PHK0200 – HIGH-ALERT MEDICATIONS

Interior Health would like to acknowledge that it operates and provides services on the traditional, ancestral, and unceded territories of the Dãkelh Dené, Ktunaxa, Nlaka'pamux, Secwépemc, St'át'imc, syilx, and Tŝilhqot'in Nations.

Interior Health recognizes that a diverse workplace includes all people, particularly those belonging to historically, systemically, and/or persistently marginalized groups, as well as individuals with protected characteristics under the B.C. Human Rights Code.

1.0 PURPOSE

This policy provides direction on the management of High-Alert Medications within Interior Health (IH) and ensures compliance with legislation, professional, and Accreditation standards.

The Institute for Safe Medication Practices Canada (ISMP 2024) defines High Alert Medications (HAMs) as "drugs that have an increased risk of causing significant patient harm when they are used in error"[1]. To reduce the risk of medication error and patient harm related to their use it is necessary to apply additional safety measures within Pharmacy and Patient Care areas where HAMs are used. It includes a standardized approach to all aspects of HAM purchase, storage, prescribing, dispensing, preparation, labelling, and administration as recommended in Accreditation Canada's 2024 Medication Management Standards[2].

2.0 DEFINITIONS

TERM	DEFINITION
Automated Dispensing Cabinet (ADC)	A computerized drug storage device that stores and dispenses medications near the point of care. To provide additional decision support tools for medication administration (e.g. Omnicell®), this system also controls and tracks drug distribution and may link with pharmacy drug-patient profiles, patient admission data, and drug information.
Dispensing Alert	An alert or prompt associated with select medications programmed to appear on the ADC computer screen when a user attempts to remove those medications from the ADC (e.g. "High-Alert Medication").
Controlled Substance	Those medications listed by the College of Pharmacists of BC (CPBC) as a Narcotic Drug (written or verbal), Controlled Drug Part 1, 2 and 3, Controlled Drug Preparation Part 1 and 2, Targeted Drug Substance or those on the Controlled Prescription Program. See CPBC for full details: CPBC Prescription Regulations Chart
Hazardous Drug[4]	Medications that produce one or more of the following characteristics in humans or animals: carcinogenicity; teratogenicity or other developmental toxicities;

	reproductive toxicity; organ toxicity at low doses; genotoxicity; and/or new medications structure and toxicity profiles which mimic existing hazardous drugs.

3.0 POLICY

3.1 High-Alert Medication Classification

- IH classifies HAMs in accordance with guidelines from the Institute for Safe Medication Practices (ISMP) and Accreditation Canada's Medication Management Standards Required Organizational Practices (ROPs).
- Each product's safety profile is reviewed and evaluated for this classification.
- See *List of High-Alert Medications* for a full listing of HAMs.
- The full listing is reviewed, updated and/or modified on a regular basis, in consultation with and approval by the IH Pharmacy and Therapeutics Committee (IH P&T), including when changes to the *IH Formulary* are made, when ISMP updates the HAM List, or for temporary exemptions as described in Section 3.12.

3.2 Identification and Labelling

- The *IH Medication Manual (for Parenteral Drugs)* identifies HAMs as HIGH ALERT.
- HAMs listed in *List of High-Alert Medications* and *High-Alert Medications Concentration, Volume, and Storage Restrictions* are labelled as HIGH ALERT in storage areas when not stored inside an Automated Dispensing Cabinet (ADC) (see storage procedures in *Procedures for Storage and Labelling of High-Alert Medications*).
- As per the requirements in *Procedures for Storage and Labelling of High-Alert Medications*, select HAMs require auxiliary and product labels.
- TALLman Lettering is a standardized method that is used to differentiate HAMs by modifying look-alike drug names to look dissimilar and is used for all naming, labelling and electronic records, including:
  - Storage containers;
  - Medication administration records;
  - Patient-specific and bulk labels;
  - Computer screen drug names; and
  - Clinical resource documents, including but not limited to Order Sets and Clinical Decision Support Tools.

3.3 Procurement

- Commercially manufactured HAM products are preferred to reduce pharmacy or nursing admixture.
- Pharmacy will perform a Failure Mode and Effects Analysis (FMEA) prior to procuring HAMs to evaluate risk and minimize look-alike products.
  - FMEA is a team-based systematic and proactive approach for identifying ways a process or design can fail, why it might fail, the effects of that failure, and how it can be made safer.
- HAM concentrations, volume options, and therapeutic duplications are standardized and limited in availability. IH Pharmacy Leadership approves purchases of other concentrations or volumes of HAMs not listed in *High-Alert Medications Concentration, Volume, and Storage Restrictions*.

3.4 Storage (All Areas)

- HAMs are stored according to this policy.
- Pharmacy stores HAM products within the pharmacy as they deem necessary for patient demographics and types of clinical indications supported within their sites.
- IH P&T approves changes to HAM storage restrictions, concentrations, and volume options listed in *High-Alert Medications Concentration, Volume, and Storage Restrictions*. Any HAM concentrations and volume options not listed in *High-Alert Medications Concentration, Volume, and Storage Restrictions* cannot be stored outside pharmacy.
- Temporary exemptions are applied once they have been approved by IH P&T (see Section 3.12).
- Appendix A lists the HAMs approved for storage in palliative care kits at hospitals without on-site pharmacy services.
- HAMs are not self-administered by patients as per Policy PHK0750- *Patient Self-Administration of Medication in Acute Care-Adult*. Do not store HAMs at a patient's bedside, including isolation rooms.
  - Exception: See CDST *Insulin Pump Self-Management in Emergency and Acute Care*.
- Pharmacy limits the stocking of HAMs in ADCs to clinical areas HAMs are indicated for use, such as the ICU, OR and ED.
- Store HAMs in ADCs and comply with the following:
  - Closed, individual pockets are preferred to ADC drawers and bins to avoid risk of multiple medication selection at one time.
  - Only store HAMs outside ADCs when necessary for patient care.
  - Use ADC Dispensing Alerts to reduce risk of HAM errors.

- For storage of Controlled Substances, comply with Policy PHK0600 - *Controlled Substances*.
- HAMs of different concentrations and volumes intended for different age populations are stored in separate ADCs.
  - For example, Pediatric concentrations of HAMs intended for age 29 days to 17 years of age less one day be stored in a separate ADC from Adult concentrations of HAMs intended for age 17 years of age and greater.
  - When multiple concentrations and volumes of HAMs are stored in the same ADC, separate the line items from each other within the ADC.

3.5 Prescribing

- Medication orders comply with Policy PHB0100 – *Safe Communication of Medication Orders*.
- HAM orders are written using:
  (i) Disease-specific protocols for chemotherapy orders; AND
  (ii) Starting rate, titration parameters, and therapeutic goals for HAM infusions.

3.6 Verification and Preparation (Pharmacy)

- A pharmacist reviews HAM medication orders prior to first dose, except in a life-threatening emergency situation where the patient could suffer significant clinical harm without rapid or immediate therapeutic or diagnostic intervention, such as in a High Acuity Response Team (HART) transport.
- HAM concentrations and volume options are standardized and limited in availability (refer to *High-Alert Medications Concentration, Volume, and Storage Restrictions*).
- Pharmacy avoids compounding concentrations outside those listed in the *IH Medication Manual (for Parenteral Drugs)*. Any exceptions to standardized concentrations and volumes are used only when absolutely required and labelled patient specific.
- HAMs that are 'Pharmacy Use Only' are:
  - Restricted for pharmacy compounding; and
  - Prohibited to be stored or dispensed outside the Pharmacy Department.
- Pharmacy prepares HAM infusions according to IH P&T approved standard concentrations, including epidural infusions and infusions administered with a Patient-Controlled Analgesia (PCA) pump, which allows patients to self-administer pain relief medications at a controlled dose and frequency as prescribed by an authorized practitioner.

- 'Ready-to-administer' HAMs are available to nursing units whenever possible.
- Compounded preparations meet the most recent Institute for Safe Medication Practices, Canadian Society of Hospital Pharmacists, and National Association of Pharmacy Regulatory Authorities (NAPRA) compounding guidelines.
- Minimum and maximum dose alerts for HAMs are built into the pharmacy computer order-entry system.
- Barcoding technology is used on automated compounders equipped with this device whenever preparing HAMs.
- Non-hazardous parenteral HAMs are prepared in a Primary Engineering Control used for non-hazardous compounding only.
- High-alert Hazardous Drugs (chemotherapeutic agents) are prepared in a Containment Primary Engineering Control- B2 Class II Biological Safety Cabinet.

3.7 Dispensing and Delivering (Pharmacy)

- Dispense HAMs in unit dose packaging wherever possible.
- HAMs provided in multi-dose vials on patient care areas are treated as single-use vials and discarded after a dose has been withdrawn. Multi-dose vials are not used for multiple patients or entered with a used needle.
    - Exception: Depending on site specific procedures, select Emergency Departments may use insulin vials as multi-dose.
- Sites equipped with barcode technology use barcode scanning when loading or refilling HAMs into ADCs.
- IH P&T has exclusive authority to approve medications available for critical override from ADCs.
- Volunteers cannot transport any Hazardous Drugs.

3.8 Medication Administration

- Administration of HAMs comply with Policy PHA1503 - *Medication Management*: *Acute Care Nursing* and CDSTs LTC851CPS – *Medication Management: Long-term Care Nursing* and *Independent Double Check – Nursing.*
- HAM injectable products which state "multi-dose" are treated as single-use vials and used for one patient, one time, unless instructed otherwise by pharmacy.
    - Exception: Depending on site specific procedures, select Emergency Departments may use insulin vials as multi-dose.
- Insulin pre-filled pens are used for ONE patient only and discarded once product expires, or patient no longer requires therapy (e.g. patient has been

discharged or ordered has been discontinued). See *Procedures for Storage and Labelling of High-Alert Medications* on how to label an insulin pen.

- Parenteral HAMs are administered in accordance to the *IH Medication Manual (Parenteral Drugs)* and CDST PHA2156 - *Infusion Pump Management Guidelines*.
- Engage patients and family or caregivers in the HAM administration process by counselling them on what to monitor for and when to notify a health-care provider.
- Patients do not self-administer HAMs.
- Barcode technology is used for administration of HAMs wherever available.
- When administering parenteral HAMs by infusion device, the infusion device has dose-error reduction software, including drug library, with hard/ soft dosing limits whenever possible.

3.9 Monitoring (Nursing)

- Monitoring of HAMs complies with PHA1503 - *Medication Management: Acute Care Nursing*.
- Parenteral HAMs are monitored as per the *IH Medication Manual (for Parenteral Drugs)*.
- Appropriate patient monitoring is carried out with the administration of HAMs.
    - Monitoring devices used will have alarms on and appropriate limits set, as applicable.

3.10 Auditing (Pharmacy)

- Pharmacy staff will routinely audit patient service areas for any HAMs and remove as required in order to comply with *High-Alert Medications Concentration, Volume, and Storage Restrictions*.

3.11 Documentation (All)

- Document completion of an Independent Double Check (IDC) as per the Clinical Practice Standard and Procedure for *Independent Double Check*.
- Document HAM monitoring as appropriate per PHA1503 - *Medication Management: Acute Care Nursing*.

3.12 Requesting Storage Exemptions

- Requests for permanent or temporary exemptions should be made in the High Alert Medication Exemption Portal. If not possible to access the portal, requests may be submitted using the form found in the High-Alert Medications Toolkit.
- Temporary Exemptions: Under certain circumstances it may be necessary to allow temporary exemptions to the HAM policy. Examples include drug

shortages of a particular concentration or vial size of a HAM or a patient-specific need to dispense a higher concentration HAM and store in a patient care area than is usually allowed.

3.13 Policy Management

- Pharmacy management is responsible for implementing, monitoring, and updating this policy.

4.0 REFERENCES

ISMP Canada. 2024. A New Canadian Approach to High-Alert Medications. Vol. 24, Issue 1.

Accreditation Canada. 2024. QMentum Program Standards: Medication Management. HSO A3001:2024. ISMP Canada. 2018. Canadian Failure Mode and Effects Analysis Framework; Proactively Assessing Risk in Healthcare (Version 3).

Interior Health Hazardous Drugs Exposure Control Program. Sept 2025. Hazardous Drugs Exposure Control Program

ISMP Canada. 2015. TALLman Lettering. https://www.ismp-canada.org/TALLman/

APPENDIX A: HIGH-ALERT MEDICATIONS STORED IN PALLIATIVE CARE KITS AT HOSPITALS WITHOUT ON-SITE PHARMACY SERVICE

Palliative care kits are for IH hospitals without on-site pharmacy services that require certain high-potency HAMs be available for prompt treatment of pain in palliative care patients presenting to ED.

Lock and store palliative care kits separately from other ED medications to prevent product selection error. Label kits as "Palliative Care Kit" on the outer box. Storage must comply with Policy PHK0600 - *Controlled Substances*.

HAMs with an exemption for palliative care kits in *High-Alert Medications Concentration, Volume, and Storage Restrictions* are exempt from usual HAM storage requirements. Additionally, the following infusion bags may also be used for palliative care kits:

- HYDROmorphone pre-mixed infusion bags in concentrations higher than those listed in the *IH Medication Manual (for Parenteral Drugs)*
- Morphine pre-mixed infusion bags in concentrations higher than those listed in the *IH Medication Manual (for Parenteral Drugs)*
- The pharmacy manager providing pharmacy services to the hospital will determine the most appropriate concentration for the pre-mixed infusions noted above