



Automation Improves Lab Efficiency

The scenario is all too familiar. Physicians attending to their hospitalized patients often complain that laboratories take too long to process and turn around test results. Patients complain medical technologists take too many samples.

To resolve these issues, Our Lady of Lourdes Medical Center and Lourdes Medical Center of Burlington County recently installed advanced laboratory systems, leading to better efficiency, improved safety and an increase in customer satisfaction for both medical staff and patients.

Faster Results, Smaller Samples

Lourdes is one of the few health systems in New Jersey to install Bayer Diagnostics' Advia® WorkCell Modular Automation system. WorkCell automates the routing and managing of patient samples — such as blood, urine and spinal-cord fluid — used in diagnostic testing.

This new technology has enabled each lab to increase its capacity by up to 140 percent. Each lab can also perform more than 100 different tests, 24 hours a day, seven days a week.

Ronald Price, Automated Testing Lab Manager at Our Lady of Lourdes Medical Center, said that in many cases, only one tube of blood is required to do all the ordered tests, instead of the previous two. That translates into less pain and inconvenience for patients.

"We can do more tests, faster and with less specimen," Price said.

How It Works

Each bar code-labeled test tube is placed on a tray capable of holding 108 specimens. Inside the machine, a robotic arm picks up the tube, reads the bar code, and places it on a conveyor belt. The sample then heads to a workstation for testing.

The computer tracks and moves the sample, eliminating the need for manual handling and significantly reducing the possibility of human error. Previously, each lab used four different analyzers to perform tests and samples were tracked manually.

"The capabilities of this instrument are greater than we had in the past," Price said.

The specimen stays in the WorkCell for the day. If a physician decides another test is warranted, lab technologists simply recall the vial.

"Our systems improve and enhance our quality service in terms of accuracy, speed and safety," said Hong Choi, M.D., Medical Director of the Clinical Laboratory at Lourdes Medical Center of Burlington County. "Only 1 to 2 percent of hospitals worldwide have automated their labs. Implementation of automation enables us to reduce potential for human error and biohazard exposures while addressing any personnel shortages and increased requests for tests."

For more information, call Our Lady of Lourdes Medical Center at (856) 757-3500 or Lourdes Medical Center of Burlington County at (609) 835-2900 and ask to speak with a manager in the hospital's clinical laboratory.

