

## Making the Case for Point-of-Care Testing

*"Providers can now conduct comprehensive, lab-accurate chemistry analyses at the point-of-care in minutes."*

**Steven C. Kazmierczak, PhD, DABCC**

Professor, Department of Pathology  
Oregon Health & Sciences University  
Director of Forensic Toxicology  
Kaiser Permanente Northwest Laboratories



The Piccolo xpress (Abaxis) comprehensive metabolic panel (CMP) recently became the first CMP to be granted Clinical Laboratory Improvement Amendments (CLIA)-waived status by the FDA. With this waiver, providers can now conduct comprehensive, lab-accurate chemistry analyses at the point-of-care in minutes under a simple certificate of waiver from the Centers for Medicare and Medicaid Services. The waiver eliminates some of the barriers that kept many physician offices from performing point-of-care blood analysis, allowing them to improve patient care and increase office efficiency.

CMP test results give physicians a comprehensive health assessment that provides critical information for accurate diagnosing and triage of patients during their initial office visit. Instead of waiting multiple days for test results from reference laboratories, physicians can ascertain an accurate assessment of health at the point-of-care. On-site testing also gives physicians the ability to check the effectiveness of an existing treatment plan and make adjustments in realtime.

In addition to the CMP, eight other Piccolo xpress panels have been granted CLIA-waived status, including the lipid, lipid plus, liver plus, and kidney check panels. Considering that lipid-lowering agents are commonly prescribed, having the ability to perform rapid, point-of-care lipid tests combined with liver and kidney function tests is a great advance. The liver panel waiver is beneficial because many patients on lipid-lowering therapies are required to have their liver function tested every 4 to 6 months. The kidney check panel, used primarily in radiology centers for assessing renal function prior to MRI and CT procedures, gives radiologists the ability to safeguard against potential kidney and cardiac damage from contrast medium injections.

### **Improve Efficiency**

Point-of-care testing also helps improve workflow for office-based physicians. The Piccolo xpress features nine wavelengths that continuously monitor reaction conditions and reports test results in just 10 to 12 minutes. Roughly 25 individual tests can be performed using the system, and 20 of these tests have been granted CLIA-waived status. For many offices, these tests will reduce the time spent preparing samples for outside labs and following up with patients to relay the lab results. It also eliminates inaccuracies in test results caused by delays in sample analysis. Physicians can diagnose patients and begin treatment immediately. Additionally, the tests are fully reimbursable and may lead to reduced administrative costs.

### **Optimize Results**

At Oregon Health & Science University (OHSU), laboratory volumes are continuing to grow, causing patients to return for testing just days after being discharged. OHSU is using the Piccolo xpress to supplement its on-site lab, and the point-of-care testing has been performed

Piccolo xpress to supplement its on-site labs, and the point-of-care testing has been performed efficiently by one person, saving time for the facility and patients. In addition, the test has been incorporated into neonatal ICU settings; it offers important benefits when managing this challenging patient population. For example, blood collection in newborns and infants is difficult and the low sample volume requirement of the Piccolo xpress. The Piccolo xpress system uses just 100 microliters of blood to perform up to 14 tests. The same 12 tests performed in a hospital laboratory would require five or six times that amount. Ideally, the Piccolo xpress and other emerging, easy-to-use point-of-care systems may ultimately provide physicians with crucial diagnostic information with which no special training is required.