Guidelines for
Licensed Practical Nurses
in Nova Scotia

The Professional Practice Series

Medication Administration

2013

CLPNNS
COLLEGE OF LICENSED PRACTICAL NURSES OF NOVA SCOTIA

Licensed Practical Nurses have core nursing knowledge to independantly care for clients with an established plan of care. Licensed practical nurses are an intregral part of the health care team; accountable to provide safe, competent, ethical and compassionate care to individuals, families and communities.

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Introduction

The College of Licensed Practical Nurses of Nova Scotia (CLPNNS), or the College, is the regulatory body for Licensed Practical Nurses (LPNs) in Nova Scotia. The College's mandate is to protect the public by promoting the provision of safe, competent, ethical, and compassionate nursing care. The College sets, monitors and enforces standards for entry into the profession, practical nurse education, registration and professional conduct. The College creates Standards of Practice, establishes a Code of Ethics, develops and implements a Continuing Competence Program, and publishes policies and interpretive documents to support the practice of licensed practical nurses in Nova Scotia.

Using this document

Guidelines are documents that outline the licensed practical nurse's accountability in specific practice contexts. They reflect relevant legislation and are designed to help licensed practical nurses understand their responsibilities and legal obligations so they can make safe and ethical nursing decisions.

This document is part of *The Professional Practice Series*. It is one document, in a group of documents that have been created to help LPNs and others better understand the scope of practice of the LPN in Nova Scotia. ***Guidelines for Licensed Practical Nurses: Medication Administration*** was developed to assist licensed practical nurses understand their role in the medication administration process. This, as with all College documents, can be used with CLPNNS Standards of Practice, Code of Ethics and all applicable practice guidelines found on the College website at **www.clpnns.ca.**

Context of Care

It is important that LPNs recognize the independence of their practice varies in relation to the context of care, or the sum total of needs of the client, their own individual competence and the supports in the practice environment (CLPNNS 2012). This means that even though the LPN may have the necessary knowledge and skill to perform an intervention, the overall context of care may be such that the judgments relating to the intervention (including education, surveillance, monitoring, follow-up assessment or support) are better suited for another care provider with a broader knowledge base, (i.e., RN, NP or MD). As with all aspects of their practice, licensed practical nurses are accountable to recognize when they are required to work in collaboration with, or under the guidance or direction of an appropriate care provider.

Employers may require that nurses achieve competence in the administration of certain medications, via certain routes in specific client contexts by completing an employer-based learning module and/or a mentored administration experience. In these situations, the process of achieving initial competency and maintaining ongoing competency is to be outlined in a policy. The nurse and employer share the accountability to do this.

NOTE: Licensed practical nurses may consult or collaborate with any care provider who has the capacity to provide consultation or direction; however for the purposes of this document, the assumption is that the LPN's first collaborative partner is the RN.

Medication Administration

LPNs are accountable to their clients to provide safe, competent, ethical and compassionate care. They are responsible to their employer to work within job descriptions, policies and procedures and to their regulatory college to comply with Standards of Practice and Code of Ethics. LPNs are responsible to ensure that their nursing knowledge is current and that they possess the necessary knowledge, skills and judgment to fulfill their role.

There are no restrictions on the *types* of medications LPNs can administer. There are, however, certain contexts and clinical situations where the LPNs may not be authorized by an employer's policy to administer a medication via a *specific high risk route.* Some routes of administration (i.e., IV or IV push) have a higher degree of risk associated because the potential for untoward outcomes is greater. High risk is associated with a greater potential for unpredictability (CLPNNS & CRNNS, 2012).

Federal and Provincial Legislation

As members of an interprofessional collaborative team, licensed practical nurses must be aware and understand the implications of relevant federal and provincial legislation, as well as the roles and responsibilities of each team member involved in the delivery of medications to clients.

Federal Legislation: Food and Drug Act

The Food and Drug Act (1985, R.S., c. F-27) governs the sale and distribution of drugs in Canada. This legislation focuses on protecting the public from unsafe drugs and addresses false, misleading or deceptive labeling of drugs. For example, it states that no person shall distribute or cause to be distributed any drug as a sample except physicians, dentists, veterinary surgeons or pharmacists under prescribed conditions. The act also defines prescription drugs and non-prescription drugs (http://laws.justice.gc.ca/en/ShowTdm/cs/f-27///en).

Federal Legislation: Controlled Drugs and Substances Act

The Controlled Drugs and Substances Act (1996, c. 19), along with the Narcotic Control Regulations, Part G of the Food and Drug Regulations, and the Benzodiazepines and Other Targeted Substances Regulations, governs the production, distribution, importing, exporting, sale, and use of narcotics, and controlled and targeted drugs, for medical and scientific purposes in Canada. This legislation defines who is authorized to be in possession of these drugs/substances and governs specific activities of pharmacists, other practitioners, and hospitals related to these drugs/substances as they can alter mental processes and harm the health of clients and/or society when diverted or misused (e.g., narcotics such as morphine; controlled drugs such as amphetamines; and benzodiazepines such as lorazepam). Among the directions noted in this legislation, it is the requirement for pharmacists and other practitioners, as well

as licensed organizations (e.g., facilities licensed under the Hospitals Act or Homes for Special Care Act) to maintain records detailing a count of narcotics, controlled drugs and medication wastage.

In appropriate practice contexts, licensed practical nurses are authorized to be in possession of narcotics/controlled substances when ordered to administer them by an authorized prescriber. When doing so, they must comply with federal regulations and follow agency policy that reflects the legislation in receiving, administering, disposing, or counting narcotics and controlled substances (http://laws.justice.gc.ca/en/C-38.8/). In Nova Scotia, the distribution and use of narcotics and controlled drugs is further governed by the Nova Scotia Prescription Monitoring Act and Regulations.

Provincial Legislation: Pharmacy Act

The Pharmacy Act (2001, c. 36, s. 1) defines the responsibilities of pharmacists in community settings such as long-term care facilities, private agencies, physicians' offices, and provides direction for other healthcare providers on the compounding, dispensing and administering of medications. For example, under the 2010 amendment to the Regulations to the Pharmacy Act, pharmacists may prescribe Schedule I drugs in accordance with the standards of practice to treat conditions approved by the Nova Scotia College of Pharmacists (http://www.gov.ns.ca/just/regulations/regs/pharmdrugrx.htm).

The Regulations to the Pharmacy Act (2002) support a national drug scheduling model developed by the National Association of Pharmacy Regulatory Authorities (NAPRA). These drug schedules classify medications according to those that require a prescription, and those that do not. These regulations also specify how medications are to be sold in pharmacies.

Table 1 outlines the Nova Scotia Drug Schedules. Drugs in schedules I-III are also listed from time to time on the National Drug Schedules. Licensed practical nurses should consult with a pharmacist when there is uncertainty as to which schedule a particular drug belongs.

NOTE: The Pharmacy Act does not apply to hospital practice.

TABLE 1: NOVA SCOTIA DRUG SCHEDULES
Schedule I drugs require a prescription from an authorized prescriber.
Schedule II drugs (also referred to as "over-the-counter medications") do not require a prescription but are kept in an area of the pharmacy where there is no public access and no opportunity for client self-selection.
Schedule III drugs (also referred to as "over-the-counter medications") do not require a prescription and may be sold by a pharmacist from the self-selection professional products area of the pharmacy. A pharmacist must be available to assist the patient in making an appropriate self-medication selection.
Schedule IV drugs are those listed under the Controlled Drugs and Substances Act (Canada) that require a prescription from an authorized prescriber.
Source: Nova Scotia College of Pharmacists (2006)

Unscheduled drugs (also referred to as “over-the-counter” medications) can be sold without professional supervision at any retail outlet. Adequate information is available for individuals to make safe and effective choices in relation to these drugs, and labeling is deemed sufficient to ensure appropriate use of these drugs (National Association of Pharmacy Regulatory Authorities, 2009).

Provincial Legislation: Hospitals Act

In Nova Scotia, the Hospitals Act (1989, R.S., c. 208, s. 1) replaces the Pharmacy Act in hospitals. For the most part, the Hospitals Act enables the province’s health authorities (and the IWK Health Centre) to determine the function of their hospital pharmacies, the practice of pharmacies, and the required medication policies. Although the Hospitals Act does not specifically refer to the role of licensed practical nurses in medication administration, according to their standards for practice, licensed practical nurses are expected to follow their respective hospitals’ and/or agencies’ medication policies (http://nslegislature.ca/legc/statutes/novahos.htm).

Provincial Legislation: Homes for Special Care Act

The Homes for Special Care Act (1989, R.S., c. 203, s. 1) governs many long-term care facilities throughout the province, including nursing homes, homes for the aged, homes for the disabled, and residential care facilities.

In May 2011, the Homes for Special Care Regulations (1989, c. 203) were amended. The regulations state that medication orders must be in writing and signed by one of the following healthcare professionals (authorized prescribers):

- Medical practitioner registered under the Medical Act;
- Nurse practitioner registered under the Registered Nurses Act, when appropriate protocols have been established in accordance with the Pharmacist Drug Prescribing Regulations made under the Pharmacy Act; or
- Pharmacist registered under the Pharmacy Act.

In emergency situations or when a medication does not require a prescription, *registered nurses (RNs)* practicing in homes for special care may accept verbal medication orders from any of the healthcare professionals listed above.

Licensed Practical Nurse Act

In Nova Scotia the practice of practical nursing is defined in the Licensed Practical Nurses Act (2006) and Licensed Practical Nurses Regulations (2009).

The Practice of practical nursing is defined as:

> "practice of practical nursing" means the provision of nursing services
>
> > (i) Independently, for clients considered stable with predictable outcomes, and
> >
> > (ii) Under the guidance or direction of a registered nurse, medical practitioner or other health care professional authorized to provide such consultation, guidance

or direction, for clients considered unstable with unpredictable outcomes.

Nursing Services is defined as;

(ae) "nursing services" means the application of practical nursing theory in the

(i) assessment of clients,

(ii) collaboration in the development of the nursing plan of care,

(iii) implementation of the nursing plan of care, and

(iv) ongoing evaluation of the client,

for the purpose of

(v) promoting health,

(vi) preventing illness,

(vii) providing palliative and rehabilitative care, and

(viii) assisting clients to achieve an optimal state of health;

Guidelines for Medication Administration

Competent medication administration practice is more than performing the technical task of giving a pill or an injection. Licensed practical nurses must have medication competence in order to: assess the appropriateness of medications for clients; administer medications correctly; evaluate the effectiveness of medications; identify and manage adverse reactions; accurately document outcomes; and support clients to manage their own health. Safe medication administration requires that the licensed practical nurse have the:

- Knowledge
  - to assess the client and the appropriateness of a particular medication for the client
  - to understand the actions, interactions, usual dose, route, side effects and adverse effects of the drug
  - to recognize the indications and contraindications for administration
- Skill
  - to perform accurate drug calculations or medication preparation (which includes storage, transportation and disposal)
  - to apply the concepts of an appropriate safety framework to the medication administration process
  - to collaborate and communicate with the healthcare team to ensure the client's needs are met
  - to appropriately document the administration process, including client outcomes
- Judgment
  - to assess, evaluate and monitor the client during and following medication administration
  - to identify and respond to side effects or adverse effects of the drug
  - evaluate the effect of the medication on the client's health status

- consult with the appropriate care provider when client outcomes are not as expected and are changing.

Safety Framework – The 10 Rights

Safe and competent medication administration requires the application of a safety framework or the "10 Rights" to the medication administration process:

1. right drug
2. right dose
3. right route
4. right time
5. right client
6. right documentation
7. right reason
8. right response/evaluation
9. right to refuse
10. right education

Verbal and Telephone Orders

Verbal orders should only be accepted in emergent or urgent situations where the prescriber cannot document their medication orders. Telephone orders should be limited to situations when the prescriber is not present. The prescriber is accountable for co-signing their verbal or telephone orders within the time frame defined in the agency's policy. Licensed practical nurses are not responsible for ensuring that verbal or telephone orders are signed off by the prescriber.

Occasionally, an LPN may be required to take a telephone order for a medication they cannot administer because it is not part of their individual scope of practice or scope of employment. The LPN may take the telephone order as long as they are they are competent to administer the medication in a different form (e.g., orally). The rationale is that LPNs possess the necessary baseline knowledge to accurately record and/or question the order if necessary. That said, in everyday circumstances, LPNs should not take telephone/verbal orders for intravenous chemotherapy, sedation or PCA/Epidural pain medication. The rationale for this is related to the complexity of the management of these medications in the IV/Epidural form.

> *Licensed practical nurses are accountable for accurately recording the information received verbally or by telephone, and for assessing the appropriateness of a medication for a client. Verbal and telephone orders must be* ***read back*** *by the LPN to the prescriber to confirm the accuracy of the medication order. When possible, the LPN should indicate on the order form that the verbal or telephone orders were read back to the prescriber.*

Faxed and Electronically Transmitted Orders

In practice settings where prescribers are not present, faxed or electronically transmitted medication orders are preferable to telephone or verbal orders. LPNs are accountable to verify the appropriateness of a faxed or electronically transmitted order in the same manner as they would for all orders by following agency policy. Orders received via text messaging, social media sites and/or sent to a LPNs personal email account are *not* acceptable.

> *Licensed practical nurses are accountable for consulting with the prescriber before transcribing or administering a medication if they have a question or concern about a particular order, regardless of how the order was received.*

Care Directives

A care directive (CD) is an order written by an authorized prescriber for an intervention or series of interventions for a range of clients with identified health conditions or needs in a specific context. Although the interventions outlined may be enacted by a nurse with the necessary, knowledge, skill and judgment to do so, the authorized prescriber retains the responsibility to ensure the interventions listed within the CD are based in best practice and evidence. Care directives are pre-approved by the appropriate medical and nursing authority within an agency, and are supported by agency policy. Care directives should be reviewed on a regular basis to ensure that they continue to reflect best practice knowledge. Care directives are generally designed for extended periods of time, but some may have time restrictions. CDs can be implemented only when an authorized prescriber is available. Availability is to be determined by agency policy (CRNNS, 2013).

It is important for LPNs to understand that there are two nursing actions associated with care directives: determination of appropriateness and implementation.

The RN applies in-depth nursing knowledge to interpret the client's data to <u>determine the appropriateness</u> of the care directive for *this* client at *this* time in *this* context. Some care directives may allow the RN to customize the interventions based on their assessment findings. The RN assessment, findings and decision to implement a CD, are to be noted in the client record. Licensed practical nurses are not authorized to independently determine the appropriateness of a care directive in any practice context.

<u>Implementation</u> involves enacting the interventions outlined in the care directive. Licensed practical nurses may independently enact interventions in the CD (as long as they have the necessary knowledge, skill and judgment to do so) once it has been deemed appropriate by the RN.

In contrast to care directives, standing medication orders are not developed from an interprofessional perspective, are not evidence-based, and provide limited information to care providers. Because they do not specifically identify the conditions and circumstances that must be present before being implemented, they are not considered best practice and are not recommended.

Transcription

Transcribing medication orders involves transferring medication order information from an order form to a medication administration record (MAR). The MAR outlines the expectations for administering medications to a client and is used by care providers to document when medications have been administered. Transcribing medication orders is an entry level competency for licensed practical nurses and part of the process of administering medications.

> *When transcribing medication orders and determining the appropriate administration schedule, licensed practical nurses apply professional judgment to maximize the therapeutic effect of the drug, support client choice and comply with agency policy.*

In some practice settings other individuals may engage in completing the paperwork involved in transcribing orders.

> *Licensed practical nurses are accountable for validating the accuracy and completeness of the transcription before administering the medications to the client.*

Electronic medication order entry systems are increasingly being implemented in practice settings. These systems allow prescribers to enter medication orders directly into the system. The system automatically transcribes the orders and generates a MAR. One of the benefits of electronic order entry systems is that they eliminate transcription errors related to illegible writing, incomplete orders or misunderstandings resulting from verbal and telephone orders.

> *Licensed practical nurses may transcribe orders for medications they cannot administer, as long as they can administer the medication in another form. In these cases the LPN is accountable to make sure their transcription is verified by a RN.*

Consultation with Other Healthcare Providers about Medication Orders

When necessary, LPNs are accountable to consult care providers such as physicians, pharmacists, registered nurses, and other regulated health professionals who have appropriate knowledge of pharmacology. Licensed practical nurses are responsible to know when and with whom they must consult.

Communicating a Concern about a Medication Order

Licensed practical nurses have a primary responsibility to advocate for their client's safety and well-being. The licensed practical nurse has a professional responsibility to question a medication order that is unclear or inconsistent with therapeutic client outcomes (CLPNNS, 2013). All orders that are unclear should be clarified prior to administration.

LPNs are expected to communicate a clear and evidence-based rationale to support their concerns to the prescriber when they are questioning a specific medication.

The licensed practical nurse is expected to consult all available drug information including reference books, product monographs, available research, relevant agency policies and/or a pharmacist if they have a question of concern about a medication order. LPNs are accountable to know how to access appropriate references.

Licensed practical nurses must discuss and resolve any medication order concerns in a timely manner with the appropriate care provider and should not administer the medication until concerns have been sufficiently addressed.

Administering Medications

The administration of medications is a cognitive and interactive aspect of nursing care and is more than just the psychomotor task of giving a medication to a client. It involves assessing the client, making clinical decisions and enacting interventions based on this assessment. LPNs are expected to use best practice when administering any type of medication (i.e., prescription medications, over the counter (OTC) medications and natural health products (NHP) or supplements).

It is important to note that the more care providers involved in the steps of medication administration for a client, the greater risk of error and/or blurring the lines of accountability.

Medication Preparation

The preparation of medications is an important aspect of the medication administration process.

Where appropriate, each licensed practical nurse should prepare all medications that they administer to clients however, in some practice settings, medications may be prepared by a pharmacist.

Licensed practical nurses should not pre-pour medications to be administered by another nurse as this practice increases the risk of errors and blurs lines of accountability. In some contexts it may be appropriate for the licensed practical nurse to pre-pour medications to be self-administered by the client over time. In some practice contexts, it may be appropriate to prepare multiple doses of a single type of medication (e.g., immunizations) to be administered by multiple nurses. This practice is specific and limited to certain circumstances and must be supported by employer policy. Licensed practical nurses should be familiar with the employer's policy specific to pre-pouring or mass preparation of medications.

Medications should be prepared as close as possible to the time they are scheduled to be administered to clients and should be stored in a safe and secure area until they are administered.

Client Consent

Informed and competent clients have the right to make decisions about accepting or refusing a medication or to self-administer medications. Licensed practical nurses must respect client choice (CLPNNS, 2013b).

Informed consent can be recorded formally (e.g., on consent form), stated verbally or can be implied (e.g., the client holds out their arm for an injection). Policy and procedures for obtaining informed consent from the client should be developed and implemented based on best practices and applicable legislation.

Licensed practical nurses should verify informed consent with the client before administering a medication. In a situation where a client refuses a medication, the licensed practical nurse is expected to determine the reasons for refusal; assess the client's level of understanding about the medication's effects, document and follow up with the prescriber. In situations where there is concern or question about a client's capacity to consent, the LPN should consult with the appropriate care provider to determine the next best action.

Double-Checking

Independent double-checking is a strategy to reduce medication errors. The Institute for Safe Medication Practices - Canada recommends conducting independent double-checks with high-risk processes (e.g., preparations that require complex calculations) and high-alert drugs. An independent double-check is a process in which a second practitioner conducts a verification of the medication and/or calculations. The verification can be performed in the presence or absence of the first practitioner. However, the critical aspect is to emphasize the independence of the 'double-check' by ensuring that the first practitioner does not communicate to the second practitioner what they would expect the second practitioner to see (ISMP-Canada, 2013).

Some agencies have established policy requiring nurses to perform double-checks of certain medications with another colleague prior to administration. LPNs are accountable to know, understand and follow their employer policies relating to double-checking and high risk medications.

In settings where there is no established policy, the licensed practical nurse should consider double-checking preparations that are high alert and/or that require complex calculations with a nursing colleague.

PRN Medications

PRN medications are those prescribed to be given when a client needs them. A PRN prescription includes the frequency with which the medication may be given, such as Q4H PRN. The purpose of the medication should be identified in the order (e.g., for sleep, pain, nausea).

> *LPNs must understand the indications and actions of PRN medications and the competence to assess the need for administering PRN medications.. Licensed practical nurses may not administer a PRN medication for a purpose other than the one identified in the order.*

Range Doses

When a client's need for medication varies from day to day or within one day, range doses are often prescribed. Range doses refer to medication orders in which the dose and frequency of medication is prescribed in a range (e.g., medication X 50-100 mg IM Q3-4H, PRN for pain).

When the client's need for a range dose is part of a well-established plan with readily anticipated outcomes, the licensed practical nurse may determine the appropriate dose based on a discussion with the client, using the effectiveness of any previous dosages as a reference point. When the client's need for a range dose has changed, become more frequent or less effective, the LPN is expected to consult with the RN to collaboratively determine the range dose.

Agency policies should specify which medications can be ordered in range doses, what ranges are appropriate, and who can determine the dose and frequency within the ranges.

> *A range dose order gives a care provider the flexibility to make a decision about an appropriate dose of medication to administer based on the current assessment of the client.*

When the findings of a client assessment indicate that the range dose administered was inadequate, the prescriber must be notified and a new order is issued. Clear communication among clients, nurses, physicians and pharmacists is vital for a range dose system to work effectively.

Sliding Scales, Algorithms and Correction Doses

Some medications may be ordered according to a sliding scale. A sliding scale helps licensed practical nurses determine the dose of a medication based on specific laboratory values. Sliding scales may be included in an agency's official medication order form, pre-printed order or policy.

Some medications dosages may be determined by following an algorithm (a step-by-step procedure often outlined as a flow chart), based on a client's laboratory values or other parameters. Algorithms may be provided as part of an agency policy.

Licensed practical nurses may use sliding scale or algorithms to determine dosages of medication for clients in the appropriate context: where a baseline of assessment parameters has been established and documented in the client's plan of care; the algorithm is part of a well-established plan of care for a client whose outcomes are reasonably anticipated, and; the LPN has the appropriate knowledge, skill and judgment. When the client's needs are not established, well known or easily anticipated or findings in relation to the assessment parameters are unpredictable or frequently changing, the LPN is expected to use the sliding scale or algorithm in consultation with the RN.

Administering medications using sliding scale or algorithms are beyond entry-level competencies for licensed practical nurses and as such employer-based education is required before an LPN can engage in these skills. Licensed practical nurses must be aware of an agency's policy regarding the use of sliding scales and algorithms, and ensure that these policies are current and based on evidence.

Licensed practical nurses are not authorized to determine insulin correction or adjustment doses.

Procedural Sedation and Analgesia

Licensed practical nurses are not authorized to administer medications intended for purposes of general anesthesia. Licensed practical nurses may not administer intravenous (IV) sedation. However, in appropriate practice contexts, they may administer oral, rectal or injected (intramuscular or subcutaneous) sedation medication.

Patient Controlled Analgesia (PCA)

Licensed practical nurses who have obtained the necessary beyond-entry-level competency through additional employer-based education, learning, and mentored opportunities may care for clients receiving PCA analgesia in any practice context. In the course of caring for the client, they may manage and use an *established* PCA pump. This may include the following:

1. Assess, monitor, and care for the client with an *established* PCA pump.
2. Decrease rates or dosages on the *established* pump, as prescribed by the prescriber in accordance with organizational policies (e.g. double checks, documentation).
3. Discontinue the PCA pump.

When a PCA pump is initialized for the first time or when syringes/cartridges are replaced and changes are required (in drug, drug concentration, or increased dosage), LPNs may be the *second* care provider/co-signature to the RN. LPNs may replace established PCA cartridges or syringes of the same medication (in the same concentration at the same or lower rate) acting as the first or second care provider/co-signature. LPNs are not authorized to fill or add medications to a cartridge or syringe.

NOTE: In certain specific and limited contexts (i.e., palliative care) the LPN may be authorized to replace cartridges or syringes with different or increased concentrations, dosages or rates. Employers and LPNs

wishing to engage in this limited practice must consult a College Practice Consultant for guidance in developing policies and processes with the understanding that these skills are not transferrable to client care outside a dedicated palliative care unit.

Allergy Testing and Desensitizing Injections and Immunizations

Administering allergy testing, desensitizing agents and immunizations medications are beyond the entry-level competencies for licensed practical nurses and as such employer-based (or post-graduate) education and policy is required before an LPN can engage in these skills.

> *Licensed practical nurses who administer allergy testing, desensitizing or immunizing agents must have the knowledge, skill and judgment to recognize and manage complications including anaphylaxis.*

Investigational and Emergency Release Medications

Investigational and emergency release medications must be prescribed by physicians. An investigational drug is a medication that has been approved for human clinical trials by the agency. Emergency release medications refer to drugs that are not on an agency's formulary or approved for general use, and require special authorization.

> *Licensed practical nurses are not authorized to administer investigational and emergency release medications because there may not be a clear predictable trajectory of client outcomes.*

Placebos

The administration of placebos to clients without their knowledge and consent is inappropriate and unethical. Clients have a right to make informed decisions (CLPNNS, 2013b). Administering placebos may be ethically acceptable when the client is aware that the medication is a placebo, or as part of a double-blind research study in which the client has been informed as part of the consent process that they may receive a placebo.

Over-the-Counter (OTC) Medications

Over-the-counter (OTC) medications refer to medications that can be obtained without a prescription. In most clinical settings, medication orders are required for any type of medication, including OTC.

> *Licensed practical nurses do not have the authority to recommend OTC medications to clients. They can, however, collaborate with the client to identify interventions successfully used in the past as part of a self-management process.*

Medications Brought From Home

Occasionally clients will bring medications from their home to the clinical setting and expect the LPN to administer them. Licensed practical nurse may administer the client's home medications as long as they

have an approved order from an appropriate prescriber, the medications are in their original containers and appropriately labeled (i.e., with an affixed prescription label) *and* the practice is supported by agency policy. If there is a discrepancy between the affixed prescription label and the administration directions from the client/family, the licensed practical nurse must clarify the order with the authorized prescriber. The LPN should document the outcomes of all consultations.

Self-Administration of Medications

Where possible, clients who are competent should be supported to self-administer medications. These clients may be completely independent or may require some assistance, such as help with opening containers, mechanical aids or preparing/preloading medications. Agencies should have appropriate policies in place to support self-administration of medications by clients.

> *Licensed practical nurses are responsible to assess and document the client's capacity for self-administration of medications on an ongoing basis.*

Administration of Medications by Unregulated Care Providers

Unregulated care providers (UCPs) can be employed in a variety of contexts of practice and perform client care activities under the supervision of professional nursing staff. Many of the care activities performed by UCPs in these settings involve assisting clients with performing activities such as bathing, mobilizing and feeding. Some of the care activities performed by UCPs may also include assisting clients with the administration of some medications.

In some practice settings, UCPs can be delegated or assigned the application of medicated creams and ointments (both prescription and OTC). In these settings, the licensed practical/registered nurse retains the accountability to assess the client to determine the appropriateness and effectiveness of the medication within the established plan of care because unregulated care providers do not have the knowledge to perform client assessment. The UCP is accountable to apply the cream/ointment as prescribed.

LPNs should be aware of agency policy with respect to UCPs assisting with medication administration or the application of medicated creams and ointments.

Disposal and Transportation

Licensed practical nurses, as part of their practice, may be required to transport or dispose of medications. Agency policies should identify the health professionals authorized to perform these activities and outline criteria for appropriate storage, safe handling and disposal of medications.

> *Licensed practical nurses should ensure that medication transport and disposal activities are part of their scope of employment and should follow agency policies and procedures.*

Documentation

The documentation of medications administered to clients is an important aspect of the medication administration process.

> *Licensed practical nurses are accountable for ensuring timely, accurate documentation of all medications they administer as well as client care and outcomes of care. Licensed practical nurses must also comply with relevant documentation requirements arising from legislation such as the Narcotic Control Regulations, Nova Scotia Prescription Monitoring Act and regulations and agency policies.*

Licensed practical nurses should only record medications they have administered themselves. The documentation of medications administered by others is generally not acceptable. However, in emergency situations, licensed practical nurses may be required to document medications administered by others. In these cases, the documentation should clearly reflect that the LPN is recording the medication administration of another professional, including that professional's name and designation.

> *The recording of medications administered is to be completed as soon as possible following their administration.*

Appropriate documentation related to medication administration includes:

- client name
- drug name
- drug dose and route
- date/time of administration
- signature of the licensed practical nurse who administered the medication

> *Licensed practical nurses should document any additional pertinent information related to the process of administering medications (e.g., self-administration, client questions, refusal of medication), related interventions (e.g., client education, communication with prescriber) and outcomes of care (e.g., therapeutic drug response, side-effects) in the client record.*

Some agencies may have policies allowing for the use of care provider initials when documenting medications. In settings where electronic health records are implemented, care providers use individual electronic signatures for signing their entries in the client record. In either instance, there must be a process in place for identifying the full name and designation of the care provider who administers medications.

The Licensed Practical Nurse as a Leader

Every LPN in Nova Scotia is expected to demonstrate leadership in their everyday practice as part of meeting their commitment to their Standards of Practice and Code of Ethics (CLPNNS, 2013a, 2013b).

Clinical leadership is the demonstration of leadership behaviour (e.g., clinical expertise, effective communication, collaboration and empathy) while providing care (Patrick, Laschinger, Wong & Finegan, 2011). LPNs act as leaders through their advocacy for and contribution to the development and maintenance of a quality practice environments. Quality practice settings are required to support safe and effective nursing practice (CNO, 2006).

> *Licensed practical nurses and their employers share the responsibility for establishing and maintaining quality practice environments. LPNs acting as leaders have a key role in advocating for appropriate resources to support quality practice environments, safe and effective medication administration.*

As leaders, licensed practical nurses are expected to be confident in their knowledge to assess clinical circumstances and articulate client needs to the team. Leadership requires the LPN to step into situations and do their best to make things better for the client. Starting a difficult conversation, taking action and following up for the sake of improvement of the client, the system, and the profession are leadership actions that require initiative and courage. Everyday leadership is critical to professional growth and confidence.

Licensed practical nurses are expected to reflect on their practice. Reflection is a method of learning and gaining insight through the critical analysis of one's experiences (Durgahee, 1997). LPNs look back at their actions and at the outcomes that were, or were not achieved. They make decisions about their future practice, based on the reflection or lessons learned from previous practice. Reflection is an important component of leadership and consistent with principles of the Colleges' Continuing Competence Program (CCP).

Medication Safety

Medication errors are defined as the preventable inappropriate use of medications. Errors can occur at any point in the medication administration process (i.e., ordering, transcribing, dispensing, administering or monitoring).

Medication errors are the most common type of medical error (I.O.M., 2000). Some errors result in an adverse drug event causing a client harm, injury and/or death. Other errors are described as "near misses." In these instances, the error is detected before the medication reached the client.

Some errors result from an unsafe act or an action that violates a policy or procedure (Popescu, Currey, & Botti, 2011).

Other causes of medication errors include:

- a lack of knowledge or information about a drug
- a lack of access to current client information

- failure to ensure the “10 Rights” of medication administration
- failure to assess or evaluate the client
- illegible orders
- confusing directions for use
- miscommunication among health professionals
- interruptions during administration
- similar or confusing product names or appearance

Most medication errors occur at patient care transition points such as hospital admission, transfer from one area of a hospital to another, and discharge home or to another facility (Barnsteiner, 2005). The principal cause of medication error at such points is the incorrect or incomplete transfer of medication information (Rozich & Resar, 2001).

Medication errors may be related to problems with the medication system. For example, agencies may not have approved lists of abbreviations and symbols or approved lists of prohibited abbreviations and symbols and this may result in errors in interpreting a medication order.

The best way to address a medication error is through the use of a non-punitive interprofessional approach that focuses on why an error occurred, rather than blaming the individual directly involved in the error.

Occasionally, a health professional or other care provider will exhibit repeated patterns of poor performance that results in actual or potential errors or harm. These patterns of poor performance do not represent a medication system problem and require appropriate individual performance management. The licensed practical nurse is accountable, through their Standards of Practice and Code of Ethics to offer guidance or mentorship to colleagues who may be struggling with their practice. When a colleague’s performance does not improve with guidance or mentorship, LPNs are accountable to report this behaviour to the appropriate person or agency (CLPNNS, 2012, 2013a, 2013b).

Strategies to Reduce Medication Errors

Nurses and healthcare agencies must work collaboratively to identify system and individual risk factors, initiate proactive measures to decrease error situations, report all errors and near misses, and intervene to minimize the potential for client health to be compromised as a result of medication errors (National Steering Committee on Patient Safety, 2002).

An authorized prescriber should have all relevant drug and client information to make the best possible prescribing decisions for each client. Relevant information includes evidence-based recommendations on medications for addressing illnesses and conditions, including correct dosing, benefits and potential risks. Accurate and complete information is also required about the client’s current medications, illnesses, and other co-morbidities, known allergies or adverse reactions to medications.

The personnel involved in dispensing medication have important roles in reviewing prescriptions and assessing their appropriateness in light of the needs of each individual client, and considering factors such as allergies, diagnoses, symptoms and diagnostic findings.

The client represents an untapped resource for reducing the incidence of medication errors. The client can and should be supported to question why they are receiving a medication, verify that it is the appropriate medication, dose, and route, and alert the health professional involved in prescribing, dispensing, or administering a medication to potential problems such as allergies or past drug-drug interactions.

> *Licensed practical nurses have an important role in educating clients about their medication, advocating for their needs, and in supporting them to achieve their outcomes.*

Licensed practical nurses act as leaders when they participate in interprofessional safety initiatives, policy review, implementation or revision of new medication systems and/or contribute to quality practice environments.

Examples of organizational strategies for supporting quality medication administration practice include:

- 24-hour access to current medication administration resources (e.g., CPS)
- implementation of scheduled maintenance processes for equipment used in the administration of medications (e.g., IV pumps)
- provision of an appropriate environment for nurses to prepare medications
- provision of uninterrupted time for nurses to administer medications
- provision of sufficient support and continuing education opportunities for nurses to further develop their competencies related to pharmacology
- integration of information related to medication systems within orientation programs for new employees
- implementation of an approved list of prohibited abbreviations and symbols or implementation of a policy requiring prescribers to write their prescriptions without using any abbreviations or symbols

Medication Reconciliation

Safer Healthcare Now!, the flagship program of the Canadian Patient Safety Institute, supports the practice of medication reconciliation as a means of reducing the risk of medication error. Medication reconciliation is a formal process in which healthcare professionals partner with clients, families, and each other to ensure that accurate and complete medication information is transferred at different points of care within the continuum of the healthcare experience. Medication reconciliation involves a systematic process for obtaining a medication history, and using that information to identify and resolve

discrepancies in medication orders. Medication reconciliation can prevent errors associated with omission or failure to restart home medications, duplications and dosage discrepancies.
Medication reconciliation is achieved by:

- collecting a complete and accurate list of a client's current home medications - including name, dosage, frequency and route.
- basing admission, transfer and/or discharge medication orders on most the accurate list.
- comparing the list against a client's admission, transfer, and/or discharge orders; identifying and bringing any discrepancies to the attention of the prescriber; and, if appropriate, to make changes to the orders, and documenting.

Best Possible Medication History (BPMH)

The BPMH is the basis of medication reconciliation and documents all medications that a client is currently taking. It is important to understand that the client may be *taking* medications differently than originally *prescribed*, so the BPMH must be based on the most recent and up-to-date client activities. At each point of care when a client is transferred from one healthcare facility/unit to another, the BPMH is compared to the client's current list of transfer/discharge medication orders.

Licensed practical nurses are accountable to use a systematic process to obtain the best possible medication history and use that information to resolve any discrepancies between clients' old and new medication plans. As part of the reconciliation process, licensed practical nurses educate clients about their new medication plans, as well as the need to discard old or discontinued medications.

Documenting Medication Errors

The facts of a medication error must be documented in a client's health record, including the medication administered, what happened to the client, the client's status, corrective actions taken to safeguard the client, and follow-up monitoring. Agency-specific forms (e.g., incident or occurrence reports) may also be required in the event of an error. However, the fact that an incident report was completed should not be documented in a client's health record and copies of these reports should not be added to the client record. An incident report is a quality improvement tool intended to alert healthcare professionals of potential risks.

A medication occurrence or incident report should detail the:

- name and designation of the person who discovered the error
- client's name, and date, time, place of error
- original medication order as written by prescriber
- identification of type of error (e.g., transcribing, dispensing, administering, documenting)
- characteristics of the error (e.g., wrong patient, dose, drug, time, route)
- factors contributing to the error
- nursing assessment, including an evaluation of the client's response/condition following the error

- names and designations of personnel involved in the error
- immediate actions taken to safeguard the client, along with client responses

Anyone involved in a medication error may be asked to participate in an agency's quality improvement review, conducted to improve client care and reduce future risks.

Conclusion

Medication administration is one of nurses' greatest responsibilities because mistakes, accidents, or omissions can result in devastating consequences for clients and nurses, (Popescu, Currey, & Botti, 2011). LPNs are expected be leaders and contribute to quality practice environments to utilize safety frameworks and best practice guidelines to ensure clients receive the safest care possible.

Glossary

Accountability: answering for the professional, ethical, and legal responsibilities within one's role (i.e., decisions, activities, interventions); can never be shared or delegated.

Authorized prescriber: a healthcare provider authorized by legislation to prescribe drugs and other health products. In Nova Scotia, authorized prescribers include physicians, dentists, nurse practitioners, midwives, optometrists, and pharmacists.

Care directive: an order written by an authorized prescriber (e.g., nurse practitioner or physician) for an intervention or series of interventions to be implemented by another care provider for a range of clients with identified health conditions and only when specific circumstances exist. A care directive relates to interventions for which the authorized prescriber(s) hold ultimate responsibility, however, which must also be within the scope of practice of the care provider involved. Care directives can only be implemented when an authorized prescriber is available (determined by agency policy).

Clients: individual(s) (e.g., family member/guardian/substitute caregiver), families, groups, populations or entire communities who require nursing expertise. In some settings, clients may be referred to as 'patients' or 'residents.'

Compounding: to cause drugs to be mixed, prepared, altered in form, mixed with non-medicinal ingredients and otherwise changed from the manufactured form (Nova Scotia College of Pharmacists, 2003). Compounding is performed only by pharmacists.

Context of practice: conditions or factors that affect the practice of nursing, including the needs of the client location of practice setting (e.g., urban, rural), type of practice setting and service delivery model (e.g., acute care, community), level of care required (e.g., complexity, frequency), staffing and availability of other resources. In some instances, context of practice could also include factors outside the healthcare sector (e.g., community resources, government).

Dispensing: "the interpretation, evaluation and implementation of a prescription drug order, including the preparation and delivery of a drug or device or patient's agent in a suitable container appropriately labeled for subsequent administration to, or use by, a patient" (NAPRA, 2009).

Independent double check: a process in which two healthcare providers verify the accuracy of a medication prepared for administration. For example, a licensed practical nurse may use this process to verify a dosage calculation. The most critical aspect is to ensure that the healthcare providers do not communicate with each other, so the visibility of the mistake would be reduced and the second provider would not have any expectation of what s/he would find. The second healthcare provider can conduct verification, either in the presence or absence of the first healthcare provider.

Individual scope of practice: the roles, functions, and accountabilities which members of a profession are legislated, educated and authorized to perform. The individual scope of practice for a licensed practical nurse is based on the scope of practice of the nursing profession, and further defined by the licensed practical nurse's specific education, experience, and context of practice (e.g., hospital, community).

Informed consent: a phrase used in law to indicate that the consent given by a person has been based upon a clear appreciation and understanding of the facts, implications, and future consequences of an action. In order to give informed consent, the individual concerned must have adequate reasoning faculties and be in possession of all relevant facts at the time consent is given. In some instances, a substitute decision-maker may be involved in giving informed consent.

Intervention: task, procedure, treatment or action with clearly defined limits, which can be assigned or delegated within the context of client care.

Medication administration: the act of giving medications to an individual client through a specific medication route (e.g., enteral, percutaneous, parental).

Medication reconciliation: a systematic process used to obtain a complete and accurate current list of a client's medications (i.e., name, dose, frequency, route) which is then compared to a physician's admission, transfer and discharge medication orders to identify and resolve any discrepancies (Canadian Patient Safety Institute; Safer Healthcare Now!, 2012).

Medication use process: in Nova Scotia, this process involves prescribing, transcribing, dispensing, compounding, administering and monitoring medications.

Near miss or close call: an event, situation or error that could have resulted in unwanted consequences, but did not occur because, either by chance or through timely intervention, the event did not reach a client (ISMP, 2013).

Order: a written or verbal medication order (prescription) from an authorized prescriber who has the legislative authority (e.g., nurse practitioner, physician).

Scope of employment: the range of responsibilities defined by the employer through specific job descriptions and policies.

Scope of practice of the profession: the roles, functions and accountabilities which members of a profession are legislated, educated and authorized to perform. In Nova Scotia, the scope of practice of licensed practical nurses is defined within the Licensed Practical Nurses Act.

Selected Resources

Administration of Medication: A Self-Assessment Guide for Licensed Practical Nurses in Nova Scotia: http://clpnns.ca/professional-development-links/

Canadian Patient Safety Institute (CPSI): http://www.cpsi-icsp.ca/

CLPNNS Immunization Practice Guideline: http://clpnns.ca/sites/default/files/Immunization%20July%2012.pdf

Health Canada: http://www.hc-sc.gc.ca/index-eng.php

Institute for Safe Medication Practices – Canada (ISMP – Canada): http://www.ismp-canada.org

Licensed Practical Nurses Act (2006) and Regulations (2009): http://clpnns.ca/lpn-act-and-regulations-2/

Safer Healthcare Now!: http://www.saferhealthcarenow.ca/EN/Interventions/medrec/Pages/default.aspx

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Licensed Practical Nurses have core nursing knolwedge to independantly care for clients with an established plan of care. Licensed practical nurses are an intregral part of the health care team; accountable to provide safe, competent, ethical and compassionate care to individuals, families and communities.