



Tips

for Increasing the Efficiency of Automated Dispensing Cabinets



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Technology in use: **medDISPENSE**

Scan all products during the automated dispensing cabinet (ADC) stocking process to reduce medication errors, such as placing look-alike drugs in the incorrect bin or drawer. A key aspect of this is ensuring that all products are bar coded and that the bar codes are up-to-date. If the product we receive from the wholesaler differs from the shelf label for that product, then the technician alerts the pharmacist and/or the DoP of the change. A pharmacist will then enter the new product into the pharmacy information system and the ADC system. Bar code updates are generally required during drug shortages, contract changes, backorders, and brand-to-generic changes. Using scanning to replenish ADC stock is labor intensive, but provides an invaluable safety net. With this process, we rarely see medication errors due to incorrect ADC stocking.

Place all insulin products in the ADCs to decrease after-hours dispensing errors.

Due to the number of look-alike/sound-alike insulin products, there is an increased chance of dispensing errors with this type of drug. While the P&T committee can decrease the number of insulin products on the formulary to help reduce this risk, nursing staff will still need to be able to access insulin when the pharmacy is closed. In order to mitigate any risk of insulin product mix-ups, we decided to place all insulin products in the ADCs. Insulin pens are organized in drawers in the ADC so that when a nurse selects the insulin from the patient profile, the correct drawer opens wherein a single product has been placed. Since we started stocking all insulin in the ADCs, we have not encountered any insulin dispensing errors while the pharmacy is closed.



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Technology in use: **MedSelect and Pyxis**

Do not permit the return of controlled substances to the drawer they were pulled from as this increases the potential for diversion.

We use a one-way return drawer in our ADCs for returning controlled drugs. The size of the drawer is determined by the quantity of controlled medications used in that area (e.g., surgery versus pain clinic). The returned product, and the accompanying return slip, is placed into a clear plastic bag, which is then retrieved by the narcotic pharmacist for processing.

Instituting a policy wherein any unresolved discrepancies are charged back to the department where the discrepancy occurred can help prevent diversion. This approach helped us to get nursing staff to buy in to discrepancy management. After the monthly audit of the cabinet is complete, an advisory notice is sent to the nurse manager with a list of the monthly charges and any missing medications. We review these discrepancies with the nurse manager to identify any stocking errors or other issues and

any remaining discrepancies are charged to that department. We use this discrepancy resolution process as a teaching/learning tool. However, if this approach is not effective then the process of charging the department begins.



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To prevent diversion of high-cost and controlled substances:

- Use the blind count function rather than asking the nurse to simply verify a given amount. This will help pinpoint when a stock level changes inappropriately.
- Invest in biometric identification on your ADCs.
- Establish a process to remove from the system any users no longer associated with the hospital as soon as possible.
- Ensure that the auto-resolve feature is not on for any controlled substance. We have detected many instances of theft by doing this.
- Whenever possible, involve at least two individuals in the ordering, processing, and loading of controlled substances. Monitor load reports daily.

To avoid mix-ups with look-alike/sound-alike drugs, use individual compartments (e.g., Cubie pockets) instead of matrix drawers whenever possible. If you have to use matrix drawers, take special care to separate look-alike/sound-alike medications.

For items that are too large to fit into your ADC, use the remote stock function to track usage and identify any missing charges. Place these items on blind count so pharmacy will be notified immediately when a discrepancy occurs.



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 Technology in use: **Omnirx**

ADC reporting capabilities can be used to help prevent diversion of controlled dangerous substances (CDS). The ADCs at our facility are connected to the pharmacy narcotics vault and there are several reports that we process on a daily basis to help prevent diversion. These reports include restock/destock reports, which compare what was removed from our narcotics vault against what is stocked in the cabinets; discrepancy reports, which list all discrepancies on all CDS; and CDS receipt reports, which list all CDS stocked into the vault against wholesaler invoices for the day. In addition to this, we generate a daily CDS waste reconciliation report detailing partial doses of CDS used without corresponding waste documented. The reporting capabilities of our ADCs allow for cycle count compliance and discrepancy reports to be automatically generated and then directly e-mailed to all the unit-based managers.



Program reminders into the ADC to help avoid mix-ups with look-alike/sound-alike drugs. We have entered a reminder in the "notation" field of the ADC item database for each of the look-alike/sound-alike drugs that appears on the cabinet screen when a nurse accesses one of these drugs.

For drug removal that requires special attention and a response, set up customized dispensing alerts. For example, if a nurse tries to remove Clozaril from one of our ADCs, we set up an alert that asks them if the patient's white blood cell count is less than 3.5, and, if so, to contact the doctor and not remove the drug. All responses are then e-mailed directly to the pharmacy department for monitoring.

Establish a procedure to manage ADC downtime. The first thing we do when an ADC goes down is call the vendor to get the repair accomplished as soon as possible. (We do keep a limited supply of some parts on hand, including one hard drive.) While the cabinet is down, we encourage our nursing staff to obtain medications from another location whenever possible. If necessary, our cabinets—including the controlled substance drawers—can be opened for manual operation. In this case, nursing is required to document all drug removals. Upon repair, the remaining cabinet inventory must be reconciled with manually documented transactions, and the charges must be entered into the patient accounting system.



WHERE TO FIND: Automated Dispensing Cabinets

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Vendor	Reader Service Number
AmerisourceBergen Technology	1
CareFusion	2
Cerner	3
McKesson Automation	4
medDISPENSE	12
MTS Medication Technologies	7
Omniceil, Inc	8
S&S MedCart	11
ADC MONITORING SOFTWARE	
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