



# Safeguarding Patient Care During Medication Administration

## Barcode Scanning at the Bedside Can Reduce the Incidence of Adverse Drug Reactions

The global cost of adverse drug events (ADEs) is \$42 billion and growing with nearly 5% of hospitalized patients experiencing an ADE.<sup>1</sup> While errors can occur at the ordering, transcription or dispensing stages of a medication management process, administration is particularly prone to errors. More than 30% of medication errors occur at that stage.<sup>1</sup>

A clinician's ability to verify patient and medication data prior to administration at the bedside can prevent many errors and the potentially life-threatening ADEs that can result.

## Many Hospitals Verify Data with Barcode Technology at the Bedside

Many hospitals are implementing Barcode Medication Administration (BCMA) at the patient bedside to enable staff to verify vital clinical data and enhance patient safety. BCMA involves scanning barcodes on the medication container, the patient's wristband and the clinician's ID badge to verify essential clinical data while documenting administration events.

Barcode scanners, mobile devices, patient wristbands and clinician ID cards collectively enable medication and patient verification, which are integral technology solutions to your BCMA process.

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Medication errors can be reduced by as much as **41%** with a BCMA process.<sup>2</sup>

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<sup>1</sup>WHO Launches Global Effort to Halve Medication-Related Errors in 5 Years. World Health Organization news release, 29 March 2017

<sup>2</sup>Effect of Bar-Code Technology on the Safety of Medication Administration. New England Journal of Medicine, May 6, 2010



## How Hospitals Can Benefit from Bedside Barcode Medication Administration

### Adherence to Patients' 5 Rights of Medication Administration



The patients' five rights of medication administration—right patient, right drug, right dose and right route at the right time—were developed as guidelines to help clinicians maximize patient safety and clinical efficacy in medication administration.<sup>3</sup> Scanning barcodes on the medication container, the patient's wristband and the clinician ID badge aligns the data verification process with the five rights.

### A Proven Way to Reduce Medication Administration Errors



Guided by the five patient rights, clinicians have used BCMA to reliably reduce medication administration errors. Besides reducing medication errors substantially, BCMA decreased potential adverse drug events by more than half, wrong-medication errors by 57% and wrong-dose errors by more than 41%.<sup>2</sup>

### Greater Medication Administration Process Transparency



BCMA provides a basis for continuous process improvement. Using barcode scanning technology to capture what was administered to the patient, who administered it and when creates a closed loop of data that leadership can use to analyze the human factors in any errors that might still occur.

<sup>2</sup>Effect of Bar-Code Technology on the Safety of Medication Administration. New England Journal of Medicine, May 6, 2010

<sup>3</sup>The Five Rights of Medication Administration. Institute for Healthcare Improvement, [ihi.org/resources/Pages/ImprovementStories/FiveRightsofMedicationAdministration.aspx](https://www.ihi.org/resources/Pages/ImprovementStories/FiveRightsofMedicationAdministration.aspx)



## Zebra Has Your BCMA Solution

Zebra offers medication administration process managers a hardware ecosystem including handheld barcode scanners, mobile computers with built-in scanners and ID card printers designed to provide the needed accuracy and reliability to maintain a sound BCMA process.

## Reliable Medication Administration Data Capture Tools



### Barcode Scanners

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



### Handheld Mobile Computers

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

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



### ID Card Printers

Providing clinicians with barcode-embedded ID badges facilitates adherence to a sound medication administration procedure. Zebra® ID card printers make clinician identification data highly scannable to ensure reliable clinician data capture. Hospitals can choose from a wide range of low-, medium- or high-volume models that give them a choice of single or dual-sided printing capability and dependable security features such as encryption and locking mechanisms.

## Software and Services

### Mobility DNA

Mobility DNA is a suite of software tools, utilities and applications that transform Zebra mobile computers into true enterprise-class devices. Making device management simpler, integration problem free and making your devices powerhouses of productivity.



### Workforce Connect

When it's necessary to communicate with their colleagues, clinicians work smarter and more efficiently when they have multi-modal options on their mobile computers. Zebra's Workforce Connect solution enables communication via voice telephony, push-to-talk and text messaging.



### Print DNA Software

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



### DataCapture DNA Software

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



### CardStudio™ ID Card Design Software

Whether clinicians or administrative staff print ID cards, your operation works more efficiently when either can quickly learn how. Zebra® CardStudio™ software was developed with a highly intuitive, user-friendly interface that practically eliminates the need for technical expertise and training. With four available editions, Zebra empowers you to buy the features you need now and upgrade to instantly add advanced features later.



### Zebra® OneCare Visibility Services

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



To learn more about Zebra® barcode medication administration solutions,  
visit [Zebra.com/healthcare](https://www.zebra.com/healthcare)



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