

Sodium chloride 0.9% intravenous (IV) flush**SESLHDPR/470****POLICY STATEMENT**

The Registered Nurse (RN) / Registered Midwife (RM) is authorised to instigate nurse/midwife-initiated medication without an authorised prescriber's order under the specific circumstances set out in the **INDICATIONS** section and provided there are no contraindications present. *Enrolled nurses may administer under the supervision of a registered nurse/midwife. The supervising registered nurse must confirm verbally with the enrolled nurse prior to the administration that the medication is appropriate and safe for the patient.* **NOTE:** *Enrolled nurses must not administer fluids/ medications through any central VAD or Implanted Ports*

It is important for nursing and midwifery staff to remain aware that:

- Minor ailments may be symptoms of other more serious diseases or may be adverse reactions to medication already prescribed
- Nurse-initiated medication may interact with the patient's prescribed medication
- The maximum daily recommended dose of the medication must not be exceeded:¹

The administering nurse / midwife must record the administration on an approved paper or electronic medication chart, clearly indicating that the medicine was nurse initiated.

If the patient continues to require the medication (i.e., more than two doses in 24 hours) then a medical officer (MO) must be consulted and a regular or PRN order obtained.

A change in the patient's condition such as newly occurring or increasing severity of symptoms must be reported to the MO and investigated.

INDICATIONS

Venous access device (VAD) flushes include the following situations:

- After correct patency of VAD has been confirmed
- Clinicians must flush catheters immediately: before and after each fluid infusion or injection, prior to and after drawing blood and post insertion of line to check patency
- On completion of a blood product transfusion (to clear the line and ensure the patient receives the entire product)
- For inpatients,
 - PIVC at least twice per day if not otherwise used (note: consider if the VAD needs to remain insitu)
 - Unused Central VAD lumens should be routinely flushed and locked every 96 hours using positive pressure technique in conjunction with the changing of the bung/bungs
 - Implanted Venous Ports (IVP) not being accessed must be flushed and locked ever 4 weeks

For further details refer to site specific VAD CBR (see reference list).

CONTRAINDICATIONS

- When VAD patency is lost and there is no probability of patency salvage, notify medical team and contact relevant CNC/ Nurse educator.
- Patient presents with signs and symptoms of probable VAD-associated sepsis, Refer to [PD2019_040](#) and contact CNC when identifying CVAD line sepsis.

Sodium chloride 0.9% intravenous (IV) flush

SESLHDPR/470

- Infiltration or extravasation.

PRECAUTIONS

Any patient on fluid restriction or where sodium retention is likely.

HISTORY/ASSESSMENT

Perform hand hygiene and don non-sterile gloves before touching patient.

Assess the VAD insertion site for patency, erythema, tenderness, pain, swelling, dressing integrity and position.

'Scrub the hub' with an 2% chlorhexidine gluconate in 70% Isopropyl alcohol wipe vigorously for at least 15-20 seconds. Allow to air dry naturally without contaminating the hub.

If an infusion is in progress, stop the infusion.

For further details refer to site specific VAD CBR (see reference list).

PROTOCOL/ADMINISTRATION GUIDELINES

Explain the procedure to the patient and gain consent.

Caution: CHECK for allergies and/or contraindications				
Type of VAD	Drug	Dose	Route	Frequency
PIVC	Sodium Chloride 0.9% for injection (ampoule or pre-filled syringe)	5 to 10mL	IV	Once
Midline	Sodium Chloride 0.9% for injection (ampoule or pre-filled syringe)	10 – 20mL	IV	Once per lumen
CVAD (eg: PICC, Port, CVC)	Sodium Chloride 0.9% for injection (ampoule or pre-filled syringe)	10 – 20mL	IV	Once per lumen

For further details refer to site specific VAD CBR (see reference list).

POTENTIAL ADVERSE EFFECTS/INTERACTIONS associated with VAD

Phlebitis – pain, tenderness, erythema, warmth, swelling, induration, purulence or palpable venous cord. Inspect VAD insertion site frequently for signs.

Infiltration and extravasation (inadvertent administration of solution or medication into surrounding tissue) blanching, burning or discomfort, cool skin, swelling at or above site, blistering or skin sloughing. Inspect VAD insertion site frequently for signs.

Possible local infection or line related sepsis – erythema, oedema, pain or tenderness; increased body temperature; exudate or discharge from the catheter site; fluid in the subcutaneous pocket of a totally implanted VAD devices; induration at the exist site or over the pocket. Perform skin assessment.

Occlusion – a normally functioning VAD should flush easily, and blood returning from it should be free-flowing.

For further details on management refer to site specific VAD CBR (see reference list).

Sodium chloride 0.9% intravenous (IV) flush**SESLHDPR/470****DOCUMENTATION**

A record of the administration must be made on the approved paper or electronic medication chart noting that the medication was nurse initiated.

A further record of the medication administered including indication, dose and effect must be included in the patient's health care record.

PRACTICE POINTS

- Post-intravenous injection cannula flush will be distributed and act more quickly with a larger volume
- Inappropriate use of sodium chloride may cause fluid or solute overload resulting in electrolyte abnormalities, over-hydration, congestive conditions or pulmonary oedema

REFERENCES/FURTHER READING

1. NSW Health [PD2022_032 Medication Handling](#)
2. NSW Health [PD2019_040 Intravascular Access Devices \(IVAD\) – Infection Prevention & Control](#)
3. Agency for Clinical Innovation. [Central venous access devices \(CVAD\) – Clinical practice guide](#). October 2021
4. ACSQHC. [Management of Peripheral Intravenous Catheters Clinical Care Standard](#). 2021.
5. [SESLHDPR/577 - Peripheral Intravenous Cannulation \(PIVC\) Insertion, Care and Removal \(Adults\)](#)
6. [SGH-TSH CLIN058 - Central Venous Access Devices \(CVAD\) in Adult Patients – Post Insertion Management of](#)
7. [SGH-TSH CLIN038 - Peripheral Intravenous Cannulation \(PIVC\) – Accreditation Process](#)
8. [SGH-TSH WPI078 - Central Venous Access Device \(CVAD\) – Flushing and Positive Pressure Lock](#)
9. [SGH CLIN537 Clinical Business Rule Midline Catheters – Post Insertion Care and Management of](#)
10. Gorski L, Hadaway L, Hagle ME, McGoldrick M, Orr M, Doellman D et al. Infusion Therapy Standards of Practice, 8th Ed. *J Infusion Nursing*. 2021;44(S1).
11. [BD Posiflush®](#) – training information
12. [POWH/SSEH CLIN026 - Central Venous Access Device \(CVAD\) and Midline Catheters Care and Management](#)
13. [POWH/SSEH CLIN017 - Peripheral Intravenous Cannula-Insertion, Care and Management](#)
14. [SESLHDPD/160 - Medication Administration by Enrolled Nurses](#)
15. [POWHCLIN032 - Medication Management](#)

VERSION AND APPROVAL HISTORY

Date	Revision Number	Author and Approval
July 2015	DRAFT	Pharmacy Department, Prince of Wales Hospital
September 2015	1	Approved by SESLHD Drug & QUM Committee
May 2018	DRAFT 2	Reviewed by nursing and pharmacy staff. Minor wording updates made. References updated.
September 2021	DRAFT 3	Reviewed by nursing and pharmacy staff. Updated terminology, reference to local site VAD CBR and additional references.
November 2021	3	Approved by SESLHD QUM Committee
August 2022	DRAFT 4	Reviewed by nursing and pharmacy staff. Updated to include flush on completion of a blood transfusion.
October 2022	4	Approved by SESLHD QUM Committee
18 September 2024	5	Approved by SESLHD DTC; published.
23 October 2024	5.1	Approved by SESLHD DTC; published.