



## Purpose:

This policy outlines the process for provision, storage, tracking and security of medications using an Automated Dispensing Cabinet (ADC) in the Home to ensure medication access, potency, and safety.

(See page 6 for Glossary of Key Terms)

## Scope:

This policy applies to all personnel involved in supporting medication management including nurses, pharmacists, pharmacy technicians and assistants, and additional staff (such as leadership, maintenance, and IT), working to support the provision of medications to residents in a LTC Home.

## Introduction:

To decrease risk and improve security of medications, automated dispensing cabinets are being used to enhance medication management in Long-term Care. Common uses include:

- replacement of the emergency medication supply box (E-box) to enhance accuracy, accountability, and timely access to medications.
- as an inventory of the most commonly used medications based on historical information in order to enable timely access to first doses; and,
- as an inventory control mechanism to increase accountability regarding access to controlled substances.

## ADC Processes:

There are nine key components to ADC use.

- A. Authorized Access
- B. Medication Provision
- C. Medication Returns
- D. Wasting Medication
- E. ADC inventory
- F. Trouble Shooting Problems
- G. Power Outage and Emergency Backup Procedures
- H. Cleaning and Maintenance
- I. Yearly Review of Emergency Supply Medications



A) AUTHORIZED ACCESS

- a. ADC access credentials are assigned by the Director of Care or designate, as needed, to regulated nursing staff and pharmacy personnel.
- b. The Pharmacy ADC system administrator implements the following actions.
  - i. Provides security level access by job title, based on defined patient care responsibilities.
  - ii. Determines user groups and maintains the data set of access codes.
  - iii. Provides a temporary password to users who will create their own unique password.
  - iv. Enables BIO-ID (finger scan) access to the ADC where available.
- c. Physical access to the ADC by individuals from outside the Home (e.g., pharmacy technician, pharmacist, maintenance staff) will only be granted if a registered staff member (i.e., RN, RPN) is present.
- d. Access credentials are disabled immediately when staff are no longer engaged by the organization or move to a new role where access is no longer required.

B) MEDICATION PROVISION

Whenever possible the pharmacy team enters the medication order into the pharmacy and EMAR systems (these may be integrated). This includes a review by a registered pharmacist and the medications are resident-profiled and available from the ADC.<sup>1</sup>

If a pharmacist is not available, a registered nurse may enter the medication order into the EMAR and obtain the medication from the ADC using an override function in accordance with the override list. If a second nurse is available, the medication order entry is reviewed and confirmed in the EMAR.

The recommended leading practice is for the ADC to display medication names (generic or brand names) in the same format as documented on the EMAR. In addition, a minimum of 5 letters should be typed into the ADC before nursing staff can select a medication through the override function.

An approved override list for the ADC allows access to medications needed in advance of the pharmacist's order review. The pharmacy will review and verify the medication order at the next possible opportunity. The medications accessible by override are to be approved by the Professional Advisory Committee (PAC) in the home and reviewed annually, at minimum, to optimize benefits and reduce risks. The PAC will also review the ADC override report at least annually to ensure the override function is being used correctly. Emergency supply medications (e.g., antibiotics, diuretics, corticosteroids) are an example of medications included on the override list.



B) MEDICATION PROVISION (continued)

**The recommended leading practice is that the nurse obtains medications from the ADC for only one resident and one pass-time, at a time. The medications retrieved are immediately placed in the medication cart (i.e., resident’s pouch porter) before medications are retrieved for the next resident.** <sup>1</sup>

A label specific to the medication and the resident receiving the medication, is produced at the time of retrieval of the medication from the ADC to support safe administration.

Rescue medications (e.g., epinephrine, naloxone, glucagon, vitamin K, nitroglycerin) are kept in a separate emergency kit outside of the ADC for ready accessibility and availability for all staff.

C) MEDICATION RETURNS

Medications, if intact and still in the unit-dose packaging, are returned to the return bin and not to the specific medication storage bin within the ADC.

If a medication is not intact, the procedure for wasting must be followed.

D) WASTING MEDICATION

Wasting of medications occurs as described in the Home’s policy. Wasting of controlled substances is documented by two nurses — one nurse wastes the medication, and the other nurse serves as a witness to the discard.

E) ADC INVENTORY

Medications will be provided in unit-dose packaging. Registered Pharmacy Technicians will prepare the medications for restocking, and a Pharmacist or Registered Pharmacy Technician will check the medications and document this check prior to stocking of the ADC.

All medications will be inventoried (i.e., counted and checked) by pharmacy and nursing personnel during loading of a new medication and refilling of medications.

Controlled substances are stored in separate secure access drawers within the ADC. During any transaction accessing a controlled substance, the user will be required to verify the count of the controlled substance using the feature “blind counts”. When a discrepancy occurs, it should be resolved with a witness or reported to the charge nurse who will attempt to resolve the discrepancy. If the discrepancy cannot be resolved, an incident report will be generated.

Pharmacy will monitor medication use, inventory counts, and expiry dates of medications. During re-stocking, the new inventory in the ADC will be placed at the back of the machine such that the medications expiring first are used first. Expired medications removed from the ADC



E) ADC Inventory (continued)

will follow the same procedures for destruction as described in the home's policy (see Model Policy #6 Drug Destruction and Disposal for further information). Arrangement of medications within the ADC must consider the separation of look-alike sound-alike medications to reduce risk of error (see Model Policy # 8 Medication Storage for further information).

Inventory levels will be evaluated periodically by pharmacy and the PAC. Changes to inventory items and/or minimum stock levels will be based on analysis of usage reports, refill activity reports, formulary revisions and interdisciplinary collaboration.

F) TROUBLESHOOTING PROBLEMS

Problems that cannot be resolved in the Home, should be reported to the pharmacy. If problems cannot be resolved by pharmacy personnel, the ADC vendor will be contacted for resolution.

G) POWER OUTAGE and EMERGENCY BACKUP PROCEDURES

The ADC is to be connected to emergency power. If it becomes necessary to open the ADC manually for medication access, the pharmacy should be contacted immediately for assistance.

H) CLEANING and MAINTENANCE

Designated and trained staff at the Home will clean and maintain the ADC. A preventative maintenance schedule should be arranged with the ADC vendor. The ADC is always tethered to the wall or floor, including during cleaning and maintenance.

I) YEARLY REVIEW of EMERGENCY SUPPLY MEDICATIONS

See Model Policy # 5 Emergency Medication Supply found here:

[LTC-Model-Policy-5-Emergency-Medication-Supply.pdf \(ismp-canada.org\)](#)

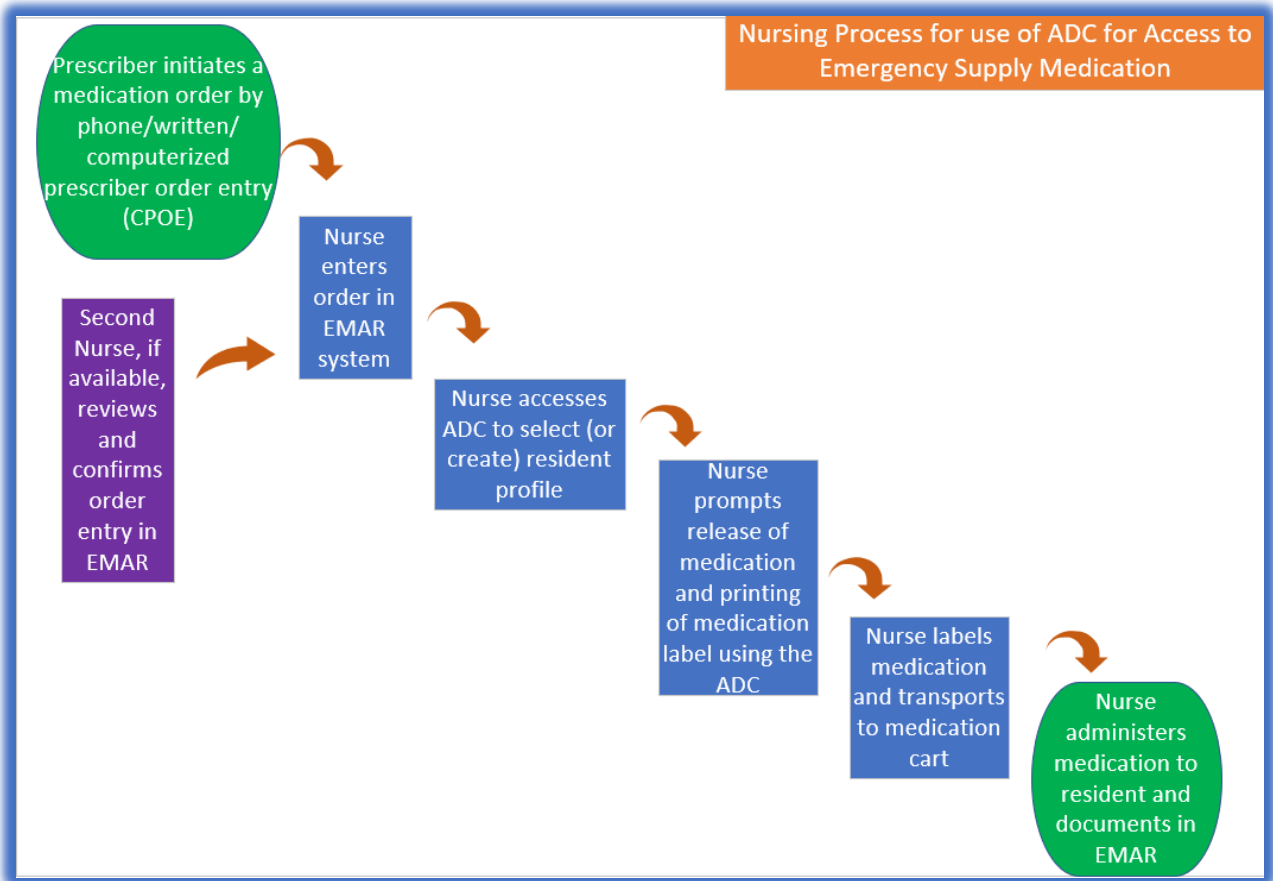
The contents of the ADC, including emergency supply medications, are reviewed at the PAC meeting, annually at minimum, to ensure they continue to meet the needs of the Home.

Considerations include:

- is the medication being used?
- is the quantity of the medication sufficient to meet the demand?
- are there medications that should be added or removed based on changing needs?



### Process Map for Emergency Access to ADC by Regulated Nursing Staff





**Glossary of Terms:**

Term	Definition
Medication Management	Medication management is defined as patient-centred care to optimize safe, effective, and appropriate drug therapy. Care is provided through collaboration with patients and their health care teams.
Automated Dispensing Cabinet (ADC)	An Automated Dispensing Cabinet is a <b>computerized medicine cabinet used in healthcare settings</b> . ADCs allow medications to be stored and dispensed near the point of care while controlling and tracking drug distribution.
Professional Advisory Committee (PAC)	An interdisciplinary team, which must include the Medical Director, the Administrator, the Director of Nursing and Personal Care and the pharmacy service provider, meets at least quarterly to evaluate the effectiveness of the medication management system in the home and to recommend any changes necessary to improve the system. <sup>2</sup>
Blind count	A blind count contains <b>the item and location information but does not show the calculated, or frozen inventory, at the time of the count.</b> <sup>3</sup>
Controlled substances	All therapeutics approved for marketing in that appear in the Schedules of the Controlled Drugs and Substances Act. Typical examples from the nursing home context include opioids, amphetamine derivatives, cannabinoids.
Rescue Kit	A supply of medications stored outside the ADC that require urgent access to treat time-sensitive conditions such as allergy, hypoglycemia etc. Examples of medications contained in the rescue kit are: epinephrine, naloxone, glucagon, vitamin K, nitroglycerin etc.
Emergency medication supply (EMS)	A supply of medications that may be needed in case of a change in a resident’s clinical status. This supply may also house medications that may typically be needed outside of the Pharmacy Service Provider’s usual delivery schedule. Examples of medications contained in the EMS are antibiotics, diuretics, prednisone etc.



Strengthening Medication Safety in Long-term Care

## Model Policy 7 for Testing

To support LTC Homes in their review and updating of medication management policies

## Automated Dispensing Cabinets

### References:

1. <https://www.ismp-canada.org/download/cjhp/cjhp0711.pdf>
2. Ontario Regulation 246/22 section 124(1).
3. <https://www.champion-business-solutions.com>

*We gratefully acknowledge the background information provided to ISMP Canada by Fairview Lodge/MediSystem Pharmacy, peopleCare Hilltop/CareRx Hogan's Pharmacy and the University of Toledo Medical Centre.*

### Revision History:

Revision Number	Effective Date	Reason for Change	Version Number
1			
2			