



### **Purpose:**

The purpose of this policy is to describe the process for safe medication storage in the Home, including the accountability for ensuring their security and for maintaining their potency.

*(See page 7 for Glossary of Key Terms)*

### **Scope:**

This policy applies to all personnel involved in the storage of medications and includes all methods of storage for all medications (controlled and non-controlled), as well as natural health products, nutritional supplements, complementary medicine products, or traditional medicines.

### **Principles of Safe Medication Storage:**

There are five principles to consider in developing, implementing, and evaluating medication storage.

- *Role of Leadership*  
Medical, nursing and pharmacy leaders ensure that medication storage requirements have been formalized and that each team member in the home is aware of their responsibilities in this process. Leadership also encourages staff to identify and report any errors or concerns related to safe storage of medication.
- *Role of Staff*  
All staff play an integral role to the accurate and complete implementation of this policy. Any errors or concerns should be reported through the specified process for analysis and learning.
- *Security*  
All medications need to be secured in a way that enables only their appropriate access and administration. Explicit and limited access to controlled medications will reduce the risk of errors and/or diversion for personal use or sale.
- *Potency*  
Medications must be stored according to the manufacturer's specifications to maintain their potency and effectiveness.
- *Look-alike Sound-alike (LASA)*  
To limit the risk of incorrect selection of look-alike sound-alike medications, packaging must include easily discernable differences between medication names and strengths within all medication storage areas. Extra steps are required to differentiate medication storage containers that pose a risk to safe selection.

There are a variety of required and recommended practices related to the safe storage of medications in long-term care that support the implementation of the five principles. See Appendix A for a summary of selected examples.



**There are 6 steps to the safe storage of medications:**

**1. Receipt of Medications at the Home**

Medications are delivered to the Home following a standardized process by all parties including the Pharmacy Service Provider and any designated back-up providers.<sup>1</sup>

- A medication delivery time is arranged prior to the arrival of medications at the Home and a designated location for receipt of the medication delivery is established.
- Confidentiality, security, and storage considerations are maintained during the delivery process.
  - No resident-specific information is visible on package
  - Refrigerated items are stored between 2 and 8 degrees Celsius
  - Tamper-proof packaging is used to prevent diversion of controlled substances
  - A paper or electronic documentation method is used to ensure the complete and accurate documentation of the receipt of medications by a registered staff member (including an identifying credential).

*(See Appendix B for Delivery Receipt example)*

**2. Confirm and Unpack Medications Received**

A registered staff member will receive the medications from the Pharmacy Service Provider, proceed to the location where the medications are to be stored, and ensure the following actions are completed.

- Confirm contents of the **refrigerated** medication cooler by comparing to the packing slip and storing medications in the refrigerator in the locked medication room.
- Unpack the contents of the **daily** medication order container and compare to the packing slip for accuracy. This container is a priority as it includes medications that require timely administration.
- Unpack the contents of the **controlled medication** container (if packaged separately) and, with a second nurse, document the receipt of each controlled medication.
- Unpack the contents of the **weekly** medication order container (weekly strips) and compare to the packing slip for accuracy.

If the nurse is unable to unpack any component of the order immediately after receipt, ensure that the storage of these medications is such that there is no exposure to environmental conditions that may affect their security, potency, or stability.



### 3. Store Medications in Secure Location and According to Requirements

All medication storage areas are used exclusively for this purpose and must be secured and always locked when not in use. If a resident's care plan includes self-administration, the resident must have a locked area within their room to store medication. Locks must always be functional.<sup>1</sup>

#### A. Medication Room/Cart Storage

- Only authorized and/or regulated staff have access to the medication room or cart.

Note: The keys to the various storage areas must always be kept with a designated and responsible registered nursing staff member. Access to the medication storage areas is restricted to persons who may dispense, prescribe, or administer medication in the home and the Administrator.<sup>1</sup>

- The room or cart is used to store medications and related supplies only.
- Discontinued or expired medications are removed and added to the appropriate destruction container immediately.
- The room or cart is protected from heat, light, humidity, or other environmental conditions to ensure potency of medications.
- Oral medications are stored separately from eye and ear drops, inhalers, injectables, and topical medications.
- Containers typically used for oral medications should never be used to store substances not intended for consumption e.g., cleaning solutions should never be stored in an old medication stock bottle.

#### B. Refrigerator Storage

- Vaccines are not stored in the door of the refrigerator due to variations in temperature.
- Temperature checks are completed daily and documented. A contingency plan is in place to ensure products are maintained between 2 and 8 degrees Celsius e.g., alternate refrigerator available for medication storage, generator for power outage. Temperature excursions outside the 2 to 8 degrees Celsius range must be reported to the manager on duty.
- Refrigerated **controlled** medications are to be stored in a stationary double-locked box within the refrigerator and access granted only to registered staff working on the unit, as well as a specified back-up e.g., charge nurse.



### 3. Store Medications in Secure Location and According to Requirements (continued)

#### C. Controlled Substances

- Must be stored in a separate locked box within the locked medication cart.
- If controlled substances are stored in a medication room, they must be stored in a separate, double-locked stationary cupboard and the medication room must always be locked (unless occupied by authorized personnel).
- A controlled substance that is to be destroyed and disposed of (e.g., discontinued, expired, etc.) must be removed from the locked narcotic box in the medication cart/room and transferred to a separate stationary, secure double-locked storage container within the home until the destruction and disposal occurs. This double-locked storage bin is accessible only to the Director of Care or designate and the pharmacist.<sup>2</sup>
- At minimum, a monthly audit of controlled medications must occur and a standardized process to investigate discrepancies followed.

#### 4. Storage Considerations for Residents in Isolation

- Safe medication storage must consider Infection Prevention and Control (IPAC) measures to reduce the spread of infection, including:
  - Use a dedicated cart (with dedicated staff) to store medications for residents in isolation.
  - Disinfect equipment used to administer medication prior to re-storing in the cart e.g., insulin pens, glucometers etc.
  - Keep individual resident's medications in a separate labelled container(s) e.g., pouch porter

#### 5. Special Considerations for High Alert Medications

Due to the heightened risk of causing significant harm to residents when used in error, high alert medications require additional considerations for storage.<sup>3</sup>

High Alert medications should be:

- stored in a separate area from other medications e.g., separate pouch porter in the cart.
- packaged separate from other medications being administered e.g., separate labelled pouch or card dedicated to the high alert medication. For example, warfarin in separate pouch within the strip to call attention to it.
- Labelled as "High Alert" to warn the nurse to take extra steps to ensure safe administration e.g., independent double checks.
- Examples of high alert medications include anticoagulants, opioids, insulin, sulfonylureas, methotrexate for nononcologic use etc. For a comprehensive list of High Alert medications, refer to Model Policy #2 [LTC-Model-Policy-2-High-Alert-Medications.pdf \(ismpcanada.ca\)](#).



## 5. Special Considerations for High Alert Medications (continued)

### Insulin

#### Concentrated Insulin

- The use of concentrated insulin (500 units per mL, referred to as U-500) should be avoided. When high doses of insulin are required for insulin-resistance, the need for a segregated storage area separate from U-100 insulins is imperative. In addition, the storage of syringes used in the administration of U-500 and U-100 insulins must also be segregated to prevent the inadvertent administration of a U-500 insulin with a U-100 appropriate syringe resulting in a five-fold dosage increase.<sup>4</sup>
- The use of high alert labelling for insulin products to aid in the differentiation of insulin types and concentrations is an important additional consideration.<sup>4</sup>

#### Quantities of Insulin

- Justice Gillese's Long-term Care Inquiry Report Recommendation 10 outlines that "Licensees should take reasonable steps to limit the supply of insulin in long-term care homes." Homes should implement a standardized approach to limiting the quantity and enhancing the security of insulin products e.g., use of refrigerated components of Automated Dispensing Cabinets, reducing quantities sent by Pharmacy Service Provider (PSP), and reviewing insulin inventory levels with PSP.

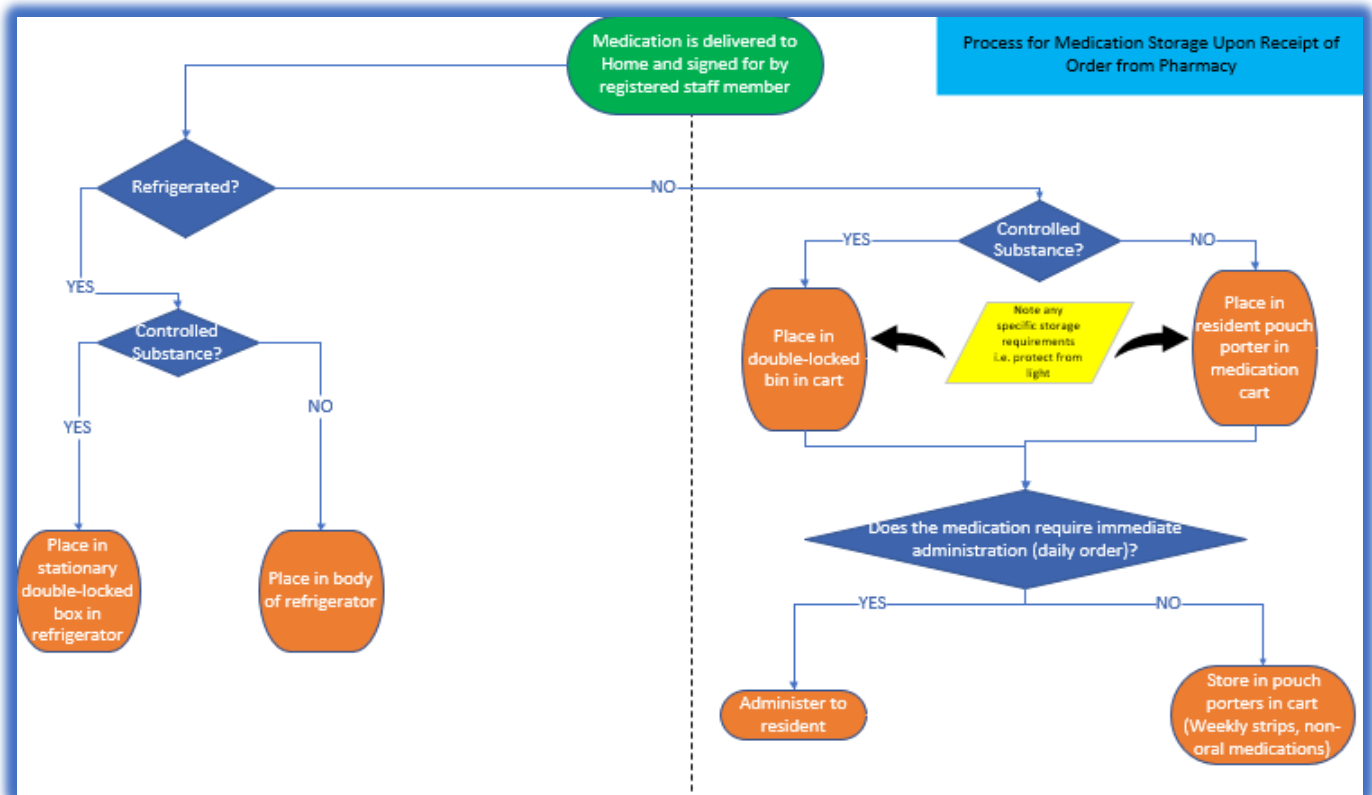
## 6. Implement Medication Storage Audits

At least monthly, an audit of the storage of medication must be completed including an assessment of the following areas:

- Medication stored in the cart (Appendix C)
- Medication stored in the medication room (Appendix D)
- Medication awaiting destruction (Appendix E)
- **Note: For homes using Automated Dispensing Cabinets, please refer to Model Policy 7 for specific storage practices [LTC-Model-Policy-7-Automated-Dispensing-Cabinets.pdf](https://ismpcanada.ca/LTC-Model-Policy-7-Automated-Dispensing-Cabinets.pdf) ([ismpcanada.ca](https://ismpcanada.ca)).**



### Process Map for Medication Storage Upon Receipt of Order from Pharmacy





## Glossary of Key Terms:

Term	Definition
Controlled substance	Definition “Controlled substance” means a controlled substance within the meaning of the Controlled Drugs and Substances Act (Canada). Typical examples from the nursing home context include opioids, amphetamine derivatives, cannabinoids.
Non-controlled medications	All therapeutics approved for marketing in Canada by Health Canada that do not appear in the Schedules of the Controlled Drugs and Substances Act. These medications typically have a Drug Identification Number (DIN) or a Natural Product Number (NPN).
Targeted medications	Therapeutics, that, although they may not be Controlled Medications, warrant treatment as Controlled Medications due to the potential risks of the drug.
Natural health products, nutritional supplements, complementary medicine products, or traditional medicines.	These therapeutic products encompass all other treatment modalities that are expected to have a physiologic effect. These may also include dietary supplements. <sup>5</sup>
Drug Destruction	A drug is considered to be destroyed when it is altered or denatured to such an extent that its consumption is rendered impossible or improbable. <sup>1</sup>
Controlled Medication Destruction Team	Controlled substances must be destroyed by a team acting together made up of one member of the registered nursing staff appointed by the DONPC and a physician or pharmacist. This requirement is subject to any requirements that apply under the Controlled Drugs and Substances Act (Canada) or the Food and Drugs Act (Canada). <sup>1</sup>
High Alert Labelling	Use of coloured auxiliary labels to differentiate High Alert medications from other medications and to alert nurses of possible increased risk of harm.
Tallman Lettering	Tallman lettering is the writing of part of the medication name in upper case letters. This practice helps to differentiate look-alike, sound-alike (LASA) medications from one another thus reducing the risk of medication errors. Example - dimenhyDRINATE / diphenhydrAMINE <sup>6</sup>



Strengthening Medication Safety in Long-term Care

## Model Policy 8 for Testing

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

## Medication Storage

### References:

1. Ontario Regulation 246/22, Sections 123-149,  
<https://www.ontario.ca/laws/regulation/r22246#BK161>
2. OPA Best Practice Guidelines for Long-Term Care: Inspections of the Medication Management System, 2020 [cited 2021 Aug 24].  
[Best Practice Guidelines for Long-Term Care | Ontario Pharmacists Association \(opatoday.com\)](#)
3. [HighAlertMedications-APFH-28Oct2018.pdf \(ismp-canada.org\)](#)
4. Medication Errors, Michael R. Cohen, American Pharmacists' Association, 2007  
[Medication Errors - Google Books](#)
5. [Natural health products - Canada.ca](#)
6. Medication Self-Assessment for Long-Term Care, ISMP Canada, April 2021
7. Principles for Safe Selection and Storage Survey Tool:  
[Principles for the safe selection and storage of medicines – Guidance on the principles and survey tool safetyandquality.gov.au](#)
8. Safe and Effective, The Eight Essential Elements of an Optimal Medication-Use System, Canadian Pharmacists Association, Neil J. Mackinnon, 2007





## Attachments

### Appendix A – Medication Storage Safety Practices in Long-Term Care

Medication Storage Safety Practices in Long-Term Care	Examples
Drugs must be stored in an area, medication cart, or refrigerator that is used exclusively for drugs and drug-related supplies, is secure and locked, protects drugs from heat, light, humidity, and other environmental conditions and that complies with the manufacturer’s instructions for the storage of drugs. <sup>1</sup> These requirements do not apply to drugs that a resident is permitted to keep on their person or in their room in accordance with section 140.8 of the Ontario regulation 246/22.	Personal items are not stored in the medication cart
Controlled substances must be stored in a separate, double-locked stationary cupboard in a locked area or in a separate locked area within a locked medication cart. <sup>1</sup>	Locked bin within medication cart
A proactive risk assessment, including considering how names or packaging might lead to confusion or harm, is performed before the use of a NEW high-risk medication. <sup>7</sup>	Medications with Look-alike Sound-alike (LASA) names and/or high-alert medications
A regular (at least monthly) audit of the medication room and medication cart is performed to ensure adherence to applicable policies and that any risk reduction strategies have been implemented. <sup>7</sup>	Risk reduction strategies include separation/segregation of products, restricting access, alert labels, Tall Man lettering
The physical design, layout and type of storage equipment and technology ensures the safe storage of medications. <sup>7</sup>	Uncluttered, Well-organized
Medication incident reports are analyzed for any key contributing factors related to storage and recommended improvements are acted upon. <sup>7</sup>	Refrigerated medications left at room temperature
Residents and families are included in education regarding proper storage of their medication. <sup>7</sup>	Communicate to resident that their eye drops expire 4 weeks after opening
Only store high potency opioids when prescribed for a specific resident. If storing high potency opioids, clearly separate and apply alert labels in the separate locked compartment of the medication cart. <sup>7,8</sup>	Hydromorphone HP 10mg/ml injection
Store different strengths/formulations of the same medication using shelf dividers or separate shelves in the medication room. <sup>7</sup>	Morphine and Hydromorphone injection products clearly segregated with shelf dividers, distance, and additional labelling in narcotic bin
Store strengths of known and potentially confusable medications separately. <sup>7</sup>	Only one ampoule of morphine injectable available from ADC at one time
Use automated storage technology to add safety. <sup>4,6</sup> Design automated systems to dispense a single dose of medication for a specific resident at any one time.	Unique auxiliary label for pouch porter to alert to LASA drugs
Use standardized storage/signage labels or alerts to organize medication storage areas. <sup>7</sup>	Nitroglycerin tablets must be protected from light
Store medications in their original packaging that contains important storage information. <sup>7</sup>	Refrigerator placement and Government stock storage area is consistent from one nursing unit to the next
Medication storage areas incorporate consistent features from unit to unit to limit process variation across nursing units. <sup>7</sup>	
Important to remove discontinued/expired medications from storage in a timely manner. <sup>7</sup>	Use medication cart, and medication room audits to confirm this process is occurring in a timely manner.



**Appendix B – Delivery Receipt Example**

<b>Date</b>	<b>Time</b>	<b>Delivered by:</b>	<b>Received by:</b>	<b>Credential for receipt of controlled substances</b>	<b>Number of bags of Controlled Medications</b>	<b>Number of boxes Weekly Strips</b>	<b>Number of bags of refrigerated items</b>	<b>Other i.e., supplies</b>



## Appendix C – Medication Cart Audit Example

*Performed by:* Nurse and Pharmacy Representative (Pharmacist, Registered Pharmacy Technician, Nurse)

Scheduled: Monthly

Procedure:

1. Start with the top drawer of the cart and proceed through all drawers to the bottom of the cart and remove all expired and inappropriately stored items for disposal.
2. *Storage of strip medications in medication bins (pouch porters):*
  - a. Ensure the medication bins are labelled with the residents' names and room numbers. Resident pictures, or other independent mechanism for accurate identification, are in place. Multiple bins for the same resident must be labelled and arranged together.
  - b. Check each bin for stray tablets/capsules. If found, document as dose omissions.
  - c. Personal items must not be stored in the cart. Note any items found i.e., money, dentures, jewellery, hearing aids etc.
  - d. Ensure the strip packaging has the current dates, documenting any strips found to have dates of preceding weeks. Separate old strips for disposal after the cart audit. **Note:** Strips supplied prior to the hospitalization of a resident must be removed from the cart and discarded to ensure accurate administration of medication upon return of the resident to the home.
3. *Medications with a short expiry date* must be labelled to alert nursing staff during administration. A standardized format of expressing expiry date is recommended e.g., 28JUN2022 and used throughout all medication management systems. Medications with short expiry may include eye and ear drops, topical preparations, specific inhalers, nasal sprays, and insulin. Medications that are close to expiry or expired must be re-ordered to ensure treatment of resident is not interrupted.
4. *Midweek orders in vials or add-on strips* must be compared to the current weekly strip to ensure no duplication of therapy. If found, discard the vial or add-on strip as appropriate.
5. *Internal and external medications* must be stored separately.<sup>4</sup> Store external products in the treatment cart away from the internal medications. Discontinued topical preparations must be removed and discarded. Bulk creams and ointments are used for one resident only to minimize cross-contamination e.g., analgesic balm.
6. All medications must be obtained from the designated Pharmacy Service Provider (Or their designated substitute) unless the medication/supplement cannot be procured by the pharmacy. (Ontario Regulation 226/22 section 131.2) In these cases, the *medication supplied by an outside source* e.g., family, renal clinic, cancer clinic must be labelled appropriately and have a prescriber order on the Medication Administration Record (MAR). A confirmation that the labelling on the package matches the physical appearance of the medication is performed and documented in collaboration with the Pharmacy Service Provider if required.

Model Policy for review and adaptation by LTC Home

Note: each Home is unique therefore review and modification where applicable is required.



### Medication Cart Audit Example (continued)

7. A standardized process must be in place to ensure devices used in the administration of medications are cleaned and stored following appropriate infection control measures e.g., glucose monitors, chambers for inhaled medications etc. have a cleaning schedule and are stored separately in the cart to avoid cross-contamination.
8. Cytotoxic medications must be appropriately packaged and labelled to ensure proper handling e.g., oral tablets and capsules are packaged separately, and topical preparations stored in plastic bags to minimize staff exposure during administration.
9. Check blister-packed cards to see if the medication is expired as per the label and remove expired cards. Check to see if the product should be re-ordered.



**Example Medication Cart Audit Documentation Form**

General Criteria	Met	Unmet	Notes/Examples
The medication cart is always locked and secure (except when overseen by a registered staff member). <b>Ontario Regulation 226/22 138.1.a.ii</b>			
The medication cart is used exclusively for drugs and drug-related supplies. <b>Ontario Regulation 226/22 138.1.a.i</b>			
The medication cart protects the drugs from heat, light, humidity, or other environmental conditions to maintain efficacy. <b>Ontario Regulation 226/22 138.1.a.iii</b>			
Controlled substances are stored in a separate locked area within the locked medication cart. <b>Ontario Regulation 226/22 138.1.b</b>			
A monthly audit shall be undertaken of the daily count sheets of controlled substances to determine if there are any discrepancies, and that immediate action is taken if any discrepancies are discovered. <b>Ontario Regulation 226/22 139.3</b>			
Internal products are stored separately from external products. <b>Medication Errors, Michael Cohen, page 209</b>			
All medications are legibly labelled and kept in the original labelled packaging. <b>Ontario Regulation 226/22 135 and 148</b>			
All discontinued or expired medications have been removed from all areas of the medication cart. <b>Ontario Regulation 226/22 148</b>			
Medications with short expiry are labelled with the date opened and discarded when expired i.e., insulin, eye drops, certain inhalers. <b>Ontario Regulation 226/22 138.1.a.iv</b>			
High Alert Medications are labelled for ease of identification.			
Oral cytotoxic medications are labelled and packaged separately from the weekly strips for ease of identification.			
Topical and injectable cytotoxic medications are labelled and stored in a plastic bag for ease of identification.			
Topical treatments (creams, ointments) that are supplied in large containers i.e., government stock are used for one resident only.			
Inhalation chambers are cleaned and stored in a hygienic manner on a regular basis dependent on frequency of use.			
Surface of cart is wiped with anti-bacterial wipe after each medication pass and when a spill occurs.			
Outside sources of medications are only used in the event the Pharmacy Service provider is unable to supply the medication/product (family supplied, renal clinic, cancer clinic).			

Completed by: \_\_\_\_\_

Date: \_\_\_\_\_

Home representative: \_\_\_\_\_

Model Policy for review and adaptation by LTC Home

Note: each Home is unique therefore review and modification where applicable is required.



## Appendix D – Medication Room Audit Example

Performed by: Nurse and Pharmacy Representative (Pharmacist, Registered Pharmacy Technician, Nurse)

Scheduled: Monthly

Procedure:

1. *Medication cabinets* must only contain up to 3 months' supply of resident medication which has a current order on their MAR. Check that these medications are not expired and that they can be safely stored at room temperature. Remove all expired and inappropriately stored items for disposal.
2. *Government stock medications* that are stored in the medication room must be checked for expiry. The quantity of these medications must reflect a 3 months' supply. It is recommended that look-alike, sound-alike medications and medications with similar labelling be stored separately to minimize medication errors.
3. *Hazardous chemicals and cleaning products* (with the exception of wipes for cleaning medication counters and carts for infection control) are not to be stored in the medication room.
4. *The refrigerator* temperatures are checked and documented twice daily to ensure proper storage of refrigerated products between 2 and 8 degrees Celsius. Temperature excursions are documented and reported to management immediately. Refrigerators are connected to the Home's emergency power system.
  - a) Refrigerator contents are limited to medications only. Food and drinks are not to be stored in the medication refrigerator. Nutritional supplements are part of the medication pass and can be stored in the refrigerator.
  - b) Check that all medications found in the refrigerator require refrigeration. Remove any products not requiring refrigerated storage as per manufacturer's directions.
  - c) Ensure the labelling on all products is clear and the medication is not expired. Re-order expired products if there is a valid order on the MAR and the product is being used.
  - d) Products with old dispense dates must be checked to ensure an active order is found on the MAR and the product is still required.
  - e) Assess that the refrigerator is in good working order and clean.



**Example Medication Room Audit Documentation Form**

<b>General Criteria</b>	<b>Met</b>	<b>Unmet</b>	<b>Notes/Examples</b>
The medication room is locked at all times. <b>Ontario Regulation 226/22 138.a.ii</b>			
Recent and relevant drug reference materials are available to nursing staff. <b>Ontario Regulation 226/22 127.1</b>			
The Pharmacy Service Provider contact information is posted in the Medication Room. <b>Ontario Regulation 226/22 127.2</b>			
The contact information for at least one poison control centre or similar body. <b>Ontario Regulation 226/22 127.3</b>			
Hazardous chemicals or cleaning compounds are not stored in the medication room. <b>MSSA-LTC 14.1</b>			
<b>Government Stock Medications</b>			
The maximum supply of any drug does not exceed 3 months. <b>Ontario Regulation 226/22 133</b>			
External and internal medications are stored separately. <b>Medication Errors, Michael Cohen, page 209</b>			
Expired and discontinued medications have been removed from the medication room. <b>Ontario Regulation 226/22 148.1.a</b>			
Medications are stored as per manufacturer's recommendations i.e., refrigerated/not refrigerated <b>Ontario Regulation 226/22 138.a.iv</b>			
<b>Refrigerator</b>			
Refrigerator is kept in a locked room or is locked. <b>Ontario Regulation 226/22 139.1</b>			
Refrigerator temperature is checked twice daily and maintained between 2 and 8 degrees Celsius. <b>Ontario Regulation 226/22 138.1.a.iii and iv</b>			
Only medication and vaccines are stored in the refrigerator. <b>Ontario Regulation 226/22 138.1.a.i</b>			
Medications and vaccines are stored in the body of the refrigerator and not in the door. <b>Ontario Regulation 226/22 138.1.a.iii and iv</b>			
Expired and discontinued medications have been removed from the refrigerator. <b>Ontario Regulation 226/22 148.1.a</b>			
Open refrigerated products are labelled with date opened and discarded as per manufacturer's recommendations. <b>Ontario Regulation 226/22 138.1.a.iv</b>			

Model Policy for review and adaptation by LTC Home

Note: each Home is unique therefore review and modification where applicable is required.



### Appendix E - Medication Awaiting Destruction Audit

Performed by: Nurse and Pharmacy Representative (pharmacist, Registered Pharmacy Technician, nurse)

Scheduled: Monthly

Procedure:

1. Ensure Non-controlled medications awaiting destruction are stored in a secure container in the medication room. The container must protect the contents from accidental ingestion or misuse.
2. Check that controlled medications awaiting destruction are stored in a secure stationary container in a double-locked storage area, separate from any controlled medications stored for administration.<sup>1</sup> The contents must only be accessible by the Controlled Medication Destruction Team (see Glossary of Key Terms).<sup>1</sup>
3. After destruction of all medications, seal the storage container to ensure the contents are irretrievable and unusable (denatured) and stored in a locked room awaiting pick-up by the waste management company.

#### Revision History:

Revision Number	Effective Date	Reason for Change	Version Number
1			
2			

Model Policy for review and adaptation by LTC Home

Note: each Home is unique therefore review and modification where applicable is required.