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INSIDER

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Photos courtesy of Houston Healthcare.

BAR CODE WRISTBAND SYSTEM

reduces information systems errors at HOUSTON HEALTHCARE

POSITIVE PATIENT ID CASE STUDY

Improving efficiency and productivity is a priority at Houston Healthcare (GA). This is reflected in Houston's implementation of an automated bar code system for glucose testing to reduce information systems errors in the emergency department (ED) triage at Houston Medical Center.

Working with Precision Dynamics Corporation's (PDC) Bar Code Systems Solution team, the hospital implemented a point-of-care bar code system consisting of Citizen 521 Printers, PDC ScanBand Wristbands, AccuCheck Handheld Glucose Meters and a MEDITECH Laboratory Information System (LIS)

During the first three months of implementation, Houston Medical Center reduced information systems errors by 30 percent using the PDC system. The chart below shows the percentage of prevented errors during the first phase of implementation. Month "0" represents the manual process used the month prior to the bar code implementation, and Months 2 & 3 represent the first phase of the bar code process using one printer and one backup printer in the ED triage. Through December 16, 2005, the error rate percentage remained at approximately 10% due to some continued manually keying in of patient identifiers.*

Houston Medical Center reduced information systems errors by 30 percent using the PDC system.

	Manual Process (Month 0)	Bar Code System (Month 1)	Bar Code System (Month 2)
Errors	102	47	36
# of Patients	344	288	377
% of Errors	30%	16%	10%*

Source: Houston Healthcare

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Small Investment, Large ROI

Houston Medical Center is a 186-bed acute care hospital located in Warner Robins, Georgia, and contrary to common belief, implementing a bar code solution was not expensive, comments Beth Benefield, Executive Director of Information Technology and Imaging Services.

"We needed to implement an automated, streamlined process that would eliminate the human error of handwriting armbands and manually keying in the patient identifiers on the glucose meter," says Benefield. "With this new system, nursing and lab personnel no longer have to manually key in the patient's account number. This allows them more time for patient care. The bar coding also gives our information systems accurate data automatically for charting in the patients medical record and to appropriately bill the patient's account. The system has cost less than $10,000, and I believe that is a very positive ROI for a relatively minimal investment."

Bar Code Wristbands Reduce Human Error

Before launching PDC's Bar Code Wristband System, Houston Medical Center utilized a manual ID process in which two standard patient identifiers (patient name and account number) were handwritten on patients' wristbands when entering the ED triage. Illegibility of handwritten data and occasions in which account numbers were keyed incorrectly led to information system errors. The errors made it difficult for lab personnel to accurately identify certain patients that glucose tests were performed on.

"The new bar code system has been a great benefit. Instances of human error with the manual patient ID process have practically been eliminated using bar code wristbands at a very reasonable cost," Benefield adds. The new system is quicker, easier to use and measurably more accurate than the former manual system. Upon entering the ED triage, each patient is banded with a PDC Bar Code ScanBand. For patients needing glucose testing, the hand held glucose reader scans the bar code on the wristband, the patient account number is automatically identified on the meter and information is then downloaded into the MEDITECH LIS.

Increased Productivity, Improved Patient Care

Nurses and lab personnel have expressed their gratitude for the new system to Benefield. "The nurses have been appreciative of the PDC Bar Code System because it speeds up the patient identification process, and nurses don't have to worry about finding the patient account number, keying it in, and so on. It saves them time."

Benefield estimates that at least two minutes are saved per patient, per nurse using the new bar code system. With an average of 200 patients triaged in the ED per day, over six and a half hours are saved in identifying patients for glucose testing – important time for treating patients.

"Before the new system, lab personnel had to track down these information systems errors and correct them in order to identify the correct patient for charting and billing. Now they save time once spent in correcting information errors which they can spend conducting lab tests. The lab process has increased in efficiency and productivity," says Benefield.

Small Changes Make a Big Difference

Ramona Douglass, Sr. Bar Code Manager at PDC, says Houston Medical Center is an example of a community hospital that is using bar code technology to improve the accuracy of patient information at a low cost: "Houston's new bar code wristband system allows nurses and laboratory staff to focus their time on what they do best – treating patients. Instances of human error which are common with a manual patient ID process are practically eliminated using bar code wristbands, and at a very reasonable cost."

There is no reason for hospitals, small and large, not to implement bar code technology to improve patient identification, says Douglass. Even a small change in patient identification processes can equate to large improvements in patient safety – and it's not always as costly as hospitals might believe.

Houston Medical Center is implementing bar code wristband printers throughout its Admissions, ED, Outpatient Surgery, Same Day Services and Women's Center, as well as the ED Triage and Outpatient Surgery departments at Houston Healthcare's 45-bed Perry Hospital. Initially the bar code system at Houston Healthcare aims to reduce information systems errors during glucose testing, and will be enhanced to include hospital-wide patient identification procedures in the near future.

About Houston Healthcare

Houston Healthcare is a health care system, committed to quality and service excellence, located in Warner Robins and Perry, Georgia, including Houston Medical Center (186 beds), Perry Hospital (45 beds), Houston Heart Institute, Houston Health Pavilion and other outpatient facilities. Houston Healthcare is fully accredited by the Joint Commission on Accreditation for Healthcare Organizations, licensed by the Georgia Department of Human Resources and certified by the Georgia Department of Human Resources and U.S. Department of Health and Human Services. For more information, visit *www.hhc.org*.

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