

The Power of Process™ in Action

Baptist Medical Center Takes A Parallel Path To Efficiency With SYNCHRON LX®i 725

Laboratory Profile

- **Baptist Medical Center, Jacksonville, Florida**
- **610 beds total in medical center and adjacent Wolfson Children's Hospital**
- **105 employees**
- **Main lab operates 24 hours a day**
- **Performs 1.3 million tests annually**
- **Lab equipment includes one SYNCHRON LX®i 725 and one LX®20 Clinical System; one Access Immunoassay System; one DL2000 Data Manager**

It's not that the laboratory at Baptist Medical Center in Jacksonville, Florida, was inefficient. It's just that things move so much faster and with fewer errors since Baptist added Beckman Coulter's SYNCHRON LX®i 725 Clinical System to its automation arsenal. "We first saw the benefits of automation in the analytical phase," says James Peele, Ph.D., director of clinical chemistry at the medical center. "Now the pre-analytical phase is rapidly catching up."

Less Is More in Lab's Tubular World

When is one tube better than two – or three? When your laboratory craves speed, reliable results, ease of use and overall efficiency.

Those qualities are standard equipment on Beckman Coulter's SYNCHRON LXi 725, which Baptist Medical Center acquired in 2003.

Before Baptist installed the LXi 725, when the lab needed to perform parallel electrolyte and cardiac tests, typically the process involved two tubes and two machines. As an example, technicians might run Chem 7 and CK tests through the lab's LX20 system and tests such as AccuTnl™ Troponin I and CK-MB cardiac assays through one of its Access systems.

"Double the tubes can't help but complicate the process and introduce a greater possibility for error," Peele says. "If you're aliquotting or printing an extra bar code, you're taking extra steps."

The chance to consolidate testing is just one reason Baptist embraced the efficiency and automated solutions of the LXi 725. Not only does the Beckman Coulter instrument allow technicians to perform both chemistry and immunoassay testing simultaneously, but it also allows for nearly

paperless processing and reduces the need for computer review.

"Normal test results simply pass right through," Peele says. "That enables our technologists to get the right information to the right place at the right time so we can focus on the more critical patients. Our entire lab runs more smoothly."

Year	Special Entry Points	Computers	Printers	FTEs	Workload (tests/yr)
1999	7	6	7	5	850,000
2001	4	1	0	3.5	926,000
2003	3	1	0	3	1,300,000

In just four years, the lab's workload increased 53% and FTEs staffing the chemistry automation station dropped from five to three.

The improvements in efficiency continue to impress. In 1999, the lab processed 850,000 sample tubes which required seven points of specimen entry, six computers, seven printers and five FTEs. Now the workload is up to 1.3 million tests annually, but the lab is thriving with just three points of entry, a single computer and three FTEs.

Laboratory Goals	Laboratory Results
• Consolidate workstations	• LXi 725's parallel processing delivers simultaneous chemistry and immunoassay testing.
• Improve lab processes	• Fewer tubes mean easier labeling; DL2000 streamlines the post-analytical process.
• Reduce computer review	• Normal test results need no review.

The added speed and efficiency are great, but they aren't why the LXi 725 is also popular with phlebotomists and patients. Cutting the blood-draw requirement in half eases the phlebotomists' burden, decreases patient discomfort and increases patient safety.

Comfort becomes particularly important when the blood to be tested is drawn from children. Because the Baptist lab is also the main lab for Wolfson Children's Hospital, which is connected to Baptist, "we have to deal with multiple needs and handle multiple-size collections," Peele says. "The LXi 725 makes the pre-analytical process as easy as can be."

Also easy were the LXi 725's installation procedures and the training of lab technicians. "We've always had great service from Beckman Coulter and this time was no exception," Peele says.

The FTEs' previous experience with the Beckman Coulter LX20 and Access Immunoassay Systems gave them an extra advantage on learning to operate the LXi 725. Two technicians received training at Beckman Coulter's headquarters in California while engineers performed the installation in Jacksonville.

"After the engineers finished the testing and turned the equipment over to us, it only took a few days to get it up and online," Peele says. "Things have been running great ever since."

Efficiencies have helped improve turnaround times and lower lab costs in several areas of the lab, such as helping the lab retain good technologists. Lab workers appreciate that Beckman Coulter technological advances eliminate the need for manual decapping and recapping of tubes. And that means faster results with less exposure to potential biohazards and repetitive motion injuries.

The post-analytical process is also more efficient, thanks to the DL2000 Data Manager. The DL2000 automatically validates outcomes and performs sample reruns of abnormal tests as well as electronically archiving results.

All of the new efficiency will be put to the test over the next few months, when the medical center's outreach to physician network offices will increase the lab's testing at an annual rate of 15 to 20 percent.

"We'll handle it," Peele says. "With the equipment we have now, we'll have capacity to spare."



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