Team Name: Pharmacy and Therapeutics Team Lead: Director - Pharmacy Approved by: Regional Lead - Medical Services & Chief Medical Office	Reference Number: CLI.6010.PR.002 Program Area: Pharmacy Policy Section: General
Issue Date: March 8, 2022 Review Date: Revision Date: January 25, 2024	Subject: Use of Single and Multi-Dose Vials in Patient Care Areas

Use of pre-printed documents: Users are to refer to the electronic version of this document located on the Southern Health-Santé Sud Health Provider Site to ensure the most current document is consulted.

PROCEDURE SUBJECT:
Use of Single and Multi-Dose Vials in Patient Care Areas

PURPOSE:
To reduce preventable harm to patients by decreasing the risk of contamination and spread of nosocomial infection in relation to the withdrawal of medication from vials in patient care areas.

To demonstrate regional consistency and compliance with Accreditation Canada requirements to minimize the use of multi-dose vials in patient care areas.

DEFINITIONS:
Multi-Dose Vial (MDV) - a vial of liquid medication intended for parenteral administration that contains more than one dose of medication. These products are labeled as multi-dose by the manufacturer and typically contain an antimicrobial preservative to help prevent the growth of bacteria.

Single Dose Vial (SDV) - a vial of liquid medication intended for parenteral administration that is meant for use in a single patient for a single procedure. These products are usually labeled by the manufacturer as single use and typically lack an antimicrobial preservative. NOTE: other single use medication formats include ampoules, vials requiring reconstitution by nursing staff and IV solutions in bags and bottles.

IMPORTANT POINTS TO CONSIDER:
- Pharmacy shall supply SDV or ampoules for parenteral administration where possible.

- MDV will be supplied when SDV are not available. The smallest volume of MDV available shall be supplied to minimize the risk of contamination.

- Vials, ampoules, IV bags/bottles and mini-bags shall be used to prepare a single dose for a patient.
  - Even when labeled by the manufacturer as a MDV, discard the vial after the dose of medication has been prepared, labeled and where applicable, the independent double check verification of high alert drugs has been performed.
  - EXCEPTION: see CLI.6010.PR.002.SD.01 Handling of Multi-Dose Vials Exceptions
- Do NOT combine leftover medication from vials, ampoules, IV bags/bottles and mini-bags to make up a dose.
- Observe all parenteral products for any product deterioration, color change or presence of particle/precipitate and for solutions, observe for loss of clarity. If any of these are observed, do NOT use and contact pharmacy.
  - MDV that may be contaminated shall be discarded in pharmaceutical waste container
- MDV containing benzyl alcohol (or other antimicrobial preservative) are not recommended in newborn infants and shall be avoided or minimized.
- Do NOT use bags or bottles of IV solution as a common source of supply for multiple patients.
- Never transport or store medications, including vials in pockets or clothing.
- Parenteral medications shall be accessed in an aseptic manner.
  - Proper hand hygiene shall be performed before handling medications and the rubber septum shall be disinfected with an alcohol swab prior to piercing.
  - Use a new sterile syringe and sterile blunt needle or cannula to draw up medications while preventing contact between the injection materials and the non-sterile environment.

PROCEDURE:

- Vials, ampoules, IV bags/bottles and mini-bags shall be discarded immediately after the dose is prepared, labeled and where applicable, the independent double check verification of high alert drugs according to the Safety Controls for High-Alert Medications, Provincial Clinical Standard has been performed.
  - SDV shall NOT be stored for later use
  - Follow appropriate procedures for discarding narcotic and controlled products CLI.6010.PL.015
- Medication prepared for parenteral use in a patient care area shall be administered within one hour of preparation.
  - Do NOT prepare multiple doses of medication for administration at a later time. EXCEPTION: Medications prepared for an operating room case. All prepared medications shall be labeled and opened vials shall be discarded at the end of the case. Follow CLI.6010.PR.001 for the management of narcotic/controlled medications wastage.
- When MDV are used as indicated in CLI.6010.PR.002.SD.01, the following procedures shall be followed as applicable:

- Medication preparation shall not take place in the immediate patient care area i.e. patient's room or in a treatment area where patients and/or family/caregiver are present.
- Both the blunt needle or cannula and syringe shall be new and sterile every time the vial is accessed for a dose
- The vial shall be appropriately labeled with an expiry date of 28 days after initial access or per the manufacturer's monograph, whichever is less.
- The vial shall be labeled with the patient name and on other identifier described in ORG.1410.PL.301 Client Identification on initial access when used for multiple doses for a single patient
    - The vial shall be discarded when the patient is discharged, the order has been discontinued or the designated expiry date has passed.
- The vial shall be stored following manufacturer instructions, which may or may not include refrigeration
    - Do NOT store MDV in the immediate patient care area i.e. in the patient's room or in a treatment area where patients and/or family/caregiver are present
- Vials labeled with a patient name shall be store in a patient specific bin or in a segregated area

SUPPORTING DOCUMENTS:

CLI.6010.PR.002.SD.01	Handling of Multi-Dose Vials Exceptions

REFERENCES:

Safety Controls for High-Alert Medications, Provincial Clinical Standard

CLI.6010.PL.015	Narcotic and Controlled Drugs
CLI.6010.PR.001	Operating Room Management of Narcotic Controlled Medications
ORG.1410.PL.301	Client Identification

Medication Management Standards: Criteria 12.8 Date Generated January 1, 2021 Ver. 14 Accreditation Canada; accessed Jan 2024

WRHA Medication Quality and Safety Committee: Use of Single and Multi-Dose Vials in Patient Care Areas Directive.