs and ensure compliance with changing laboratory regulations.

### UTILIZING POC TESTING ACROSS THE CONTINUUM OF CARE

Rapid turnaround of test results is vital to decision-making across a range of hospital departments. By having access to key test results on the spot, clinicians gain greater control in evaluating and responding to a patient's ever-changing condition.

- **EMERGENCY DEPARTMENT:** Emergency room overcrowding presents problems that can include extensive wait times, prolonged patient suffering, patients leaving without seeing a physician, treatment delays for time-sensitive illnesses and patient dissatisfaction with care. At the same time, emergency departments are being pressured by guidelines specifying accelerated evaluation for patients presenting with specific complaints, including fever, chest pain, and abdominal pain. Implementing POC testing may help expedite patient triage by accelerating the availability of critical diagnostic test information, improve patient flow, shorten door-to-disposition times, and reduce length of stay.

## POINT-OF-CARE TESTING ISSUE OVERVIEW - CONT'D

- **CRITICAL CARE:** Critical care departments including the ICU and neonatal ICU departments are responsible for the management of life threatening conditions where actionable real-time patient monitoring is imperative. They are also impacted by the need to meet established patient safety protocols while reducing the costs associated with prolonged patient treatments. By reducing the number of complex steps in the blood-testing process, POC testing reduces the potential for errors, accelerates availability of critical test information to help expedite diagnosis and disposition of patients and helps to improve department efficiency.

**Operating Room (OCVOR)** - In the OR, delays can impact patient outcomes, so throughput is paramount and surgical delays are kept under close watch. POC testing can help support the unit's goal of expeditious care and allow surgeons to respond immediately to unstable patient conditions. In addition, the technology may streamline the blood analysis process, to potentially reduce equipment maintenance, and minimize changes in surgery schedules.

**Intensive Care Unit (CVICU)** - Without POC testing, blood analysis requires time, necessitating leaving the bedside, and may ultimately, increase a patients' length of stay (LOS). In light of these challenges, POC testing can present a meaningful solution to help streamline the vent-weaning process, reduce time on vent and decrease LOS.

**Neonatal Intensive Care Unit (NICU)** - In the NICU, blood conservation and vent weaning are top priorities, and rapidly obtaining test results is crucial. Without POC testing, blood analysis takes time, requires a significant volume of blood, necessitates leaving the infant's side, and may ultimately increase length of stay. POC testing may expedite test results, and markedly reduces the volume of blood needed for analysis, and, in turn, reduces the number of transfusions and associated risks.

**Respiratory Therapy** - POC testing enables rapid testing of blood gases, so respiratory therapists can gain a greater degree of control over a patient's respiratory condition. With many current models, the Respiratory Therapist must leave the bedside for blood analysis, taking time away from the patient and necessary breathing treatments. With bedside testing, the RT can remain a more visible and present member of the care team. Also, common issues associated with standard lab, such as mislabeled or misdirected specimens, may be eliminated.

## POINT-OF-CARE TESTING ISSUE OVERVIEW - CONT'D

- **LABORATORY:** Clinical guidelines and facility-determined patient care protocols have created a demand for rapid availability of laboratory testing results. With limited skilled resources and mounting financial pressure, hospital laboratories are under unprecedented pressure to perform quickly. Adoption of POC testing can help alleviate pressure on lab technicians by reducing the amount of test requests and telephone call-back procedures, thereby freeing them from routine testing to allow them to focus on more complex, time-consuming tests and high-volume reference lab testing.
- **CARDIOLOGY/CATH LABS:** Cardiac patients undergoing procedures require constant monitoring of vital signs, blood oxygenation, and heparin levels. Rapid diagnostic results performed at the bedside may lead to greater efficiency in the lab.
- **RADIOLOGY:** Imaging agents (such as iodine and barium) used in radiological procedures can pose serious health risks to patients with certain conditions. In order to minimize these risks, creatinine measurement of renal function is recommended prior to the administration of these imaging agents. Because it may take several hours for the clinical lab to process creatinine tests, POC testing can be used to minimize disruptions and improve efficiencies.
- **OTHER USERS:** Medical facilities beyond the hospital are increasingly adopting POC testing. Examples include urgent care centers, surgery centers, imaging centers, family practices, long-term care facilities, cardiology practices, outpatient clinics and the U.S. military.