

**Example Policy and Procedures:**

***Using the CADDTM -SOLIS and the CADDTM -SOLIS VIP infusion pumps for palliative patients***



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**Acknowledgements**

This example Policy and Procedures document was developed as part of *PallConsult,* a service designed to boost the ability of local healthcare teams to deliver patient-centred palliative care across Queensland.

**Suggested reference**

Brisbane South Palliative Care Collaborative. Example Policy and Procedures: *Using* *the CADDTM-SOLIS or the CADDTM-SOLIS VIP infusion pump for palliative patients*. Brisbane: Brisbane South Palliative Care Collaborative; 2023.

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**Disclaimer**

TheExample Policy and Procedures*: Using the* *CADDTM -SOLIS and the CADDTM -SOLIS VIP infusion pumps for palliative patients* is intended as a guide for health care organisations to help them develop or review their own policy and procedures.

While Brisbane South Palliative Care Collaborative has exercised due care in ensuring the accuracy of the material (at the date of publication) contained in the example policy and procedures document, the document is only a general guide to developing appropriate policy and procedures.

Brisbane South Palliative Care Collaborative does not accept any liability for any injury, loss, or damage incurred by use of, or reliance upon, the information provided within this example policy and procedures document.

**IMPORTANT INFORMATION**

This document is relevant for use with the CADDTM-SOLIS or the CADDTM-SOLIS VIP infusion pump as the operation of these infusion pumps is very similar.

For the purposes of this document, when CADDTM pump is written in the text, the information is relevant for the CADDTM-SOLIS or the CADDTM-SOLIS VIP infusion pump.

**Table of Contents**

[Overview 4](#_Toc44685394)

[Purpose of this document 4](#_Toc44685395)

[How to use this document 4](#_Toc44685396)

[How was this document developed? 4](#_Toc44685397)

[PART ONE: POLICY 6](#_Toc44685398)

[Purpose 6](#_Toc44685399)

[Policy statement 6](#_Toc44685400)

[Guiding principles 6](#_Toc44685401)

[Organisational principles 7](#_Toc44685402)

[Health professional principles 7](#_Toc44685403)

[Patient and family education principles 7](#_Toc44685404)

[Relevant resources 7](#_Toc44685405)

[Terms/definitions 8](#_Toc44685406)

[PART TWO: PROCEDURES 9](#_Toc44685407)

[Organisational instructions 9](#_Toc44685408)

[Prescription Guidelines 9](#_Toc44685409)

[Medicine administration management 9](#_Toc44685410)

[Equipment supply 10](#_Toc44685411)

[Training for health professionals 11](#_Toc44685412)

[Components of the CADDTM -SOLIS or the CADDTM -SOLIS VIP infusion pump learning package: 12](#_Toc44685413)

[Use of the CADDTM infusion pump 12](#_Toc44685414)

[Suitable patients 12](#_Toc44685415)

[Site selection for the subcutaneous cannula: 12](#_Toc44685416)

[Setting up the CADDTM infusion pump 14](#_Toc44685417)

[Symptom assessment 20](#_Toc44685418)

[Symptom assessment scores 20](#_Toc44685419)

CADD[TM infusion pump infusion checklist 20](#_Toc44685420)

[Precipitation 20](#_Toc44685421)

[Subcutaneous site check 20](#_Toc44685422)

[Patient/family education related to the CADDTM infusion pump 21](#_Toc44685423)

[Patient/family education 21](#_Toc44685424)

[At home: 21](#_Toc44685425)

[Quality improvement 21](#_Toc44685426)

[Servicing and maintenance 22](#_Toc44685427)

[Pump storage 22](#_Toc44685428)

[References 23](#_Toc44685429)

# Overview

## Purpose of this document

The purpose of this document is to provide an example policy and procedures concerning the use of the CADDTM pump for palliative patients.

Health care services can use this document to develop, or review, their own policy and procedures for use of the CADDTM pump.

The document contributes to the delivery of high-quality palliative care by enabling health professionals to competently use CADDTM pump infusions to help manage pain and other distressing symptoms experienced by palliative patients.

This document is one component of a suite of resources developed as part of the Queensland Health PallConsult service. These resources are available at [www.pallconsult.com.au](https://metrosouth.health.qld.gov.au/pallconsult). PallConsult aims to boost the ability of local health care teams to deliver patient-centred palliative care by providing resources and support to health professionals who care for palliative patients.

## How to use this document

This document is a resource for health care services to inform the development of policy and procedures for the use of CADDTM pump infusions within an individual service, according to the jurisdictional requirements of that service. Services may adapt the content of this document to meet individual service needs. When adapting the content of this document please insert the correct name for the type of infusion pump (CADDTM-SOLIS or the CADDTM-SOLIS VIP) your organisation uses i.e. you may have both CADDTM-SOLIS and CADDTM-SOLIS VIP infusion pumps or you may only use the CADDTM-SOLIS infusion pump.

## How was this document developed?

The document was developed using best-practice resources regarding palliative care symptom management. Resources included:

* A practical handbook for health professionals: *How to safely set-up, commence and provide necessary documentation for the CADDTM-SOLIS or CADDTM-SOLIS VIP nfusion pump*add hyperlink when available
* Centre for Palliative Care Research and Education 2021. *Guidelines for Subcutaneous Infusion Device Management in Palliative Care.* Third Edition, Queensland Health, Herston QLD available at [Guidelines for Subcutaneous Infusion in Palliative Care (health.qld.gov.au)](https://www.health.qld.gov.au/__data/assets/pdf_file/0014/1101623/SC-Guidelines-Palliative-care-R.pdf)
* [National Palliative Care Standards. 5th ed. (2018)](http://palliativecare.org.au/wp-content/uploads/dlm_uploads/2018/02/PalliativeCare-National-Standards-2018_web-3.pdf) (Palliative Care Australia)
* [Palliative Care](https://www.qld.gov.au/health/support/end-of-life/care/palliative) (Queensland Government)
* [Professional Standards for Practice](http://www.nursingmidwiferyboard.gov.au/Codes-Guidelines-Statements/Professional-standards.aspx) (Nursing and Midwifery Board of Australia)
* [Safer Care Victoria. February 2021. Syringe driver compatibility guidance document](file:///\\PA-CL3_SC_DATA7\DATA7\PallConsult%20Project\Resources\NIKI%20T34\Policy%20and%20procedure\.%20Available%20from:%20https:\www.bettersafercare.vic.gov.au\sites\default\files\2021-02\GUIDANCE_Syringe%20%20driver%20compatability%20FINAL_0.pdf%20(Accessed%2010%20June%202021).
* [State-wide strategy for end-of-life care (2015)](https://www.health.qld.gov.au/__data/assets/pdf_file/0022/441616/end-of-life-strategy-full.pdf) (Queensland Health)
* [Syringe driver Online Learning Package (2015)](https://www.health.qld.gov.au/cpcre/sdlearning-old) (Centre for Palliative Care Research and Education [CPCRE])
* CADDTM-SOLIS product information available at [CADDTM-SOLIS Infusion system (smiths-medical.com)](https://www.icumed.com/products/infusion-therapy/iv-systems/cadd-ambulatory-pumps/cadd-solis)
* CADDTM-SOLIS VIP product information available at [CADD](https://www.icumed.com/products/infusion-therapy/iv-systems/cadd-ambulatory-pumps/cadd-solis-vip)[TM](https://www.icumed.com/products/infusion-therapy/iv-systems/cadd-ambulatory-pumps/cadd-solis-vip)[-SOLIS VIP infusion system (smiths-medical.com)](https://www.icumed.com/products/infusion-therapy/iv-systems/cadd-ambulatory-pumps/cadd-solis-vip)
* [The Syringe Driver: Continuous subcutaneous infusions in palliative care. 4th ed. 2016. (Dickman A, Schneider J. Oxford University Press)](https://oxfordmedicine.com/view/10.1093/med/9780198733720.001.0001/med-9780198733720)
* [Therapeutic Guidelines: Palliative Care, Version 4 (2016)](https://www.nps.org.au/australian-prescriber/articles/therapeutic-guidelines-palliative-care-version-4)

# PART ONE: POLICY

[Name of service provider] is committed to providing quality palliative care, including supporting the delivery of best-practice symptom management using the CADDTM infusion pump for the relief of distressing symptoms in palliative care patients.

## Purpose

This policy facilitates the safe and effective use of the CADDTM infusion pump for the palliative management of patients’ symptoms. This policy has been written to provide health professionals with best-practice guidance on the safe use of CADDTM infusion pumps.

## Policy statement

The aim of palliative care is to support palliative patients to live and die well in the setting of their choice. This support improves the patient’s quality of life through the prevention and relief of suffering, by impeccable assessment and treatment of pain and other problems.

In the terminal phase of a palliative patient’s illness, subcutaneous administration of medicine is common practice to manage distressing symptoms as other routes are often inappropriate or ineffective. Subcutaneous infusions, using infusion pumps, have become an integral part of care to ensure the comfort of many palliative patients. The CADDTM infusion pump delivers medicines subcutaneously at a controlled rate over a pre-programmed period of twenty-four hours. Management of subcutaneous infusions using CADDTM infusion pumps must ensure patient safety and comfort and accord with best practice medicine guidelines.

This policy aligns with the Queensland Health *PallConsult* service that specifically aims to enhance the ability of local health care teams to deliver patient-centred palliative care, especially in rural and remote parts of Queensland. *PallConsult* includes the development of a suite of resources to educate clinicians about aspects of end-of-life care. *PallConsult* supports people in the last year of their life to access the right care, at the right time and in the setting of their choice.

## Guiding principles

* People have a right to be supported, cared for and to die in the place of their choice
* To ensure a good quality of life and death, people may require proactive pharmacological management of distressing symptoms by the most effective route possible
* Subcutaneous delivery of medicine is a safe and effective way to administer medicines for the management of palliative symptoms
* The use of the CADDTM infusion pump to administer medicines must be openly discussed with the person (wherever possible) and the family in the context of death and dying, respecting the person’s specific spiritual, religious and cultural needs
* Medicines must be prescribed, obtained, charted and administered according to the [National Medicines Policy | Australian Government Department of Health and Aged Care](https://www.health.gov.au/resources/publications/national-medicines-policy) and in accordance with regional jurisdictional requirements and local facility policy and procedures
* All Australians receiving palliative care must be able to access necessary medicines, including opioids, to manage and prevent suffering from uncontrolled symptoms
* To ensure a consistent baseline competency in pain and symptom management for palliative patients, health professionals should engage in palliative care and CADDTM infusion pump education and training.

### Organisational principles

[Name of service provider]:

* is responsible for providing a workplace which has clear, best-practice procedures concerning medicine management, including guidance regarding anticipatory prescribing for emergent palliative care symptoms
* will supply the workplace with the appropriate resources to safely and competently use the CADDTM infusion pump
* will provide guidance for best-practice assessment of symptoms and documentation of actions when using the CADDTM infusion pump
* will provide support for the delivery of patient and family education concerning CADDTM pump infusions
* will implement quality activities that allow for the review of practices when using CADDTM pump infusions
* will ensure staff are aware of, and adhere to, the policy and procedures outlined in this document.

### Health professional principles

It is the health professional’s responsibility to:

* be familiar with the policy and procedures outlined in this document prior to administering medicines using a CADDTM infusion pump
* recognise any gaps in their competency with CADDTM pump infusions, and complete any training required.

### Patient and family education principles

* Patient and family education promotes safety and acceptance of the infusion pump as a means to providing improved symptom control.
* Careful explanation and education about CADDTM pump infusions and associated advantages and possible disadvantages is required for patients with infusion pumps and their families

## Relevant resources

1. The *PallConsult* CADDTM infusion pump learning package, that includes:

|  |  |  |
| --- | --- | --- |
| **Target Audience** | **Resource** | **Use of resource** |
| Organisations | **Example Policy and Procedures: *Using the CADDTM-SOLIS or CADDTM-SOLIS VIP infusion pumps for palliative patients*** | The purpose of this document is to provide an example policy and procedures about using the CADDTM-SOLIS or CADDTM-SOLIS VIP infusion pumps for palliative patients. Health care services can use this document to develop or review their own policy and procedures. |
| Health professionals | **Online education module** | The online education module aims to educate health professionals about how to safely use the CADDTM-SOLIS or CADDTM-SOLIS VIP infusion pumps. |
| Health professionals | **A practical handbook for health professionals: *How to safely set-up, commence and provide necessary documentation for the CADDTM -SOLIS or CADDTM-SOLIS VIP infusion pumps*** | This handbook contains the essential information the clinician needs to know to safely set up, commence and provide necessary documentation for the CADDTM-SOLIS and CADDTM-SOLIS VIP infusion pumps and infusions. |
| Health professionals | [***Setting up and commencing a CADDTM-SOLIS or CADDTM-SOLIS VIP pump infusion:* A step-by-step guide**](https://www.caresearch.com.au/EOLCareRACF/Portals/10/Documents/Step-by-step-NIKI-BodyGuard-pump-update-FINAL.pdf) | This illustrated guide explains how to set up and start a CADDTM-SOLIS or CADDTM-SOLIS VIP infusion pump and infusion using a step-by-step approach. |
| Health professionals | **Short training videos** | Two videos illustrate some of the essential elements for ensuring safe delivery of CADDTM-SOLIS or CADDTM-SOLIS VIP pump infusions:   * Video 1 - Getting to know the CADDTM-SOLIS and CADDTM-SOLIS VIP infusion pumps. * Video 2 - Starting and subsequent day set up of the CADDTM-SOLIS and CADDTM-SOLIS VIP infusion pumps. |
| Health professionals | **A competency checklist: *CADDTM -SOLIS and CADDTM-SOLIS VIP infusion pumps*** | This checklist describes the requirements for ongoing demonstration of competency for safe and effective use of CADDTM-SOLIS or CADDTM-SOLIS VIP infusion pumps. |
| Families | **Information sheet for families** | This information sheet provides information for families about the CADDTM-SOLIS and CADDTM-SOLIS VIP infusion pumps. It includes what an infusion pump is; how it works; why it is used and special considerations if a person has one at home. |

1. *[caring@home](https://www.caringathomeproject.com.au/)* [Project](https://www.caringathomeproject.com.au/)
2. [*PallConsult*](https://metrosouth.health.qld.gov.au/pallconsult)
3. [Safer Care Victoria. February 2021. Syringe driver compatibility guidance document](file:///\\PA-CL3_SC_DATA7\DATA7\PallConsult%20Project\Resources\NIKI%20T34\Policy%20and%20procedure\.%20Available%20from:%20https:\www.bettersafercare.vic.gov.au\sites\default\files\2021-02\GUIDANCE_Syringe%20%20driver%20compatability%20FINAL_0.pdf%20(Accessed%2010%20June%202021).
4. [National Palliative Care Standards 5th ed, 2018](https://palliativecare.org.au/standards)
5. palliMEDS (download for free from [Google Play](https://play.google.com/store/apps/details?id=au.com.caringathomeproject.www.pallimeds) or from [App Store](https://apps.apple.com/au/app/pallimeds/id1412581448))
6. Therapeutic Guidelines: Palliative Care - Subcutaneous drug administration in palliative care.  
   Online (subscription required): [eTG complete, 2016. Appendix 10.1.](https://tgldcdp.tg.org.au/viewTopic?topicfile=subcutaneous-drug-administration-in-palliative-care#MPS_d1e157)   
   Print copy: Version 4, 2016. Appendix 1, page 387.

## **Terms/definitions**

|  |  |
| --- | --- |
| **Palliative care** | Care provided for a person of any age who has a life-limiting illness, with little or no prospect of cure, and for whom the primary treatment goal is quality of life. |
| **CADDTM-SOLIS or CADDTM-SOLIS VIP infusion pump** | The CADDTM pump is a portable battery-operated device. It holds a cassette containing the medicine as prescribed by a doctor or nurse practitioner. The infusion pump is used to give medicines subcutaneously, over a 24-hour period and will deliver medicine at a rate set by the health professional.  The two versions of the infusion pump work in the same way. |
| **Registered nurse** | A registered nurse is a person with appropriate educational preparation and competence for practice, who is registered with the Australian Health Practitioner Regulation Agency (AHPRA) to practise nursing in Australia. |
| **Subcutaneous medicine** | Subcutaneous medicine is medicine given via a small plastic tube placed under the person’s skin. |
| **Subcutaneous cannula** | A subcutaneous cannula is a thin plastic tube that is inserted under the person’s skin by a health care professional. |
| **Prescriber** | A health professional authorised to write prescriptions and medicine orders and give directions (verbal or written) about administration and supply of prescription-only medicines. |

# PART TWO: PROCEDURES

## Organisational instructions

All medicines given via an infusion pump should be correctly prescribed and clearly documented in an order written by a Doctor or a Nurse Practitioner in Palliative Care.

Examples of order forms:

1. Hospitals

*Form* – [Subcutaneous Medication Infusion Device Chart](http://paweb.sth.health.qld.gov.au/sqrm/hims/informatics/forms/SW176.pdf)

1. Community and Residential Aged Care Facilities (RACFs)

*Form* – [Community Subcutaneous Medication Infusion Order (over 24 hours)](https://www.caresearch.com.au/Portals/10/Documents/Community-Subcutaneous-Medication-Infusion-Order-over-24-hours.pdf)

The CADDTM pump should only be operated by, or under the supervision of, appropriately trained personnel and in accordance with each local site Work Instructions and Procedures. Prior to setting up or using an infusion pump, staff must familiarise themselves with the manufacturer’s instruction booklet and locally developed clinical guidelines.

### Prescription Guidelines

All prescriptions completed by a Doctor or Nurse Practitioner must comply with the [*Medicines and Poisons Act 2019*](https://www.legislation.qld.gov.au/view/html/inforce/current/act-2019-026?query=((Repealed%3DN+AND+PrintType%3D%22act.reprint%22+AND+PitValid%3D%40pointInTime(20200702000000))+OR+(Repealed%3DN+AND+PrintType%3D%22reprint%22+AND+PitValid%3D%40pointInTime(20200702000000)))+AND+Content%3D(%22drugs%22+AND+%22and%22+AND+%22poisons%22)&q-collection%5B%5D=inforceActs&q-collection%5B%5D=inforceSLs&q-documentTitle=&q-prefixCcl=&q-searchfor=drugs+and+poisons&q-searchin=Content&q-searchusing=allwords&q-year=&q-no=&q-point-in-time=02%2F07%2F2020&q-searchform=basic).

Often when commencing a CADDTM pump, oral or transdermal medicine doses need to be converted to equivalent subcutaneous doses of the same or a different medicine.

For opioid conversion information see:

[palliMEDS](https://www.caringathomeproject.com.au/tabid/5159/Default.aspx) - The palliMEDS app, developed by *caring@home*, familiarises primary care prescribers with eight palliative care medicines that have been endorsed by the Australian & New Zealand Society of Palliative Medicine (ANZSPM) for management of terminal phase symptoms in community-based palliative care patients. These medicines can be used to manage common emergent symptoms in home-based palliative care patients in the last few days of life when people often have problems swallowing.

### Medicine administration management

When managing a CADDTM pump infusion the primary responsibilities of the registered nurse are to:

* Recognise limitations in their knowledge and competence and must decline duties they do not feel able to perform in a skilled and safe manner in accordance with the Nursing and Midwifery Board of Australia’s *Registered Nurse Standards for Practice - effective 1 June 2016*
* Regularly assess patient comfort levels and symptom management requirements
* Administer medicine, assist with administration or support carers to give medicines. They must exercise professional judgement, apply knowledge and recognise their professional accountability according to the organisation’s mandatory training requirements and the requirements of the Nursing and Midwifery Board of Australia’s *Registered Nurse Standards for Practice - effective 1 June 2016*
* Be aware of the indications for infusion pump use
* Have a knowledge of the purpose and action of medicines administered via a CADDTM pump
* Recognise adverse effects of medicines used in a CADDTM pump
* Educate the patient/family (if appropriate) on the use of and function of the CADDTM pump
* Safely set up a CADDTM pump, ensuring that the cassette is clearly labelled (listing all medicines and diluent), signed and dated
* Assess subcutaneous sites and pump function at least four-hourly in inpatient units and daily in the community/RACF and change according to policy
* Document commencement, changes of infusions, and any site or extension set changes in the patient notes and care plan/local documentation.
* Ensure the appropriate battery for the CADDTM pump type has been selected, it has sufficient charge and is fitted correctly.

### Equipment supply

Appropriate equipment required to safely and effectively set up and maintain a CADDTM pump infusion is essential to the delivery of timely, quality palliative care. This equipment includes:

* CADDTM pump - manually programmed to deliver infusions over a 24-hour period for palliative care patients
* CADDTM Medication cassette - a 50 mL or 100 mL cassette can be used
* Battery –-Four 1.5v (non-rechargeable) alkaline batteries or a rechargeable battery pack can be used

Using the incorrect battery can cause a number of issues including end of battery messages during pre-loading, volume test fails, pressure test/calibration issues and reduced amount of infusions from the battery

* CADDTM Extension set - Luer Lock extension sets should be used to prevent accidental disconnection of the extension set
* ‘Medicines Added’ label - The following details are required on the label:
  + Patient name
  + ID number (record number)
  + DOB
  + Medicine/s added
  + Units/mL of medicine/s added
  + Diluent added
  + Date
  + Time
  + Initials of the nurse who prepared the cassette reservoir
  + Initials of the nurse who checked the cassette reservoir

Ensure the label is flat when attached to the cassette, so it does not interfere with the keypad.

* Holster or lockbox – the pump and labelled cassette can be accommodated in a holster or lockbox when in use
* Stock order – maintaining a stock of the same brand of equipment is important to minimise variations when setting up CADDTM pump infusions

### Training for health professionals

Sustainable staff training processes are implemented to ensure all registered nurses have an understanding and knowledge of the *CADDTM online education module.* This module supports health professionals to safely and effectively use the *CADDTM* pump.

An educational calendar, highlighting when each staff member needs to review the education module and the expected date of completion for their competency check, should be established.

### Components of the CADDTM infusion pump online education module:

|  |  |
| --- | --- |
| 1 | Indications for use of an infusion pump |
| 2 | Features of the CADDTM-SOLIS and CADDTM-SOLIS VIP infusion pumps |
| 3 | Principles guiding the management of the CADDTM-SOLIS and CADDTM-SOLIS VIP infusion pumps |
| 4 | Equipment required to commence a CADDTM-SOLIS or CADDTM-SOLIS VIP infusion pump |
| 5 | Starting a CADDTM-SOLIS and CADDTM-SOLIS VIP infusion pump |
| 6 | Documentation and monitoring of a CADDTM-SOLIS and CADDTM-SOLIS VIP infusion pump |
| 7 | Alerts and alarms |
| 8 | Cleaning, storage and maintenance of the CADDTM-SOLIS and CADDTM-SOLIS VIP infusion pumps |
| 9 | Educating the patient and family about the use of a CADDTM infusion pump |

## Use of the CADDTM-SOLIS or CADDTM-SOLIS VIP infusion pump

### Suitable patients

Health professionals should proactively identify when a person receiving palliative care may require a CADDTM pump infusion to deliver medicine/s.

Some indications include:

* Persistent nausea and vomiting
* Dysphagia
* Gastrointestinal obstruction
* Poor absorption of oral medicine
* Weakness and/or alteration in a patient’s level of consciousness; or
* Any other reason where the administration of oral medicines is inappropriate or likely to be ineffective.

Health professionals should:

* Provide an opportunity for the patient and family to express any fears and anxieties that they may have around the use of an infusion pump and medicines to be administered.

### Site selection for the subcutaneous cannula:

* Inappropriate site selection can lead to poor medicine absorption and ineffective therapeutic effect
* Site selection should consider the patient’s choice and comfort, the patient's mobility, skin condition and ease of access
* Site selection location must be clearly documented
* The site should be assessed regularly
* Sites to avoid:
* Any area that restricts body and limb movement (i.e. skin folds, joints)
* Breast tissue
* Areas of obvious bruising, swelling, infection, redness, inflammation, bony prominences, tumour site, ascites, scarred areas, lymphoedema, oedema and/ or hardened, broken skin
* Irradiated skin areas
* Areas where there is little subcutaneous tissue (i.e. thin patient outer arms/ sub clavicular area).
* Additional considerations:
* For confused patients, consider a subcutaneous site position that is out of the patient's line of sight and reach (i.e. scapula, upper back)
* If a patient is being turned at regular intervals avoid the anterior upper arm
* When re-siting a subcutaneous cannula, ensure adequate site rotation. When it is necessary to re-site in the same area, the new site should be at least 5 cm away from the old site
* If the patient requires subcutaneous breakthrough medicines in addition to the subcutaneous infusion, use a separate subcutaneous cannula.

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## Symptom assessment

Meticulous symptom assessment and management is required when a person is receiving a CADDTM pump infusion

### Symptom assessment scores

* Assess the person’s symptom(s) level(s) using a numerical rating scale with scores of 0 to 10 (0 = no symptom distress at all and 10 = worst imaginable symptom distress level)
* Document the score before and about thirty minutes after any intervention delivered to provide symptom relief such as a breakthrough medicine
* Provide PRN medicine as ordered and required
* Follow up with the prescriber if symptoms are not well controlled.

## CADDTM pump infusion checklist

* Ensure the battery has sufficient charge
* Check the green indicator light on the CADDTM pump is on when the pump is infusing
* Check the volume remaining in the medication cassette reservoir and that the required volume has been delivered
* Check that the infusion pump is running to time
* Check extension set connections are secure
* Ensure there are no leakages
* Check extension set lines are kink free
* Check solution in the medication cassette is clear and there is no precipitation in the cassette
* Document checks and any remedial actions taken.

## Precipitation

If a combination of medicines become cloudy, precipitates or crystallises in the cassette reservoir or extension set:

* Immediately stop administration of the medicines
* Contact the medical officer
* Re-site subcutaneous cannula
* Discard the cassette and extension set
* Prepare a new cassette and extension set
* Restart the infusion pump
* Document actions in the patient’s medical record and ensure that the incident is recorded in the organisation’s Incident Information Management System

## Subcutaneous site check

Site inspection (at least four-hourly in inpatient units and daily in the community/RACFs) is integral to early identification and prevention of site-related complications and should be performed as part of routine care. Any site problems can potentially cause patient discomfort. They can also interfere with medicine absorption and compromise effective symptom control.

When inspecting the site, check for:

* Tenderness or hardness at the site
* Leakage at the insertion site
* Swelling
* Erythema (redness)
* Presence of blood in the tubing
* Displacement of the cannula.

## Patient/family education related to the CADDTM infusion pump

Patients and family require clear and simple education about the reasons the CADDTM infusion pump is being considered for symptom management. Time should be provided to discuss a patient or family members’ fears about the use of a CADDTM infusion pump infusion.

### Patient/family education

Education should include:

* Infusion pump use including:
* An explanation about what the CADDTM infusion pump does, and how it works
* Safety aspects of the CADDTM infusion pump
* Ways to help manage the CADDTM infusion pump at home
* Subcutaneous cannula site checks
* Trouble shooting tips.
* Providing written information to reinforce verbal education provided

### At home:

Nursing staff must carefully assess the patient/ family for their willingness and ability to manage subcutaneous infusions in the home environment.

The patient and family should be given verbal and practical guidance about living with a CADDTM infusion pump. Health professionals should be mindful that information and education given when the patient is unwell, and the family/carer is anxious may need to be repeated and reinforced. Well-timed information can prepare the family for the role they are taking on, minimising potential adverse consequences.

**A 24-hour support number must be provided to families caring for patients with infusion pumps.**

See: Information sheet for families (about the CADDTM infusion pump) (available at [PallConsult](https://metrosouth.health.qld.gov.au/pallconsult)).

## Quality improvement

As part of the continuous quality improvement process of a palliative care organisation, 12-monthly audits should be undertaken to monitor staff completion rates of the CADDTM infusion pump competencies. This includes both the online education module *Using the CADDTM infusion pump for palliative symptom management* and the Competency Checklist using the PallConsult CADDTM infusion pump learning package resources.

A routine audit of the organisation’s incident and error register is a systematic way to review any potential issues with staff knowledge of policy and procedures of the CADDTM infusion pump.

Audits need to be directly relevant to the implementation of the PallConsult: CADDTM infusion pump resources.

Evaluation and monitoring should be simple, inexpensive and feasible. The processes should use routinely collected data and data linkage where possible.

## Servicing and maintenance

* Follow the manufacturer’s instructions for the cleaning of the CADDTM infusion pump after each use
* Always turn the pump off and remove the battery before cleaning
* Dampen a soft, lint-free cloth with warm water and mild detergent, disinfectant or 10% bleach solution. Apply to the exterior surface of the pump
* Check battery compartment for fluid or debris; this could damage the battery contacts and compromise the pump. Do not allow fluid or debris into the battery compartment
* Do not store the pump for prolonged periods with batteries installed. Battery leakage may damage the pump.
* The CADDTM infusion pump must be calibrated/serviced annually
* The CADDTM infusion pump is NOT waterproof. The CADDTM infusion pump should not be immersed in water or cleaning solution. Measures need to be taken to protect the pump from water splash when the person is showering or bathing, such as wrapping the pump in a plastic bag
* If the pump becomes wet, it should be removed from service immediately and sent for maintenance assessment
* Do not expose pump directly to ultrasound, ionising radiation or magnetic fields produced by MRI. Pump should be removed from patient at these times to avoid permanent damage to pump.
* **Allow to dry completely before use.**

**CAUTION**

* **DO NOT soak or immerse any part of the CADDTM pump in water or any other solution.**
* **DO NOT clean the pump with chemicals such as xylene, acetone or similar solvents.**

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## Pump storage

Store in a clean, dry place at room temperature. If the infusion pump is stored for an extended period, it should be cleaned and the battery removed.

# References

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* CADDTM-SOLIS VIP product information available at [CADD](https://www.icumed.com/products/infusion-therapy/iv-systems/cadd-ambulatory-pumps/cadd-solis-vip)[TM](https://www.icumed.com/products/infusion-therapy/iv-systems/cadd-ambulatory-pumps/cadd-solis-vip)[-SOLIS VIP Infusion Pump (smiths-medical.com)](https://www.icumed.com/products/infusion-therapy/iv-systems/cadd-ambulatory-pumps/cadd-solis-vip)

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