Continuous Subcutaneous Infusions in the Palliative Care Setting via T34™ Pump Procedure

1. Purpose

A subcutaneous infusion allows safe and effective continuous administration of medications when other routes are inappropriate or ineffective. Subcutaneous ambulatory infusion pumps deliver a constant, metered dosage of medications over a set time frame. This procedure describes the use of Niki T34™, BodyGuard T™ and T34™ subcutaneous pumps (referred to as T34™ pumps).

Subcutaneous infusions are utilised in patients with palliative care needs to manage a variety of symptoms including pain, nausea, vomiting, breathlessness, agitation, delirium and increasing respiratory or gastric secretions.

Subcutaneous infusions are primarily prescribed for patients with palliative care needs and one or more of the following:

- an inability to swallow
- an inability to absorb oral medications
- uncontrolled pain
- uncontrolled nausea and/or vomiting
- obstructive gastrointestinal disease
- decreased level of consciousness
- patients in the terminal phase of disease.

This procedure facilitates safe and effective symptom management, while supporting patient choice, carer involvement and patients staying in their preferred place of care and death.

2. Procedure

2.1 Education

Nursing

Before setting up or managing a continuous subcutaneous infusion nurses must be deemed competent by their managers or a senior clinician. They are to:

- be conversant with this procedure.
- complete the MyLearning education program via MyLearning: Ambulatory Infusion Pump: NIKI T34 Declaration (EQ03 EL1)
- be supervised in the set up and management of the pump until confident and competent in their practice.

Local regional palliative care team members or staff development nurses can assist in facilitating learning in this area.

Patient / family / carer

Use of the subcutaneous infusion (including reasons for use, practical care and ongoing management and review) must be discussed with the patient / family / carer prior to commencement. Consent must be obtained from the patient and/or family/carer, for both the medications prescribed and the use of the pump.

Consent is to be managed in accordance with the WACHS Consent to Treatment Policy. Consideration should be given to capacity and substitute decision makers as relevant. The WACHS MR30 series of consent forms are used to document consent.

Patient / family / carer need to receive education and written instructions. They are to be given the WACHS Palliative Care Subcutaneous Infusion Devices – Information for patients and carers brochure.

The patient must be advised that the infusion pump must not get wet.

If the patient is in the community additional education to be provided includes:
- instructions on subcutaneous insertion site observations for signs swelling, redness or leakage and who to report to if issues identified
- procedures around dislodgement of the subcutaneous cannula
- how to change the batteries in the pump
- advice on when and how to contact the local community palliative care nurse and/ or after-hours emergency contact.

2.2 Medication Prescribing and Administration

All prescribing and administration is to be in accordance with the WACHS Medication Prescribing and Administration Policy.

Prescription

The MR170H.1 WACHS Continuous Subcutaneous Infusion via T34™ Chart is used.
- The prescription is to include the medication(s), dose(s), diluent and duration of infusion.
- Any change to the medications dose, diluent or duration requires a new prescription to be written on a new chart.
- A new prescription to be written on a new chart after 7 days.
- Refer to education: How to prescribe: Continuous Subcutaneous Infusion via T34 Pump
- A maximum of three (3) medications to be combined in syringe for infusion.
- All combinations of medications must be checked for compatibility (refer to the Australian Injectable Drugs Handbook and/or Safer Care Victoria Syringe Driver Compatibility or pharmacist).
- Medications are to be diluted in the syringe to 18 mL with a suitable diluent.
- Duration of infusion is usually 24 hours. This can only be altered in consultation with the Palliative Care Regional Nurse Coordinator. The pump is to then be appropriately labelled to indicate an alteration in duration of infusion.
- All patients require appropriate doses of breakthrough/bolus doses (‘prn’) medication to be prescribed.

Medication Preparation:

- Infusions are to be prepared and connected using aseptic technique in accordance with WACHS Aseptic Technique Policy.
- Use the MR170H.3 WACHS Subcutaneous Infusion Medication Calculation Sheet for T34™ Pump to calculate and check doses.
- A completed "For Subcutaneous Use Only" medication label is to be attached to the syringe and a Subcutaneous Line label to the extension tubing (refer to the Australian Commission on Safety and Quality in Health Care (ACSQHC) National Standard for User-applied Labelling of Injectable Medicines, Fluids and Lines).
- All T34™ pumps are to be locked into the plastic, rigged lockbox when in use. Keys are to be kept with designated staff. The LOCK function on the pump is also to be activated.
- Most medications will not reach therapeutic efficacy for several hours. Consider administering a breakthrough/bolus dose at commencement of infusion to ensure timely symptom management.
- All infusion volumes are to be discarded in accordance with the WACHS Medication Handling and Accountability Policy and are to be documented on the MR170H.1 WACHS Continuous Subcutaneous Infusion via T34™Pump Chart.
- Where only one nurse (RN or medication competent EN) is available that nurse is permitted to check and administer Schedule 8 and Schedule 4 Restricted medications on their own in accordance with the WACHS Medication and Prescribing Policy.
- Recommended that when administering on their own the nurse checks calculations of medication doses/volumes with another nurse or specialist palliative care service nurse (by telephone/telehealth as necessary).

2.3 T34™ Procedural Information

Refer to the Subcutaneous Infusions in the Palliative Care Setting via T34™ Quick Guide for fitting the battery; battery test; initiating subcutaneous infusion procedure, including priming the line; procedure for daily management of continuous infusion; and cessation of the infusion.

ATTENTION

The Quick Guide is not left in patient's file as incorporates access codes to changing function of pump.

Maintenance

Care and cleaning of the pump:

- Clean infusion pump with detergent wipes. They are **not** to be cleaned with alcohol impregnated wipes.
- Follow the manufacturer's instructions on cleaning.
- All infusion pumps are to be returned to designated storage points, with battery removed, when not in use.
- A maintenance service of the T34™ pump is recommended every year, as per the manufacturer's guidelines. A maintenance reminder alert will display on the machine when the yearly service is due.

2.4 Practical considerations

- In determining placement of the Saf-T-Intima™ cannula consider patient mobility, skin condition (avoiding areas affected by ascites, oedema, tumour or lesions), comfort and ease of access to insertion site.
- Insert a separate cannula for all breakthrough/bolus doses of medication. Do not administer breakthrough/bolus medications into the catheter being used for the infusion of subcutaneous medications or fluids. Flush Saf-T-Intima™ with 0.5 mL sodium chloride 0.9% pre- and post- each PRN breakthrough dose of subcutaneous medication.
- When re-siting the cannula, ensure adequate site rotation. If it is necessary to re-site in the same area, the new site should be at least 5 cm from the previous insertion site.
- Remove infusion if the patient is having Magnetic Resonance Imaging (MRI).

2.5 Patient monitoring and observation

Observations are to be conducted every two (2) hours for inpatients (to be adjusted according to individual patient's health status) and at every home visit for community patients.

- The MR170H.1 WACHS Continuous Subcutaneous Infusion via T34™ Pump Chart outlines the observations to be monitored and recorded in relation to the pump. Observations include:
  - Pump monitoring (time remaining, volume infused, volume to be infused)
  - Catheter insertion site assessment (catheter dislodgement; leakage from site; blood in line; inflammation, significant oedema, hardness surrounding the site; pain or discomfort).
  - Re-insert a new Saf-T-Intima™ at a new site as clinically indicated.
- Assess and record Symptom Assessment Scale (SAS) scores (see Appendix A for form).
  - Omit if patient is asleep.
  - In addition, assess and record SAS scores for the symptom being managed (e.g. pain, dyspnoea, nausea) prior to administering breakthrough medication. Repeat SAS score 30 minutes post breakthrough administration to monitor effectiveness.
- Check solution for crystallisation, cloudiness, or precipitation – if present, discard in accordance with WACHS Medication Prescribing and Administration Policy.
- Monitor for adverse reactions. Inform the prescriber if adverse reaction present.
  - If reaction severe, infusion is to be discontinued immediately and medical advice sought.
  - Refer to the WACHS Medication Prescribing and Administration Policy.

3. Roles and Responsibilities

Nursing staff are responsible for the appropriate handling of medications and management of the pump as described in this procedure, and the completion of associated documentation.

Medical Staff and Nurse Practitioners (prescribers) are responsible for ensuring all medication orders are correctly prescribed and clearly documented on MR170H.1 WACHS Continuous Subcutaneous Infusion via T34™ Chart in accordance with WACHS Medication Prescribing and Administration Policy.

All staff are required to work within policies and guidelines to make sure that WACHS is a safe, equitable and positive place to be.

4. Monitoring and Evaluation

4.1 Monitoring

Managers of clinical areas, health sites and services are responsible for monitoring compliance with this procedure. Any variance from this procedure should be under the guidance of a Regional Palliative Care Nursing Co-ordinator and prompt a review of the procedure.

4.2 Evaluation

Evaluation of this procedure is to be carried out by the manager monitoring clinical incidents attributed to safe administration and prescribing of subcutaneous infusions in the palliative care setting. Overall monitoring of compliance with this document is to be carried out by the WACHS Safety and Quality unit in conjunction with the WACHS Medication Safety Committee. This is to be done in collaboration with the Regional Palliative Care Team.

5. Compliance

Failure to comply with this procedure may constitute a breach of the WA Health Code of Conduct (Code). The Code is part of the Integrity Policy Framework issued pursuant to Section 26 of the *Health Services Act 2016* and is binding on all WACHS staff which for this purpose includes trainees, students, volunteers, researchers, contractors for service (including all visiting health professionals and agency staff) and persons delivering training or education within WACHS.

WACHS staff are reminded that compliance with all policies and procedures is mandatory.

6. References

Fiona Stanley Fremantle Hospitals Group Policy and Procedure, Continuous Subcutaneous Infusions via NIKI T34™/ T34™/ BodyGuard™T syringe pump. April 2022.

PallConsult. Support for clinicians delivering end of life care. Example Policy and Procedures: Using the Niki T34, T34 or BodyGuard™T syringe pump for palliative patients. February 2022. [Accessed 8 September 2023]. Available at: https://www.caresearch.com.au/eolcareracf/tabid/6027/Default.aspx Definitions

7. Definitions

Term	Definition
Breakthrough symptoms	Symptoms that occur despite continuous background medication administration.
Breakthrough doses	Doses of short acting medications given *prn* (as needed) in response to a sudden onset of symptoms.

8. Document Summary

Coverage	WACHS-wide
Audience	Medical Officers, Nurses and Pharmacists who are involved in the use of subcutaneous infusions for palliative care
Records Management	Health Record Management Policy
Related Legislation	*Health Services Act 2016* (WA) *Medicines and Poisons Act 2014* (WA) Medicines and Poisons Regulations 2016 (WA) *National Health Act 1953* (Cth)
Related Mandatory Policies / Frameworks	• MP 0122/19 Clinical Incident Management Policy 2019 • MP 0175/22 Consent to Treatment Policy • MP 0131/20 High Risk Medication Policy • MP 0139/20 Medicines Handling Policy • Clinical Governance, Safety and Quality Policy Framework
Related WACHS Policy Documents	• Consent to Treatment Policy • High Risk Medications Procedure • Medication Handling and Accountability Policy • Medication Prescribing and Administration Policy • Aseptic Technique Policy • Infection Prevention and Control Policy • Recognising the Importance of Carers Policy • Working in Isolation – Minimum Safety and Security Standards for All Staff Policy
Other Related Documents	• Subcutaneous Infusions in the Palliative Care Setting via T34™ Quick Guide • WACHS Palliative Care Subcutaneous Infusion Devices – Information for patients and carers brochure
Related Forms	• MR170H.1 WACHS Continuous Subcutaneous Infusion via T34™ Chart • MR170H.3 WACHS Subcutaneous Infusion Medication Calculation Sheet for T34™ Pump • MR722.2 WACHS Palliative Care Outcome Measures
Related Training Packages	Ambulatory Infusion Pump: NIKI T34 Declaration (EQ03 EL1)
Aboriginal Health Impact Statement Declaration (ISD)	ISD Record ID: 2975
National Safety and Quality Health Service (NSQHS) Standards	3.08, 3.10, 3.11, 3.12, 3.17, 4.01, 4.03, 4.04, 4.10, 4.11, 4.13, 4.14, 4.15, 5.01 – 5.36
Aged Care Quality Standards	Nil

Chief Psychiatrist's Standards for Clinical Care	Nil

9. Document Control

Version	Published date	Current from	Summary of changes
2.00	30 August 2024	30 August 2024	• change of title • incorporation of new brands of pumps; reference to new prescription charts added; and EN medication scope of practice updated.
2.01	19 September 2024	30 August 2024	• minor amendment to competency assessment.
2.02	25 October 2024	30 August 2024	• rectified incorrect link to form.

10. Approval

Policy Owner	Executive Director Nursing and Midwifery
Co-approver	Executive Director Clinical Excellence
Contact	Coordinator of Nursing Palliative Care
Business Unit	WACHS Nursing and Midwifery
EDRMS #	ED-CO-21-143517

This document can be made available in alternative formats on request.

Appendix A: PCOC Symptom Assessment Scale Form

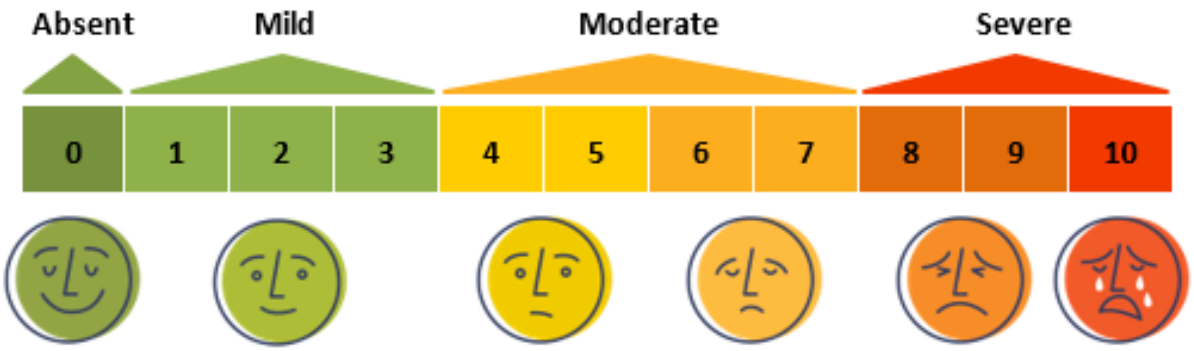
PCOC palliative care outcomes collaboration

(Please complete or affix Label here)

UPI:
Surname
First name:
DOB:

Symptom Assessment Scale

Please use this form to tell us about the symptoms that bother, worry or distress you. This information will help us to meet your needs.



1. Write the day or date in the first row.
2. Use the scale above to choose a number between 0 and 10 that shows how bothered, worried or distressed you are.
3. You can add other symptoms in the blank space at the bottom of the list.

Day or date									
Difficulty sleeping									
Appetite problems									
Nausea									
Bowel problems									
Breathing problems									
Fatigue									
Pain									
Other									