

WHITE PAPER

# Elevating Medication Management in the OR

Point of Care

Surgical patients are three times more likely to experience a harmful medication error than patients in other settings of the healthcare system.<sup>1</sup> Perhaps it's no surprise given the number of high-alert controlled substances administered under often intense, dynamic conditions.

Yet paradoxically, the operating room and perioperative areas often have less robust medication safety protocols in place than other areas. Consider that automated dispensing cabinets are used in nursing units in 95% of U.S. hospitals, but similar technology is used in the OR by only a little more than half of hospitals.

OR-based medication dispensing systems can greatly benefit both anesthesia providers and pharmacy. Advantages include:

**Safety** – Features such as label printers that automatically print ASTM standard color-coded labels for syringes can help prevent harmful medication errors, and barcode confirmation ensures accurate restocking.

**Storage** – An anesthesia medication cart can securely store enough medications for a full day's case load, so the provider does not have to travel back and forth to the pharmacy or store medications in fanny packs or tackle boxes.

**Diversion Prevention** – Secure bio-ID login prevents unauthorized access, while the ability to track medications dispensed and wasted helps prevent drug diversion and supports compliance documentation.

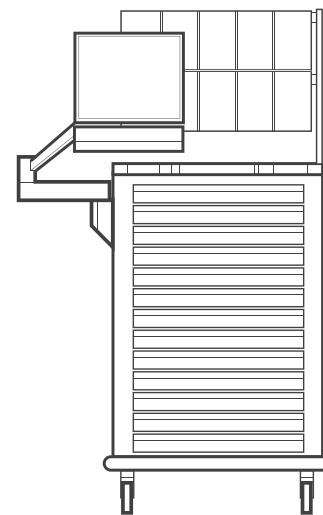
Despite these benefits, one of the barriers to adopting medication management technology in the OR is the concern by anesthesia providers that managing and operating the technology will take precious time away from their clinical responsibilities.

However, advancements in dispensing technology for the OR are enabling more streamlined processes – saving time for anesthesia providers as well as pharmacy.

## Moving from Spreadsheets to Dashboards

Dispensing systems for the OR, often referred to as anesthesia carts, are more than just medication storage cabinets – they are end-to-end systems that provide transaction data to pharmacy, aiding in controlled substance oversight.

Just as automated dispensing systems for nursing units have evolved to incorporate more sophisticated data intelligence, certain anesthesia dispensing systems now offer user-friendly dashboards instead of static reports to deliver



1. Hicks RW, Becker SC, Cousins DD. MEDMARX Data Report: A Chartbook of Medication Error Findings From the Perioperative Settings From 1998-2005. Rockville, MD: USP Center for the Advancement of Patient Safety; 2007.

the analytics and insights pharmacy needs to identify risk among anesthesia providers and quickly reconcile discrepancies.

With these systems, data is fed directly to a dashboard visible to permissioned users from any device on the health system's network. Pharmacists can view real-time transactions of medications issued from the dispensing system, and they can enter case notes within the application. All the data is stored and retrievable from a single location, providing a modern solution for pharmacy that replaces hand-kept records and manual spreadsheets.

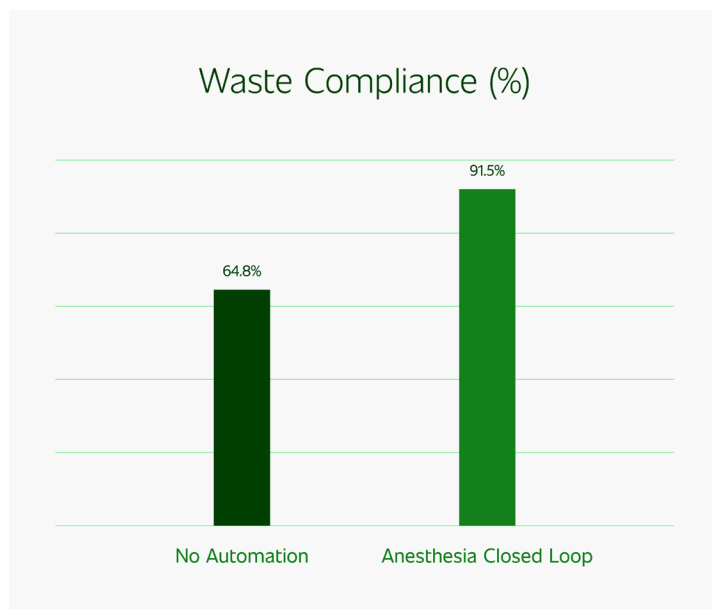
## Integration that Closes the Loop

Accountability of controlled substances used and wasted in the OR requires a partnership between pharmacy and anesthesia providers. The reconciliation process can be greatly streamlined for both parties when the dispensing system integrates with the electronic health record (EHR), which enables closed loop auditing.

The Omnicell® XT Anesthesia Workstation™ now has this integration, allowing closed loop reconciliation of controlled substances used, wasted, or transferred to another provider. Variances between medications dispensed from the anesthesia cart versus those that are documented as administered in the EHR and/or wasted are automatically flagged. Baptist Health (Indiana) adopted this closed loop functionality, which has enabled several workflow improvements.

### Improved Waste Compliance

It is now easier for anesthesia providers to document waste, which helps improve compliance levels. Previously, even if a dispensed medication had no waste associated with it – typical for approximately 80% of dispenses – providers still needed to make an entry in the Anesthesia Workstation. Now no action is needed for zero waste transactions.



Baptist Health increased waste documentation compliance levels by 28% due to the more efficient process. They're now achieving over 90% compliance from their anesthesia providers and are close to meeting their goal of 100%.

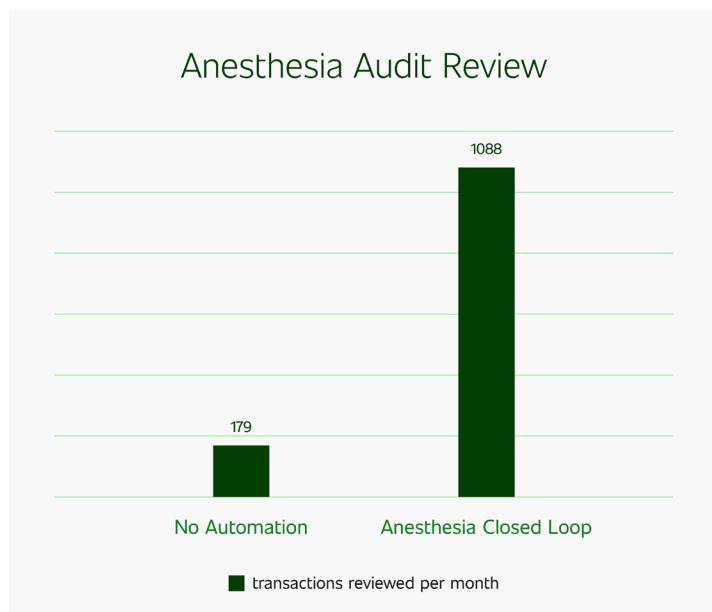
### Redundant Data Entry Eliminated

Because of the EHR integration, medication administration documented in the EHR automatically appears in the Anesthesia Workstation. This eliminates the need for double documentation, speeding up the dispensing process for anesthesia providers.

### Improved Auditing Compliance

The closed loop automation has resulted in fewer variances while also enabling more comprehensive and efficient pharmacy auditing.

Previously, Baptist Health checked only 10% of their OR transactions retrospectively on a monthly basis. Now they're checking 100% of transactions in real time on a daily basis while spending less time overall on the auditing.



**Without Automation** – Reviewed only 179 transactions per month and identified 16.75 discrepancies (variance rate of 9.34%)

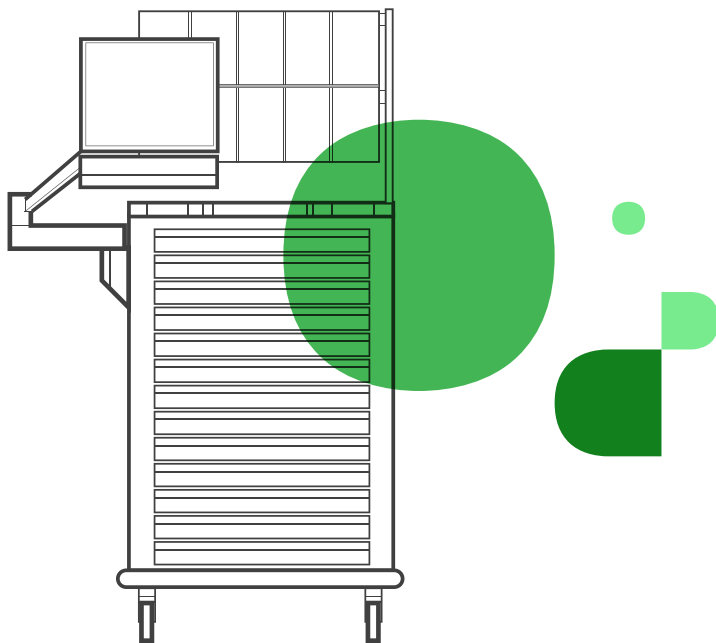
**With Closed Loop Automation** – Reviewed 1,088 transactions (100% of monthly transactions) and identified 12 discrepancies (variance rate of 1.1%)

The ability for an anesthesia provider to easily transfer unused dispensed medications to another provider also supports chain of custody compliance.

## Technology-Enabled Partnership in the OR

There's a strong need to improve medication management processes in the OR and perioperative areas. These are dynamic environments that are prone to drug diversion and its associated risk to patients. But anesthesia providers can't afford to be slowed down by documentation and administrative tasks associated with medication dispensing systems.

Advancements in dispensing technology – especially improvements tied to integration with the EHR – are enabling new workflows that streamline controlled substance accountability tasks for both pharmacy and anesthesia providers. New dashboard-based systems provide easier access to data analytics and give pharmacy a clearer window into medication use in the OR, helping to identify potential drug diversion and medication non-compliance issues while facilitating partnership with anesthesia providers.



For more information on medication dispensing automation for the OR, visit [Omnicell.com/AWS](https://www.omnicell.com/AWS).

