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| Nurse Manager Cancer Services Stream  
KEY TERMS | Palliative care, subcutaneous fluid  
SUMMARY | The purpose of this policy is to provide clinical guidance and a framework to ensure the safe administration of subcutaneous fluids to adult patients in the acute hospital environment and community setting.
1. **POLICY STATEMENT**

   Continuous subcutaneous infusion (CSCI), also called hypodermoclysis, is the administration of fluids into the subcutaneous layer of the skin where there is an extensive lymphatic and blood vessel system through which fluids can be absorbed.

   The decision to use CSCI in patient care frequently invokes robust discussion as some research and clinicians advocate its use to manage dehydration, while others oppose it. The decision to hydrate a palliative patient caused by low fluid intake should be individualised based on careful patient assessment, the potential risk of/benefits of fluid administration and the wishes of the patient and carer.

   The purpose of this policy is to provide clinical guidance and a framework to ensure the safe administration of subcutaneous fluids to adult patients in the acute hospital environment, and community setting.

2. **BACKGROUND**

   2.1 **Indications for subcutaneous fluids:**

   The CSCI is an appropriate treatment of a patient who is/has:
   - Dehydrated
   - Dysphagia
   - Limited venous access
   - Diarrhoea, nausea and vomiting,
   - Constipation, bowel obstruction
   - Has delirium whose aetiology is believed to be due to opioid metabolite accumulation\(^(3)\)
   - Induced neurotoxicity
   - Recurrent Hypercalcaemia.

   2.2 **Subcutaneous fluids are contraindicated:**

   - Poor skin integrity (e.g. scar tissue, infection, recent radiation)
   - Extremely emaciated
   - in cardiovascular shock
   - Fluid overload
   - Cardiac failure
   - Pulmonary oedema
   - Hyperosmolarity

3. **RESPONSIBILITIES**

   3.1 **Nursing staff will:**

   - Be familiar with the policies and procedures outlined in this document prior to providing subcutaneous treatments to patients.
   - Document all actions and conversations in the patient’s medical record.
3.2 Medical staff will:
  - Document on medical treatment order fluids to be administered
  - Liaise with nursing staff in the hydration management of the patient

4. PROCEDURE

4.1 Administration of adult subcutaneous fluid
For site selection and care, subcutaneous cannula insertions and care refer to SELSHD policy SELSHNPD/19 - Subcutaneous Needle Insertion and Management.

4.2 Equipment
  - 0.9% Sodium Chloride (Normal Saline) as per medical treatment order
  - Sharps container
  - 2% Chlorhexidine Gluconate v/v 70% Isopropyl Alcohol swabs
  - Appropriate infusion pump and stand
  - Intravenous giving set #

In the community setting
  - Gravity infusion giving set #
  - Drip stand or coat hanger

4.3 Procedure
  - Explain the procedure and obtain verbal consent as per NSW Ministry of Health PD2014_036 Clinical Procedure Safety
  - This procedure requires the use of aseptic technique, as per NSW Ministry of Health PD2010_058 Hand Hygiene Policy
  - Check infusion fluid as per NSW Ministry of Health PD2013_043 Medication Handling in NSW Public Health facilities
  - If required Insert subcutaneous cannula as per SELSHNPD/19 Palliative Care - Subcutaneous Needle Insertion and Management. If using an existing cannula check date of insertion and site prior to administration of any fluid or medication. Please see Appendix 2 for access duration.
  - Prime the infusion giving set using 0.9% Normal saline. Clamp line.
  - Wipe subcutaneous port with 2% Chlorhexidine Gluconate v/v 70% Isopropyl Alcohol swab.
  - Attach infusion giving set to the subcutaneous cannula using no touch technique.
  - Secure line using the appropriate tape.
  - Set infusion rate as per medical treatment order.
  - Complete documentation as per NSW Ministry of Health PD2012_069 Health Care Records - Documentation and Management
4.4  Ongoing Management

- Fluid flasks must be labelled with date and time of commencement and anticipated completion time.
- Due to the nature of subcutaneous fluid administration and the slow infusion time, it is recommended that fluids be administered via gravity flow administration sets. In clinical settings where infusion pumps are the preferred method infusion rates should not exceed 42mL/per hour.
- Monitor the infusion site for signs of infiltration or infection. For example pain, swelling, redness and abdominal distension:

<table>
<thead>
<tr>
<th>Symptom</th>
<th>Assessment</th>
<th>Treatment</th>
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</thead>
<tbody>
<tr>
<td>Swelling, abdominal distension</td>
<td>Assess patient if it is appropriate to continue with subcutaneous fluid replacement</td>
<td>Reduce infusion rate by half. If the reduced flow rate does not improve symptoms, change the subcutaneous cannula site.</td>
</tr>
<tr>
<td>Redness, pain, discharge</td>
<td></td>
<td>Resite subcutaneous needle as per SESLHNPD/19 Subcutaneous Needle Insertion and Management</td>
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4.5. Removal of subcutaneous needle

Refer to SESLHNPD/19 - Subcutaneous Needle Insertion and Management

5. DOCUMENTATION

Medical treatment order Patient’s medical record Nursing care plan

6. AUDIT

As required by clinical staff

7. REFERENCES

- Gastroenteritis Initiative handbook incorporating the NSW Health Gastro Pack.
Palliative Care: administration of Adult Subcutaneous Fluid

8. REVISION AND APPROVAL HISTORY

<table>
<thead>
<tr>
<th>Date</th>
<th>Revision No.</th>
<th>Author and Approval</th>
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<tr>
<td>May 2009</td>
<td>DRAFT</td>
<td>Caroline Belfanti, Palliative Care, Calvary Health Care, Sydney</td>
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<tr>
<td>June 2009</td>
<td>DRAFT</td>
<td>Approved by Area Palliative care Working Party</td>
</tr>
<tr>
<td>February 2010</td>
<td>DRAFT</td>
<td>Approved at Palliative Care Directors Meeting</td>
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<td>May 2010</td>
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<td>Draft for comment- Area Policy and Procedure webpage</td>
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<td>November 2010</td>
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<td>Area Drug Committee</td>
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<td>May 2014</td>
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<tr>
<td>July 2015</td>
<td>2</td>
<td>Changes endorsed by Executive Sponsor</td>
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Appendix 1

Percutaneous Access Algorithm

Duration Of Access

- < 1 week
  - Good peripheral access
    - Peripheral IV cannula
  - Inadequate peripheral access for site rotation
    - Mid-line catheter
      - peripheral insertion
      - 4 week dwell
      - x-ray verification not required
  - Central vein access not required
    - Subcutaneous access
      - isotonic hydration
      - certain drugs
  - Central vein required
    - TPN
    - Monitoring
    - Temporary CVC
      - subclavian or jugular veins
    - PICC
      - 1 year dwell
      - body image/lifestyle considerations
      - bedside insertion
      - weekly maintenance
    - Implanted port
      - OT placement
      - needle to access
      - 8 weekly maintenance
    - Tunnelled catheter
      - OT placement
      - body image/lifestyle considerations
      - weekly maintenance

- 1-4 weeks
- 4-52 weeks
- > 6 months

COMPLIANCE WITH THIS DOCUMENT IS MANDATORY
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