HIGH ALERT MEDICATIONS POLICY

Summary of Changes

	NEW	Previous
BC Cancer	Changed audit frequency to once a year	Twice a year

1. Introduction

1.1. Purpose

High-alert Medications are drugs that bear a heightened risk of causing significant patient harm when they are used in error, irrespective of how likely these errors may occur.[1-3] These medications may therefore include drugs associated with a high incidence of serious toxicities when administered to unintended patients. In addition, high-alert medications may also include drugs which require specializing nursing knowledge and skills to safely administer and provide care to intended patients. [4] A comprehensive strategy for the management of high-alert medications is needed to enhance medication safety and prevent patient harm.

Note: This policy outlines the minimum requirements for the handling of the designated high-alert medications. Additional safeguards may be appropriate for medications in specific situation e.g. administration of Hazardous Drugs by intrathecal route.

Policies referenced in this document are accessible on BC Cancer SHOP.

1.2. Scope

The standards of behavior set forth in the policy apply to all BC Cancer staff and physicians prescribing, storing or administering high-alert medications in all areas, including inpatient, ambulatory/outpatient, radiation therapy, diagnostic/imaging and surgical areas.

2. Responsibilities and Compliance

2.1. Responsibilities

Every health care provider involved in the high-alert medication management is required to adhere to the requirements of this policy.

Practice leaders will monitor audit results and take action to improve adherence to high-alert medication safety standards.

Senior Executive Director, Medical Affairs and Quality and Medical Director, Systemic Therapy (Chair of Provincial Systemic Therapy Network) are responsible for:

- The implementation, monitoring and maintenance of the High-Alert Medications Policy.

Provincial Systemic Therapy Network (PSTN):

- Establish a high-alert medication list in accordance to Accreditation Canada Standards and BC Cancer specific practice needs. (See Appendix in A)

  - Oncology high-alert medications list was developed according to criteria shown in Appendix B
- Routinely review submissions gathered from local experience or the literature for potential additions to the high-alert medication list. These include additions to formulary, medications procured during shortages, and medications identified by the organization's incident reporting system.
- Annually review the high-alert medication list and high-alert medication best practices for modifications. Request for additions and changes to the High-Alert Medication List or exemptions from any of the best practices identified must be submitted with supporting data to PSTN for approval.

High-alert medications approval process is outlined in Appendix C.

2.2. Compliance/Audits

PSTN (or designate) will perform annual audits to confirm compliance with the patient safety activities described within the High-Alert Medications Policy.

High-alert medications stocked in patient care areas (i.e. wardstock) shall be audited **once a year** by pharmacy staff.

3. Policy

3.1. High Alert Medication Management

Overarching principle:

BC Cancer will continuously develop, implement, maintain, review and improve medication management processes to ensure safe and effective delivery of High-alert Medications to patients.

Prescribing, storing, preparing, labelling (including auxiliary information), dispensing, administering and documenting of high-alert medications shall align with:

- Legislated requirements
- Patient and medication safety best practices
- Inventory control and other accessibility limitations
- Labelling standards
- Professional College guidelines
- Pertinent Provincial Health Services Authority (PHSA), BC Cancer and (Vancouver Coastal, Provincial Health Services, Providence Health Authorities (VPP) Clinical Systems Transformation (CST) policies and procedures.

3.2. Prescribing

Pre-printed orders or equivalent computerized prescriber order entry (CPOE) orders, with relevant dosing and monitoring parameters will be used to guide safe prescribing as appropriate.

See resources for patient monitoring criteria and toxicity management under "Related Documents".

3.3. Storage and Labeling

The strengths/concentrations and package sizes of high-alert medications will be limited and standardized.

High-alert Medications, unless pre-approved as wardstock as per Appendix D, will be:

- Issued as a patient-specific supply and removed/returned to pharmacy when no longer required or
- Available via automated dispensing cabinets, when programmed to allow drug access ONLY after Pharmacy Services has reviewed the medication order.

High-alert medications will only be added to wardstock in patient care areas with the approval of PSTN (see Appendix D). They shall be limited in type and quantity to only those essential for timely care. Considerations will be given to:

- The urgency with which the medication may be required
- The safeguards available for storage
- Availability of pharmacy services on site
- Accreditation Canada Required Organizational Practices (ROP) requirements for specific products such as concentrated electrolytes, heparin products and high potency opioids.
  ***Note:** PSTN approved wardstock exceptions are outlined in Appendix E.

High-alert wardstock Medications in areas without automated dispensing cabinets will be stored in red bins with "High-Alert" label.

In areas with automated dispensing cabinets (ADC), high-alert medications shall be stored in locking bins, sole designated matrix drawers, remote dedicated cupboards with controlled locks, or remote refrigerators with controlled locks, where possible.

- ADC locking bins, sole designated matrix drawers and dedicated cupboards with controlled locks containing high-alert medications do not require auxiliary warning labels

- Storage containers located within ADC remote refrigerators shall be labeled with high- alert auxiliary warning label
- When a product is removed, a user warning/alert with positive acknowledgement is required (Appendix F).

Where appropriate, antidote/reversal agents shall be readily available either in a pre-approved medication "kit", or as single stored rescue agents.

In pharmacy:

- High-alert medications will be stored separately in red bins with "High Alert" label as per Appendix D

3.4. Preparation/Dispensing:

High-alert Medications will be provided to client service areas in ready-to-administer forms whenever possible to minimize the requirement of preparation on the units.

BC Cancer Pharmacy Practice Standards for Hazardous Drugs will be followed (includes clinical review, preparation and checking requirements).

3.5. Administration

High-alert medications of intravenous (IV) infusion will be administered via Dose-Error Reduction (DERS) infusion pumps. DERS pump drug library will set soft and hard dose limits for high-alert medications.

Independent double checks (IDC):

Selected high-alert medications will require Independent Double Check as indicated in C-252 "Chemotherapy Drugs, Administration of". See related documents.

- If such medications are stored in automated dispensing cabinets, when the product is removed, a user warning will prompt that an independent double check is necessary. Positive acknowledgement is required (Appendix F).

3.6. Documentation

Prescription, administration and monitoring are documented in patient's medical record and medication administration records as per BC Cancer documentation standards.

3.7. Staff Education

All staff and prescribers will be oriented to the High-Alert Medications Policy and Procedures.

Nursing and Pharmacy Staff will complete oncology certification and maintain requirements as outlined by discipline-specific policies.

New information on High-alert Medications, such as cancer drug treatment protocols, drug information will be provided in the monthly Systemic Therapy Update Newsletter as appropriate.

4. Related Documents

Patient monitoring criteria and toxicity management are outlined in cancer drug treatment protocols, pre-printed orders or equivalent CPOE orders, Cancer Drug Manual, Parenteral Drug Therapy Manual and relevant BC Cancer supportive care and symptom management guidelines.

Policies referenced in this document are accessible on BC Cancer SHOP including all Provincial Pharmacy Policies/Directives (PPPD) referenced below.

http://shop.healthcarebc.ca/phsa/BCCancer/Provincial%20Pharmacy/70310.pdf

Overarching Systemic Therapy (ST) Policies

http://www.bccancer.bc.ca/health-professionals/clinical-resources/systemic-therapy

III-10 Systemic Therapy Delivery Process

III-40 Systemic Therapy Treatments Policy

III-40 Systemic Therapy Treatments Procedure

III-45 Compassionate Access Program

V-10 Hazardous Drug Safe Handling Policy

Protocols and Preprinted Orders

See BC Cancer website http://www.bccancer.bc.ca/

Pharmacy Policies/Directives/Standards

Clinical Pharmacy Guide: Cancer Drug Treatment Assessment and Review

Safe Handling Standards Manual: BC Cancer Pharmacy Practice Standards for Hazardous Drugs

Systemic Policy (ST) Policy III-100 Laboratory Tests--Ordering by Pharmacists

Provincial Pharmacy Policies/Directives (PPPD)

Nursing Directives

Chemotherapeutic Agents: Administration Of: C-252

Medication Administration Policy

M-100 Medication, Administration of

I-490 IV Therapy: Use of Infusion Pump with Dose-Error Reduction Software

Management of Chemotherapy Related Adverse Drug Reactions

ST Policy III-60: Drug Reaction Management--Physician Coverage during Delivery of Selected Chemotherapy Drugs

Supportive care: http://www.bccancer.bc.ca/health-professionals/clinical-resources/chemotherapy-protocols/supportive-care

Symptom and Side Effect Management Resource Guide

Flourouracil Overdose Management

Tumour Site Protocols and Cancer Drug Manual Monographs: http://www.bccancer.bc.ca/

Policies and Procedures for Specific High-alert Medications

ST Policy V-40: Vinca Alkaloid Preparation and Administration Policy

ST Policy III-50: Administration of Hazardous Drugs by the Intrathecal Route via Lumbar Puncture or Ommaya Reservoir Procedure

ST Policy III-140: Management of Dose Banded Cancer Drug Treatments

PPPD VI-50: High-Alert Medication Management

Limiting Concentrations and Availability of High-Alert Medications

PPPD III-40-10 Medication concentrations—Standardizing and Limiting the Number of Medication Concentrations Available

PPPD III-30-13 Client Service Area Ward Stock policy

Storage of High-Alert Medications

ST Policy V-10 Hazardous Drug Safe Handling Policy

Safe Handling Standards Manual: BC Cancer Pharmacy Practice Standards for Hazardous Drugs

PPPD VI-50 High-Alert Medication Management Procedure

PPPD III-30-13 Client Service Area Ward Stock policy

Labelling of High-Alert Medications

ST Policy V-10 Hazardous Drug Safe Handling Standards

ST Procedure III-50: Administration of Hazardous Drugs by the Intrathecal Route via Lumbar Puncture or Ommaya Reservoir.

PPPD VI-50: High-Alert Medication Management Procedure

PPPD III-30-12: Auxiliary Labelling of Outpatient Medications

Auditing of High-Alert Medication Storage in Patient Care Areas

PPPD III-30-04 Medication Area Audit

PPPD VI-50: High-Alert Medication Management Procedure

Ongoing Education

Pharmacy: PPPD II-50: Certification Assessment Process For Safe and Aseptic Preparation of Parenteral Cytotoxic Antineoplastic Drugs and Other Parenteral Drugs

Nursing: Infusion pump annual validation process H:\EVERYONE\nursing\EDUCATION\Alaris Infusion Pump\Annual Validation

5. Definitions

High-Alert Medications: Drugs that bear a heightened risk of causing significant patient harm when used in error. Although mistakes may or may not be more common with these drugs, the consequences of an error are clearly more devastating to patients.

Wardstock Medications: Non-patient specific medications stocked in a patient care area. Such medications can place patients at risk as their use bypasses pharmacy review process for therapeutic appropriateness, dose, allergies, duplicate therapy and interactions. Ward stock medication availability must therefore be limited.

BC Cancer Hazardous Drugs List: Comprised of drugs listed as hazardous in the currently published National Institute for Occupational Safety and Health-US (NIOSH) List of Antineoplastic and Other Hazardous Drugs in Healthcare Settings (i.e., NIOSH List) AND drugs evaluated as hazardous by BC Cancer (refer to BC Cancer Provincial Pharmacy Directive VI-80 Hazardous Drug List for details regarding the evaluation process).

Independent Double Check (IDC): A process by which two clinicians work separately to verify the accuracy of the order and medication related care to be delivered. The two clinicians perform the verification process independent of one another, without assistance from each other and without knowledge of the steps followed or conclusions arrived at by each other. Once verifications are complete, results are compared and discrepancies, if any, must be resolved before any action is taken e.g. transcription, preparation or administration. Refer to "Independent Double Check" and "Medication Administration" M100 and C-252

6. References

1) Institute for Safe Medication Practices (ISMP). High-alert medications in acute care settings. 23 August 2018. Available at: https://www.ismp.org/recommendations/high-alert-medications-acute-list. Accessed on: 5 December 2019.
2) Institute for Safe Medication Practices (ISMP). High-alert medications in community/ambulatory settings. 31 January 2011. Available at: https://www.ismp.org/recommendations/high-alert-medications-community-ambulatory-list. Accessed on: 5 December 2019.
3) Institute for Safe Medication Practices (ISMP). High-alert medications in long-term care (LTC) settings. 20 November 2017. Available at: https://www.ismp.org/recommendations/high-alert-medications-long-term-care-list. Accessed on: 5 December 2019.
4) Badry N, Beliveau J, Zapach T, Janes K, Ng, T. Guiding principles for the identification of medications used in the treatment of cancer which require administration by a registered nurse (RN) who has completed certification. BC Cancer Agency: Vancouver, BC: 6 December 2016.
5) Winkler GC, Barle EL, Galati G, Kluwe WM. Functional differentiation of cytotoxic cancer drugs and targeted cancer therapeutics. Regul Toxicol Pharmacol 2014;70(1):46-53.
6) Accreditation Canada 2021 Medication Management Standards; Accreditation.ca

7. Appendices

Appendix A: High-Alert Medications List and High Alert Medications Table

Appendix B: BC Cancer High-Alert Oncology Medications Evaluation Criteria

Appendix C: BC Cancer High Alert Medications Approval Process

Appendix D: High-Alert Medications (Labelling, Storage and Wardstock Requirements)

Appendix E: Provincial Systemic Therapy Network (PSTN) Approved Exceptional Wardstock Storage Indications and Locations

Appendix F: Automated Dispensing Cabinet (ADC) Alerts

Table 1: ADC Alerts

Appendix A: High-Alert Medications List (Last updated Oct 2021: Reviewed October 2022)*

*As per Vancouver Coastal/Provincial Health Services/Providence Health Authorities (VPP) High-Alert Medications List

Medications:
Oncology high-alert medications (see table A below)
methotrexate oral (all indications)
Insulins
Over 100 units per mL
IV continuous infusions
Neuromuscular blocking agents e.g. succinylcholine, rocuronium, cisatracurium
Concentrated Electrolytes
calcium salts for injection at concentrations of 10% or above
magnesium sulfate for injection at concentrations above 20%
potassium (all salts) for injection at concentrations of 2 mmol/mL or more
sodium acetate and sodium phosphate for injection at concentrations of 4 mmol/mL or more (of sodium)
sodium chloride for injection at concentrations above 0.9%
Heparins in High-dose Formats
heparin for injection containing 10,000 units or more per container
Low molecular weight heparin for injection, multidose vials
Opioids in High-dose Formats
Opioids, parenteral vials or ampoules containing more than fentanyl 100 mcg morphine 15 mg (adults) morphine 2 mg (pediatrics) HYDROmorphone 2 mg
diacetylmorphine injectable
methadone oral liquid
Other Medications
sterile water for injection in containers of 100 mL or more
Medications by specific routes:
Epidural
Intrathecal
Perineural
Patient Controlled Analgesia (IV- PCA, Epidural - PCEA, Perineural - PCPA)

Table A: Oncology High-Alert Medications List

Follow link to most current list: http://www.bccancer.bc.ca/drug-database-site/Documents/Oncology%20High%20Alert%20Medications%20List.pdf

Appendix B: BC Cancer High-Alert Oncology Medications Evaluation Criteria

INCLUSIONS

Scope

1. BC Cancer Benefit Medications
2. Other non-formulary oncology medications dispensed through Cerner PowerPlans at the Clinical System Transformation (CST) sites of Vancouver Coastal Health, Providence Health Care, and Provincial Health Services Authorities (VPP)

Drugs associated with serious toxicities in intended or unintended patients

1. Cytotoxic drugs, defined as drugs with primary activity through indiscriminate and direct killing of both malignant and normal cells, based on fulfilling all three criteria below.[1]
   a. Mechanism of action – directly disrupts DNA structure or mitotic function to cause cell death (e.g., intercalation, clastogenicity, spindle destruction), usually described as genotoxic or clastogenic.
   b. Does not selectively target malignant cells or differentiate in susceptibility between malignant and normal cells.
   c. Toxicity is not specific or significantly preferential to malignant cells based on in vitro and animal studies or clinical studies.
2. Non-cytotoxic drugs with narrow therapeutic index or low dose toxicity
3. Drugs with potential for acute serious toxicities (e.g., febrile neutropenia, anaphylaxis, hypersensitivity reactions, infusion reactions, immune-related toxicities, tumour lysis syndrome), including drugs designated as vesicant/irritant or associated with flare reactions
4. Potential for delayed serious toxicities (e.g., immune-related toxicities, QT prolongation, fetal abnormalities)

Parenteral drugs requiring patient assessment prior to cyclical administration

These include the following routine pre-treatment assessments:

1. Specific pre-medications required to prevent side effects (e.g., nausea and vomiting, cholinergic responses, hypersensitivity reactions)
2. Dose limiting side effects and performance status (e.g., presence of infection, mucositis, hand-foot syndrome, high or low blood pressure, rash, diarrhea, immune responses, proteinuria)
3. Specific laboratory findings, imaging (e.g., blood counts, renal, hepatic or cardiac function [echo, MUGA])
4. Drugs associated with high possibility of incorrect route of administration leading to significant patient harm as advised by BC Cancer Medication Safety (e.g., vinca alkaloids, rituximab, bortezomib).

EXCLUSIONS

The following drug products are generally assumed to pose limited risk of harm to patients:

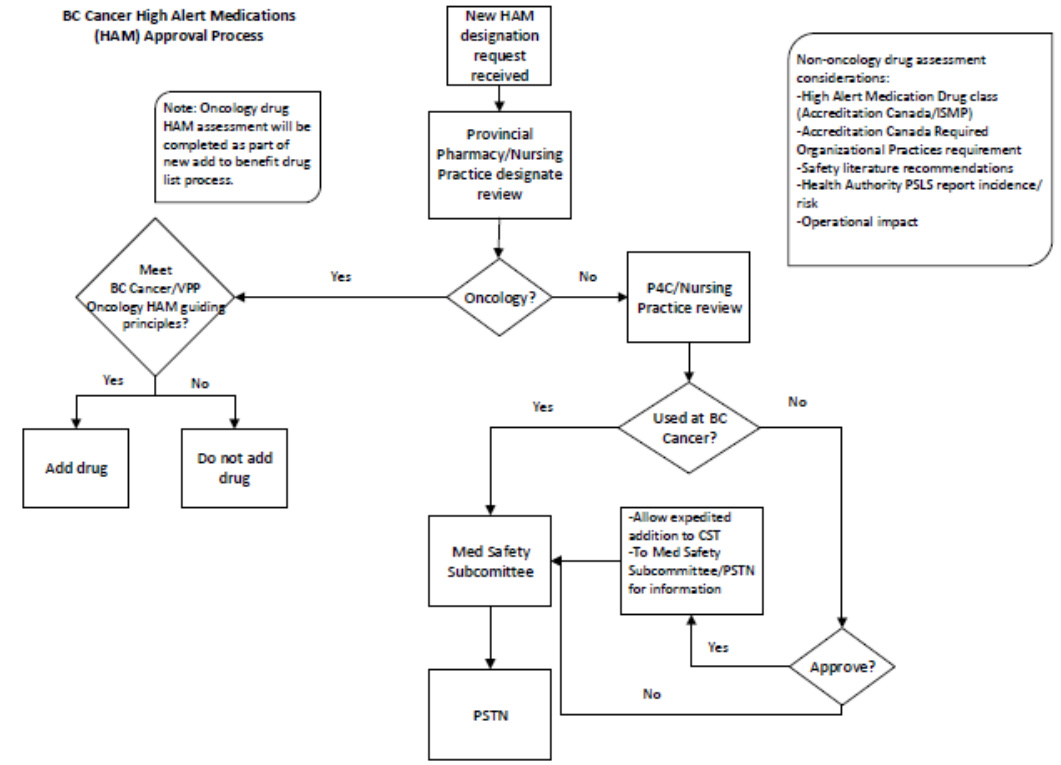
1. Oral drugs administered continuously or cyclically, or parenteral depot injections that do not require regular assessment for serious toxicities.

2. Topical application products (including eye drops) with limited toxicities if inadvertently administered to unintended patients.

References

1. de Lemos ML, Badry N, Conklin J, Koberinski M. Defining cytotoxic drugs - you know it when you see it? J Oncol Pharm Pract. 2021 Sep 24:10781552211034473. doi: 10.1177/10781552211034473. Epub ahead of print. PMID: 34558361.

Appendix C: BC Cancer High Alert Medications Approval Process



Definitions:
CST= Clinical Systems Transformation
ISMP= Institute for Safe Medication Practices
P4C= Provincial Pharmacy Professional Practice Council
PSTN= Provincial Systemic Therapy Network
PSLS= Patient Safety Learning System
VPP = Vancouver Coastal/Providence/Provincial Health Services Authorities

Appendix D: High-Alert Medications (Labelling, Storage and Wardstock Requirements)

Medications	Labelling on drug/IV bags	Labelling on medication bins	Stored in Separate Red Bin (Yes/No)	Wardstock/ Variances
Oncology medications (See Appendix A for complete list)	High Alert*	N/A	No	Not permitted
Oncology medications with additional requirements: Liposomal or target conjugate chemotherapy/immunotherapy agents e.g. DAUNOrubicin liposomal DOXOrubicin liposomal PACLitaxel NAB vinCRIStine liposomal trastuzumab emtansine	High Alert*	High Alert	Yes	Not permitted
Concentrated Electrolytes calcium salts for injection at concentrations of 10% or above e.g. • calcium chloride 10% vials/syringes • calcium gluconate 10% vials/syringes magnesium sulfate for injection at concentrations above 20%: e.g. • magnesium sulphate 50% vials potassium (all salts) for injection at concentrations of 2 mmol/mL or more sodium acetate and sodium phosphate for injection at concentrations of 4 mmol/mL or more (of sodium) sodium chloride (IV) greater than 0.9 % e.g. • sodium chloride 3% bag.	High Alert	High Alert	Yes	Not permitted Provincial Systemic Therapy Network (PSTN) approval required for exceptions. (See Appendix E)
Unfractionated heparin for injection containing 50,000 units or more per container e.g. heparin 50,000 units/5 mL vials	High Alert	High Alert	Yes	Not permitted

Unfractionated heparin for injection containing 10,000 units or more per container Greater than or equal to 10,000 units total per container (e.g. 10,000 units/ 1 mL; 10,000 units/10 mL; 30,000 units/30 mL) a. Intravenous premixed bags e.g. 25,000 units/500 mL; 20,000 units/500 mL	High Alert	High Alert	Yes	Not permitted PSTN approval required for exceptions (See Appendix E)
Low Molecular Weight Heparin Multidose vials (Not to dispense for patient use at BC Cancer. Only permitted in critical care for treatment doses as per Accreditation standard)	N/A	N/A	N/A	N/A
High Potency Opioids a. fentanyl amps or vials with total dose greater than 100 mcg per container b. HYDROmorphone amps or vials with total dose greater than 2 mg **c.** morphine amps or vials with total dose greater than 15 mg	High Alert	High Alert	Yes	Not permitted PSTN approval required for exceptions (See Appendix E)
a. methadone oral liquid	High Alert	High Alert	Yes	Per usual ward stock policy requirements
Neuromuscular Blocking Agents e.g. succinylcholine, rocuronium, cisatracurium, atracurium, mivacurium, pancuronium, vecuronium	High Alert; Paralytic agent	High Alert; Warning: Paralyzing Agent Causes Respiratory Arrest. Patients Must be Ventilated.	Yes (red bin with plastic lids)**	Per usual ward stock policy requirements
Insulin Over 100 units/mL IV Continuous infusions	High Alert	High Alert	Yes	Not permitted
Sterile Water for Injection (in containers of 100 mL or more	High Alert	High Alert	Yes	Not permitted STP approval required for exceptions (See Appendix E)

*****For sites on live on Clinical Systems Transformation (CST)

** For Anesthesia work stations, if space constraints prevent the use of separate bins with lids, storing drug in locked bin or sole designated matrix drawer, the minimum requirement for storing neuromuscular blocking agents in a matrix drawer is as follows:

- Bin must be labelled with medication name and concentration
- Medication must be separated from other look-alike/sound-alike drugs
- Increase visibility of neuromuscular blocking agent by:
    a. Lining the bin with red plastic liner
    b. Affixing high alert medication label to bin
    c. Affixing “paralytic agent” warning label to medication vial/amp

Appendix E: Provincial Systemic Therapy Network (PSTN) Approved Exceptional Wardstock Storage Indications and Locations

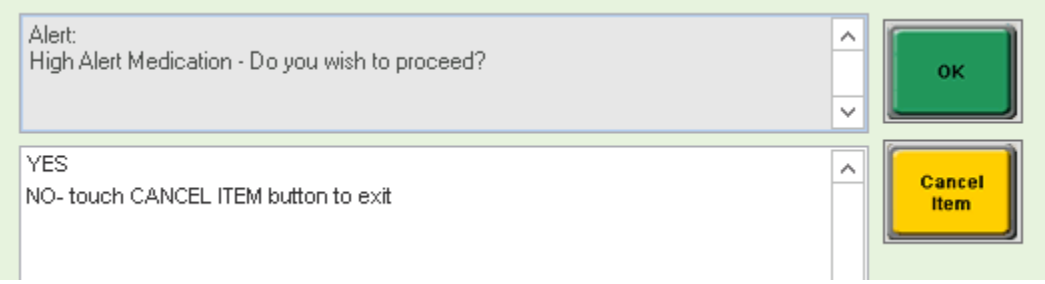
	Approved Indications for Availability as General Wardstock	**Approved Locations for Wardstock Storage**
Restricted Concentrated Electrolytes		
calcium chloride 10% (1 g/10 mL)	Life threatening arrhythmias	Vancouver Centre OR
	Malignant Hyperthermia	Vancouver Centre OR Brachytherapy (RT)— Abbotsford; Kelowna
calcium gluconate 10% (1 g/10 mL)	Life threatening arrhythmias	Vancouver Centre OR
Restricted High Dose Format Opioids		
fentanyl 250 mcg/5 mL vial	Induction; procedural sedation by anesthesiologist	Vancouver Centre OR Kelowna Centre Brachytherapy
HYDROmorphone 10 mg/mL vial	Pain Control Patients who require more than 4 mg/dose units	Vancouver Centre Inpatient Unit
High Dose Format Heparins		
heparin 10,000 units/10 mL	Urgent bolus doses of heparin Initiation of heparin protocol	Vancouver OR
Sterile Water for Injection (in containers of 100 mL or more)	Reconstitution of dantrolene for treatment of malignant hyperthermia	Vancouver OR Brachytherapy--Abbotsford; Kelowna

OR = Operating Room; RT= Radiation Therapy

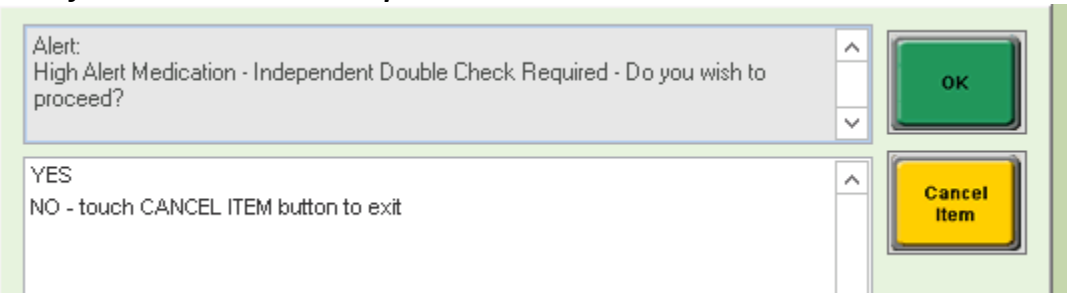
Appendix F: Automated Dispensing Cabinet (ADC) Alerts

1. General Principles
    - ADC alerts system set up described below for High-Alert Medications do not negate the BC Cancer High-Alert Policy requirements outlined in this policy. Only permitted medications (see Appendices C) will be placed in ADC cabinets.
    - Alerts will:
        - Be used judiciously to prevent alert fatigue.
        - Fire upon removal of high-alert medications approved to be stored in ADC cabinets. Positive user acknowledgement is required.
2. ADC alerts verbiage
    - Two types of alerts will be created in the system:
        - High Alert Medication
        - High Alert Medication—Independent double check (IDC) required.

General alert for high alert medications (no IDC required):



Alert for medications that require an IDC:



- Medications/medication class will be matched with appropriate alert as per High-Alert requirements in Appendix A and IDC requirements in http://shop.healthcarebc.ca/_layouts/15/DocIdRedir.aspx?ID=SHOP-1273641220-183. (See Table 1)

Table 1: ADC Alerts

Medication	Alert
Alteplase IV	IDC
Antineoplastic agents	IDC
Methotrexate oral	IDC
Insulins for greater than 100 units/mL	General Alert
Insulin IV continuous infusions	IDC
Ketamine IV route	IDC only (not High Alert Medication) – verbiage pending
Lidocaine IV route	IDC only (not High Alert Medication) – verbiage pending
Sterile water for injection, in containers of 100 mL or more	General alert
Concentrated Electrolytes	
Concentrated electrolytes	General alert
Calcium salts for injection at concentrations of 10% or above	General alert
Magnesium sulfate for injection at concentrations above 20%	General alert
Potassium (all salts) for injection at concentrations of 2 mmol/mL or more	General alert
Sodium acetate and sodium phosphate for injection at concentrations of 4 mmol/mL or more (of sodium)	General alert
Sodium chloride for injection at concentrations above 0.9%	General alert
High Dose Format Heparins (To be further reviewed)	
Heparin for injection containing 10,000 units or more per container	IDC
Low molecular weight heparin for injection, multidose vials	IDC
High Dose Format Narcotics	
Methadone oral liquid	IDC
Diacetylmorphine injectable	IDC
Hydromorphone 50 mg/mL	IDC
Midazolam – for subcutaneous infusion	IDC only (not High Alert Medication) – verbiage pending
Opioids, parenteral vials or ampoules containing more than Fentanyl 100 mcg or Morphine 15 mg (adults) Morphine 2 mg (pediatrics) HYDROmorphone 2 mg	General alert
Neuromuscular Blocking Agents	
E.g. succinylcholine, rocuronium, cisatracurium, atracurium, mivacurium, pancuronium, vecuronium	General alert

****Last page of document****

First Issued:	20-Nov-2017		
Approving Body:	Provincial Systemic Therapy Network; Medical Advisory Committee (MAC) Quality Council (2022)		
Final Sign Off:	**Name**	**Title**	**Date Signed**
	Dr. Sharlene Gill	Medical Oncologist, Chair-MAC	12-OCT-2023
	Helen Anderson	Medical Director, Systemic Therapy Program	28-SEPT-2023
	Elaine Wai	Senior Executive Director, Medical Affairs and Quality	December 2022
Developed By:	**Name**	**Dept.**	**HO**
	Tonya Ng	Provincial Pharmacy	BC Cancer
	Karen Janes	Nursing Practice	BC Cancer
Reviewed by:	Provincial Medication Safety Subcommittee		BC Cancer
	Provincial Pharmacy Professional Practice Council (P4C)		BC Cancer
	Nursing Advisory Council		BC Cancer
	Quality and Safety Team		BC Cancer
	Kris Gustavson	Corporate Director, Accreditation & Patient Experience, Quality, Safety & Outcome Improvement	PHSA
	Scott Tyldesley	Lead, Radiation Therapy Program	BC Cancer
Owner(s):	Helen Anderson	Medical Director, Systemic Therapy Program	BC Cancer
Posted Date:	16-OCT-2023		
Version:	8.0		
Revision:	**Name of Reviser**	**Description**	**Date**
	Tonya Ng Reviewed by: P4C/Provincial Professional Practice Nursing Community of Practice/ Medication Safety Subcommittee/PSTN	Changed audit frequency to once a year	Sep 6, 2023
	Tonya Ng Reviewed by: P4C/Provincial Professional Practice Nursing Community of Practice/	Updated links. Moved appendix from website to this document. Content update	Nov 29, 2022

	Medication Safety Subcommittee/PSTN		
	Tonya Ng Reviewed by: P4C/Nursing Advisory Council/ Medication Safety Subcommittee/PSTN	Content update	Feb 1, 2022
	Tonya Ng Reviewed by: P4C/Nursing Advisory Council/ Medication Safety Subcommittee/PSTN	Content update	Oct 1, 2021
	Tonya Ng/Theressa Zapach Reviewed by: P4C/Nursing Advisory Council/ Medication Safety Subcommittee/PSTN/Quality Council	Content update	Jun 1, 2021
	Tonya Ng/Karen Janes Reviewed by: P4C/Nursing Advisory Council/ Medication Safety Subcommittee/PSTPC/Quality Council	Content update	Jan 31, 2019