



The Power of Process™ in Action

Pomona Valley Medical Center Uses SYNCHRON LX®i 725 Systems To Consolidate Workstations And Improve Productivity

Laboratory Profile

- Pomona Valley Hospital Medical Center, Pomona, California
- 436-bed acute-care medical center
- Full-service laboratory operates 24 hours a day
- Processes approximately 700 chemistry specimen tubes per day
- 1.7 million reportable chemistry results per year
- 150,000 reportable immunoassay results per year
- 20 FTEs
- Utilizes two SYNCHRON LX®i 725 analyzers and one DL2000 data manager

Nationally recognized as a Top 100 hospital, Pomona Valley Hospital Medical Center (PVHMC) is a 436-bed acute-care, not-for-profit, teaching hospital serving Eastern Los Angeles and Western San Bernadino (Calif.) counties. PVHMC is also recognized throughout the state and the region for outstanding medical care and the efficient use of resources.*

Workstation Consolidation

In late 2002, the laboratory sought a new way to increase productivity, consolidate workstations and lower costs. A long-time Beckman Coulter customer, the lab decided to consolidate its general chemistry solution (a SYNCHRON CX®7 and LX®20) and immunochemistry solution (two Abbott AxSYM systems) into a single platform – with two SYNCHRON LX®i 725 systems and a DL2000 data management system. The LXi 725 system is the only integrated workstation that offers closed tube sampling and automated aliquot capability.

“Prior to this acquisition, we had more instruments than we could maintain with our current staff – 12 different instruments run by four people,” said Les Emery, chemistry supervisor. “After the consolidation was complete, we had only eight instruments, which lowers the instrument-to-staff ratio significantly.”

Closed-Tube Sampling

The state-of-the-art LXi 725 workstations also enhanced safety with cap piercing technology.

“When we first considered this instrument package, we thought cap piercing was a nice feature, but it wasn’t a top priority,” said Emery. “However, we’ve since found this feature has had a major impact on our daily activities.”

When the staff was manually uncapping and recapping tubes, Emery stated that several individuals began to exhibit ergonomic, or repetitive stress, injuries.

“With closed-tube sampling, this manual chore was completely eliminated – and that’s aside from the inherent safety benefit,” said Emery. “We’re no longer releasing vapors from potentially communicable diseases by manually uncapping tubes. Cap piercing is a feature that has paid off more than we ever anticipated.”



“Our greatest cost reduction has come in the form of labor savings . . . we reduced our work force by 11.2 FTEs with an annual savings of \$347,000.”



Improved Productivity and Turnaround Time

With the installation of the two LXi 725 systems, the lab immediately increased its general chemistry speed by 33 percent, reducing test turnaround time and improving overall productivity. But the improvements didn't stop there.

The lab also runs more tests on a single sample – decreasing instrument loading and the number of platforms – which reduces maintenance and paperwork.

has reduced its blood requirements by 40 percent, which is significant when dealing with infants and geriatric populations.

"Drawing less blood also means labeling fewer tubes, so this one change benefits everybody – not just technologists, but also central processing staff, nurses and phlebotomists who draw the blood," he said.

By running more tests on a single tube, the lab has reduced its need for manual aliquotting. This reduces the risk of common lab errors, such as samples being poured into the wrong tubes and tubes being mislabeled.

Laboratory Goals	Laboratory Results
• Consolidate workstations	• Reduced the number of instruments from 12 to 8, a 33% reduction
• Increase productivity	• Enhanced general chemistry testing speed by 33% • Reduced stress
• Reduce costs	• Reduced work force by 11.2 FTEs with an annual savings of \$347,000

Patient Care Improvements

Another significant aspect of the instrument upgrade was improved immunoassay testing performance.

"I am extremely impressed with the LXi 725 systems' AccuTnl™ [Troponin I] assay and the Hybritech™ PSA assay," said Emery. "Compared to our former assay, AccuTnl offers much greater sensitivity and consistency. When we used to get

a positive Troponin result on the AxSYM, we had to repeat the test because the results were so inconsistent. In addition, the LXi 725's immunoassay component has a wider dynamic range than the AxSYM. It has been a tremendous improvement all the way around."

Streamlined Data Management and Less Stress

"I believe our new instrument combination – and the DL2000 in particular – has reduced our stress level by at least 50 percent," said Emery. "Instead of three people collating results and searching for tubes, the DL2000 enables one person to collate results from multiple instruments and helps us complete these tasks more quickly."

Today, the lab relies on only one person (instead of two) to collate 80 percent of its test results, a fact that helps it maximize labor and optimize efficiency.

The Benefits Of Integrated Analyzers

"When considering integrated analyzers, there is first the promise of what the technology may be able to do for your lab, then later, the reality of what it can actually do," said Emery. "With some vendors, a lab may be disappointed because they can't do what they hoped they could do, but with Beckman Coulter, I've discovered that workstation-level automation has consistently exceeded my expectations."

Less Blood Drawn

Before the lab began running both its general chemistry and immunoassay tests on a single platform, two tubes of blood were drawn – one for each instrument. But thanks to a consolidated workstation, the lab

* Recognized by HCIA Mercer for 1996, 1998 and 1999.



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