



How Omnicell Supports Compliance with ISMP Guidelines for the Safe Use of Automated Dispensing Cabinets

The Institute for Safe Medication Practices (ISMP) has published best practice guidelines to support healthcare organizations in their safe use of automated dispensing cabinets (ADCs). By adopting the standard practices recommended by ISMP, health systems can improve their overall medication use process. Omnicell continually refines its ADC systems based on the ISMP guidelines – as well as direct input from clinicians – to help health systems strive for ever-safer medication management.

Following are the Core Safety Processes included in the ISMP guidelines:

- Provide Ideal Environmental Conditions for the Safe Use of ADCs
- Establish ADC System Security
- Provide Profiled ADCs and Monitor System Overrides
- Select and Maintain Appropriate ADC Configuration and Functionality
- Select and Maintain Optimal ADC Inventory
- Implement Safe ADC Stocking and Return Processes
- Display Important Patient and Drug Information
- Develop Procedures for Accurate ADC Withdrawal and Transfer to the Bedside for Administration
- Provide Staff Education and Competency Validation

OmniceLL supports these processes in several key areas to ensure patient safety.

Core Safety Process #1 Summary

Provide Ideal Environmental Conditions for the Use of ADCs

The physical environment for ADC use can have a direct impact on the safety and efficiency of medication distribution and administration. Specifically, the work environment, interruptions, and a busy, chaotic clinical area were cited as contributing factors for medication errors. Reports submitted to the ISMP National Medication Errors Reporting Program (ISMP MERP) also suggest that poor environmental conditions (e.g., unnecessary noise, dim lighting, interruptions, remote medication storage locations) can contribute to medication errors.

How Omnicell Supports Compliance

OmniceLL ADCs offer flexible designs and configurations to ensure safe administration of medications while minimizing disruption. To save time, nurses can use **Anywhere RN™** to remotely select and queue up medications for removal, and document waste and returns from any hospital network computer at a time and place that is convenient and unrushed. Omnicell ADCs also offer direct integration with Epic and Cerner electronic health record systems, so nurses can use Anywhere RN functionalities directly within their MAR.



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Core Safety Process #2 Summary

Ensure ADC System Security

Security processes must be established and regularly reviewed to ensure appropriate access, transfer, and control of medications as part of an effort to reduce the potential for medication diversion from automated systems.

How Omnicell Supports Compliance

Omnicell ADCs are equipped with tamper-resistant metal drawers to enhance medication safety and enable a variety of medications – including controlled substances – to be stored in a secure environment. Omnicell tightly manages user access to ADCs. Access to specific cabinets and medication control levels (DEA medication classes) are restricted by user type and role within the hospital.

A biometric ID scanner enables fast and secure access to the cabinet by using fingerprints to log into the cabinet. Furthermore, Omnicell provides a variety of software and reporting tools that can be autogenerated to monitor essential activity. Examples include:

- **Closed Loop Dose Accountability** – automatically identifies variances between medications dispensed from the ADC versus medications documented as administered and/or wasted, saving time for pharmacy and nursing.
 - **Dose Reconciliation report** – helps to identify missing waste and assist with inventory management for controlled substances.
 - **Pharmacy Discrepancy report** – helps to identify both resolved and unresolved discrepancies. This pharmacy discrepancy report and the Dose Reconciliation report can be emailed to nurse managers as often as hospital policy requires.
- Omnicell's Intelligence solution**, Omnicell One™, provides full visibility into medication inventory and potential drug diversion along with workflow recommendations to optimize par levels and reduce risk of administering expired medication.

Core Safety Process #3 Summary

Provide Profiled ADCs and Monitor System Overrides

The use of an ADC in a “**PROFILED** mode” is considered an important safety feature throughout the healthcare industry as it directs **PRACTITIONERS** to a patient-specific medication profile and limits access to only medications that have been reviewed and verified by a pharmacist as appropriate for the patient.

How Omnicell Supports Compliance

Omnicell supports “profiled mode” in ADCs. Medications that have been reviewed and verified by a pharmacist can be assigned to a patient-specific list. This not only ensures safe retrieval or issue of specific medications from the ADC, but it also allows practitioners to access selected medications quickly and easily from the **Local Patients** list without having to spend time scrolling through the entire patient list.



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Omnicell ADCs can restrict specific drugs by cabinet and restrict specific users from overriding. However, in certain emergency situations when an override is necessary, Omnicell ADCs offer additional controls such as med order override witness, and reason and dispensing alerts to reduce the risk of medication errors. All this information is reportable to allow pharmacy to audit trends and reconcile overrides to patient orders.

Core Safety Process #4 Summary

Select and Maintain Appropriate ADC Configuration and Functionality

Restricting access to medications limits the potential for **inadvertently selecting the wrong medication and dose**. Medications stocked in ADCs may be HIGH-ALERT drugs, and it is important to ensure that only the right drug is selected. For these reasons, it is important that each drug has its own unique and segregated location within the ADC, so only the specific drug or vaccine needed is accessible. Decisions regarding ADC functionality as well as storage configurations should always be made with safety in mind.

How Omnicell Supports Compliance:

Omnicell ADCs offer flexible cabinet configurations and drawers to accommodate safe storage of various types of medications. High-Alert medications can be stored in individual secure locking lid bins, and controlled substances can be secured in Omnicell's Controlled Substance Dispenser to prevent potential inadvertent selection of wrong medications and wrong doses.

To ensure removal of the right medication and right dose, Omnicell's patented Guiding Lights technology directs the nurse to the correct bin location and drawer within the ADC. The locking lid bin only opens when the specific medication is requested. This reduces the risk of patient harm and allows practitioners to focus more time on patient care.

Omnicell ADCs can be configured to require entry of a minimum of the first 5 characters of the drug name unless the drug name has fewer than 5 characters (as documented in the ISMP guidelines – 4.4).

Core Safety Process #5 Summary

Select and Maintain Optimal ADC Inventory

The ADC inventory should be determined based on the needs of the patients served and replenished on a regular basis. Medication stock should be regularly reviewed and adjusted based on medication prescribing patterns, utilization, and unit-specific needs (considering typical patient ages and diagnoses). Standard stock medications should be identified and approved for each patient care area, with an effort to limit excess volume and quantities that could lead to serious medication errors.

How Omnicell Supports Compliance

Omnicell offers customers full control of inventory to be stocked in the ADC with automated inventory management to identify replenishment/restock needs of each item at each ADC. Restock reports are autogenerated based on par levels to guide the restock process. Omnicell supports inventory



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optimization with reports and dashboards that help to monitor important information such as item usage versus par levels.

Additionally, the **OmniceLL One** predictive pharmacy intelligence solution can provide full visibility into par levels and soon-to-expire medications, to help reduce medication waste and optimize inventory.

Core Safety Process #6 Summary

Implement Safe ADC Stocking and Return Processes

The ADC restocking process encompasses many sub-processes that may involve both pharmacy as well as frontline PRACTITIONERS. A safe replenishment process contains redundancies to ensure that the correct medication, concentration, and formulation is selected for distribution to the unit and is placed in the correct location within the ADC. Mistakes in drug selection stemming from incorrectly stocked items in both pharmacy and at the unit level in the ADC have resulted in serious medication errors.

How OmniceLL Supports Compliance

OmniceLL's **Central Pharmacy Manager, Controlled Substance Manager, and Automated Dispensing Cabinets** are all integrated into a single platform to promote consistency and visibility into medication inventory across medication dispensing systems used throughout the hospital system.

Central Pharmacy Manager automates the picking, repackaging, ordering, receiving, stocking, and verification workflow processes in the pharmacy, thus ensuring accurate ADC restock workflows.

As part of the restock process, OmniceLL recommends using **SafetyStock®**, which requires barcode scanning to ensure accuracy and efficiency. Nurses can also use SafetyStock barcode scanning to safely remove medications from the ADC. This also helps to reduce medication errors by preventing the user from selecting the wrong medication.

Core Safety Process #7 Summary

Display Important Patient and Drug Information

Having sufficient patient information and drug information when dispensing and administering medications is key to the safety of the medication use process. Because there is limited space available for patient information on ADC screens, it is important to present essential information that is of the greatest safety value to PRACTITIONERS when selecting and administering medications. Systems should provide the ability for unique identification of individual patients, review of their active medication orders, and full integration with the electronic health record (EHR) to provide a closed loop process.

How OmniceLL Supports Compliance:

OmniceLL systems are interfaced with the EHR for patient and medication order information. This information is displayed as appropriate, at the ADC. Critical patient information including patient name, account and room number, and allergies are all visible within the screen header of the OmniceLL ADCs to facilitate the safe dispensing and administration of medications.



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Core Safety Process # 8 Summary

Develop Procedures for Accurate ADC Withdrawal and Transfer to the Bedside for Administration

Processes must be developed to reduce the risk or mitigate the harm associated with accessing a medication without an order, or the selection and administration of the wrong medication, dose, route, or frequency due to medication retrieval errors from the ADC. The contents (variety, concentrations, and volume), configuration, and functionality of the ADC play a large role in the PRACTITIONER'S ability to safely select and remove medications.

How Omnicell Supports Compliance:

In certain emergency situations, when a medication order does not exist or approval is delayed and immediate administration of the medication is needed, Omnicell's **Override** functionality enables practitioners to issue certain types of emergency medications without a medication order and without a warning prompt using the approval of a witness.

OmniceLL's patented Guiding Lights technology directs the user to the right location within the cabinet and only unlocks the right bin location, which is indicated with a flashing green light. Controlled substances can be dispensed in unit doses via the Controlled Substance Dispenser to reduce patient harm. Additionally, Omnicell's **integrated Medication Label Printer** automatically provides a label to safely identify any medication withdrawn from the ADC. It can also print the item barcode on the label which can be used to scan at the bedside to support proper administration via barcode medication administration (BCMA).

Core Safety Process # 9 Summary

Provide Staff Education and Competency Validation

Use of ADC overrides should be situationally dependent, and not based merely on a medication or a list. All users of ADCs (pharmacists, pharmacy technicians, nurses, respiratory therapists, designated physicians, and others) must be educated and have regular competency validation on the use of the device to meet expectations for safe use. Most often this education occurs during the PRACTITIONER'S orientation period, or upon ADC installation and software upgrades, but periodic updates may be required to ensure ongoing appropriate use. Users who are not properly oriented to the device may develop practice habits and device WORKAROUNDS that are considered unsafe.

How Omnicell Supports Compliance:

OmniceLL offers a blend of in-person and self-guided training opportunities to help customers standardize operations while maximizing the use of their ADCs in a secure and safe manner. These training solutions are tailored to meet the needs of various skill levels and roles of the staff within the organization. Staff training on all major functionality and workflows are included as part of the Professional Services engagement for implementation. Additional training modules can be integrated into the health system's learning management system (LMS) with ongoing refresher training available virtually or in-person.