
SASKATCHEWAN



ASSOCIATION

Medication Administration: Guidelines for Registered Nurses

Effective February, 2007

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The Saskatchewan Registered Nurses' Association (SRNA) is the professional regulatory body for the registered nursing profession with the mandate to promote and ensure competent, caring nursing for the people of Saskatchewan.

This document sets out the SRNA's guidelines for medication administration by registered nurses in Saskatchewan. The original document (2000) had been adapted by Liz Domm, RN from the College of Nurses of Ontario document *Medication Administration Standards, 1996*.

The document was reviewed and endorsed by the Saskatchewan College of Pharmacists in relation to those sections of the document that pertain to Pharmacy Standards and Regulations.

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INTRODUCTION

Ensuring safe and effective administration of medications to clients is an important component of nursing care. This document provides guidelines for registered nurses to administer medications safely and effectively in most practice settings (articulated in the shaded, boxed areas of the document). These guidelines are built on the SRNA *Standards and Foundation Competencies for the Practice of Registered Nurses, Effective March 1, 2007* to provide direction for developing policies and structures which contribute to quality systems related to medication administration. In quality practice settings policies are necessary to facilitate consistent medication administration practices and support for registered nurses in providing safe, quality care. Effective policies consider the clients, their needs and the resources available to meet those needs. The SRNA promotes the development of these policies in conjunction with nursing staff so that they accurately reflect the realities of the practice setting. Registered nurses are required to advocate for policies in their practice setting when policies do not exist.

These guidelines are not intended to replace legal advice for specific practice settings. Agencies or individual registered nurses may need to consult their own legal counsel or a pharmacist for advice about legislation on medication administration specific to their area of practice. There are provincial and federal statutes and regulations that relate to the legal responsibilities of registered nurses with regard to the administration of drugs. A review of these statutes and regulations was undertaken and considered in the revision of this document.

Throughout this document the term registered nurse refers to the registered nurse, the registered nurse-nurse practitioner [RN(NP)] and the graduate nurse. There are limitations to the practice of the graduate nurse in some clinical settings.

A list of resources related to medication administration is included in this document. Appendix A outlines commonly used medication supply systems and Appendix B includes some information to guide registered nurses in the administration of sedation/analgesia for procedures.

The Role of the Registered Nurse in Administering Medications

Pharmacotherapeutics, the use of drugs to prevent, modify or cure disease, is among the most frequently used medical treatment. Expectations of society and increasing nursing expertise have expanded the registered nurse's role from simple administration to collaboration, in which the registered nurse contributes to the design, implementation and evaluation of the client's drug regimen. Nursing pharmacotherapeutics requires the application of knowledge from a variety of sources. The registered nurse is educated in drug actions, effects, adverse reactions, factors that affect drug-taking behaviour and capabilities to learn self-medication and techniques of administration (Potter & Perry, 2006).

Administering medications involves more than just the technical task. Competent medication administration requires the ability to assess the appropriateness of the medication for a particular client. Evaluation of the appropriateness of a medication requires knowledge of the actions, interactions, side effects (including allergic reactions), usual dose, route and approved use, basic pharmacokinetics of the drug and the client's response to it. Competent medication administration also includes preparing the medication according to directions, monitoring the client while administering the medication, appropriately intervening as necessary, evaluating the outcome of the medication on the client's health status and documenting the process. Assessment and evaluation of the appropriateness of the medication is done in collaboration with the client.

In acute and community care, one of the major roles of the registered nurse is to teach clients to safely administer their own medications and to help them understand the expected positive outcomes and potential adverse effects.

Registered nurses receive significant educational preparation in medication administration over the course of their nursing education program. Preparation includes pharmacology, pathophysiology and nursing courses as well as other support courses and case studies. Registered nurses gain clinical knowledge of medications and integrate learning into practice through care planning, experience and continued education opportunities.

Registered nurses need to assess their competence to safely and effectively carry out their roles and responsibilities for medication administration in each situation. Registered nurses and/or employers need to assess both the medication needs of their clients and the expertise of their staff. Policies are required to identify appropriate roles and responsibilities for medication administration.

GUIDELINES FOR MEDICATION ADMINISTRATION

PRESCRIBING

For the purposes of this document the term **prescribers** denotes those who can legally prescribe medications in Saskatchewan.

In Saskatchewan a number of health professionals have prescribing authority, including RN(NP)s, physicians, dentists and optometrists.

The RN(NP) prescribes and dispenses drugs in accordance with SRNA *Bylaws 2006* and the *Registered Nurse (Nurse Practitioner) Standards & Core Competencies 2003*. At this time federal legislation does not permit RN(NP)s licensed in Saskatchewan to prescribe narcotic, controlled drugs, benzodiazepines and other targeted substances (*Government of Canada, 1996*). In addition the *Food and Drug Act of Canada* prohibits the RN(NP) from receiving and distributing drug samples.

In certain settings in the province, designated registered nurses may be delegated the authority to prescribe a specific range of medications. The process that enables a registered nurse to prescribe and distribute drugs is outlined in *The Registered Nurse Scope of Practice: Guidelines for Nurses Prescribing and/or Distributing Drugs by Transfer of Functions* (SRNA, 1999) and the *Registered Nurse Scope of Practice: Special Nursing Procedures and Nursing Procedures by Transfer of Medical Functions* (SRNA, 1993).

Most medications are prescribed as “direct orders” for a specific client by a prescriber. An order is considered valid if documented, dated and signed, on a prescription form, or in a client’s clinical record. Once a medication has been dispensed to a specific client, the dispensing label may also serve as a dated record of the order for the purpose of administration (e.g., home care clients) until the appropriate order is received. Pharmacists may produce computerized re-order lists of prescribed medications clients are taking. Once the prescriber reviews and signs these lists, they are considered valid orders.

The Registered Nurse (Nurse Practitioner) Standards and Core Competencies 2003 (SRNA, 2003a) and *College of Physicians and Surgeons of Saskatchewan Bylaw 53, 2003* identify standards for writing prescriptions. They include:

- The name of the client (surname, initials or given names) and address
- Date prescribed
- Name of the medication (generic), the strength, quantity and concentration, where applicable
- Dosage, with instructions for use by the client including frequency, interval or maximum daily dose
- Amount prescribed or the duration of treatment
- Administration route, if other than oral
- Explicit instructions for client usage of the medication
- Number of refills if applicable
- Purpose, when it is a PRN medication
- Prescriber’s name, address, telephone number, fax number and signature

Each prescription must be complete to enable the medication to be administered as the prescriber intended. This information is necessary for a prescription outside of the hospital setting where the orders are written on the client’s record. Orders such as “medications as at home,” “medications as pre-op,” or “resume medications post discharge” can lead to errors. The prescriber may request assistance from a pharmacist to provide the information for a specific client about “medications as at home”. The Institute of Safe Medical Practices (ISMP) Canada recommends that medication orders should be written in full without using abbreviations to reduce the risk of error.

There are times when registered nurses, physicians, pharmacists, or other regulated health professionals with knowledge of pharmacology need to communicate with one another about specific prescriptions for medications. For example a registered nurse may communicate a physician’s order to another registered nurse, consult with a pharmacist about physicians’ orders or accept physicians’ orders from a pharmacist. It is not appropriate for clerical staff or unregulated care providers to take verbal or written medication orders from a prescriber.

Registered nurses may accept a prescriber’s order that is communicated via an intermediary, provided that they are licensed health care professionals and have the necessary knowledge of pharmacology to provide this service and that it is endorsed by agency policy.

Communicating a Concern about a Medication Order

If there are concerns about a medication order, registered nurses have a responsibility to advocate on the client’s behalf. Registered nurses need to clearly articulate the rationale supporting their concerns. It may be necessary to review related drug information, research, agency policies and consult with nursing colleagues or other health care professionals, such as a pharmacist.

Registered nurses:

- Have a professional responsibility to question a medication order that is not clear or consistent with therapeutic outcomes prior to administration
- Contact the prescriber to discuss the concern and rationale for the concern
- Discuss with the appropriate nursing authority or medical authority in the facility if the concern remains unresolved
- Withhold the administration of the medication until the concerns have been addressed
- Document concerns and the steps taken that relate directly to the client’s care in the client’s chart

Verbal, telephone and faxed orders

Verbal orders are those given by the prescriber face-to-face. Registered nurses should avoid accepting verbal orders when the prescriber is present and can document his or her own orders. Verbal orders are acceptable in emergent or urgent situations such as a code or trauma situation when it is difficult for the prescriber to document.

Telephone orders (verbal orders received via the telephone) can be more error-prone than written orders due to a number of variables such as misinterpretation of spoken language, background noise, disruptions and the potential for error with drug names that sound alike. Telephone orders should be limited to those situations in which direction for client care is required and the prescriber is not present. The prescriber is accountable for documenting and signing his or her telephone and verbal orders in a timely manner. Registered nurses are not responsible for ensuring such orders are signed.

A facsimile (fax) is a copy of the original order. Faxed orders are legally acceptable in Saskatchewan and become part of the client health care record. Faxed orders that are verifiable, written, dated and signed by the prescriber are preferable to telephone or verbal orders as there is less chance of misunderstanding the spoken order and therefore less chance of error. Safe practice when receiving faxed orders include examining the fax carefully to determine if it is legible. If clarity of the order is compromised the registered nurse should contact the prescriber to have the order clarified before dispensing or wait for the original to arrive (ISMP, 1998).

Registered nurses:

- Require knowledge of the client and the medication before accepting telephone orders
- Are accountable for recording information received verbally or by telephone accurately, repeating the order to the prescriber for verification, and for assessing the appropriateness of the medication for the client
- Document verbal or telephone orders and include faxed orders on the client record
- Follow agency policies related to verbal, telephone, and faxed orders

Clinical Protocols

Clinical protocols are established sets of procedures for the management of conditions and disorders which include prescribing medications. They can apply to a range of clients who meet certain conditions or criteria. Written clinical protocols serve as the prescriptive authority in a specific situation when there is no individual order for a client. Clinical protocols are evidence-based and pre-approved by the appropriate medical and nursing authority within the agency and are supported by nursing and agency policy.

A clinical protocol that includes medication administration identifies the specific medication(s), the specific condition(s) that must be met, and any specific circumstance(s) that must exist before the clinical protocol can be implemented. The degree to which this is specified depends on the client population, the nature of the medication(s) involved, and the expertise of the registered nurses implementing the clinical protocol. Generally accepted standards for clinical protocols also require the:

- Name and signature of the physician authorizing the clinical protocol
- Date and signature of any administrative authority that is approving the clinical protocol (e.g., Emergency Department Advisory Committee)

Registered nurses:

- Ensure there is a written clinical protocol before implementation
- Advocate for clinical protocols when none are available and client care is compromised
- Collaborate with other health professionals in developing and evaluating clinical protocols
- Obtain the necessary educational requirements prior to implementation of the protocol
- Evaluate client outcomes of the clinical protocol including medications

TRANSCRIBING

Transcribing medication orders is a basic competency of registered nurses. It is a process of transferring the prescriber's order to a medication administration record for the purpose of directing administration of the medication. In some practice settings individuals other than registered nurses may be designated to complete the paper work involved in transcribing orders.

Registered nurses:

- Validate the accuracy and completeness of the transcription
- Verify the order with the prescriber if the order is not clear
- Apply professional judgment when transcribing orders to determine an administration schedule that maximizes the therapeutic effect of the drug, supports client choice and complies with agency policy

Electronic medication order entry systems are being implemented in practice settings. They allow the prescriber to enter medication orders directly into the system and eliminate transcription errors related to illegible writing, incomplete orders or misunderstandings resulting from verbal and telephone orders.

Agency policies need to determine the appropriateness of verbal, telephone and faxed orders and indicate under what circumstances they are appropriate, who may take them and how and where they should be documented.

DISPENSING/DISTRIBUTING MEDICATIONS

Dispensing medications includes the selection, preparation and transfer of a medication to client or his/her representative for administration. Pharmacists are authorized to dispense medications in Saskatchewan under the *Pharmacy Act, (Province of Sask., 1996)*. RN(NP)s, physicians and dentists are also authorized to dispense medications under certain conditions.

In certain areas of the province and in certain practice settings registered nurses can distribute medications as described in *The Registered Nurse Scope of Practice: Guidelines for Nurses Prescribing and/or Distributing Drugs by Transfer of Functions (SRNA, 1999)*. The guidelines are very specific about the requirements and conditions necessary for a registered nurse. Practice settings must identify who is delegating the authority to the registered nurse and the process and guidelines for distributing specific medications. Only registered nurses with a signed transfer of medical function as per agency policy may dispense medications in this manner.

There is an overlap between activities related to dispensing a drug and activities related to administering a drug. Assessing the appropriateness of a drug, selection of the drug, appropriate health teaching and providing drug information to a client occurs in dispensing and administering a medication. Activities that fall within administering a medication are not, by themselves considered dispensing.

Registered nurses:

- Have knowledge and skills in assessment/diagnosis, intervention/treatment/management, drug therapy and referral functions prior to accepting a delegation from a pharmacist to distribute drugs
- Only distribute drugs if the specific requirements and conditions as identified in *The Registered Nurse Scope of Practice: Guidelines for Nurses Prescribing and/or Distributing Drugs by Transfer of Functions (SRNA, 1999)* are met

Re-packaging of medications

Health care agencies require the development of policies and procedures in consultation with the pharmacist if repackaging of medications is permitted.

Medications dispensed from a pharmacy, come in blister packs, vials, or other containers suitable to the dosage form. The manufacturers' original package or unit dose packages should be labeled with the medication name, dose, frequency and client's name. The following may be considered repackaging and not dispensing:

- Filling a mechanical medication administration aid or alternate container from a client's own blister pack or prescription bottle (e.g., Home Care) to facilitate self-administration, or administration by a caregiver
- Repackaging and labeling drugs from a client's own blister pack or prescription container for a leave of absence. The labeling should include the date, client's name, prescriber's name, name of the drug and strength, quantity and directions for administration
- Giving a client going away medications prepared by the pharmacy
- Giving a client his/her blister pack or prescription bottle to take on a trip

Registered nurses:

- Follow agency policies and procedures related to repackaging of medications
- Consult with the pharmacist regarding medications prior to client going away
- Collaborate with the prescriber and pharmacist to determine that it is safe and appropriate to provide the client going away with either the entire prescription package or repackaged prescription
- Provide the client going away or person responsible for the client with relevant information about the medication

ADMINISTERING MEDICATIONS

The act of administering a medication is a cognitive and interactive aspect of nursing care. It is more than just the task of giving a medication to a client and evaluating its effect on the client. It involves assessing the client, making clinical decisions and planning care based on the assessment. Medication administration is carried out in collaboration with the client. It is necessary to talk to clients or caregivers to ascertain that they understand the use of the medication and any special precautions or observations that might be indicated.

It is important that the same registered nurse carry out all the steps in the medication administration process. Preparing medications by one registered nurse to be administered by another nurse is unsafe. This practice increases the risk of errors and confuses the line of accountability.

Registered nurses:

- Verify that the transcribed order is correct according to the medication system used
- Assess the appropriateness of the medication as prescribed for the client in the particular situation using critical thinking skills to consider:
 - client's allergies or sensitivities, age, weight, pathophysiology, knowledge, and attitude about the medications
 - medication's expected benefits
 - medication's possible risks, side effects, and interactions with other medications, including non-prescription medications and herbal preparations
- Follow-up with the prescriber if the order is believed inappropriate
- Consult with the pharmacist as necessary to determine if order is appropriate
- Identify the expected therapeutic outcomes of the medications
- Consider the medication profile when developing the plan of care
- Use knowledge and judgment to calculate a fractional amount or combine two or more substances as required
- Prepare medications for administration, applying principles of aseptic technique
- Know the stability, storage, and how to label medications properly once they are reconstituted or mixed
- Prepare medications as close as possible to the time they are scheduled to be given and store safely until administered
- Apply the 'rights' for administering medications:
 - the right client
 - the right medication
 - the right dose
 - the right route
 - the right time
 - the right technique
 - the right approach
- Administer the medication with the consent of the client, in a timely manner and based on pharmacokinetics and optimum serum levels
- Monitor the client while the medication is being administered and after administration for side effects and intervenes appropriately as necessary
- Teach clients about their medications
- Sign for medications after they are administered, including the time, date and site (if parenteral)
- Evaluate the outcome of medications on the client
- Document the outcome of medications administered
- Advocate for a medication administration system and policies that facilitate administering medications in a safe and effective manner according to standards
- Advocate for adequate and appropriately prepared staff to allow for the safe and effective administration of medications according to standards

Consent

As with any care or treatment, administering a medication requires client consent. A notation in the nursing notes of the client's co-operation may be sufficient to indicate implied consent. Invasive techniques such as an injection may require verbal consent. Agencies require policies and procedures that address consents specific to their area of service.

Registered nurses have professional and ethical responsibilities to ensure clients are informed and competent to give consent. They must also recognize that persons have the right to refuse or withdraw consent for care or treatment at any time (*Canadian Nurses Association, 2002*).

The relationship between a registered nurse and client is based on the recognition that clients are able to make decisions about their own life and are partners in the decision-making process. The extent a client participates is determined by the client's health status, willingness and expectations. Two useful resources that provide more information related to consent are: The Canadian Nurses Protective Society (CNPS) InfoLAW Bulletins entitled *Consent to Treatment: the Role of the Nurse (1994)* and *Consent for the Incapable Adult (2004)*.

Double-checking the Preparation of Medications

Independent double-checking is a safety strategy to reduce medication errors. There is no law that requires a registered nurse have a colleague double check the preparation of a medication for administration. However, the Institute for Safe Medication Practices-Canada (ISMP, 2005) recommends conducting independent double-checks with high risk processes (e.g., preparations that require complex calculations) and high-alert drugs such as highly toxic medications such as chemotherapy drugs. Verification by a second practitioner can be performed in the presence or absence of the first practitioner. It is critical that double-checking is performed independently and that the first practitioner does not communicate to the second practitioner what they would expect the second practitioner to see (ISMP-Canada, 2005). It is important that RNs advocate for agency policies that address double-checking of high-alert drugs.

Range Doses

Range doses refer to medication prescriptions in which the dose, frequency, or route is prescribed in a range (e.g., meperidine HCl 50-100 mg IM Q3-4H, PRN for pain). The majority of medications are not prescribed in range doses. However, in some situations, such as the management of pain, a client's need for analgesia may vary from day to day or within the same day. For the range dose system to work effectively, clear communication among clients, nurses, prescribers and pharmacists is vital.

Registered nurses assess the client and make a decision on the appropriate amount of medication based on the assessment at that particular time.

Agency policy relating to range doses should include:

- Which medications may be ordered and administered by means of a range dose prescription
- What type of ranges are appropriate (i.e. dose, frequency, route, how often partial doses may be administered)
- Who may determine the dose, frequency, and route within the range
- How to dispose of any remaining portion of unused medication

PRN Medications

Pro re nata (PRN) means “when necessary”. PRN medications are given only when a client needs them. The prescription includes the frequency with which the medication may be given, such as, “HS, PRN” or “Q4H, PRN,” and the purpose of the medication (e.g., sleep, pain, nausea).

Registered nurses:

- Make decisions whether to administer a PRN medication based on assessment of client need
- Evaluate and document the reason for and the effects of PRN medication
- Advocate for regular dosing when PRN use shows signs of a consistent need

Agencies require a policy relating to PRN medications, considering the role of the registered nurse in administering PRN medications, and how to dispose of any remaining portion of unused medication.

Allergy Testing and Administering Desensitizing Injections

The knowledge, skill and judgment required for administering allergy tests or desensitizing injections is the same as required to administer other types of injections.

Registered nurses:

- Require support of agency policy prior to administering allergy testing and desensitizing agents
- Require emergency equipment and resources in the practice setting in the event of a sudden adverse reaction

Immunizing Agents

The competence required to administer immunizing agents is the same as that required to administer other injections. To administer an immunizing agent to a client, the registered nurse requires an individual prescription or standing medical order that applies to a specific client population. Standing medical orders for influenza and pneumococcal vaccines are commonly used for clients in long-term care facilities. Agencies that use standing medical orders must have written clinical guidelines in place that are developed and acceptable to all health professionals involved.

In public health settings, immunization programs are established collaboratively by Saskatchewan Health, public health or community health nurses with expertise in immunizations and medical health officers. The activities of screening, teaching, administering the immunizing agent, and evaluating outcomes are responsibilities of the registered nurse and are supported through special nursing procedure criteria. Anaphylaxis management protocol is developed by the medical health officer and authority for registered nurses to manage anaphylaxis is achieved through a transfer of medical function.

Clients identified to be at risk of developing severe side effects or complications as a result of administration of an immunizing agent, may require assessment and intervention by a physician.

Registered nurses:

- Have the competencies to determine client's eligibility for immunization
- Assess for adverse effects and provide the necessary interventions to address complications should they arise while immunizing
- Require agency support through policies related to the immunization program

As with any other medication administration, one registered nurse should be responsible for all the steps of administering an immunizing agent. In specific circumstances, such as a massive immunization campaign, it may be appropriate for a registered nurse to constitute and draw up the vaccine ahead of time. If it is necessary to pre-fill syringes, a cold chain (2-8 degrees C) must be maintained. Each syringe should only be filled with one biological agent that should be administered within the reconstitution times as recommended by the manufacturer.

The Saskatchewan Immunization Manual (2006) and the *Canadian Immunization Guide (2006)* are important resources for registered nurses involved in immunization programs. Registered nurses who are involved in immunization outside the public health system should also refer to the *Guidelines for Immunization Administration & Immunization Program (SRNA, 2003)*.

Administering Investigational and Emergency Release Medications

Investigational and emergency release medications require a prescription. An investigational drug is one that has been approved for human clinical trials by an independent research ethics board and 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. Agencies require policies relating to investigational or emergency release medications.

Registered nurses:

- Administering an investigational or emergency release drug requires the necessary information (e.g., product monograph) to safely administer the medication, monitor effects, outcomes and side effects, and intervene appropriately if adverse side effects occur
- Participate only in genuine research seeking new scientific knowledge using valid methods, not in marketing activities under the guise of research

Placebos

It is inappropriate and unethical to administer placebos to clients without their knowledge and consent. As with any care, clients have a right to make an informed choice. Administering placebos may be ethically acceptable only when the client is aware that the medication may be a placebo e.g., part of a single-blind or double-blind research study. Agencies require policies related to the use of placebos.

Registered Nurses:

- Refrain from administering placebos without client consent
- Advocate for a "No placebos without consent" policy in the absence of such a practice

Non-Prescription Medications and Preparations (Over-the-Counter)

Non-prescription medications and preparations, also called over-the-counter medications (OTC) do not require a prescription and are therefore, not part of the controlled act of prescribing. Many agencies, particularly acute care, require a physician's order for any medication. It is inappropriate for registered nurses to recommend OTC medications to clients when the client is being treated for an acute illness in hospital. In other settings it may be appropriate for registered nurses to recommend OTC medications and preparations to clients. Registered nurses are individually accountable for suggesting that an OTC is appropriate.

There are three categories of access of non-prescription medications; restricted access (sold by pharmacist from the dispensary), open access (sold from the self-selection area of the pharmacy) and unrestricted access (sold from any retail outlet). To determine whether a medication is a non-prescription drug (OTC) or requires a prescription, a pharmacist should be consulted.

In all care settings registered nurses require verification through an approved order or agency protocol to administer a client's own OTC medication and preparations including herbal preparations.

Registered nurses:

- Refer the client to a physician or registered nurse (nurse practitioner) for medical attention and prescription when necessary
- Have knowledge of the OTC item and its potential impact on the client's health status
- Encourage clients to report to their health care provider their use of OTC medications and herbal preparations
- Educate clients about the OTC or herbal preparation they may be taking on their own and the potential impact on their health

Medications Brought from Home to Adult Day Care/Camps

In some settings, such as adult day care, rehabilitation centers and camps, clients bring their prescribed and OTC medications from home for registered nurses to administer. Based on the nurse's professional judgment of the client's competence and situation the registered nurse may administer these medications provided they are in their original container with an affixed prescription label from a pharmacy. It may be appropriate for some clients to self administer their medications.

The client, family member or substitute decision-maker may direct the nurse to administer the medication differently than written on the prescription label. The registered nurse needs to use professional judgment and/or consult with the prescriber as necessary. The discrepancy must be documented and rationale given for the decision taken.

Registered nurses follow agency policies and procedures relating to administering medications brought from home and safe storage of those medications.

Self-administration of Medications

To develop or maintain a client's optimal level of functioning and independence, it may be appropriate to have clients self-administer their medications. Agencies require policies related to self-administration. In facilities which are "open environments", maintaining all medications in a secure, locked place will help to ensure that medications are not inadvertently misplaced or misused.

Clients who are capable of self-administering their medications may be totally independent or may require some assistance in the form of reminders to take medications. They may also require assistance to open their prescription container or mechanical aid, or they may need assistance to fill their mechanical aid.

Registered nurses:

- Continually assesses clients for their capacity to self-administer their medications
- Collaborate with other members of the health care team to determine client's initial and ongoing capacity to self-administer their medications
- Document on the client's plan of care when they are capable of self-administering their medications, including the type of assistance required
- Advocate for appropriate policies to support clients administering their own medications

Mechanical Aids for Self-administering Medications

Many types of mechanical aids (e.g., dosettes) are available in the marketplace to assist individuals living in the community to self-administer their medications. These aids are especially helpful to the elderly, individuals with cognitive impairment and individuals with physical disabilities (e.g., anyone who cannot open the traditional medication container, see the calibrations on a syringe, or remember whether they have taken their medications).

The SRNA supports the use of such aids to assist clients to self-administer their medications. Pharmacists may dispense medications into a mechanical aid for a client. Registered nurses may assist clients to fill their mechanical aids with medications that have been dispensed by a pharmacist, and also ensure that medications are stable in the mechanical aid for the time period involved.

In Home Care a registered nurse may delegate to a home health aide the task of reminding the client to take their medication(s) at a certain time, supervising a client to self-administer or administering an oral medication(s) when the client is physically unable to take the medication from their mechanical aid.

Medication Administration by Unregulated Care Providers

The ongoing assessment of health care needs, development of a plan of care, evaluation of the client's health status, and the ongoing effectiveness of the medications are the responsibility of the registered nurse. Unregulated care providers such as health-care aides do not have the educational preparation with the knowledge, skills or judgment to administer medications.

It may be appropriate in some health care settings such as Home Care for a registered nurse to delegate to an unregulated care provider tasks related to medication administration. For example, the unregulated care provider may be taught tasks such as how to apply a medicated ointment to a client or how to safely assist a client with their medications. Delegation is the transfer of responsibility for a task when it is not part of the scope of practice of a care provider (SRNA, 2004). Only the task can be delegated to the unregulated care provider for a specific client. The registered nurse cannot delegate the required knowledge and judgment. The delegation process is complex and involves a teaching component, supervision, support and evaluation.

Registered nurses are familiar with the SRNA document *Practice of Nursing: RN Assignment and Delegation 2004* and understand their responsibility and accountability around delegation of nursing tasks.

Controlled Substances

Controlled substances under the *Controlled Drugs and Substances Act (1996)* include narcotics, controlled drugs and targeted substances (e.g., benzodiazepines). The Act directs licensed organizations such as hospitals to maintain accountability for acquired controlled substances. Although the Act does not specifically authorize the delegation of this responsibility, common practice is to delegate the responsibility for establishing and enforcing agency policies to pharmacy. Pharmacists, in consultation with other stakeholders including registered nurses, develop policies at agency level regarding storage, control and access to controlled substances. Established systems in practice settings are required for appropriate storage, security, dispensing, administration and disposal of these drugs. The practitioner who administers controlled substances to clients is accountable for accurately and properly handling such substances.

The Office of Controlled Substances of Health Canada which regulates the distribution of controlled substances in Canada recommends that two health care professionals be present during all controlled substance counts at shift change and that verification should be undertaken by a professional nurse coming on duty and a professional nurse going off duty.

Registered nurses:

- Follow legislation and agency policies and procedures regarding the administration, counting, securing, storage and disposal of narcotics and controlled drugs
- Advocate for a system that clearly outlines the appropriate administration and disposal of narcotics and controlled drugs

Management of Marihuana for Medicinal Purposes

The amended federal *Marihuana Medical Access Regulations (2003)* under the *Controlled Drugs and Substances Act (1996)* include provisions for eligible clients to reasonably access a legal source of marihuana for medical purposes. A medical declaration from a physician is required when a client submits an application to receive an exemption. The medical declaration must include the daily dosage of dried marihuana in grams, and the form and route of administration.

Clients must have a valid 'authorization to possess' to take medicinal marihuana. The authorization to possess means authorization to possess dried marihuana. The authorization indicates the:

- Name, date of birth and gender of the holder of the authorization
- Full address of the place where the holder ordinarily resides
- Authorization number
- Name and category of the symptom
- Medical condition, or its treatment, with which the symptom is associated
- Maximum quantity of dried marihuana, in grams, that the holder may possess at any time
- Date of issue
- Date of expiry

Marihuana must be obtained from a licensed dealer, as outlined in the *Marihuana Medical Access Regulations, 2003*. "A licensed dealer is able to provide marihuana to the pharmacy provider for the client" (College & Association of Registered Nurses of Alberta, 2005, pg. 16).

The regulations focus mainly on a client in the community taking responsibility for all aspects of production, storage and administration of this narcotic. Regulations also specify that the decision to allow a client to possess and/or grow marihuana within an institution remains the decision of that institution. If the client has appropriate authorization and the agency agrees to their use of the marihuana, the registered nurse may become involved in assisting a client with self-administration of the drug.

Registered nurses follow agency policies related to the management of controlled substances.

Medication Disposal

The *Joint CNA/CMA position statement Environmentally Responsible Activity in the Health Sector (2005)* addresses the responsibility of the health sector to prevent environmental degradation by observing safe disposal practices for outdated or unserviceable medications as well as biomedical waste, plastic and non-recyclable general waste.

Prescribed medications, including narcotic and controlled drugs, that are outdated or no longer needed by clients require appropriate disposal. These medications should be returned to a pharmacy to be disposed of according to established guidelines.

Registered nurses educate clients in the community about medication disposal.

- Follow agency policies and procedures for appropriate disposal of syringes and sharps

In the community, individually prescribed medications, whether non-controlled, controlled, or narcotics are the property of the individual client. If clients are unable to dispose of medications themselves and have no assistance from family or friends, the registered nurse may transport unused medications to a pharmacist from the client's home if it is part of the nurse's employment and there are established agency policies and procedures. A documentation process that includes the following should be in place:

- Drug inventory (name and quantity);
- Signature by the client or the client representative confirming the inventory; and
- Pharmacist's signature upon receipt of the drugs.

If the client is deceased, the administrator or executor of the estate is responsible for the narcotic and controlled drugs in the home. The registered nurse can assist the executor by taking an inventory of the medications to be destroyed, and then sign the document with the executor. The medications should be returned to a pharmacy for appropriate disposal.

Transporting Medications

There may be instances, particularly in the community, when a registered nurse is asked to help clients obtain their medications from the pharmacy. Transporting a client's medications, including narcotics and controlled drugs is not considered illegal since the registered nurse is acting on behalf of the client. If a registered nurse is challenged, the registered nurse should clarify why he or she is in possession of the medications.

Registered Nurses:

- Verify that transporting medications is part of their role and ensure agency policies and procedures are followed

DOCUMENTATION

Appropriate documentation of medications administered includes: client name; drug name; date and time of administration; dose; route and/or site; and signature of the registered nurse who administered the medication. When medications are held, refused or omitted, it is also important to document the assessment and reasons for the action and who has been notified in accordance with agency policies. Evaluating and charting the effects of medications as well as related follow-up actions are important components of nursing practice. PRN medication documentation should also include the reason for the medication and the response to the medication.

Registered nurses:

- Ensure timely, accurate documentation of all medications they administer and related client care and outcomes of care
- Advocate for a medication administration system and policies that facilitate administering medications in a safe and effective manner
- Comply with documentation requirements arising from legislation (e.g., Narcotic Control Regulations, Part G of the Food and Drug Regulations, Benzodiazepine and other Targeted Substances Regulations) and agency policies
- Record medications they have administered

In some emergency situations such as a cardiac arrest it may be necessary for a registered nurse who witnessed the event to record medications administered by another person. The record should be countersigned by the person who actually administered the medication.

Some agencies may have policies that allow initials to be used to sign for medication administration. There must be a process in place for identifying the full name and designation of the care provider who administers the medications.

MEDICATION SAFETY

Promoting client safety in the interest of protecting the public is fundamental to nursing care and health care across all settings. This is a moral and ethical imperative.

Quality Management for Medication Administration

Quality practice settings require policies and procedures that align with legislation and system controls to support safe and effective medication administration. Effective policies consider the clients, their needs, and the resources available to meet those needs. Registered nurses who are directly involved in client care need to be involved in policy development to ensure that policies accurately reflect the realities of the practice setting.

System control policies and procedures should be established which:

- Identify categories of medications, especially high-alert medications and settings in which they may be administered
- Identify any restrictions or limitations related to the administration of medications
- Address the management of adverse effects or emergency situations arising from the administration of a medication
- Require that all medications be administered in an approved manner by authorized staff
- Require that prescribed medications be administered only in accordance with a time-limited prescription from an authorized regulated member of a health profession such as a physician or registered nurse (nurse practitioner)
- Address specifically the administration of over-the-counter medications

Policies and procedures should also be established for:

- Documenting client consent
- Documenting the administration of medications
- Retaining and storing records and maintaining client confidentiality in light of appropriate privacy and information management legislation
- Non-punitive tracking and management of medication errors
- Managing conflicts that may arise when there is disagreement and/or concern with a prescriber's orders
- Supplying, transporting and receiving stock medications
- Labeling and storing medications
- Ensuring the security of medications, especially of controlled substances such as narcotics
- Discarding outdated or unused medications
- Ensuring a regular review and periodic evaluation of all policies and procedures related to medication administration

Generic drug names rather than brand names should be used for prescribing unless the prescriber specifies "no substitution." Every drug has a single generic name; but it may have multiple proprietary names. Multiple names for drugs contribute to errors. A brand name used for prescribing and explaining important information about the medication to the client may not appear on the dispensing label and leads to confusion for the client.

Medication Errors

Medication errors are a serious threat to client safety in all settings. They are defined as "any preventable event that may cause or lead to inappropriate medication use or patient harm, while the medication is in the control of the health care professional, patient, or consumer. Such events may be related to professional practice, health care products, procedures, and systems including: prescribing; order communication; product labeling, packaging and nomenclature; compounding; dispensing; distribution; administration; education; monitoring; and use" (National Coordinating Council for Medication Error and Prevention, 2006).

Errors can occur at any point during the complex medication administration process: ordering, transcribing, dispensing, administering or monitoring medications. Errors in medication administration are enabled and caused by many factors which include:

- Inadequate drug knowledge or lack of available and accessible drug information
- Failure to ensure the seven rights of medication administration
- Miscommunication among professionals
- Ambiguity in product names or appearances
- Inadequate current or available client information
- Confusing directions for use
- Poor techniques
- Lack of policies or outdated policies
- Workload and staffing

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- Errors in transcribing orders
 - Illegible orders
 - Interruptions during preparation or administration of medications
 - Dispensing and labeling errors in pharmacy.
 - Errors in packaging of medications

Prevention of Medication Errors

Prevention of medication errors and achieving patient safety can only be achieved with system accountability and system competence (CNA, 2003). Medication system problems often cross several professional boundaries and departments within an organization. A culture of safety rather than a culture of blame is necessary to facilitate reporting near misses and medication errors in order that the root-cause of the error is determined and prevention strategies be implemented.

Organization strategies to safeguard medication administration and reduce errors include:

- 24-hour access to current medication administration resources (e.g., Compendium of Pharmaceuticals and Specialties)
- Implementation of an approved list of prohibited abbreviations and symbols or implementation of a policy requiring prescribers to write prescriptions without using any abbreviations or symbols
- Provision of an appropriate environment for registered nurses to prepare medications
- Provision of uninterrupted time for registered nurses to administer medications
- Provision of continuing education opportunities for registered nurses to further develop their competencies related to pharmacology
- Integration of information related to medication systems within orientation programs for new employees
- Implementation of scheduled maintenance processes for equipment used in the administration of medications (e.g., IV pumps)
- Independent double-checking of potentially toxic medications (e.g., chemotherapy drugs) and those requiring complex calculations
- Standardization of telephone order procedures and practices
- Unit dose dispensing
- Bar code medication administration systems
- Establishment of an interprofessional advisory group such as a Pharmacy and Therapeutics Committee, which includes registered nurses directly involved in medication administration to address safe and effective medication provision and administration

Medication Reconciliation (MR) is one method used to reduce the occurrence of adverse events. This process involves the transfer of medication information across the care continuum. It is a process that ensures the collection and communication of accurate client medication information to facilitate the continuity of pharmaceutical care for clients at admission of a service and/or at discharge or transition of service (Chevalier, MacKinnon, Parker & Sketris, 2006). A guide called *Getting started kit: Medication reconciliation* is available to assist organizations to develop this method to aid in preventing adverse events (ISMP, 2005).

Clients are a resource in the reduction of medication errors. Clients should be supported to question why they are receiving a medication, verify that they are receiving the appropriate medication, dose and route, and alert the health professional involved in prescribing, dispensing or administering a medication to potential problems such as past drug-drug interactions or allergies.

Registered nurses:

- Advocate for organizational strategies to prevent medication errors
- Educate clients about their medications, advocate for their needs, and support them to be co-managers of their care

In the event of a medication error or suspected medication error, the registered nurse should complete a rapid nursing assessment and notify the appropriate authorities and physician as required in order that a medical assessment is conducted and treatment initiated as necessary.

Medication Error Reporting

Agencies determine the content and use of medication error reporting forms or regular incident reporting forms. Such forms allow data to be collected about near misses and factors contributing to the error such as characteristics of the error (e.g., wrong client, wrong medication, wrong dosage, wrong route, or omitted dose), method of discovery, action taken to safeguard the client, client responses and names of individuals involved in the error.

Medication errors should be documented on the client's chart in order to inform the care team of the error and subsequent intervention if provided to safeguard the client. Documenting on the incident form (quality improvement tool) alerts managers to the risk issues. The client's chart does not have to indicate that an incident report was filled out.

Critical Incident Reporting

The administration of a wrong medication and or an adverse drug reaction may be considered a 'critical incident' if it is serious and leads to untoward health effects or potential loss of life. Section 58 of the *Regional Health Services Act* (Province of Sask., 2004) requires that critical incidents that arise as a result of a health service provided by a regional health authority be reported to the Minister of Health. The Act requires that critical incidents need to be investigated promptly in a manner that focuses on identifying the root causes of the untoward/unexpected outcome. Critical incident reporting to the Minister of Health is the responsibility of the Regional Health Authority and is only initiated once the registered nurse reports the incident using the appropriate internal mechanisms in a timely manner.

Registered nurses follow agency policies regarding reporting and documentation of medication errors.

SUMMARY

The safe administration of medications is a shared responsibility. The registered nurse's goal in administering medications is to ensure that clients receive medications as they have been prescribed. Prescribers determine appropriate drug therapy and are responsible for writing prescriptions while pharmacists dispense medications. Registered nurses administer medications according to the guidelines described in this document. Quality health care settings require appropriate staffing, medication systems, and organizational policies and procedures to facilitate safe, effective and ethical client care.

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GLOSSARY

Administer/ Administering	the direct application of a drug to the body of a patient or research subject by injection, inhalation, ingestion, or any other means (NAPRA, 2007).
Clinical	established sets of procedures for action in a given circumstance. Their purpose is to synthesize information into a concise structure that promotes the translation of knowledge into the actions most likely to produce optimal patient outcomes (Kowalak, Hughes & Mills, 2003).
Collaboration	the ongoing process of partnering with others in the provision of health services including the identification of needs, data analysis, the development of alternatives, creation of, implementation and evaluation of preferred action plans (SRNA, 2005).
Competence	the overall display by a nurse, in the professional care of a client(s), the knowledge, skill and judgment required in the practice situation. The nurse functions with care and regard for the welfare of the client and in the best interests of the public, nurses and nursing profession (SRNA, 2005).
Confidentiality	the duty to preserve a person's privacy (SRNA, 2005).
Consent	a legal doctrine based on respect for the principle of autonomy of an individual's right to information required to make decisions (SRNA, 2005).
Consultation	a deliberation of two or more health care professionals about diagnosis or treatment (SRNA, 2005).
Delegation	the act of transferring to a competent individual the authority to perform a selected nursing task in a selected situation, while the nurse retains accountability for the delegated task. Authority to delegate must adhere to legislation and to a facility's specific policies and procedures regarding what is within a scope of practice (SRNA, 2005).
Dispense/ Dispensing	the interpretation, evaluation, and implementation of a prescription drug order, including the preparation and delivery of a drug or device to a patient or patient's agent in a suitable container appropriately labeled for subsequent administration to, or use by, a patient. National Association of Pharmacy Regulatory Authorities (NAPRA, 2007).
Distribute Distributing	the act of giving a drug or device other than by administering or dispensing (adapted from NAPRA. See also administer/administering and dispense/dispensing).
Evidence-based	practices based on the best available evidence, from various kinds of knowledge including empirical. Scientific knowledge derived from systematic observation, study and qualitative and quantitative research. When there is insufficient evidence from science, expert opinion is used, or there is a combination of science and expert opinion (SRNA, 2005).
Graduate	one who has successfully completed the requirements of an approved nursing education program (SRNA, 2005).
High-alert medications	drugs that bear a heightened risk causing significant patient harm when they are used in error. (ISMP, 2005).
Knowledge	acquaintance with facts, truths, or principles, as from study or investigation. Familiarity or conversance with a certain subject (SRNA, 2005).
Medication errors	the failure to complete a planned action as it was intended, or when an incorrect plan is used at any point in the process of providing medications to patients (CPSI, 2003).
Nursing process	the systematic series of goal-directed activities related to assessment, planning, implementation and evaluation of an individual's care (SRNA, 2005).
Prescribing	authorization given by a practitioner directing that a stated amount of any drug or mixture of drugs specified in it be dispensed for the person . . . named in the authorization (Pharmacy Act, SK, 1996).

Prescription	authorization from a practitioner to dispense a specified drug or device for use by a designated individual. (BC Pharmacists, Pharmacy Operations and Drug Scheduling Act, 1996).
Protocols	protocols are established sets of procedures for action in a given circumstance. Their purpose is to synthesize information into a concise structure that promotes the translation of knowledge into the actions most likely to produce optimal patient outcomes (Lippincott 2003.)
Special nursing procedures	procedures in the practice of nursing for which the basic nursing education programs provide neither specific theory nor clinical practice. These procedures are not taught in basic nursing education programs, either because they are not needed by many clients or because they are required only in specialty areas of practice (SRNA, 2005).
Transcribing	the process of transferring the prescriber's order to a medication administration record for the purpose of directing administration of the medication (adapted from ARNLL, 2005).
Unregulated care provider (UCP)	health care providers that are not subject to regulation, and may include personal care attendants, health care aides, nursing aides, or ward aides (SRNA, 2005).

APPENDIX A

MEDICATION SUPPLY SYSTEMS

Medication supply systems support the safe storage and access to medications by using appropriate delivery, storage, drug packaging and technological systems. Commonly seen medication systems include unit dose systems, pill-paks, multi-dose packages and the stock system.

A. Unit-Dose System

In unit-dose dispensing, medication is dispensed by pharmacy in a single unit package that is ready to administer to the patient. The registered nurse uses the information from a client's Medication Administration Record (MAR) to select the appropriate medication and dosage. The dosage units are usually dispensed for a 24-hour period. Pre-pouring of medications also occurs simultaneously with administering the medications to clients.

B. Pill-Pak (Bubble or Blister Pack)

The registered nurse uses the information on the MAR to select the client's correct dose of medication. When using the pill-pak system, the pharmacist dispenses the required medication within one 'blister', usually on a weekly or monthly basis. Pre-pouring of medications occurs simultaneously with administration of medications to clients.

C. Multi-dose Package System

In the multi-dose package system, the pharmacist dispenses all the client's medications for a particular dosage time (e.g., 0800) in one sealed package. The package is labeled with all the medications in the package. The package is generally similar in appearance to a unit dose package system. The difference is that a number of different medications are included together in the same package, rather than being packaged and labeled individually.

SRNA supports the use of a multi-dose packaging system in long-term care facilities, licensed special care homes or for clients the pharmacist determines this approach to be the appropriate mode for medication administration. The implementation of any multi-dose package system must meet all of the following conditions:

Each multi-dose package identifies the:

- Client's name
- Prescriber's name
- Name and strength of each medication in the package as identified in the prescription and the MAR
- Medication administration times

Medications which are likely to be withheld (e.g., PRN or because of the client's condition) are not included within the multi-dose package, but are packaged separately (in a unit dose or blister pack). A separate client medication profile should also be kept with the MAR and should provide the following information:

- Client's name
- Prescriber's name
- Client allergies
- Information about medications, including:
 - o generic and trade name of medication
 - o drug identification number (DIN)
 - o prescribed dosage
 - o number of doses dispensed
 - o directions for administration
 - o a written description (e.g., a red, scored round tablet)

Optimally, a color photograph of each medication prescribed is included on each client Medication Profile, or is readily available. There are color photographs of most prescription drugs in the CPS (Compendium of Pharmaceuticals and Specialties). If the pharmacy that services the long-term care facility does not have the computer capabilities required for this, a binder containing an individually packaged and labeled example of every medication administered on the unit is required. The ability of the registered nurse to quickly and correctly identify a specific medication among the several medications contained in a multi-dose package is essential.

When a medication is discontinued the registered nurse must contact the pharmacy. Based on this consultation, the drug may be removed from the prepackaged system. At the earliest possible time, the multi-dose packaging should be correctly repackaged by the pharmacist. In the event that the pharmacist cannot be contacted, the registered nurse may remove the

discontinued drug(s) from the package provided the specific drug(s) can be identified. At the earliest possible time the registered nurse must follow up with the pharmacist who originally dispensed the multi-dose pack to have the drugs repackaged correctly.

Note: this provision is not intended for regular repackaging of medications. It is intended to ensure the prescribed medications are administered to a client without creating unnecessary delay.

The use of the multi-dose package system is appropriate in settings where:

- Client's self-administer medications
- Oral medications are administered by unregulated care providers

The use of multi-dose package systems is not appropriate in:

- Agencies where client-specific Medication Profiles and Medication Administration (MAR) records are not available.
- Acute care settings or environments where the range and type of medications administered to a client population is extensive or changes frequently, and where the range or dose is frequently altered.

D. Stock system

In a stock system, the registered nurse uses the information on the Medication Administration Record (MAR) to select the appropriate medication and dose from medication containers stored on the unit. The registered nurse is responsible for placing the correct medication with the client's name and the name of the medication, required dose and frequency of administration. In these instances, the registered nurse may need to pre-pour medications but must do so only for one medication run at a time.

Setting up and Maintaining a Medication System

The pharmacist in consultation with the registered nurse is the most appropriate person to set up and maintain a medication system. However, in some practice settings (e.g., occupational health services, home care, camp settings, correctional services, clinics), a pharmacist may not be available and a registered nurse performs this function. The registered nurse may require additional education and knowledge to competently carry out this function.

Responsibilities of the registered nurse include:

- Assessing the clients being served, the care providers responsible for administering the medications, and the physical environment to determine the supply of medications, access, storage and equipment needed.
- Consulting with a RN(NP), physician or pharmacist as needed.
- Limiting both the selection and supply of medications.
- Ensuring that the inventory reflects the shelf life of the medications, given the setting.
- Storing the medications in a secure, locked area and secure and control the supply of narcotics and controlled drugs in a separate locked area.

Setting up and Maintaining Supplies of Over-the-counter Medications for Self-Administration.

There may be some settings (e.g., occupational health services) where nursing services are not always available or individuals are discouraged from keeping their own supply of over-the-counter (OTC) medications. The pharmacist is the most appropriate person for this function, however there may be situations where this is not possible and a registered nurse performs this function.

The responsibilities of the registered nurse are similar to those in the previous section on setting up and maintaining a medication system with the following additions:

- Limit access to medications for self-administration to designated persons.
- Collaborate with those in authority to select a designated person(s) to be responsible for accessing the OTC medications.
- Ensure that the designated person(s) understands that individuals have access to the supply of medications to self-administer, keeps a record of the date, the individual's name, the amount of medication taken, and the reason it was taken.
- Ensure that the designated person(s) understands that they do not offer advice about the OTC medication.
- Inform individuals who self-administer OTC medications that they remain responsible for the decision to take the medications and that the use of such medications may mask symptoms of an illness that requires medical intervention, prevent early detection of an environmentally induced illness, or pose a safety risk.

APPENDIX B

SEDATION/ANALGESIA FOR PROCEDURES

There are various levels of client sedation including minimal sedation, moderate sedation/analgesia, deep sedation and general anesthesia. Registered nurses can administer medications to induce minimal sedation, however inducing moderate sedation (conscious sedation) and monitoring the client is beyond the basic preparation of the registered nurse. The additional knowledge, skill, and judgment required are within the scope of the registered nurse with advanced training or education. Typically the registered nurse becomes involved in inducing conscious sedation in a client during invasive procedures under the direction of a physician or a dentist.

Registered nurses require certification in order to manage clients requiring deep sedation. General anesthesia is beyond the scope of a registered nurse and can only be performed by anesthesiologists and physicians with advanced education and skills and others whose scope of practice includes these functions.

There are different levels of risks associated with different levels of client sedation. Risks include aspiration, hypoventilation, apnea, airway obstruction and cardiopulmonary depression. Registered nurses must continually assess the client for signs of over-sedation because clients can rapidly and unpredictably move from one level of sedation to another.

Minimal Sedation (Anxiolysis) is a drug induced state during which clients respond normally to verbal commands. Registered nurses can administer minimal-sedation medications that do not impair the client's ventilatory and cardiovascular functions (e.g., lorazepam 0.5 mg sublingually).

Moderate Sedation/Analgesia (Conscious Sedation) is a drug-induced depression of consciousness used to control pain or psychological stress. Clients respond to verbal commands and can maintain their airway. Cardiovascular function is usually maintained. Moderate sedation can be administered through self-administration by a mask or administered by an authorized health care provider.

- **Self-administered moderate sedation**

The client holds the mask and controls the amount of sedation (nitrous oxide and oxygen) they receive. Once the client has had enough, he/she releases the mask. The registered nurse assists clients by setting up the equipment, offering the mask or putting the mask to the client's face for the client to hold. Monitoring of the client and assessing their level of consciousness and overall status during sedation self administration is essential.

- **Nurse administered moderate sedation**

Nurse administered moderate sedation is when the registered nurse administers the drugs to the client by the following routes: oral, parenteral or a combination of routes. Moderate sedation can be achieved by one of the following means:

- o Single, oral sedative drug
- o Nitrous oxide and oxygen
- o A combination of oral sedative drugs, or nitrous oxide and oxygen with an oral sedative drug
- o A parenteral sedative drug (e.g., intravenously).

Registered nurses:

- Assess the appropriateness of the prescribed sedation prior to inducing conscious sedation.
- Monitor the client and competently interprets data.
- Make decisions required during conscious sedation.
- Manage all possible outcomes of the induction and maintenance and ensure resources are available to manage the outcomes and adverse effects.

DEEP Sedation/Analgesia

Deep sedation/analgesia is a drug induced-depression of consciousness during which clients cannot be easily aroused but respond purposefully following repeated or painful stimulation. The ability to independently maintain ventilatory function may be impaired. Clients may require assistance in maintaining a patent airway, and spontaneous ventilation may be inadequate. Cardiovascular function is usually maintained.

General Anesthesia

General anesthesia is a drug-induced loss of consciousness during which clients cannot be aroused, even by painful stimulation. The ability to maintain ventilatory function is often impaired. Patients often require assistance in maintaining a patent airway,

and positive pressure ventilation may be required because of depressed spontaneous ventilation or drug-induced depression or neuromuscular function. Cardiovascular function may be impaired.

Reference: American Society of Anesthesiologists. (2004). *Continuum of depth of sedation:*

Definition of general anesthesia and levels of sedation/analgesia. Retrieved August 24, 2006 from <http://www.asahq.org/publicationsAndServices/standards/20.pdf>

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