



The PDC Insider is a newsletter comprised of case studies, company and product news.

PDC CompuBand[®] is Key Part of Bar Code ID Solutions at Stanford Hospital & Clinics



All photos courtesy of PDC.



As part of the Stanford University Medical Center, Stanford Hospital & Clinics is known worldwide for its advanced patient care and cutting edge innovations. When it comes to historic firsts, Stanford leads the way. For example, Stanford performed the first successful adult human heart transplant in the country and the first combined heart-lung transplant in the world.

Setting the standard for state-of-the-art patient care, Stanford remains on the cutting edge of new technology. An example is illustrated by the facility's use of PDC's CompuBand[®] Bar Code Identification System, which has helped healthcare personnel to prevent processing errors, dramatically reduce time, and streamline processes through automation.

The Challenge

Stanford Hospital & Clinics installed laboratory glucose meters in their clinical laboratory in 2001. Nursing staff manually entered patient medical record numbers to the devices, which resulted in transposition errors. The data errors caused lab staff to spend up to two hours a day correcting mistakes while nurses spent up to five hours a week fixing problems, according to Connie Taylor, Patient Care Policy and Procedures Coordinator at Stanford Hospital.

The implementation problems were understandable upon examination. "It's a human error thing," explained Taylor. "When people are working fast, it's like typing without auto-correct. It's very difficult. We had to fix the system first."

The Solution

To solve the problem, Stanford sought to automate how medical records numbers were entered into their test devices and then transmitted to the clinical laboratory. Stanford chose PDC's CompuBand[®] Bar Code Wristband System to provide the automated link between medical device and information system. The system proved immediately successful.



(Continued on back)

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—Connie Taylor

Patient Care Policy and Procedures Coordinator
at Stanford Hospital



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With the new technology in place, patients admitted to the hospital receive a PDC CompuBand containing his or her medical record number. The code is then electronically conveyed to various devices, such as glucometers, to link test results directly back to the patient. Upon scanning, data is automatically downloaded to the clinical laboratory, where it is joined to other test results in the patient's medical record. The wristband helps eliminate the possibility of human error in entering medical record data and ensures more accurate patient information.

Nursing staff members were trained in the operations of hand held glucose meters with a bar code scanner. Data was then downloaded at a docking station where it was transmitted to the Clinical Laboratory. Transposition errors that were once common with manual data entry were now eliminated.

Taylor further explained, "It was a pretty exciting project, one that nurses saw benefit from and they embraced. It made their jobs easier because it's a lot less work to scan a bar code than to enter information manually. This change has been perceived as being very positive."

The project to adopt PDC's Bar Code Wristband System involved not only the Clinical Laboratory, but also Nursing, Patient Admitting Services, Medical Records, IT and Materials Management. All patients in Inpatient Nursing Units, the Emergency Department, Same-Day Surgery, the Ambulatory Treatment Unit, and the

Cath/Angio Lab have also received the wristbands upon admission. The Lucile Packard Children's Hospital, an adjacent Stanford facility, also followed suit with its introduction of PDC CompuBand wristbands

Other Uses

Sandra Trotter, Quality Manager for the Clinical Laboratories at Stanford Hospital & Clinics and Lucile Packard Children's Hospital, said the wristbands also work with the i-Stat 1, a portable device that analyzes blood chemistry. The i-Stat 1 was designed for use in space by NASA (National Aeronautics and Space Administration) astronauts.

Describing the multi-step process, Trotter explained, "for a blood-gas test, you would typically draw blood from an artery, pull it out with a syringe, cap the syringe, label it, put it in a bag of ice, put the order in the computer, take the sample to the lab, mix the sample, warm it a little, put it into a reader and read it out."

Prior to the i-Stat 1, the time from the physician's order to the result was 30-45 minutes. Today, it takes two minutes to decide whether to get a patient up to the ICC or surgery," Taylor added.

Benefits are Hospital Wide

The new system is viewed as a hospital wide benefit rather than merely a departmental improvement, explains Charles Dibble, Assistant Director of Patient Services at Stanford Hospital. "It can be a safety issue for results to be correctly matched to patients. It can also

be a financial issue for getting the charge correctly matched to the patient who's receiving the service," he said.

Dibble also foresees tremendous potential for new technology as it becomes more widely used. "It's going to be an expanding process as more departments look at and purchase equipment with bar code reading capabilities. Right now, it's the Lab—it can be Material Management or it could be the Pharmacy, EKG, Radiology. It's almost endless."

Stanford Hospital & Clinics

Stanford Hospital & Clinics is known

worldwide for its advanced patient care, particularly for the treatment of rare, complex disorders. In recognition of its excellent care, the hospital and physicians consistently rank among the top in the nation in surveys by consumers and healthcare professionals. In July, 2003, Stanford was again named to the Honor Roll of America's Best Hospitals by U.S. News & World Report.

Lucile Packard Children's Hospital is an internationally recognized pediatric and obstetric healthcare organization dedicated to excellence in patient care, education and research. The hospital was specially designed to accelerate the healing process and features unique amenities including 27 gardens, a spacious roof garden and outdoor play area. Originally a separate entity, it merged with Stanford Health Services in 1997.



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