

ARTICLE

3 Ways OR Automation May Prevent Diversion and Support Patient Safety

As health systems face growing pressure to address medication diversion, many are turning to automation in the OR—not just to streamline workflows but also as a critical safeguard. Automation is intended to help reduce manual errors, increase accountability, and ultimately enhance patient safety and protect providers from the risks of diversion and adverse events.

According to a recent [NIH study](#), anesthesia departments are among the most common areas where drug diversion occurs. Limited tracking and manual processes may sometimes lead to missing doses, falsified waste documentation, or unreported incidents—all of which could create safety, compliance, and legal risks.

Here are three ways automation in the OR may help mitigate those risks while striving for improved visibility and safety:

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Improved Accountability

Manual processes for documenting controlled substance issues—like syringe documentation and witnessed wasting—for many pharmacy departments are often inconsistent and exposed to workarounds. Automation of medication management in the OR is intended to support traceability by linking transactions in an effort to reduce manual input. While no system is entirely foolproof, automated workflows are designed to make it more difficult to bypass accountability measures. Automated systems should also help flag anomalies to further reduce the opportunity for diversion.

Automated solutions like [Omniceil's XT Anesthesia Workstation](#), are designed to help ensure the security of controlled substances. A variety of drawer types support the dispensing of one dose at a time, while keeping the remaining medications secured. Closed-loop functionality with the Epic™ electronic health record (EHR) system is intended to automate the process for reconciling controlled substances, which should help provide additional insurance against diversion and reduce the time spent resolving discrepancies.



Greater Visibility into the Chain of Custody

When something goes wrong—whether it's a missing dose or an adverse patient outcome—visibility is often crucial. Automation aims to help enable real-time documentation of medication inventory and movement – a capability that is intended to provide clinical and pharmacy leaders with increased transparency.

For example, the XT Anesthesia Workstation is designed to enable users to track which employees removed certain medications at what time and for what purpose. This audit log is meant to help identify and correct gaps and may also serve as a powerful tool in contentious situations. With a tighter chain of custody, you should be more empowered to proactively manage potential diversion situations.

MedTrack - OR¹, Omnicell's new RFID-enabled drawer for the XT Anesthesia Workstation, is designed to extend visibility even further by supporting inventory tracking of non-controlled medications, even when they aren't manually scanned. This added layer of oversight is meant to help ensure that all medications are accounted for, which should reduce discrepancies that could lead to stockouts and potentially compromise patient safety.

1. MedTrack - OR is under development and not yet generally available to Omnicell customers.



Process Standardization

Automation should also help create a standardized process that is consistent regardless of what surgical personnel use the equipment. This standardization is meant to help keep the OR environment safe and predictable by limiting variable manual processes that may introduce human error.

The XT Anesthesia Workstation is designed to be an end-to-end solution that delivers oversight in high-diversion areas. Controlled substances are able to be tracked from stocking in the XT Anesthesia Workstation through administration, and this process is designed to be consistent and repeatable.

Investing in OR automation isn't just about compliance—it's also about working to enhance care, prevent adverse events, ensure medication availability, and create a safer workflow intended to build trust between pharmacy, providers, and patients. We believe that with the right systems in place, health systems should be able to be more proactive as they strive to protect the well-being of their patients.

