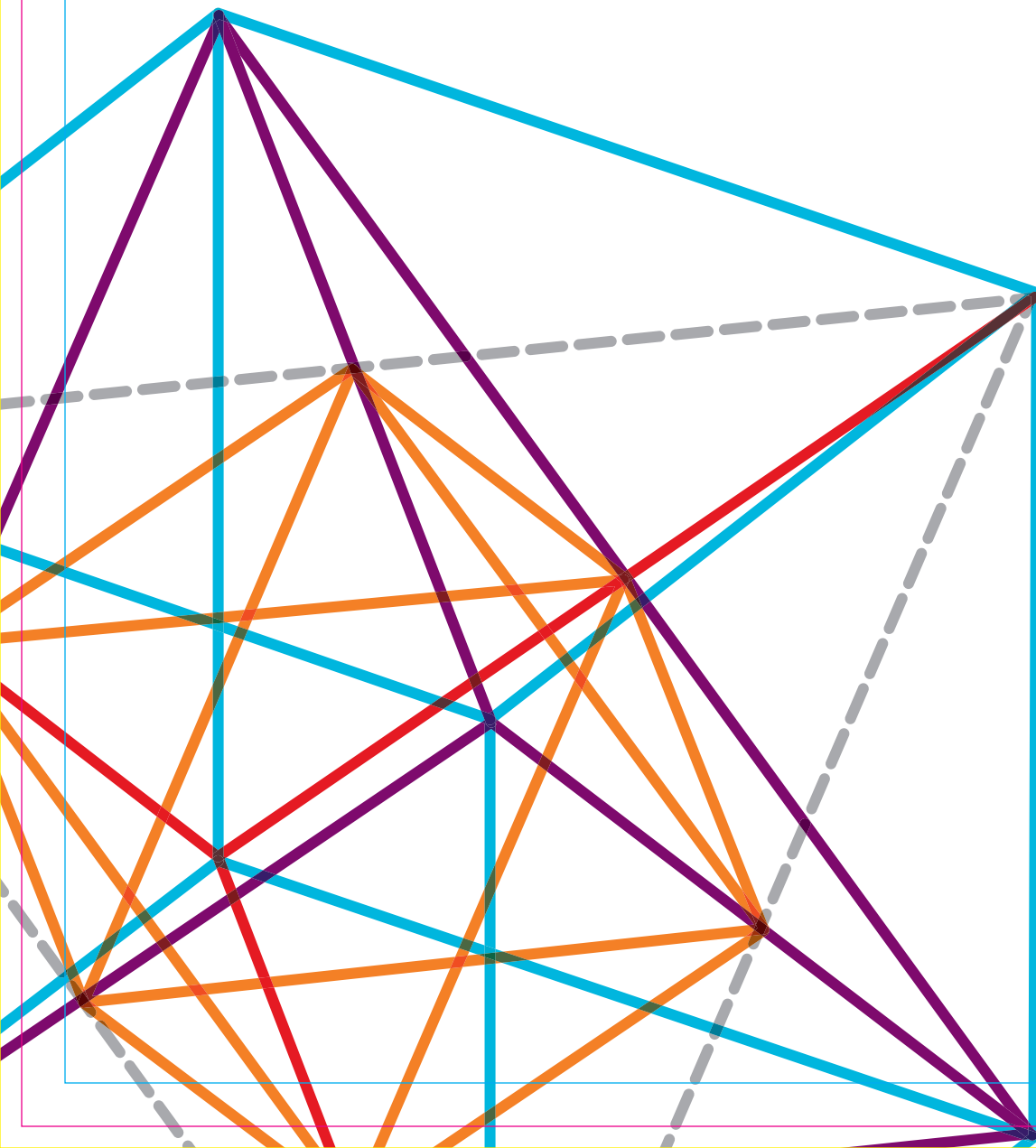


# FIVE RIGHTS – How Barcoding Enables the Five Rights of Medication Administration

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# HOW BARCODING ENABLES THE FIVE RIGHTS OF MEDICATION ADMINISTRATION

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Maximizing patient safety and improving the quality of care is the ultimate goal for healthcare providers, of which closed-loop bedside medication verification (BMV) is a vital component. Doing so requires staying within regulatory compliance, while also advancing staff retention and meeting fiscal constraints. Barcode technologies provide a “virtual voice” to patients, applications and workflows. Barcoding accomplishes this by laying a solid foundation for enhancing patient identification, providing visibility into medical practices, and driving efficiencies throughout healthcare applications—and is a key aspect in electronic medical record (EMR) adoption.

## LEVERAGING THE BENEFITS OF BARCODING

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When it comes to healthcare, today’s highly informed patients have choices. And their biggest decision point is often based on trust that the provider will deliver the highest quality of care, safely and efficiently. Administering medications safely and efficiently is a critical task that caregivers must perform, without error, each and every time. This high level of accuracy is known as “The Five Rights of Medication Safety”:

1. **Right Patient**
2. **Right Drug**
3. **Right Dose**
4. **Right Route**
5. **Right Time**

Even with this high standard, medical errors are still a leading cause of death in the U.S. When it comes to costs, medication errors are the cause for 5 percent of malpractice claims according to an analysis by Dr. Byron J. Bailey, FACS. Dispensing errors contribute directly to adverse drug events (ADEs). But blaming nurses and other practitioners will not help, since they are not the core of the problem. Caregivers cannot be held accountable for achieving the Five Rights. They can only be held accountable for following the processes that their organizations have designed and determined as the best way to verify the Five Rights.

Fortunately, barcode technology can enable healthcare professionals to perform their tasks—including meeting the Five Rights—at efficiencies and accuracies never before possible. The foundation of the Five Rights is “Right Patient.” Once organizations can consistently and accurately identify the right patient, many improvements can follow, from BMV to EMR, and beyond.

Medical centers across the nation are leveraging the benefits that barcoding provide beyond just reduction of paperwork. A safe, proven and efficient way to identify the right patient is to use 2-D barcoded patient ID wristbands. Barcoded wristbands build the necessary foundation for the “Right Patient” by ensuring that accurate patient information is always available at the point of care, including during BMV. They also provide a platform to extend safeguards to other patient care activities like automated medication administration and computerized prescriber order entry (CPOE).

### Safe, Accurate Closed-Loop Medication Administration

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Barcode technology—from the patient ID wristband to barcode-labeled medication—enables nurses to verify the patient’s identity, medication and dosage by scanning the wristband ID at the bedside. This closed-loop medication workflow helps to ensure that the medication administered at the point of care follows the physician-prescribed orders entered in the CPOE:

- Physician determines prescription, records in the CPOE system
- Pharmacy receives order via CPOE and dispenses using barcode-enabled technology
- Nurse picks up the prescription
- Nurse verifies the Five Rights at point of care by scanning patient wristband and medication barcodes
- Nurse records administration and patient response in the EMR
- Physician can review EMR and respond to adverse events

Application software compares the medication to information in the patient's electronic record queried by the wristband scan. The process verifies that the patient should be receiving the medication at the indicated dosage at that time. After the verification confirmation alert displays on the computer screen, the caregiver can continue the process. As a final step, the caregiver scans her/his own barcoded ID badge to record who administered the medication.

The system essentially automates the Five Rights check, with the wristband scan verifying right patient, and the database lookup from the medication scan verifying the other elements. With this system in place, healthcare centers gain a cost-effective, automated, and traceable way to improve patient safety and quality of care.

## AVOID WORKAROUNDS

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To improve efficiencies and safety even further, healthcare centers can go beyond paper barcode labels by deploying durable, easy-to-scan barcoded synthetic wristbands that are smudge-free and liquid-resistant. In addition, BMV solutions should help prevent nurse workarounds. Specifically, barcode-enabled workflows should prevent nurses from scanning barcodes from patient folders instead of patient wristbands—a requirement for achieving BMV compliance.

Prior to implementing a BMV solution, healthcare centers should perform research to uncover workarounds that nurses commonly use in their medical center. One way to prevent workarounds is

to include a "check digit" in the patient wristband barcode. Implementing this step helps guarantee that only approved patient ID scanners can read the wristband. This prevents chart label scanners, or other off-the-shelf scanners, from decoding the wristband data. In addition, the check digit ensures that medical staff actually scans the band at the patient's bedside, and is a major factor for preventing workarounds.

To gain the most value from barcoding solutions, medical centers must ensure that wristbands contain the right information, meet industry mandates, and provide staff with an efficient solution that also prevents workarounds.

## CONCLUSION: BARCODES DRIVE BEDSIDE MEDICATION VERIFICATION

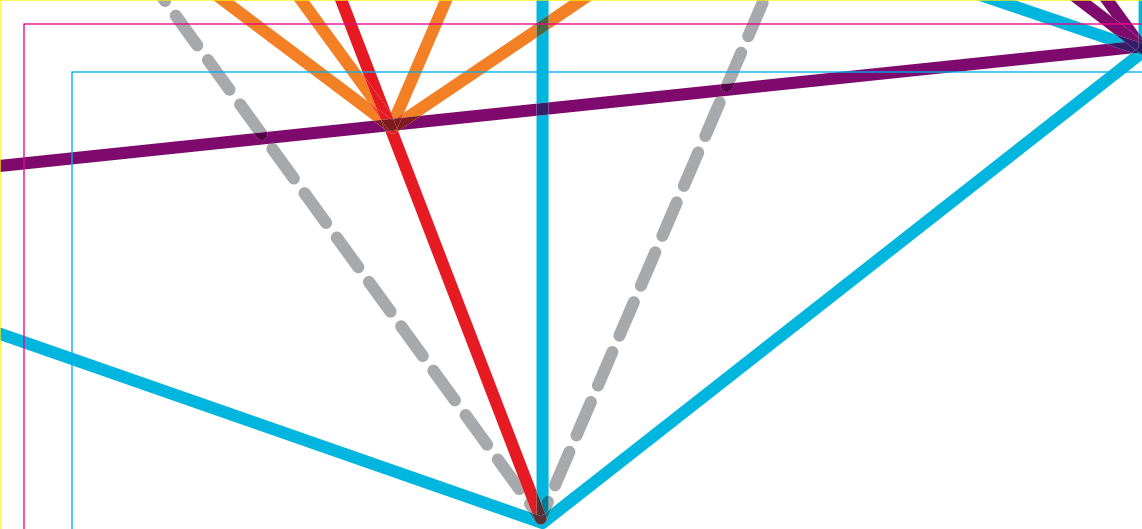
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Patient safety and quality of care depends on safe, precise medication administration. The Five Rights of patient safety works only when "The Right Patient" is verified, and caregivers follow proper procedures. Automated barcode control systems for medication dispensing and administration provide proven and significant safety benefits, and are fundamental for closed-loop workflows and efficient EMR adoption.

Thermal printers from Zebra Technologies create millions of barcode unit-dose, prescription, and sample-tracking labels as well as wristbands in a

variety of clinical settings every year. Zebra partners with software integrators to develop printers and label supplies that meet healthcare providers' need to achieve safe, accurate bedside medication verification.

Barcode printing solutions from Zebra Technologies can help healthcare organizations reduce errors and increase productivity. Now is the time to provide your patients, medications and assets a virtual voice—so you can work with the patient and continue to provide safe treatments and a caring atmosphere.



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