

UniCel® DxI 800 Gives Hospital Core Lab The Tools To Meet Diverse Needs, Increased Demands

Laboratory Profile:

- Emory Crawford Long Hospital
Atlanta, Georgia
- 511 licensed beds
- 20 full-time lab workers
- Core lab serves the hospital's 20,000 inpatients and 54,000 outpatients each year as well as other hospitals, clinics and physicians group in the Emory Healthcare System
- Lab operates 24 hours a day
- Performs about 21,000 chemistry tests per month, 254,000 tests a year
- Lab instrumentation includes two SYNCHRON LX®20 PRO Clinical Systems, one COULTER® LH 755 Hematology Analyzer, one UniCel DxI 800 Access® Immunoassay System and one Access 2 Immunoassay System

Situation

Faced with diverse testing requirements and a growing workload, Emory Crawford Long Hospital in Atlanta needed the right tools to keep up with lab demands. After an extensive review of immunoassay analyzers on the market, the hospital upgraded to Beckman Coulter's UniCel DxI 800 Access Immunoassay System. With this new instrumentation the laboratory met two important criteria for the upgrade – efficiency and versatility. Now the lab can not only meet current challenges, but also it can pursue new business without adding resources or sacrificing turnaround time.

Efficiency Grows as Test Menu Expands

Home to the widely respected Carlyle Fraser Heart Center, Emory Crawford Long Hospital in Atlanta depends on its clinical lab to produce over a thousand results each day without missing a beat.

The lab's testing menu includes the highly sensitive cardiac AccuTnI™ troponin I test as well as CK-MB and Myoglobin assays. The lab is also called on to perform βhCG, Hybritech® PSA, Hypersensitive hTSH, Total T3, Total T4, Free T3 and Free T4 tests.

By moving Prolactin, hLH and hFSH onsite, as well as bringing in house Progesterone and Estradiol, the lab is able to provide faster turnaround for a growing women's reproductive center on the hospital campus. It's clear that variety is both the spice and challenge of life at Emory Crawford Long's core lab. This is why technical coordinator Vivian Moore is pleased with the new automation that helps the 20-member lab staff meet its diverse testing requirements.

"Our needs are consistently growing, which puts pressure on our people and our instruments to perform," says Moore, who has 22 years of experience at the hospital. "We're confident we have the means to increase our depth of services and expand our menu while also improving our efficiency."

The 511-bed teaching hospital in midtown Atlanta has trusted its lab work to Beckman Coulter instruments for two decades. The reliability of Beckman Coulter equipment and customer service is a big factor, Moore says.

"When I started, much of our lab work was done by hand," Moore adds. "Our new instrumentation has helped us move from that point to one of efficient automation. And we know when we call with a question or for service, we'll get a quick response."

Laboratory Goals	Laboratory Results
• Faster turnaround time (TAT)	• More efficient system improves TAT by 16% in chemistry tests.
• Maintain sample integrity	• Connecting DxI 800 with Power Processor allows automation, reducing sample handling and potential for errors. • Variety of racks accommodate tubes of different sizes, increasing versatility.
• Reduce maintenance time and expense	• Daily hands-on maintenance is minimal and weekly upkeep is eliminated, boosting instrument's uptime.
• Handle increasing workload without adding staff	• Reduced worked hours per billable test from last year's 0.09 to 0.08 for the fiscal year ending August 2004



The Emory Crawford Long lab performs 254,000 chemistry tests a year with equipment that includes Beckman Coulter's UniCel Dxl 800 Access Immunoassay System, the SYNCHRON LX20 PRO Clinical System, the COULTER LH 755 Hematology System, as well as an Access 2 Immunoassay System.

The Dxl 800 performs up to 400 tests an hour, and since the lab added its new instrument in September 2003, it has reduced its work hours per billable test from last year's 0.09 to 0.08 for the fiscal year ending August 2004.

Consistent Results Across All Platforms

Because the Dxl 800 uses the same proven technology, the same reagent cartridges and software similar to the lab's Access 2, the hospital lab can ensure consistent patient results, and operator training is simplified.

The Dxl 800 accommodates up to 50 reagent packs allowing technicians to load the right combination of reagents that meets the lab's varied testing needs. Plus, a variety of racks allow for tubes of different sizes, increasing the Dxl 800's versatility.

Moore also likes that techs can load reagents and other consumables on the fly, without having to use the console computer. This feature further minimizes manual intervention.

Another way the Dxl 800 boosts the lab's efficiency is by reducing maintenance time. Daily hands-on maintenance takes less than 10 minutes, increasing the instrument's uptime and freeing lab techs to perform other tasks.

Since the Dxl 800 went online at Emory Crawford Long, the lab has seen a 16 percent improvement in turnaround time for chemistry tests. "We expect to see similar results for cardiac markers once we connect the analyzer to the automation line," Moore says.

Plus, the Dxl 800 provides an extensive menu and ample growth opportunities - which offers the lab the potential of performing more testing in house.

Moore and her lab co-workers also like the Dxl 800's ease of operation. She says reading and understanding the computer screen is particularly user-friendly.

"I'm a visual person, so whenever I can navigate without having to go straight to the manual, I'm happy," Moore says. "With the Dxl 800, the titles are clearly defined and the symbols are understandable."

The healthcare system expects turnaround time demands on the lab to continue increasing. The outreach program that began two years ago now accounts for 30 percent of the lab testing volume.

"I'm confident we can handle the growth," Moore says. "We feel we have a platform that can expand to meet our challenges for years to come."

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*Vivian Moore
Technical Coordinator
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