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NOTE: The first appearance of terms in bold in the body of this document (except titles) are defined terms – please refer to the Definitions section.

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OBJECTIVES

- To ensure consistency and awareness of safe **medication administration** practices as an important part of the **medication management** process across **Alberta Health Services (AHS) settings**.

PRINCIPLES

Medication administration is performed by **health care professionals** in partnership with the **patient** and/or **family**. The interprofessional team is responsible for facilitating effective and appropriate delivery of medication therapy to all patients in a manner that promotes safe patient care.

Health care professionals must have the knowledge, competence, and authorization to provide medication management services as determined by their applicable regulatory body and within their defined scope of practice (refer to the *Health Professions Act* [Alberta]).

APPLICABILITY

Compliance with this document is required by all Alberta Health Services employees, members of the medical and midwifery staffs, Students, Volunteers, and other persons acting on behalf of Alberta Health Services (including contracted service providers as necessary).

ELEMENTS**1. Exemptions**

- 1.1 This policy does not apply to the following:

- a) Continuing Care settings (including Long-Term Care, Designated Supportive Living, and Home Care) (refer to the AHS *Medication Administration* Policy [Continuing Care]); and
- b) the use of cannabis for medical purposes (refer to the AHS *Patients' Use of Cannabis for Medical Purposes* Policy).

2. Medication Orders

2.1 A patient-specific **order** for a **medication** or **protocol** (e.g., AHS policy document) from an **authorized prescriber** is required prior to the administration of a medication. Medication orders shall comply with the AHS *Medication Orders* Policy and Procedures.

- a) Exceptions include:
 - (i) AHS documents supporting direction by the Medical Officer of Health under the *Public Health Act* (Alberta);
 - (ii) AHS Emergency Medical Services' *EMS Medical Control Protocols*; and
 - (iii) AHS protocols that authorize the administration of a medication:
 - prior to obtaining an order (e.g., AHS *Anaphylaxis Management – Administration of Intramuscular Epinephrine* Policy);
 - without obtaining an order at all (e.g., naloxone); or
 - without requiring notification to the authorized prescriber, prior to administration of the medication.
- b) Protocols with any exemptions for specific medications require endorsement by the Provincial Medication Management Committee.

3. Preparation and Safe Handling of Medications

- 3.1 **Hand hygiene** shall be followed as per the AHS *Hand Hygiene* Policy and Procedure, including but not limited to, before preparing medications and following medication administration.
- 3.2 Medications that require preparation prior to administration should be prepared in a medication room/area or at the point of administration, with adequate lighting and minimal distraction, noise, and interruptions.
 - a) If interrupted, the health care professional should restart the process.
- 3.3 Health care professionals shall not borrow or use medications from another patient.

- 3.4 Health care professionals shall not borrow medications from another unit except when their site has established processes that are followed.
- a) If medications are borrowed from another unit, health care professionals should follow their site process (e.g., Global Find function in automated dispensing cabinets).
- 3.5 Medications prepared for a patient shall be properly labelled and/or in unit-dose packaging.
- a) A medication label shall be affixed to parenteral medications at the time of medication preparation and referred to at the time of administration. The label shall include information as outlined in the AHS *Labelling Medications* Guideline.
- b) A medication label shall be affixed to syringes at the time of medication preparation and referred to at the time of administration.
- (i) Medications prepared outside of the pharmacy (e.g., in syringes or added to intravenous infusion bags) for administration in care areas must be started within one (1) hour of preparation.
- c) Oral medications in patient-specific unit-dose packaging do not require additional labelling.
- d) Oral medications poured from wardstock require a label that includes two (2) patient identifiers.
- e) For current labelling requirements for medications within Correctional Health, health care professionals shall refer to the AHS *Medication Administration* Procedure (Correctional Health).
- 3.6 Medications that do not require additional preparation shall be maintained in their original packaging (e.g., bottle, unit-dose packaging) until immediately before administration.
- a) Pre-pouring medications is not an acceptable practice. If prepared medications are left unattended, the medications must be discarded in the appropriate dedicated medication waste container.
- 3.7 A sterile syringe and needle shall only be used once when inserted into any single-dose or multi-dose vials and ampoules.
- a) When there are circumstances where more than one (1) vial may need to be entered with the same sterile syringe and needle (e.g., when reconstituting medications or vaccines), aseptic technique must be followed and preparation should be performed in a medication area that is separate from areas where potentially contaminated items are placed.

- 3.8 Single dose vials and ampoules shall be used for one (1) patient only. Unused contents shall not be retained for later use.
- 3.9 When multi-dose vials are used for multiple patients, the health care professional shall reduce the risk of cross-contamination by ensuring that the date that the vial was opened is indicated on the vial, that the vial is properly stored, and aseptic technique is strictly followed.
- a) Contrast media and radiopharmaceuticals in Diagnostic Imaging shall be securely stored and used as per the product monograph, or under the authorization of the supervising Physician, Nuclear Medicine Physician, or Radiologist.
 - b) Multi-dosing via an injector system is an acceptable method of administration in Diagnostic Imaging (refer to the AHS *Computed Tomography Multi-dosing Utilizing an Injector System Policy and Procedure* [Diagnostic Imaging]).
- 3.10 Narcotics and controlled drugs removed from locked storage must remain in the possession of the health care professional until administered.
- 3.11 In the operating room and other sterile areas where medications are administered during invasive procedures, two (2) health care professionals (one who is circulating and one who is scrubbed) or one (1) health care professional and one (1) authorized **health care provider** (with appropriate education and authorized by the program area / unit) shall prepare the medications (including chemicals and reagents) for delivery onto a sterile field.
- a) Both health care professionals or one (1) health care professional and one (1) authorized health care provider (with appropriate education and authorized by the program area / unit) must verbally and visually verify the identity of all medications (including chemicals and reagents), amount or dose, and expiration date prior to delivery to a sterile field.
 - b) Medications (including chemicals and reagents) on the sterile field shall be clearly labelled (e.g., medication name, dose, route) using a sterile marking pen and/or sterile label.
 - c) Diagnostic Imaging staff shall refer to the AHS *Safe Handling of Medications and Solutions in a Sterile Field Policy and Procedure* (Diagnostic Imaging).

4. Hazardous Medications

- 4.1 To prepare, administer, and dispose of hazardous medications, follow the AHS *Hazardous Medication Personal Protective Equipment (PPE) Guide and List*.

5. High-alert Medications / Independent Double-check

- 5.1 An **independent double-check (IDC)** shall be performed in accordance with the AHS *Independent Double-check* Guideline prior to the administration of designated **high-alert medications** (refer to the AHS *Management of High-alert Medications* Procedure), including but not limited to:
- a) narcotic (opioid) infusions (continuous only);
 - b) heparin infusions;
 - c) insulin infusions;
 - d) antineoplastic infusions; and
 - e) parenteral nutrition.
- 5.2 IDCs for designated high-alert medications may not be possible in settings where the health care professional works alone or provides services in the community (refer to the AHS *Independent Double-check* Guideline).
- 5.3 In **emergency situations**, it is expected that a health care professional may be unable to obtain an IDC for a designated high-alert medication (refer to the AHS *Independent Double-check* Guideline).

6. Medication Administration

- 6.1 Health care professionals shall verify that **informed consent** (express or implied) for the treatment/procedure (including medications to be administered) was obtained from the patient, unless a valid exception to informed consent applies, as per the AHS *Consent to Treatment/Procedure(s)* Policy Suite.
- 6.2 Prior to medication administration, the health care professional shall verify each medication against the Medication Administration Record (MAR) and shall assess the patient for allergies and previous adverse drug reactions.
- a) In emergency situations, the MAR may not be populated with the medication being administered. The health care professional should verify the medication with the appropriate AHS kit (e.g., epinephrine, naloxone) or authorized prescriber.
- 6.3 Health care professionals shall use the 'eight rights' of medication administration:
- a) right patient (use at least two [2] patient identifiers per the AHS *Patient Identification* Policy);
 - b) right medication;
 - c) right dose;

- d) right time and frequency;
 - e) right route;
 - f) right reason;
 - g) right documentation; and
 - h) right to refuse.
- 6.4 In areas where Pharmacy does not prepare the medications, the health care professional who prepares the medication should also be the one who administers it to the patient.
- 6.5 In emergency situations, medications may be prepared by a health care professional other than the one administering; the medication should be properly labelled.
- a) The health care professional administering the medication shall verify the medication (either by reading the label on the bottle, infusion bag, vial, ampoule, or syringe) and as many of the 'eight rights' as possible, prior to administration.
- 6.6 In Diagnostic Imaging, contrast media and radiopharmaceuticals may be prepared and labelled by a health care professional other than the one administering.
- 6.7 In care areas where barcode scanning is available, the health care professional shall visually verify and use the barcode scanning system to verify the medication order, the patient's identification label, and/or the medication barcoding label.

7. Medication Schedules

- 7.1 Time-critical medications are medications that shall be administered within 30 minutes of before or after the scheduled time and includes medications with a dosing schedule of every four (4) hours and more frequent.
- 7.2 Medications that are not time-critical shall be administered within 60 minutes of before or after the scheduled time.
- 7.3 When necessary, the health care professional shall contact the Pharmacist or the authorized prescriber if there is uncertainty as to whether or not a medication is time-critical.
- 7.4 In the event of a delayed dose, the health care professional shall document the time that the medication was administered in the MAR.
- 7.5 Missed or refused doses of medication shall be documented in the MAR and the patient's **health record**.

8. Monitoring Medication Effects

- 8.1 The health care professional shall:
- a) monitor therapeutic effects and side effects;
 - b) respond to adverse drug reactions;
 - c) document therapeutic effects, side effects, and adverse drug reactions; and
 - d) report serious adverse drug reactions (ADR) as mandated by Health Canada in the *Protecting Canadians from Unsafe Drugs Act* (Canada).

9. Withholding Medication

- 9.1 A health care professional may withhold a medication based on an assessment of the patient's condition. The authorized prescriber shall be immediately informed of the health care professional's decision and actions.
- a) In Correctional Health, it may not be possible to immediately inform the authorized prescriber when a medication is held. Health care professionals shall refer to the AHS *Medication Administration Procedure* (Correctional Health).
- 9.2 A patient may refuse medication. The health care professional should determine the reasons, assess the patient's level of understanding about the medication's effects, inform the authorized prescriber within 24 hours, and document the situation.

10. Patient Self-administration

- 10.1 The health care professional shall assess and document the ability of the patient (or family or guardian) to self-administer medications and the appropriateness of self-administration in the patient's current environment, including risks to other patients. Self-administration of medication shall include:
- a) the patient's agreement to self-administer their medication and documentation of this agreement in their health record;
 - b) an assessment of the patient's ability to administer their medication per the care area's guidelines and criteria;
 - c) a medication order from the authorized prescriber that:
 - (i) allows for self-administration by the patient;
 - (ii) indicates which medications the patient will self-administer; and

- (iii) includes the medication order requirements as per the AHS *Medication Orders Procedure*;
 - d) an assessment if the medication can be stored in a secure unit/cabinet;
 - e) patient-specific medications that are properly labelled; and
 - f) observation that the patient is following the medication regimen.
- 10.2 The health care team in collaboration with the patient shall perform ongoing assessments of the patient's ability to self-administer medications. If the patient's condition changes or the patient is unable to self-administer their medication, self-administration by the patient shall be suspended and the health care professional shall assume the responsibility of medication administration.
- 10.3 All medications for patient self-administration shall be stored in a secure unit/cabinet at the bedside.
- 10.4 For patients performing self-administration of medications in Correctional Health, health care professionals shall refer to the AHS *Patient Self-Administration of Ordered Medications* Guideline (Correctional Health).
- 10.5 The health care professional shall document on the MAR that the medication was self-administered by the patient and indicate whether the self-administration was witnessed or unwitnessed (patient self-reported). Health care professionals in Correctional Health shall refer to the AHS *Patient Self-Administration of Ordered Medications* Guideline (Correctional Health).

11. Disposal of Medications

- 11.1 Medications which are partially used, need to have part of a dose wasted, or have been contaminated (e.g., dropped on the floor), shall be safely disposed of in an appropriate dedicated medication waste container.
 - a) Wastage of narcotics and controlled drugs shall be witnessed and documented immediately by two (2) health care professionals, or in those circumstances when a health care professional is working alone, a health care provider with appropriate training shall witness and sign that they witnessed the wastage.
 - b) For disposal of hazardous medications, refer to the AHS *Hazardous Medication Personal Protective Equipment (PPE) Guide and List*.
- 11.2 Unused and expired medications are returned to the pharmacy or per care area process.

12. Pass or Discharge Medications

- 12.1 For authorized inpatient day or overnight passes, an inpatient pharmacy shall **dispense** patient medications for the pass when they are provided sufficient notice (e.g., 24 hours in advance).
- 12.2 When the inpatient pharmacy is unable (e.g., closed or insufficient notice is provided) to prepare pass medications, a health care professional who is authorized to perform the restricted activity of dispensing medications may dispense pass medications in the patient care area.
- a) Pass medications dispensed in the patient care area shall be labelled and packaged in child resistant containers as outlined in the *AHS Medication Supply: Bridging Discharged Patients to Community* Procedure to ensure appropriate labelling and packaging of medications. The appropriate education and information material shall be provided to the patient.
- 12.3 Any unused pass medications that are returned to the care area when the patient returns from pass shall be documented and either:
- a) disposed of in the appropriate dedicated medication waste container; or
- b) returned to the pharmacy as per care area process.
- 12.4 An AHS health care professional authorized to dispense pass medications may hand patient-specific pass medication off to a non-AHS employee with appropriate identification (e.g., RCMP Officer, Peace Officer) who is accompanying the patient to court or off-site procedures/appointments.
- 12.5 For patients being discharged who require a **bridge supply of medication**, refer to the *AHS Medication Supply: Bridging Discharged Patients to Community* Policy and Procedure.
- 12.6 For patients being discharged from an Emergency Department or Urgent Care Centre who require one (1) or two (2) doses to complete their treatment, refer to the *AHS Dispensing of Medications to Patients with a Discharge Medication Order* Guideline (Emergency Strategic Clinical Network).

13. Night Cupboard

- 13.1 The night cupboard shall only be accessed when medications are not available from wardstock and the pharmacy is closed.
- 13.2 When a medication that should be administered without delay is not available in the night cupboard, the health care professional should contact the Pharmacist on-call or follow their site process.
- 13.3 If possible, the health care professional should wait until the medication order is verified by Pharmacy before administering the medication. Twenty-four (24) hour

medication order verification by Pharmacy may be available in some care areas to review medication orders prior to the first dose.

14. Patient Education

- 14.1 Health care professionals shall provide the patient with medication education when appropriate. This shall be a collaborative process with other health care disciplines and the patient.
- 14.2 The health care professional who administered the medication shall ensure the patient and/or family receives and confirms an understanding of the following:
- a) reason for the medication;
 - b) signs and symptoms that indicate a therapeutic response, potential complications, or an adverse reaction;
 - c) how to report concerns (e.g., side effects); and
 - d) if necessary, information on hazardous medications regarding safe handling and additional precautions.

15. Documentation

- 15.1 The health care professional who administers the medication shall document the medication administration on the MAR in a timely manner (e.g., as close to the time of medication administration as possible).
- a) In Public Health, medication administration shall be documented per program processes.
- 15.2 When documenting the administration of medications on the patient health record, health care professionals shall adhere to the AHS *Clinical Documentation Directive* and AHS *Clinical Documentation Process Directive* for required activities related to medication administration, monitoring, patient education, and medication error.
- 15.3 Reporting of adverse events, close calls, and hazards with medication preparation and administration into the Reporting and Learning System (RLS) is highly encouraged as per the AHS *Reporting of Clinical Adverse Events, Close Calls and Hazards Procedure*.

DEFINITIONS

Alberta Health Services (AHS) setting means any environment where treatment/procedures and other health services are delivered by, on behalf of or in conjunction with, Alberta Health Services.

Authorized prescriber means a health care professional who is permitted by Federal and Provincial legislation, their regulatory college, Alberta Health Services, and practice setting (where applicable) to prescribe medications.

Bridge supply of medications means a minimum supply of medications dispensed to a discharged patient, to ensure availability until the discharged patient can access the medications from a source (community or specialty pharmacy). This is not the same as pass medications or medications dispensed by specialized clinics where the costs are covered through special funding by Alberta Health.

Dispense (-ing) means to provide a medication pursuant to a prescription for a person but does not include the administration of a medication to a person. Dispensing is a restricted activity under law (*Government Organization Act* [Alberta]).

Emergency situation means a circumstance which requires immediate health care that is necessary to preserve life, to prevent serious physical or mental harm, or to alleviate severe pain.

Family means one or more individuals identified by the patient as an important support, and who the patient wishes to be included in any encounters with the health care system, including, but not limited to, family members, legal guardians, friends and informal caregivers.

Hand hygiene means proper practices which remove micro-organisms, with or without soil, from the hands (refers to the application of alcohol-based hand rub or the use of plain/antimicrobial soap, and water hand washing).

Health care professional means an individual who is a member of a regulated health discipline, as defined by the *Health Disciplines Act* (Alberta) or the *Health Professions Act* (Alberta), and who practises within scope and role.

Health care provider means any person who provides goods or services to a patient, inclusive of health care professionals, staff, students, volunteers and other persons acting on behalf of or in conjunction with Alberta Health Services.

Health record means the collection of all records documenting individually identifying health information in relation to a single person.

High-alert medications means medications that bear a heightened risk of causing significant patient harm when used in error (Institute for Safe Medication Practices [ISMP], 2012).

Independent double-check means a verification process whereby a second health care professional conducts a verification of another health care professional's completed task. The most critical aspect is to maximize the independence of the double-check by ensuring that the first health care professional does not communicate what they expect the second health care professional to see, which would create bias and reduce the visibility of an error.

Informed consent means the patient's agreement (or alternate decision-maker) to undergo a treatment/procedure after being provided, in a manner the patient can understand, with the

relevant information about the nature of the treatment/procedure(s), its benefits, potential risks and alternatives, and the potential consequences of refusal.

Medication means any substance or mixture of substances manufactured, sold or represented for use in the diagnosis, treatment, mitigation or prevention of a disease, disorder or abnormal physical state, or its symptoms, in human beings, and restoring, correcting or modifying organic functions in human beings.

Medication administration means the activity of supplying a dose of a medication for the purpose of immediate ingestion, application, inhalation, insertion, instillation, or injection. The administration of medications is more than just a psychomotor task of giving a medication to a patient. It also includes a cognitive and interactive aspect of care involving assessing the patient, making clinical decisions, and planning care based on this assessment. Medication administration requires the knowledge and skills of a competent health care professional.

Medication management means a team-based approach to prevent and reduce patient safety incidents related to medications by addressing all areas of the medication management process from the medication order to preparation and dispensing to administration of the medication and ongoing monitoring of the patient.

Order means a direction given by a regulated health care professional to carry out specific activity(-ies) as part of the diagnostic and/or therapeutic care and treatment to the benefit of a patient. An order may be written (including handwritten and or electronic), verbal, by telephone or facsimile.

Patient means all persons, inclusive of residents and clients, who receive or have requested health care or services from Alberta Health Services and its health care providers. Patient also means, where applicable:

- a) a co-decision-maker with the person; or
- b) an alternate decision-maker on behalf of the person.

Protocol means, for the purposes of this policy, an AHS policy document (i.e., policy, procedure, standard, guideline, protocol, or directive), developed in accordance with the AHS Policy Development Framework.

REFERENCES

- Alberta Health Services Governance Documents:
 - *Clinical Documentation Directive* (#1173)
 - *Clinical Documentation Process Directive* (#1173-01)
 - *Computed Tomography Multi-dosing Utilizing an Injector System Policy and Procedure* (Diagnostic Imaging) (#DICT2.0)
 - *Consent to Treatment/Procedure(s) Policy and Procedures* (#PRR-01)
 - *Critical and Semi-Critical Single-Use Medical Devices Policy* (#PS-07)
 - *Dispensing of Medications to Patients with a Discharge Medication Order Guideline* (Emergency Strategic Clinical Network) (#HCS-226-01)
 - *Hand Hygiene Policy and Procedures* (#PS-02)
 - *Independent Double-check Guideline* (#PS-60-01)

- *Labelling Medications* Guideline (#HCS-185-01)
- *Management of High-alert Medications* Procedure (#PS-46-01)
- *Management of Patient's Own Medications* Policy and Procedures (#PS-98)
- *Medication Administration* Procedure (Correctional Health) (#HCS-54-01)
- *Medication Orders* Policy and Procedures (#PS-93)
- *Medication Supply: Bridging Discharged Patients to Community* Policy and Procedure (#HCS-02)
- *Patient Identification* Policy (#PS-06)
- *Patient Self-Administration of Ordered Medications* Guideline (Correctional Health) (#HCS-48-01)
- *Patients' Use of Cannabis for Medical Purposes* Policy (#HCS-241)
- *Reporting of Clinical Adverse Events, Close Calls and Hazards* Procedure (#PS-95-04)
- *Safe Handling of Medications and Solutions in a Sterile Field* Policy and Procedure (Diagnostic Imaging) (#DIS1.10)
- *Specialized Clinical Competencies Medication Administrations MRT(R) and MRT(MR)* Policy (Diagnostic Imaging) (#DIS1.7)
- Alberta Health Services Resources:
 - *Hazardous Medication Personal Protective Equipment (PPE) Guide and List*
 - *High-alert Medication List* (Pharmacy Services)
- Non-Alberta Health Services Documents:
 - *Health Professions Act* (Alberta)
 - *Medication Management Standards* (Accreditation Canada, 2019)
 - *Protecting Canadians from Unsafe Drugs Act* (Canada)
 - *Public Health Act* (Alberta)

VERSION HISTORY

Date	Action Taken
Click here to enter a date	Optional: Choose an item