

Committing to the journey toward zero errors and zero waste



# Medication: the most widely prescribed therapy

Healthcare systems are under intense pressure to manage cost without sacrificing safety. As your most widely prescribed therapy, medication has a significant impact on every key outcome — your quality of care and patient satisfaction.

In an ideal world, your medication use process would have zero errors and zero waste. But getting there is an incredibly complex journey. It takes an average of 16 steps to get one medication to a patient.<sup>1</sup>

# Big investments for small improvements

To manage information across these 16 steps, health systems have invested billions of dollars in Electronic Health Record (EHR) technology. And your Electronic Medical Record (EMR) has likely overcome many challenges with order entry and barcoding.

Still, it hasn't been enough. Even with Computerised Physician Order Entry (CPOE) and Bar Code Medication Administration (BCMA) and other pharmacy solutions, the industry has not made significant reductions in medication errors.

A recent Australian study identified that 83.3% of all medication errors were due to communication-related factors.<sup>2</sup>

According to industry experts, the problem lies in the gaps between these isolated systems and processes. As long as these organisational gaps exist, acuity and care complexity rise.

These increased risks exposes medication errors, wasted costs and decreased patient satisfaction.

Throughout a typical day, your pharmacy delivers hundreds of medications across the different wards, but nurses often cannot find them. One study at a thousand-bed hospital showed that nursing calls the pharmacy about missing medications **150-175 times a day**.<sup>3</sup> As a result, caregivers' time is consumed by workarounds that take their focus away from patient care. Statistics show that nurses may spend more than a third of their time on unnecessary tasks such as handing off, searching for things, fixing things, waiting and reworking .<sup>4</sup>



## Connected Technology - Enhances Clinical Practice

Your EMR is an essential tool, but it can't solve your medication management challenges on its own. That's because reducing errors and waste isn't just an information problem or a technology automation problem.

Instead, think of medication management as a systematic challenge that crosses over multiple disciplines. That means you need to connect islands of technology and information into one comprehensive approach to manage medication logistics and care delivery, and link this with your EMR.

### What if you could be proactive and plan to prevent dangerous variation with access to data



Apply mandating functions to practice components where variation is dangerous?



Consolidate medication management into one connected system?



Anticipate medication needs and flex quickly to accommodate them?

If you could, you would be able to commit to the journey toward zero errors at the lowest possible cost. While you will never arrive at zero, BD can help you move ever closer to that goal.



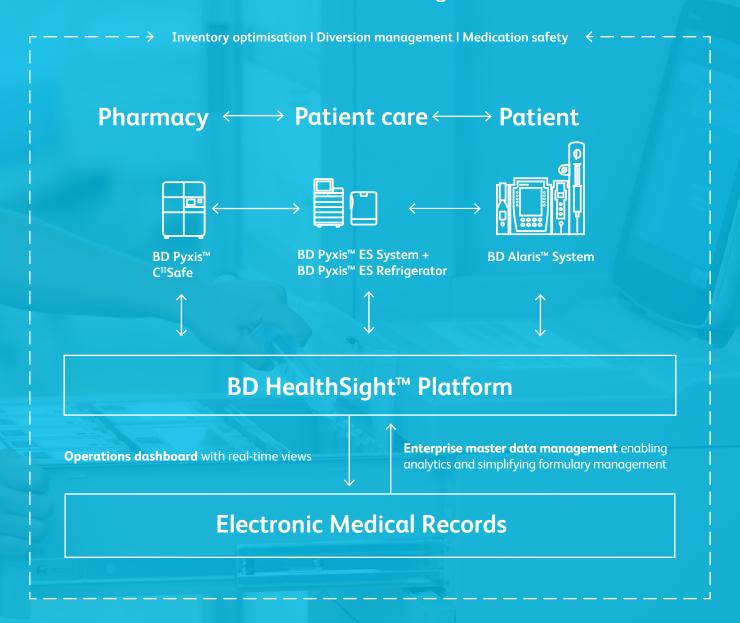
#### That's why health systems are turning to BD

The answer starts with the BD HealthSight™ Platform, our unique combination of common infrastructure, workflow applications, advanced analytics and practice improvement services for managing medications across your health system. You'll use the BD HealthSight™ Platform to connect your core BD products with each other and with your EMR.

#### Address your process gaps with the BD HealthSight™ Platform

Medication management is complex, manual and error prone. You need to expose and bridge the gaps in this critical process. That's where the BD HealthSight™ Platform comes in:

#### BD Connected Medication Management



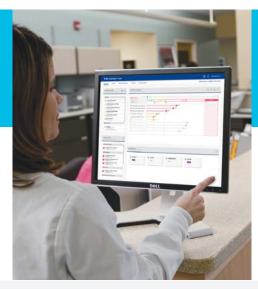
# Transforming medication management

Your ultimate goal is to make medications available when and where your patients need them—while minimising errors and waste. To get it right, you'll need to overcome three key challenges.

#### **Challenge:**

#### Unwarranted practice variations

Every patient deserves the same level of care, but due to patient factors or clinical practice variation, patients do not always experience the expected outcome from medication therapy. That variation is especially dangerous when it comes to infusions. The problems start when disconnected systems and processes force you to create manual workarounds. Nurses manually program pumps at the bedside. Each step is vulnerable to mistakes that can cause life-threatening errors.



The most costly and serious medication errors - 70% - are administration related and one quarter of these clinical errors led to increased length of stay, surgical intervention or permanent harm. The wrong mixture, wrong volume, wrong rate or medicine incompatibility accounted for 92% of all clinical errors.<sup>5</sup>

#### The BD solution:

## Move infusions safely and seamlessly from physician order to pump



Because BD applies mandatory functions where variation is dangerous, you can reduce everything from unintentional errors to unsafe practices and narcotic diversion. With our end-to-end infusion safety system, you can standardise IV therapy across your hospital. You will integrate the BD Alaris<sup>TM</sup> System with your EMR to pre-populate infusion pumps with orders and accurately document the status. With the BD HealthSight<sup>TM</sup> Viewer you will be able to get visibility of infusion status from the BD Alaris<sup>TM</sup> System across the different wards.

Interoperability with BD Alaris<sup>TM</sup> Infusion Pumps can reduce the number of manual key strokes by 86%<sup>6</sup>



#### Challenge:

#### Interrupted and wasteful processes

Running your hospital efficiently and safely requires tight coordination. But it's difficult to streamline medication management when nurses and pharmacists are interrupted every few minutes. Plus, the medication information they need exists in a complex set of systems and spreadsheets—or even

other employees manual notes. Even when you realise you're carrying too much inventory or nurses are wasting too much time locating medications, it's often a struggle to pinpoint exactly where the problems lie and how to fix them.

One study demonstrated that there was a 13% increased chance of a clinical error with each interruption.<sup>5</sup>

#### The BD solution:

### Manage your medication logistics as a single system



With the BD HealthSight™ Platform, you can seamlessly connect your BD technologies, including BD Pyxis™ Medication Management technology and the BD Alaris™ System. With integration to BD HealthSight™ Data Manager you will be able to manage multiple formularies through one application. Depending on your EMR vendor, you can integrate your EMR with the data from your BD medication management technologies. By simplifying how you manage medication inventory, you can improve efficiency and medication availability across the care continuum.

Because of the interoperability of BD, nurses in one case study spent 30% less time removing medications per patient.<sup>6</sup>



### Challenge:

#### Constant changes

Any industry wide medication fomurlary change or regulatory change can wreak havoc on how you manage medications. It's even harder to keep up when these changes are all happening at once. You also need to adjust quickly to prescribing changes,

patient movement, seasonal demands and manufacturing shortages. The slower the reaction, the bigger the problems get. For example, inventory shortages often create conflicts between nursing and pharmacy staff, while potentially leading you to overspend when you need a quick replishment of stock.

Buyers spend 3 to 4 hours per day on pharmacy purchases, reconciling medications and stocking shelves.<sup>7</sup>

#### The BD solution:

### Anticipate and adjust to dynamic medication needs



With BD HealthSight<sup>™</sup> Inventory Optimisation Analytics and automation from BD, you can manage inventory dynamically with minimal intervention. That way you can decrease medication waste and carrying costs. An integrated BD HealthSight<sup>™</sup> solution will enable precise discharge summary that can help improve patient outcomes. And by partnering with our BD HealthSight<sup>™</sup> Practice Improvement Team, you can apply the right data to make your medication management practices smarter over time.

#### Why BD?

When you partner with BD, you can apply clinical information from the EMR to the moments when medication logistics and clinical care intersect. Then you don't have to choose between cost reductions and safety improvements—you can do both.

You'll use the BD HealthSight™ Platform to make medication management safer, simpler and smarter.

#### Safer:

Detect and address medication safety risks before they reach the patient

#### Simpler:

Simplify how you manage medication logistics across the care continuum

#### Smarter:

Make your medication management practices smarter and more flexible

To begin the journey toward zero errors and zero waste, visit bd.com/en-au

#### References

<sup>1</sup> Australian Commission on Safety and Quality in Health Care. Electronic medication management systems: a guide to safe implementation. 3rd edition. Sydney: ACSQHC, 2017.

<sup>2</sup> Manias E, Cranswick N, Newall F, Rosenfeld R, Weiner C, Williams A, Wong I. CK, Borrott N, Lai J, Kinney S. Medication error trends and effects of person-related environment-related and communication-related factors on medication errors in a paediatric hospital. 2018:323.

 $<sup>\</sup>textbf{3} \ \mathsf{McCluskey} \ \mathsf{C}. \ \mathsf{Medication} \ \mathsf{tracking} \ \mathsf{system} \ \mathsf{improves} \ \mathsf{drug} \ \mathsf{delivery} \ \mathsf{times} \ \mathsf{for} \ \mathsf{Riverside} \ \mathsf{Methodist} \ \mathsf{Hospital}. \ \mathsf{\mathit{Wolters}} \ \mathsf{\mathit{Kluwer}} \ \mathsf{\mathit{Health:}} \ \mathsf{Pharmacy} \ \mathsf{One} \ \mathsf{Source} \ \mathsf{case} \ \mathsf{study}, \ \mathsf{2010}.$ 

<sup>4</sup> Allen S. The Connection Between Nurses Working at Top of Licensure and Patient Care. New York, NY: Infor Healthcare, 2015.

<sup>5</sup> Roughhead L, Semple S, Rosenfeld E, Literature Review: Medication Safety in Australia (2013). Australian Commission on Safety and Quality in Health Care, Sydney.

 $<sup>\</sup>textbf{6} \ \text{Cerner Corporation. CareAware Smart Pump Programming: Advancing IV Medication Administration Safety. Cerner white paper, 2011.}$ 



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