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.

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 VAD insertion to confirm correct placement
- Before each medication / infusion is given (to ensure VAD is still patent)
- In between serial / multiple infusions and between medications to prevent interactions and incompatibilities
- After each injection / infusion [to remove irritant material (i.e. fibrin deposits, drug precipitate and other debris) from the catheter and ensure drug distribution]
- Before and after blood sampling (to clear the VAD of blood)
- For inpatients,
    - PIVC at least every 8 hours if not otherwise used (note: consider if the VAD needs to remain insitu)
    - CVADs not being accessed must be flushed and locked every 7 days
    - TIVADs not being accessed must be flushed and locked ever 4 – 6 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.
- Patient presents with signs and symptoms of probable VAD-associated sepsis.
- 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 alcohol wipe vigorously for at least 15 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

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).

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

- Using a post-intravenous injection cannula flush will result in medication being distributed and acting 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 PD2013_043 Medication Handling in NSW Public Health Facilities
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. SESLHDPR/577 Peripheral Intravenous Cannulation (PIVC) Insertion, Care and Removal (Adults)
5. SGH-TSH CLIN058 Central Venous Access Devices (CVAD) in Adult Patients – Post Insertion Management of
6. SGH-TSH CLIN038 Peripheral Intravenous Cannulation (PIVC) – Accreditation Process
7. POWH CLIN157 Peripheral Intravenous Cannula – Insertion, Care and Management
8. POWH/SSEH CLIN026 Central Venous Access, Devices, Care and Management
9. SGH-TSH WPI078 Central Venous Access Device (CVAD) – Flushing and Positive Pressure Lock
10. Gorski L, Hadaway L, Hagle ME, McGoldrcik 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. Letter BD Posiflush® January 2014

REVISION 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 Drug & QUM Committee