



Medication Management

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College of LPNs and HCAs of Alberta

Licensed Practical Nurse Policy

TABLE OF CONTENTS

Introduction	2
Purpose	2
Authorization For Medication Administration	2
Medication Orders	4
Medication Administration and Cultural Safety	8
Medication Rights & Checks	9
Medication Reconciliation.....	12
Medication Preparation.....	12
Administration and Management of Controlled Drugs and Substances	15
Off-Label Use of Medication	15
Medication Administration for the Purpose of Research.....	16
Medication Administration for Aesthetic Purposes	16
Administration of Cannabis for Medical Purposes	16
Administration and Distribution of Naloxone	17
Administration of Complementary and Alternative Therapies.....	17
Immunization and Vaccine Administration	18
Evaluating Client Outcomes	18
Documentation	19
Storage, Disposal, and Transportation of Medication	19
Over-the-Counter Medications	20
Client’s Own Medication	21
Medication Safety.....	21
Conclusion.....	22
Definitions.....	24
References	26

INTRODUCTION

The College of Licensed Practical Nurses and Health Care Aides of Alberta (CLHA) has the authority under the *Health Professions Act* (HPA) to carry out its activities and govern Licensed Practical Nurses (LPNs)* in a manner that protects and serves the public interest.

This document outlines the LPN's scope of practice as it relates to the authorization and requirements for safe management of medication.

For LPNs supervising or assigning Health Care Aides (HCAs) to provide medication assistance to clients, please see the *Standards of Practice for Health Care Aides on Restricted Activities and Supervision Requirements*, the *Medication Assistance* policy and the *Performing Activities of Daily Living* practice guideline.

Terms found in the definition section are **bolded** where they appear for the first time in this document.

PURPOSE

The purpose of this document is to provide direction to LPNs related to their role in medication management. This policy follows the nursing process and refers to the assessment, planning, preparation, implementation, administration, evaluation, and documentation required in the management of medication.

AUTHORIZATION FOR MEDICATION ADMINISTRATION

Legislative and Regulatory Authority

Drugs in Canada are controlled at a federal level by the *Food and Drug Act*, the *Controlled Drugs and Substances Act* and the regulations made under those acts, including the *Natural Health Products Regulations*.ⁱ In Canada, drugs are categorized into four categories derived from the schedules to the *Controlled Drugs and Substances Act*:

1. **Schedule 1** drugs require a prescription as a condition of sale.
2. **Schedule 2** drugs are available without a prescription but must be obtained from a pharmacist.
3. **Schedule 3** drugs are available without a prescription from the self-selection area of a pharmacy.
4. **Unscheduled** drugs are not listed in a national or provincial schedule and may be sold from any retail outlet.ⁱⁱ

For additional information related to drug schedules, please refer to the Alberta College of Pharmacy (ACP) website at <https://abpharmacy.ca/drug-schedules>. Health Canada maintains a

* In this document, "LPN(s)" has the same meaning as "regulated member(s)" in the *Health Professions Act*

database with information on licensed natural health products available at <https://health-products.canada.ca/lnhpd-bdpsnh/index-eng.jsp>.

The LPN's authorization to administer medication in Alberta is primarily governed by the HPA and *Health Professions Restricted Activity Regulation (HPRAR)*.

The HPRAR provisions list high-risk health service activities, known as restricted activities. These activities may only be performed by regulated health professionals who have been specifically authorized in their profession's regulation to do so. Although **medication administration** is not a specific **restricted activity**, the route or way a medication is administered may be a restricted activity. The HPRAR provisions do not place restrictions on the administration of medications by non-invasive routes, which include oral, topical, or inhalation.

The LPN Role

Medication management and administration are performed in accordance with legislation, regulatory standards, policy documents, employer requirements, and individual competence across all practice settings. The LPN may manage and administer medication under the following conditions.

- The LPN must have the education, knowledge, and competence to accept and transcribe (record) medication orders according to employer requirements.
- The LPN must have the education, knowledge, and competence to safely prepare, initiate, administer, monitor, titrate, and discontinue medications.
- The LPN must adhere to the core rights and checks of medication administration to ensure client safety.
- The LPN must always include the client's individual rights and needs determined through health assessment, the LPN's competence, and the availability of support in the practice environment to ensure safe medication administration.

The HPRAR permits LPNs to perform the restricted activity of administering anything by an **invasive procedure** on body tissue below the dermis for the purpose of administering injections or for starting a peripheral intravenous line. Therefore, under the HPRAR, the LPN may prepare, initiate, monitor, titrate, and discontinue the delivery of medications via infusion or injection that includes, but is not limited to, the following routes: intravenous, intraosseous, intradermal, intramuscular, or subcutaneous.

The HPRAR permits LPNs to perform the restricted activity of administering medication via a central venous line or administering parenteral nutrition as well as restricted activity related to hemodialysis if the LPN obtains advanced authorization from the Registrar. The practice and education requirements for performing such restricted activities related to medication administration can be found in the *Standards of Practice on Restricted Activities, Advanced Practice, and Supervision*.

LPN Practice

While the CLHA has the authority to define the scope of practice for LPNs in Alberta, employer organizations define the role of the LPN specific to a practice environment. This may vary depending on the specific care requirements, care delivery model, and staff mix in the practice area. Although an LPN may be authorized under legislation to perform certain activities, LPNs must work within the role articulated by the employer's job description and any related employer requirements.

With respect to medication administration, legislation does not specify what medications can be administered by which provider. This allows flexibility for employers to determine what medications are appropriate for certain providers to administer based on client needs, provider competencies, and the resources available in that specific care environment. In certain areas of practice, employers may require LPNs to obtain site-specific education before performing certain activities within their facility.

Individual Competence

Nursing competence represents the integrated knowledge, skills, behaviours, attitudes, critical thinking, evidence-informed inquiry, and clinical judgments required to provide safe, competent, and ethical nursing care. LPNs are responsible and accountable for ensuring they hold individual competence in their nursing practice.

The core importance of managing and administering any medication is to ensure the health and safety of the client. This means that the LPN is knowledgeable about the medication and that it is appropriate for the client.

MEDICATION ORDERS

Authorized Prescriber

LPNs require an order from an **authorized prescriber** before administering medication to a client. Authorized prescribers may include, but are not limited to, physicians, medical residents, nurse practitioners, pharmacists, midwives, and dietitians.ⁱⁱⁱ LPNs are responsible for knowing and staying up to date on who an authorized prescriber is and the extent of the prescribing authority of different health professionals.

Components of a Complete Medication Order

Acceptable medication orders are clear, complete, current, legible, and clinically relevant. The LPN should clarify any missing components and unclear directions with the authorized prescriber as soon as possible before taking any further action. A complete medication order includes the:

- client's full name;

- date prescribed;
- medication name, strength, and dosage;
- route;
- dose frequency;
- reason the medication is prescribed; and
- signature of the authorized prescriber.^{iv}

If the order is unclear, incomplete, or there is any question of accuracy, the LPN must contact the authorized prescriber for clarification prior to administration.

Abbreviations

Abbreviations, acronyms, and symbols are a short-hand form of communication often used in medical prescriptions, orders, and documentation. Although abbreviations, acronyms, and symbols can seem like a quick shortcut, the use of these is also one of the most common causes of medication errors.^v LPNs should follow employer requirements on the use of approved abbreviations, acronyms, and symbols in their documentation.

If a medication order contains a prohibited abbreviation or symbol, the LPN is responsible for clarifying the order before continuing with the medication administration process.

Orders Transmitted via Technology

The CLHA supports the appropriate use of technology to communicate a medication order.

All components of a complete medication order must be met regardless of the format. All shared information must be handled in a manner that upholds the privacy and confidentiality of client information. Additionally, medication orders need to be received in a manner that allows the person receiving the order to verify who the authorized prescriber is. A medication order received via technology must be transcribed appropriately.

The LPN must follow employer requirements as to

- when the receipt of orders transmitted via technology for medications are acceptable; and
- how orders transmitted via technology are to be transcribed.

The LPN must ensure accurate transcription and recording of all order instructions in a timely manner upon client admission, end of service, transfer to another level of care, or as otherwise required.

The LPN must validate the accuracy, clarity, and completeness of the transcription of the order before assessing the client and administering the medication.

Verbal and Telephone Orders

Although authorized prescribers are expected to provide written orders (or enter the order into the electronic health record) whenever possible, in some situations, an authorized prescriber may need to initiate or change medications before they are able to provide the written order. Verbal or telephone orders can be more error-prone than written orders due to the increased potential of miscommunication or misunderstanding.^{vi} Verbal or telephone orders should be limited to emergent or urgent situations.

A medication order received verbally or by telephone must be transcribed in the appropriate manner and verified by the authorized prescriber as soon as possible within the time frame defined by employer requirements. If an order has not been verified within this time frame, the LPN must not proceed with further medication administration until this has been addressed.

In addition to the standard components of a complete medication order, a verbal and telephone medication order must also include:

- the date and time the order was transcribed;
- a notation that this was a verbal or telephone order;
- the LPN's signature and credentials; and
- identification of the authorized prescriber (e.g., name, practice ID, and any additional employer requirements).^{vii}

The LPN is required to confirm the accuracy of the order by reading it back in its entirety to the authorized prescriber. It is important for the LPN to ensure that accurate transcription of all instructions occurs in a timely manner.

The LPN is to follow employer requirements regarding:

- whether verbal and telephone orders for medications can be accepted and in which situations,
- which care providers may accept them, and
- how verbal and telephone orders are to be transcribed.

Intermediaries

An **intermediary** is someone who communicates a verbal prescription between an authorized prescriber and a pharmacist. If supported by the employer, an LPN can act as an intermediary under employer requirements as a last resort due to the potential increased risk of error.^{viii}

LPNs acting as intermediaries:

- understand that both the LPN and the authorized prescriber are responsible for the accuracy and appropriateness of the order. The authorized prescriber should be available to speak with the pharmacist directly if necessary.

- do not communicate verbal prescriptions for narcotics or controlled drugs as defined in the *Controlled Drugs and Substances Act* and its regulations.
- only transmit new prescriptions to a pharmacist verbally if:
 - it is an unusual or urgent situation, and
 - the LPN speaks directly to both the authorized prescriber and the pharmacist.
- only transmit an authorized prescriber's authorization to refill an existing prescription:
 - if supported by the employer,
 - if there are no changes to the prescription, and
 - it is followed by appropriate documentation from the authorized prescriber.
- communicate to the pharmacist the reason the medication is being prescribed as well as the name and credential of the LPN acting as the intermediary.
- confirm a new prescription communicated verbally to a pharmacist as soon as possible through direct communication between the authorized prescriber and the pharmacist or through electronic transmission.^{ix}

In acting as an intermediary, the LPN:

- is required to be authorized by the prescriber to communicate a verbal prescription to the pharmacist on behalf of the authorized prescriber, and
- simultaneously sends a copy of the prescription to the pharmacy via technology.

Order Sets

An order set is a pre-determined, evidence-informed tool ordered by an authorized prescriber to manage a common state of disease (e.g., community-acquired pneumonia) or address a general clinical need (e.g., standardized admission orders). Across an organization, the use of order sets can help to ensure consistency in care, best practice, accurate communication, and client safety. Order sets must be client-specific, and the authorized prescriber should identify the orders that apply to a particular client. The use of standing orders that are not client-specific is no longer considered best practice.

The Institute for Safe Medication Practices (ISMP) recommends the use of order sets to reduce incorrect or incomplete prescribing, ensure clarity when medical orders are communicated between health professionals, and standardize client care. However, if poorly designed, order sets can contribute to errors and increase clients' risks.^x

The LPN may implement a client-specific order set in an electronic or pre-printed format received from an authorized prescriber.

Protocols

A **protocol** is a medically approved guide for practice implemented by health professionals managing specific client health needs in their practice environment.^{xi} A protocol should be evidence-informed and developed using standardized criteria.

In implementing a medication-based protocol, it is essential for the LPN to complete the required nursing assessment to determine if the client meets the criteria set forth by the protocol. The LPN must have the knowledge, skill, and competence required to:

- determine if the protocol is clear, complete, and appropriate for the client in the specific care environment; and
- perform any of the intervention(s) outlined within the protocol
 - for protocols that require the LPN to administer a medication to a client, the LPN must obtain a client-specific order.

If the protocol is unclear or missing any of the information listed above the LPN must seek clarification from the authorized prescriber.

In addition, the LPN is required to ensure they are supported by their employer in implementing the protocol within that specific practice environment.

Emergency Situations

There could be **emergency situations** where it is not possible to obtain an order before implementing a medication-based protocol, and a delay in treatment would place a client at risk of serious harm. An LPN may implement the protocol according to employer requirements and immediately contact the authorized prescriber to obtain an order.

For example, in an emergency, such as a client experiencing hypoxemia, an LPN is authorized to assess, initiate, and administer oxygen according to the client's needs. The LPN then notifies the authorized prescriber as soon as possible to inform them of the incident and obtain an order. The LPN must also document the interventions provided.

MEDICATION ADMINISTRATION AND CULTURAL SAFETY

Professional and ethical expectations for medication administration are outlined in the *Standards of Practice for Licensed Practical Nurses in Canada*, *Code of Ethics for Licensed Practical Nurses*, and the practice guideline on *Cultural Competence and Inclusive Practice*. When administering medication, LPNs practice in a culturally safe manner respective of diversity, equity, and inclusion, which can be defined with the following.^{xii}

Cultural safety requires health professionals and their associated healthcare organizations to examine themselves and the potential impact of their own culture on clinical interactions and healthcare service delivery. This requires individual health professionals and healthcare organizations to acknowledge and address their own biases, attitudes, assumptions, stereotypes, prejudices, structures, and characteristics that may affect the quality of care provided. In doing so, cultural safety encompasses a critical consciousness where health professionals and healthcare organizations engage in ongoing self-reflection and self-awareness and hold themselves accountable for providing culturally safe care, as defined by the client and their communities, and as measured through progress towards achieving health equity.^{xiii}

Respecting client values, beliefs, and preferences builds cultural safety in client interactions related to medication management and administration. LPNs must consider the potential interactions between conventional and traditional medicines while practicing in a culturally safe manner.

MEDICATION RIGHTS & CHECKS

Medication administration involves practicing the following medication rights and checks at minimum, in accordance with employer requirements, to ensure safe nursing practice every time a medication is administered. Before administering medication, the LPN should have the individual competence to confirm and evaluate:

- right reason,
- right client,
- right medication,
- right dose,
- right route,
- right time and frequency,
- right to refuse, and
- right documentation.

Right Reason

The LPN is required to know the client-specific **reason(s)** for administering a particular medication and have the knowledge, skill, and judgment to assess the appropriateness of the medication for the client.

Right Client

Client-specific identifiers help eliminate medication errors and ensure clients receive the medication(s) intended for them. The LPN follows any additional employer requirements for client identification.

Right Medication

The LPN only administers medications they prepare themselves and are accountable for ensuring that the right medication is prepared appropriately for the right client. If there is a question about the accuracy of the order for the medication a client is receiving, the LPN is required to withhold the medication and contact the authorized prescriber to confirm accuracy prior to administration.

Right Dose

The LPN has a responsibility to ensure dosage calculations are accurate (as prescribed) and appropriate.

If a medication order indicates a dose that requires calculation or conversion, the LPN should have another nurse verify that the dose calculated is correct. This is referred to as an independent double check. For more information on independent double checks, see the section under **High-Alert Medications** & Independent Double Checks.

When calculating medication dosages, the LPN must consider characteristics of the client, taking into consideration factors or underlying conditions that may alter the dosing, absorption, or metabolism of the medication.

Right Route

The route of administration is determined in collaboration with the care team and ordered by the authorized prescriber. LPNs must work within the regulated scope of practice and the role of the LPN articulated by the employer. For example, in some facilities or under certain circumstances, there may be medications that only a physician or nurse practitioner is authorized to administer.

Right Time and Frequency

It is the LPN's responsibility to know when they are administering a time critical medication. In the event of a delayed or missed dose the LPN is required to document the actual time the medication administration occurred in the client record as soon as possible.^{xiv}

Right to Refuse and Right to Know

An integral principle of medication administration is a client's right to be informed and decide whether they wish to accept the proposed medication. The LPN is expected to demonstrate respect for a client's needs, values, and preferences.

If the LPN is concerned about a client's capacity to provide consent, the LPN is expected to consult with the care team and authorized prescriber.^{xv} In the event a client refuses a medication, the LPN is required to document the reason for refusal and advise the care team and authorized prescriber as appropriate.

Right Documentation

After the client’s medication has been administered, the LPN is required to complete the right documentation according to regulatory and employer requirements as soon as possible to decrease the risk of error.

The LPN is expected to complete an evaluation to assess the client for any side effects, adverse reactions, as well as monitor the effectiveness of the medication and document the outcome.

Checks

Before administering any medication, the LPN is required to ensure that the following is checked:

- right client,
- right medication,
- right dose,
- right route, and
- right time and frequency.

As this is critical information, it is checked three times:

- | | |
|----------|---|
| Check 1: | Before preparing or removing the medication from its container or packaging. |
| Check 2: | While preparing and once the dose of medication ordered is removed from its container or packaging. |
| Check 3: | After the preparation process has been completed and before administering to the client. |

High-Alert Medications & Independent Double Checks

High-alert medications are those that present a risk of causing serious injury or death if used incorrectly. LPNs should inquire as to whether their employer has a high-alert medication list for their facility.

To ensure accuracy and reduce the possibility of medication errors associated with high-alert medications, an independent double check should be completed at the point of care.^{xvi} An independent double check is a process in which a second regulated health professional independently verifies the core medication rights and checks before the medication is administered to a client.^{xvii} LPNs are expected to have the knowledge, skill, and competence to perform and request an independent double-check.

MEDICATION RECONCILIATION

Medication reconciliation is a formal process that aims to ensure accurate and comprehensive medication information is collected and communicated consistently across transitions of care. The purpose of this process is to ensure client safety and the appropriateness of client medications.

Steps of Medication Reconciliation

1. Obtain the **best possible medication history** and identify discrepancies. Each medication should be verified against the client's medication profile prior to administration.
2. Resolve discrepancies with the care team.
3. Document the reconciled list and communicate any medication changes.
4. Continually update the reconciled medication list as necessary.^{xviii}

Additional information on medication reconciliation can be found on the Institute for Safe Medication Practices Canada (ISMPC) and the World Health Organization websites.

MEDICATION PREPARATION

The LPN is expected to demonstrate the knowledge and ability to appropriately prepare medications for administration according to employer requirements and the following:

- preparing medications only after an order has been verified as complete,
- following appropriate hand hygiene when preparing any medication,
- preparing medication when it is to be administered,
- avoiding leaving medication unattended,
- preparing medications in a space without interruptions and distractions to avoid medication errors,^{xix}
- preparing medication for one client at a time,
- administering only the medications that the LPN prepared, and
- following manufacturing guidelines for preparation and administration of the medication.

Medication Preparation from Ward Stock

LPNs may prepare medication from ward stock provided there is a client-specific order from an authorized prescriber. Preparing medication from ward stock does not fall under the restricted activity of dispensing if it is being prepared to give to the client for immediate administration.

Mixing Medications

An LPN may be required to mix two or more medications for immediate administration by injection, ingestion, or infusion. This is different from the restricted activity of **compounding**

medications, which LPNs are not authorized to perform. Mixing medications (including Schedule 1 or 2 drugs) for immediate administration is within the scope of LPN practice and can be performed, provided they are supported by their employer.

Pre-Pouring Medication

Pre-pouring medication is not recommended as it increases the risk of error or client harm.^{xx} Pre-pouring medication occurs when medication is prepared and then stored for later use, instead of being immediately administered to a client. A pharmacy should be utilized to prepare medications in appropriate packaging (e.g., blister or bubble packaging) for administration at a later time.

Pass and Bridge Medications

Generally, the legal authority to **dispense** a medication falls within the responsibility of pharmacy professionals (pharmacists or pharmacy technicians). Whenever possible, medications should be prepared, packaged, and dispensed in the pharmacy. An LPN is only authorized to dispense medications incidental to the **practice of practical nursing**,¹ such as in pass and bridge medications.

Pass medication refers to the practice of providing a client with the required doses of medication they will need while out on a temporary leave of absence from a facility (facility pass). The LPN may dispense the necessary medication to the client according to existing client-specific orders. If the client has enough medication for their absence, the LPN can use the existing order to dispense the medication without needing a separate client-specific order. Otherwise, the LPN will require a client-specific order and follow employer requirements to order and dispense pass medication.

Bridge medication refers to the practice of providing a minimum supply of medication to a client upon discharge to meet the client's needs until they can have their prescription filled by a pharmacy. When medication dispensing is required to meet the client's needs and a pharmacy is not available, a client-specific order from an authorized prescriber must be in place for the LPN to prepare and dispense bridge medications.

An LPN is only authorized to dispense controlled drugs or substances listed in Appendix A of the *Standards of Practice for Licensed Practical Nurses on Restricted Activities, Advanced Practice, and Supervision*.

If an LPN prepares and dispenses medication for a client to take later (such as the cases discussed in this section), the LPN should educate the client and their family and confirm that they can use and store the medication safely. The LPN must follow the *Standards of Practice*

¹ When an activity is incidental to the practice of practical nursing, it means that the LPN requires it to complete the provision of a particular professional service.

for Licensed Practical Nurses on Restricted Activities, Advanced Practice, and Supervision related to dispensing medications, including any employer requirements.

Sample Medication

LPNs may administer sample medications to clients pursuant to a client-specific order from an authorized prescriber if supported by the employer.

LPNs are not authorized by the Food and Drug Act to accept medication samples from pharmaceutical companies or their representatives or distribute medication samples to clients.^{xxi}

Pro Re Nata (PRN) Orders

PRN orders are client-specific orders for medications to be administered, only as required, based on clinical need rather than according to a fixed schedule.^{xxii} PRN orders will require that a certain amount of time passes between doses (e.g., no more than one dose every three hours) or a maximum amount that can be given and are considered incomplete if they do not.^{xxiii} The order must include the reason and indications for use; if this information is missing, the LPN has a responsibility to seek clarification from the authorized prescriber.

The LPN must be aware of why the PRN medication was prescribed and when to administer it, based on the appropriate nursing assessment. The LPN must also follow the rights and checks of medication administration and be supported by the employer before administering any PRN medication.

Range Doses

Range doses may be prescribed for clients requiring flexibility in their medication regimen. Range dosing occurs when an authorized prescriber orders a medication that allows for medication administration in a range of doses or frequencies. An example of a range dose medication order is Morphine 5-10 mg IV q4h PRN. Range dosing should be based on an established care plan designed to meet the potential variations in a client's specific and timely need for medication.^{xxiv} Once a portion of a range dose has been administered, the unused amount should not be given within the prescribed time interval as a "top up." The LPN must obtain an additional order from an authorized prescriber to provide additional medication.

As employer requirements allow, the LPN may administer medications according to a medication order containing a range dose as provided for by an authorized prescriber. In the event of any uncertainty, the LPN has a responsibility to clarify the correct interpretation of a range dose with the authorized prescriber prior to administering the medication.

Sliding Scales

A sliding scale is an objective tool used to manage a progressive increase or decrease in medication dose based on a pre-defined measurement of another indicator. For example, in

sliding scale insulin therapy, the amount of insulin administered is based on the client's blood glucose level: as the blood glucose level increases so does the insulin dosage.^{xxv}

Following an appropriate client assessment and the rights and checks of medication administration, the LPN may administer medication on a sliding scale based on a client-specific order from an authorized provider and according to employer requirements.

ADMINISTRATION AND MANAGEMENT OF CONTROLLED DRUGS AND SUBSTANCES

An LPN may administer controlled drugs and substances, including narcotics, in accordance with the federal *Controlled Drugs and Substances Act*, associated regulations, and employer requirements.

Administration and Documentation of Narcotics

Narcotics are considered high-alert medications. LPNs administering a narcotic must document and reconcile the narcotic count sheet with the Medication Administration Record (MAR) and follow any additional documentation requirements set out by the employer.

In the event of an adverse reaction to a narcotic, LPNs are permitted to administer and distribute naloxone across all care settings. For further information see the section, "Administration and Distribution of Naloxone."

OFF-LABEL USE OF MEDICATION

In Canada, prescription medications must be approved for use by Health Canada. The approval defines the population the medication can be prescribed for, the clinical indication(s) the medication can be used to treat, and the recommended administration dosages.^{xxvi} Authorized prescribers can prescribe a medication for off-label indications. Off-label use refers to the use of medication in a dose for an indication, or population, beyond those identified by Health Canada.^{xxvii}

Health Canada provides a Drug Product Database containing product-specific information on medications approved for use in Canada. Using this database enables health professionals to look up the specific medication and confirm approved usage.

Medications can be prescribed for off-label use when:

- approved by Health Canada for use in Canada; and
- the authorized prescriber has based their order on evidence-informed information; or
- the medication is prescribed as part of a current study approved by one of Alberta's health research ethics boards.^{xxviii}

LPNs receiving an order for an off-label use of a medication must ensure that they are well informed about the medication and the reason for its use for the particular client. When preparing an order for off-label use, the LPN must have the knowledge, skill, and competence required to administer the medication as prescribed and evaluate its effectiveness for the client.

MEDICATION ADMINISTRATION FOR THE PURPOSE OF RESEARCH

When administering medication for research purposes, the LPN has a responsibility to ensure:

- the client understands the research study, provides informed consent, and a signed research consent form is placed in the client chart;
- the medication is administered specific to the research protocol;
- the rights and checks of medication administration are completed; and
- documentation and evaluation are completed according to the research protocol and any additional requirements.

MEDICATION ADMINISTRATION FOR AESTHETIC PURPOSES

Aesthetic nursing services, including the injection of fillers or neuromodulators such as Botox and other substances, are not taught in the practical nurse diploma program. LPNs require additional post-entry-level education and experience to perform these procedures.

ADMINISTRATION OF CANNABIS FOR MEDICAL PURPOSES

Cannabis may be used for medical purposes to help manage the symptoms associated with a variety of disorders and conditions. The use of medical cannabis is similar to other medication therapies that may be part of a client's overall care. LPNs are responsible for following medication administration procedures when administering medical cannabis, including completing appropriate nursing assessments, following medication rights and checks, and completing documentation. LPNs should ensure they are aware of and in compliance with any employer requirements specific to client use and administration of medical cannabis.

LPNs are encouraged to access Health Canada's "Information for Health Care Professionals – Medical Use of Cannabis" at <https://www.canada.ca/en/health-canada/services/drugs-medication/cannabis/information-medical-practitioners.html> for more information on the use, dosing, adverse effects, and drug interactions associated with medical cannabis.

LPNs are authorized to administer medical cannabis in all practice settings if the following requirements are met:

- The client has a client-specific order.

- The medical cannabis is appropriately packaged and clearly labelled.
- The LPN's employer has authorized the use of medical cannabis within the practice setting.
- The individual LPN has the competencies required to administer medical cannabis.

The LPN has a responsibility to seek clarification before administering medical cannabis if they are unsure of whether the medical cannabis has been legally obtained if the packaging does not clearly indicate the product, or if the client-specific order is unclear or incomplete.

ADMINISTRATION AND DISTRIBUTION OF NALOXONE

Naloxone temporarily helps to reverse the respiratory depression associated with opioid overdose. Naloxone is formulated as a nasal spray and injection. In Canada, both types are available as take-home kits. LPNs may administer naloxone, distribute naloxone kits, and provide relevant education and instructions to clients and the public.

LPNs may administer naloxone to clients under a client-specific order or medical protocol. If there is no order or protocol, the LPN may administer naloxone following the guidelines for responding to an emergency outlined in this policy and other employer requirements. Because naloxone's effect is temporary, emergency medical services (EMS) should be notified as soon as possible after it is administered. The LPN must continue to assess the client's response to determine the need for additional doses before EMS arrives.

If the LPN has appropriate training and is supported by employer requirements, an LPN may distribute naloxone kits to anyone requesting them and educate them about naloxone use, indications, and availability.

LPNs should stay current with the signs and symptoms associated with opioid overdose, naloxone administration, and other relevant information. The LPN must document any intervention they provide, including additional support provided to the client or the public.

ADMINISTRATION OF COMPLEMENTARY AND ALTERNATIVE THERAPIES

LPNs should be familiar with common complementary and alternative therapies. The LPN must demonstrate the knowledge and ability to assess and consider risk factors associated with the proposed complementary or alternative therapy, including:

- delayed treatment,
- contraindications with conventional treatment or medication(s), and
- understanding of the health risks and potential interactions.

Additional information on licensed natural health products can be found in Health Canada's database available at <https://health-products.canada.ca/lnhpd-bdpsnh/index-eng.jsp>.

An LPN may assist with or administer a substance for the purpose of providing complementary or alternative therapy if the following conditions are met.

- The therapy is within the scope of practical nursing in accordance with the HPRAR.
- The LPN has the individual competence required to safely assist with or administer to the client.
- The LPN is acting on a client-specific order from a regulated health provider who is authorized to prescribe complementary or alternative therapy.
- The client has received enough information to make an informed decision to receive complementary or alternative therapy.
- The LPN has assessed the appropriateness of the complementary or alternative therapy for the specific client.
- The employer supports the use of complementary or alternative therapy as part of a client-specific established care plan.

IMMUNIZATION AND VACCINE ADMINISTRATION

LPNs are authorized to administer vaccines for immunization to clients five years of age and older as outlined in the HPRAR and the *Standards of Practice for Licensed Practical Nurses on Restricted Activities, Advanced Practice, and Supervision*. An LPN must ensure that they have the knowledge, skills, judgment, and competence related to the concepts and principles of immunity, communicable disease control, and immunization, as well as legislative and reporting requirements.

In accordance with the *Public Health Act* and the *Immunization Regulation*, LPNs performing immunizations or conducting assessments in respect of immunizations must report information about immunization administration and **adverse events** following immunization (AEFI) to Alberta Health Services at <https://www.albertahealthservices.ca/info/Page16187.aspx>. LPNs must also record vaccine lot numbers and expiry dates in the client's health record. LPNs are responsible for safe and appropriate storage, handling, and transport of vaccines as outlined in provincial regulation under the *Public Health Act*.

LPNs providing vaccines outside of an immunization program recognized by the Public Health Act and authorized by the Medical Officer of Health will require a client-specific order before administering a vaccine to a client.

EVALUATING CLIENT OUTCOMES

The LPN is expected to demonstrate the knowledge and ability to provide ongoing assessment, monitoring, and evaluation of medication effectiveness. The LPN must be able to recognize and manage adverse medication reactions, including anaphylaxis. This includes recognizing signs and symptoms, implementing protocol, and documenting according to employer requirements and LPN competencies.

In practice, this means that the LPN must be aware of:

- the type and frequency of monitoring required for specific medications as it pertains to their role in providing care and
- any effects of the medication(s) that must be monitored, managed, documented, and reported as appropriate.

DOCUMENTATION

Documentation is one of the main communication tools that healthcare providers use to share client information, and it may be electronic, paper-based, or a combination of both. The LPN is expected to ensure accurate, concise, complete, and timely documentation.

Documentation for medication administration should include the LPN's assessment, implementation of interventions, and evaluation of outcomes. The LPN must sign or initial all documentation according to employer requirements. Inaccurate or incomplete documentation places the LPN in breach of professional and legal requirements and potentially places the client at risk.

The CLHA supports documentation completed in accordance with the CLHA policy on *Documentation* and any additional requirements set out by the employer.

The LPN is expected to complete documentation immediately following administration of medication, noting the specific time of administration, or if the client refused their medication, and the LPN's assessment of the client's response.^{xxix} The LPN must clearly document any medication errors or omissions and required interventions.

Medication Administration Record (MAR)

The MAR is an organizationally maintained record that serves as the legal record of medication administered to a client. The MAR should reflect accurate documentation of all medications administered to a client, refused by a client, or when a client does not receive a medication as ordered. This includes the name of the medication and strength, date, time, route, dose, frequency, and the signature of the administering health professional and following any additional employer requirements.

STORAGE, DISPOSAL, AND TRANSPORTATION OF MEDICATION

The LPN is responsible for the safe storage, disposal, and transportation of medication following legislative, regulatory, and employer requirements. LPNs are expected to:

- Follow manufacturer guidelines for reconstitution and preparation of medication immediately before administration. Reconstitution can affect the storage requirements, stability, and subsequent efficacy of the medication.

- Apply infection prevention and control standards in the safe storage, handling, and removal of medications to ensure the appropriate storage of medications per manufacturer guidelines to maintain drug stability.
- Maintain the storage conditions of medications during transportation and avoid unauthorized access to medications.
- Follow employer requirements and dispose of excess or unused medications safely and document accurately. Some examples include a waste portion of an injection ampoule, or an unused portion of a medication reconstituted for immediate use.
- Return medications to licensed facilities like pharmacies when applicable. This must be done following applicable requirements such as witness verification and secure handover.
- Ensure proper and complete documentation at each step of medication administration, storage, disposal, return, and transportation. LPNs must also report any incidents, discrepancies, theft, or safety concerns regarding medications according to employer requirements.

Disposal of Controlled Drugs and Substances

The requirements for the management of controlled drugs and substances in healthcare facilities are outlined under federal legislation. The *Controlled Drug and Substances Act* gives authority to healthcare organizations to establish policies governing the administration, storage, and safe handling of controlled drugs and substances. The LPN should be aware of any additional employer requirements for disposal of controlled drugs and substances.

OVER-THE-COUNTER MEDICATIONS

Over-the-counter medications are Schedule 2, 3, and unscheduled drugs outlined in the *Alberta Pharmacy and Drug Act* and the supporting *Scheduled Drugs Regulation*. These medications can be acquired without a prescription.

LPNs are not authorized to prescribe medications. Having a discussion with a client or family member and making recommendations about over-the-counter medications or natural health products may be viewed as pseudo-prescribing. Therefore, LPNs should advise their clients to seek advice about over-the-counter medication from a health professional who is authorized to prescribe or make the recommendation.

In the event a client has an existing order for over-the-counter medication from an authorized prescriber, the LPN may provide education and advise them to obtain this medication on their own. This advice would be considered appropriate as there is a covering order from an authorized prescriber in place. To provide this education, the LPN needs to be aware of the client's specific health information and medication history.

CLIENT'S OWN MEDICATION

Self-Administration

LPNs are responsible for teaching clients about their medications, potential side effects, the importance of adhering to the established medication regime, and how to evaluate the effects of their medication.

LPNs caring for clients who are self-administering medications are expected to:

- assess the client's competence and ability to safely self-administer their medication;
- confirm a client's agreement to self-administer;
- ensure storage of self-administered medication is safe and appropriate, with access available as needed;
- provide teaching, coaching, and supervision as needed;
- follow employer requirements related to the client's self-administration of medication within their practice setting; and
- complete documentation according to regulatory and employer requirements.

MEDICATION SAFETY

A key component of medication administration is the assurance of safe medication management.^{xxx} LPNs have a responsibility and accountability for safe medication management, including infection prevention and control, appropriate management of **hazardous medications**, reduction of potential medication errors, and reporting of adverse events or **near misses**.

Safety and Infection Prevention and Control

LPNs must be aware of the competencies for safety and infection prevention and control specific to medication administration including the safe storage, handling, removal, and disposal of medications. The CLHA has adopted Alberta Health's 2019 *Reusable and Single-Use Medical Devices Standards* that provide additional guidance and accountability in infection prevention and control related to medical devices.

More information can be found in the *Infection Prevention and Control* practice guideline on the CLHA website and on the Alberta Health website at: <http://www.health.alberta.ca/>.

Hazardous Medications

Hazardous medications are known or suspected to cause adverse health affects when healthcare workers are inadvertently exposed. The LPN must follow manufacturer guidelines and employer requirements for safe management of hazardous medications. Specific characteristics of hazardous drugs are outlined by the National Institute for Occupational Safety and Health (NIOSH).^{xxxi}

Strategies to Reduce Medication Errors and Adverse Events

The following safety strategies should be applied to reduce medication errors and ensure client safety.

- Perform medication rights and checks and complete medication reconciliation.
- Follow nursing protocols and employer requirements to decrease medication errors.
- Employ strategies to stay focused and reduce distractions.
- Ensure medications and medical sharps are stored, handled, used, and discarded safely, according to manufacturer instruction(s), employer requirements, and provincial and national guidelines.
- Discuss how to prevent medication-related client safety incidents with the client, family members, and caregivers.
- Provide clients with information about who to contact if they have concerns with their medication regime.
- Identify and report concerns with medication orders, packaging, or labelling to appropriate team members, managers, and pharmacies.
- Support the development of employer policies that provide guidance for team members to raise safety concerns with the authorized prescriber or pharmacist.
- Follow established guidelines within their practice environment to report any near misses, medication errors, or adverse events.
- If an adverse event or near miss occurs, work with team members to consider strategies to avoid a recurrence.^{xxxii}

Reporting Adverse Events, Medication Errors, or Near Misses

Safe medication administration requires collaboration among the members of the healthcare team. Medication errors can be a result of individual mistakes, systems issues, or a combination of both. LPNs are responsible and accountable for their individual competence in the administration of medications.

The LPN is expected to take appropriate and timely steps to report and manage medication errors, adverse events, or near misses. The LPN must follow specific reporting criteria and processes as outlined by the employer and legislative requirements.

Once the LPN is aware of a missed or delayed dose, the LPN must document what they did about it, including the actual time of medication administration in the client record and who they informed about the missed or delayed dose.

CONCLUSION

Medication management is integral to the LPN profession. LPNs are responsible for ensuring they possess the required knowledge, skill, and competence to administer and manage

medications safely. The CLHA supports a collaborative and interdisciplinary approach that includes clients and families as part of safe medication management practices.

Documents are updated frequently. For the most current version and access to related documents and resources, please visit the Knowledge Hub on clha.com.

If after reading this document you have questions, please contact the CLHA's Professional Practice Team via practice@clha.com or 780-484-8886 or 1-800-661-5877 (toll free in Alberta).

DEFINITIONS

Adverse event: a harmful and negative outcome that happens to a client as a result of a drug or professional service that they have received.

Authorized prescriber: regulated health provider permitted by the law, their regulatory college, employer, and practice setting (where applicable) to prescribe medications.

Best possible medication history: a complete account of a client's actual medication use, including drug name, dosage, route, and frequency. A best possible medication history is created using a systematic process of interviewing a client and/or their family, and a review of at least one other reliable source of information to verify all of a client's medication use. A medication history includes:

- prescribed medication,
- not prescribed medication, and
- alternative or complementary products.

Compound: to mix together two or more ingredients, of which at least one is a drug for the purposes of dispensing a drug or drugs but does not include reconstituting a drug or drugs with only water.

Dispense: with respect to drugs, to provide a drug pursuant to a prescription for a person, but does not include the administration of a drug to a person (see Appendix A for a list of medications LPNs are authorized to dispense under specific circumstances).

Emergency situation: a medical situation in which immediate care is required, or the client would be placed at significant risk if the clinical intervention is delayed.

Hazardous medications: medications known or suspected to cause adverse health effects when healthcare workers are inadvertently exposed. The National Institute for Occupational Safety and Health (NIOSH) has identified six characteristics of hazardous drugs; drugs exhibiting one or more of these characteristics should be handled as hazardous, and appropriate precautions should be taken.

High-alert medications: drugs that bear a heightened risk of causing significant client harm when used in error.

Intermediary: in the context of medication administration, an intermediary is someone who is used to communicate a verbal prescription between an authorized prescriber and a pharmacist.

Invasive procedure: a procedure requiring insertion of an instrument or device into the body through the skin or a body orifice for diagnosis or treatment.

Medication: a drug as defined in the *Pharmacy and Drug Act*.

Medication administration: refers to the process of providing medication(s) to clients to diagnose, treat, or prevent disease and improve health outcomes. It involves assessing the client, making clinical decisions, and monitoring and evaluating the care provided.

Near miss (good catch/close call): an event that could have caused harm or resulted in unwanted consequences but did not because the event was caught and prevented.

Practice of Practical Nursing: the scope of practice of LPNs as described in Section 3 of Schedule 10 of the HPA.

Restricted activity: health services that can only be performed by authorized persons because of the risks associated with the performance of these activities and the need to ensure that professionals possess the necessary competencies.

Schedule 1 drugs: drugs that require a prescription as a condition of sale, within the meaning of the *Pharmacy and Drug Act*.

Schedule 2 drugs: drugs which may be sold by a pharmacist on a non-prescription basis, and which must be retained within the professional service area of the pharmacy where there is no public access and no opportunity for patient self-selection.

Schedule 3: drugs that are available without a prescription from the self-selection area of a pharmacy. Although no prescription is required, they can only be sold from a licensed pharmacy or an institution pharmacy.

Unscheduled: drugs not listed in Schedule 1, 2, or 3 that may be sold from any retail outlet.

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