MARKHAM STOUFFVILLE HOSPITAL CORPORATION	**360.914.914.005 Medication Fluid Administration via Subcutaneous Cannula**
Location: Clinical (CLIN)\Pain Management (CLIN-PAIN)	Version: 2.00
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POLICY:

Medications or fluids are administered via the subcutaneous route (either intermittently or continuous infusion) in a safe and effective manner.

GUIDELINE:

A provider order is required to:

- Administer a medication or fluid via the subcutaneous route
- Initiate a continuous subcutaneous infusion of a medication or fluid

Patients with anticoagulation and clotting disorders may not tolerate subcutaneous access due to bleeding at the injection site.

EXPECTED OUTCOMES:

1. Patient comfort is optimized by effective medication/fluid administration via subcutaneous infusion or intermittent administration.
2. The subcutaneous Cannula is considered for patients receiving routine intermittent subcutaneous *injections* of medication every 2-4 hours.

PROCEDURES:

A. SUBCUTANEOUS CANNULA INSERTION

Equipment:

1. Subcutaneous cannula
2. Transparent dressing (e.g. tegaderm)
3. 1- 3cc syringe
4. 3 - 70% alcohol, 2% chlorhexidine swabs
5. Gloves
6. Tape
7. Subcutaneous line identification label

Procedure:

1. Assemble equipment.
2. Explain procedure and expected outcomes to patient/family.
3. Perform hand hygiene.
4. Select the appropriate insertion site – preferred sites are abdomen, upper chest, outer arm or thigh.
5. Remove vent plug and prime with 0.5 mL of medication or fluid to be administered.
6. Don gloves.
7. Cleanse the insertion site with 70% alcohol, 2% chlorohexidine swab (for approximately 15 seconds) using a circular motion from the anticipated insertion site out. Allow the area of skin to air dry.
8. Insertion of cannula:
    a. Prepare cannula by rotating the white safety shield to loosen the needle.
    b. Confirm that the needle bevel is facing up and that the catheter is not over the bevel before insertion.
    c. Grasp the textured sides of wings and bring them together, pinching firmly.
    d. Using thumb and index finger gently pinch the skin around selected site to identify the subcutaneous tissue.
    e. Insert the full length of the catheter and needle through the skin at a 30-45^0 angle.
    f. Lay the wings flat on the skin surface and pull the white safety shield in a straight, continuous motion until the safety shield separates from the safety system.
9. Observe for any backflow of blood into the tubing. If blood is noted, withdraw the needle and repeat the procedure using a new needle and a different site.
10. Secure the subcutaneous cannula by applying a transparent occlusive dressing (e.g. tegaderm) over the wings and insertion site.
11. Reinforce the tubing by taping it in place leaving the injection port accessible.
12. Complete the subcutaneous line identification sticker and place it on top of the transparent occlusive dressing indicating the following:
    - Insertion date
    - Medication **name and strength** to be infused
13. Document the following in the patient's chart:
    - Date and time of insertion
    - Gauge of cannula used
    - Site of insertion
    - Patient's response
14. Assess insertion site and document assessment q4h for the following signs and symptoms:
    - Redness
    - Bruising
    - Swelling
    - Tenderness
    - Leakage
    - Purulent discharge
15. Change insertion site every 5 days or if site is red, swollen or painful.

16. Change the tubing q96h.

B. MEDICATION ADMINISTRATION – INTERMITTENT

Procedure:

1. Swab injection port of the leur lock adapter with alcohol swab.
2. Insert syringe containing analgesic into the injection port.
3. Inject medication VERY slowly over 1 to 5 minutes dependent upon patient comfort.
4. Maximum medication volume to be injected into the site at one time should be less than or equal to 2 mL. This will provide optimal absorption and comfort for the patient.
5. Inject only one medication per site. Do NOT flush the tubing after medication administration as this will result in a dose greater than intended to be administered.
6. Remove syringe and assess effectiveness of the analgesic ½ hour following administration.
7. Discard used equipment appropriately.
8. For all medications being administered via a subcutaneous cannula, use one site per medication and clearly label as to which medication is being administered in each site. Document the name and strength of the medication.
9. Medication should not sit in the tubing for an extended period of time. Common medications to which this policy applies (morphine, midazolam, HYDROmorphone and ketamine) are stable in the tubing for up to 3 days

C. CONTINUOUS MEDICATION/FLUID ADMINISTRATION

Procedure:

1. Prime infusion tubing with appropriate solution.
2. Attach infusion tubing to luer lock of subcutaneous cannula and secure in place with tape.
3. Use a pump for all infusions (e.g. CADD, Alaris).
4. Affix the appropriate medication label to the infusion tubing, indicating the following:
    - Medication name and strength
    - Date and time of initiation
    - Date and time tubing is to be changed
5. Isotonic IV solutions may be administered to adult patients (hypodermoclysis therapy). Fluids should infuse slowly (e.g. 30 mL/h) during the first hour of therapy and if the patient remains comfortable, may be increased, not to exceed 80 mL/h.

D. SUBCUTANEOUS CANNULA REMOVAL

If it is determined that the subcutaneous site is no longer required (i.e. if the line has not been used within the last 3 days), the subcutaneous line should be removed and/or replaced as needed.

Equipment:

1. Non-sterile gloves
2. Band-aid or 2x2 gauze
3. Non-allergic tape

Procedure:

1. Obtain equipment.
2. Perform hand hygiene.
3. Don non-sterile gloves.
4. Explain the procedure to patient/family.
5. Remove the transparent dressing and subcutaneous line identification sticker.
6. Remove the subcutaneous cannula and discard into the biohazard/sharps container.
7. Apply pressure if bleeding or leakage of fluid occurs.
8. Apply band-aid or 2x2 gauze (secured with non-allergic tape).
9. Document the following:
    - Date
    - Time
    - Reason for removal
    - Patient response/ toleration of procedure

REFERENCES:

Saskatoon Health Region, Subcutaneous therapy- intermittent and continuous, Policy 1074 January 2015

ENDORSEMENT(S):

Interprofessional Practice Advisory Committee	20/09/ 2017
Drugs and Therapeutics Committee	12/10/ 2017

PREVIOUSLY REVIEWED/REVISED DATE(S):

25/05/1998 (new), 22/10/2014, 25/10/2017

This policy was previously named:
360.914.914.005 Medication/Fluid Administration via Subcutaneous Butterfly Device

Appendix A: Link to learning materials

1. In LIME

2. Intranet/Interprofessional Practice and Education/Educational Resources/Video Resources/Saf-T-Intima Cannula (needs to be accessed on Chrome)