

The Power of Process™ in Action

With Lab's Workload Growing, Hospital's Solutions Speak Volumes About Process Improvement

Laboratory Profile

Reading Hospital and Medical Center

- Reading, Pennsylvania
- The largest hospital in Berks County, with more than 600 beds and 4,000 employees
- Operates a main lab that employs 300 and operates 24 hours a day, seven days a week
- Performs 4 million tests per year
- Equipped with two SYNCHRON LX®i 725 clinical systems, one SYNCHRON LX®20 PRO and one UniCel™ DxI 800 Access® Immunoassay System
- Approximately 60 percent of testing is outpatient.
- Testing volume is rising 8 to 13 percent a year

Situation

In recent years, officials at Reading Hospital and Medical Center have faced obstacles familiar to lab managers nationwide. Testing volume has more than doubled while the lab staff has shrunk by four positions. So this year, officials at the central Pennsylvania hospital considered upgrading equipment with a sharpened focus on doing more with less. The lab's new lineup includes a variety of instruments from Beckman Coulter. Reading officials project that new efficiencies will net annual savings of more than \$110,000, a figure that only tells part of the story, says Linda Gallagher, MT, ASCP, the lab's chemistry supervisor. "It's hard to put a price on job satisfaction and lower stress levels."

Upgrading Efficiency, Safety

Depth of product line, quality of service and efficient integration of lab processes are three key reasons Reading has partnered with Beckman Coulter for more than two decades.

"We've grown right along with the Beckman Coulter family of products," Gallagher says.

The lab's two new LXi 725's offer a combination of chemistry and immunoassay analysis with a menu of 146 different tests. The new systems deliver "the quality of results we're looking for, plus the added bonus of better safety," Gallagher relates.

The LXi 725 offers closed-tube sampling, which allows staff members to load sample tubes without decapping them, adding efficiency and reducing exposure to biohazards.

"We used to worry about materials being released into the air or spilling on the floor," Gallagher says. "We don't anymore."

Also gone are concerns about repetitive-stress injuries related to decapping – concerns that hit home when a Reading technologist had to miss work with just such an injury.

"OSHA is working toward ergonomic standards on this issue," Gallagher says, "and we feel with the new Beckman Coulter instruments, we're already ahead of the game."

Safety benefits also extend to patients. Because LXi 725 operators load only one sample tube for both chemistry and immunoassay analysis, hospital staff members have to draw only half as much blood.



The new SYNCHRON LX®i 725's deliver "the quality of results we're looking for, plus the added bonus of better safety," says Linda Gallagher, MT, ASCP, the lab's chemistry supervisor.



Savings Add Up

What's more, the lab now enjoys freedom from recapping each sample tube. This is a small step, to be sure, but one that accumulates quickly considering the lab deals with 1,800 tubes a day. Thanks to the LXi 725, the lab is saving time, effort and the \$10,000 a year it used to spend on cork.

"It's one of those costs you don't think about, but when you do the math, it's amazing what it adds up to," Gallagher says.

The savings add up even faster because of the LXi 725's parallel processing technology. This allows technologists to perform immunoassay and chemistry testing at the same time, using one sample.

This efficiency is a boon to technologists on the day shift, when the lab operates both LXi 725's. But it's even more beneficial at night, when typically only one staffer is on duty. No longer does the night person – a generalist – have to run from workstation to workstation to perform a variety of tests, using a variety of instruments.

Automation and consolidation have allowed the hospital to eliminate one day-shift FTE position. However, the more substantial reductions have been to stress levels, Gallagher says.

"There's less stress on all three shifts, but at night it's particularly noticeable," she adds. "The fewer unnecessary demands we put on our technologists, the more they can concentrate on the work that matters."

Also impressive are the throughput levels of the LXi 725 performing up to 1,440 chemistry tests an hour. What's more, the LXi 725 features immunoassay throughput of up to 100 tests an hour. That's enough immunoassay capacity to meet the demands of the night shift.

Future Growth

The lab's new efficiencies and resulting financial savings will grow as the lab starts to do insulin, testosterone, estradiol and other tests in-house rather than sending them out to reference labs.

The lab is undergoing renovations, and by fall 2004, officials expect to have installed pre-analytic hardware. With the hospital planning to add 200 beds and with lab volume growing by 8 percent to 13 percent a year, automation will help position the lab to keep up with demand, Gallagher adds.

"Our current platform gives us the potential to meet growth projections for the next five years without adding staff," she says. "We're confident we made the right choices."

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Linda Gallagher, MT, ASCP
Lab Chemistry Supervisor
Reading Hospital and
Medical Center
Reading, Pennsylvania

| Laboratory Goals | Laboratory Results |
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| • Consolidate workstations | • Night-shift demands now met by one technologist and one LXi 725 system. Work environment is less stressful |
| • Improve safety | • Less exposure to repetitive stress and to potential biohazards |
| • Expand test menu | • Added numerous tests and increased in-house testing |
| • Boost throughput for immunoassay testing | • Increased testing volume |
| • Reduce operating expenses | • New efficiencies will save \$110,000 a year |



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