Accurate patient and specimen identification can improve outcomes

Effective collection management starts with bedside technology

Medical errors are a leading cause of adverse healthcare outcomes in healthcare facilities, with an estimated 10% of patients harmed during a hospital stay. As the global healthcare industry faces challenges from marked increases in aging populations to staff shortages and rising costs, preventable medical errors are something healthcare organizations cannot afford.

Misidentification of specimens is a common medical error that often leads to unnecessary sample redraws, retesting and additional treatments[1] at an estimated cost of $200 million to $400 million USD per year.[2] Specimen collection errors not only put patient care at risk and increase costs, but also represent a drain on resources that can be prevented.

Fortunately, many hospitals are adopting technology solutions which can enhance efficient use of resources and help improve patient safety while controlling costs.

Bedside technology aids matching accuracy

Employing technology at the patient bedside forms the basis of an effective specimen management process. Bedside specimen labelling can increase the effectiveness of a three-point check that confirms links between the specimen collection order, the patient and the babelled container. Further, a verification process that uses automatic identification systems such as barcoding aligns with widely accepted GS1 global healthcare standards.[3]

> Clinician education coupled with bedside specimen collection can reduce identification errors up to **90%**.[4]

[1] Paul N. Valenstein, MD; Stephen S. Raab, MD; Molly K. Walsh, PhD, "Identification Errors Involving Clinical Laboratories: A College of American Pathologists Q-Probes Study of Patient and Specimen Identification Errors at 120 Institutions," Archives of Pathology and Laboratory Medicine: Vol. 130, No. 8, pp. 1106–1113.

[2] "Benefiting from Bedside Specimen Labelling," white paper, Zebra Technologies, 2016

[3] 3gs1.org/healthcare/standards

[4] "Specimen labelling errors: A retrospective study, Online Journal of Nursing Informatics (OJNI), 19 (2), June 2015. http://www.himss.org/ojni

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Help ensure accurate specimen-patient matching with bedside specimen labeling

Limited clinical resources might make establishing a bedside specimen labeling process seem daunting. However, barcode labeling and scanning technology can give hospitals several advantages.

Creating a Safer Patient Environment

Bedside specimen labelling and matching can serve as an integral step in a three-point check of the specimen collection order, the patient wristband and the labeled container. An effective process that relies on mobile or desktop printers to generate specimen barcode labels at the patient bedside can help reduce preventable specimen collection errors and the misdiagnoses, delays and potential adverse patient outcomes. In addition, accurate matching can help prevent the need for redraws and retesting, which subject the patient to unnecessary pain and increase the overall cost of care.

Helping Reduce Operational Costs

The collection and management of specimens is a multifaceted process that includes a number of disciplines and handoffs. Incorrect specimen identification at the bedside can introduce errors that perpetuate throughout the whole process, translating into unnecessary redraws and retesting, misdiagnosis or inappropriate medical treatment. A bedside specimen management process that utilizes barcode specimen label printers, a barcode scanner or handheld mobile computer can help prevent errors from being introduced and help manage operating costs.

Maximising Clinicians' Patient Care Time

By giving clinicians an efficient way to verify critical specimen and patient data at the patient bedside, health organisations can minimise their low-value activity in favor of meaningful patient care time. In an emerging global healthcare environment largely defined by growing patient populations and fewer clinicians to provide care, organisations can't afford wasted clinician effort.

Digi-Trax® has your bedside specimen collection solutions

A specimen collection process requires the use of technology at the front line of care—the bedside—to be effective. Digi-Trax specimen collection management solutions can help clinical staffs implement an efficient, effective three-point specimen-patient matching process.

Technology that aids efficient matching

Mobile Printers

Your busy staff needs printing reliability, ease of use and design features that withstand the harsh clinical environment. Zebra® ZQ600 Healthcare Series mobile printers deliver all three, with:

- Fast 802.11ac and Bluetooth 4.1 wireless connections
- Battery technology that ensures power throughout the entire shift
- Disinfectant-ready plastics that tolerate continual cleaning

Desktop Printers

Clinicians who work in constrained areas can easily print specimen labels using the compact Zebra® ZD410 healthcare model desktop printer. The ZD410 uses thermal transfer printing—beneficial as this process does not create additional personal health information that would require secure disposal. This model is designed for the healthcare environment, with:

- Disinfectant-ready plastic
- An IEC 60601-1-compliant power supply

Barcode Scanners

Clinicians working at the patient's bedside need to capture specimen barcode data from any medium, in any condition, the first time. Engineered for reliability in clinical environments, Zebra® healthcare scanners offer accurate specimen data collection.

Handheld Mobile Computers

Clinicians need secure, instantaneous access to patient information and reliable scanning to match patients to their specimens with confidence. Zebra® handheld mobile computers and enterprise tablets handle the demands of the healthcare environment with:

- Drop ratings that withstand impacts with concrete hospital floors
- Easy-to-clean disinfectant-ready plastic
- Removable batteries built to last a full shift

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Software, supplies and services

DNA PPME Software

Hospitals can deploy and maintain devices for maximum operating performance throughout the enterprise with DataCapture DNA, a portfolio of scanner productivity, visibility, management and application development tools. DataCapture DNA enables greater worker efficiency through seamless application integration and maximum device performance.

Print DNA is a suite of powerful productivity, management, development and visibility tools for Link-OS printers. These tools offer a common, customizable printer user experience that enables fast, accurate printing; remote enterprise-level printer management tools; and easy printer integration into existing infrastructures.

Zebra® OneCare Visibility Services

OneCare ensures that your Digi-Trax devices achieve maximum uptime and peak performance. Multiple service levels are available to meet each hospital's unique requirements and protect operational investments.
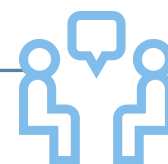
Digi-Trax® Healthcare Labels

Labels from Digi-Trax are unrivaled and exceed FDA requirements to withstand all the rigors of blood bank, cellular therapy and laboratory environments. Our diverse lineup of printers feature custom firmware designed to work exclusively with your LIS software and our HemaTrax labeling software to serve a wide range of customers from large to low volume facilities.
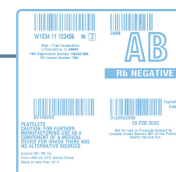
Consultation Services

We work with you to help determine the optimal solutions based on usage, workflow assessments and site visits that will help you make the right decision for your facility. With over 30 years of experience, rest assured, our experts will help implement the most economical compliance identification solution for your department.

To learn more about Digi-Trax® bedside specimen collection solutions, visit **www.digi-trax.com/lab-labels**

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Digi-Trax was incorporated in 1986 as a value added reseller and systems integrator focused exclusively in the healthcare and life sciences markets. Digi-Trax provides single source solutions including software, hardware, consumable supplies, support and service for a range of healthcare applications such as blood banks, cellular therapy, laboratory, life sciences and hospital admissions.

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