



HEALTH HOLDING

HAFER ALBATIN HEALTH
CLUSTER
MATERNITY AND
CHILDREN HOSPITAL

Department:	Pediatric Intensive Care Unit (PICU)		
Document:	Departmental Policy and Procedure		
Title:	Guidelines for Monitoring and Management of IV Infiltration, Phlebitis and Extravasation		
Applies To:	All Pediatric Intensive Care Unit Staff		
Preparation Date:	January 12, 2025	Index No:	PICU-DPP-013
Approval Date:	January 26, 2025	Version :	2
Effective Date:	February 26, 2025	Replacement No.:	PICU-DPP-013 (1)
Review Date:	February 26, 2028	No. of Pages:	3

1. PURPOSE:

- 1.1 To guide healthcare providers in the monitoring, and management of fluids in the Pediatrics.

2. DEFINITIONS:

- 2.1 **Peripheral IV devices** – are cannula/catheter inserted into a small peripheral vein for therapeutic purposes such as administration of medications, fluids and/or blood products.
- 2.2 **Infiltration** – occurs when drugs or fluid infiltrates into the tissue surrounding the venepuncture site. This happens when the tip of catheter slips out of the vein, catheter passes through the wall of the vein or as blood vessel wall stretches which allows fluid to infuse into the surrounding tissue.
- 2.3 **Phlebitis** – a sign of vessel damage. The cause can be chemical (due to osmolality of solution), mechanical (from trauma at insertion or movement) or infective (microorganisms contaminating the device). Signs include swelling, redness, heat, purulence and pain related to local inflammation of the vein.
- 2.4 **Extravasations** – an extravasation occurs when there is accidental infiltration of the vesicant drug or fluid into the tissue surrounding the venepuncture site.

3. POLICY:

- 3.1 There must be a written physician order for any IV infusion, and medication administration.
- 3.2 The IV line assessment must be done on hourly basis (for continuous infusion) and must be recorded on the patient's file.
- 3.3 Large bore catheters must be used for IV infusion and for administering fluids containing glucose concentration greater than 12.5% will require central venous line access.
- 3.4 All the fluid/ bag/ syringe will be labelled with date, time, patient name and medical record number.
- 3.5 Fluid bags and syringes are changed as per infection control recommendation.
- 3.5 Infusion lines are replaced at least every 72 hours with standard aseptic technique.
- 3.5 If signs of infiltration/ extravasation noted, immediately inform the physician and stop IV fluids.

4. PROCEDURE:

- 4.1 The patient IV site assessments should be done on regular basis.
 - 4.1.1 Assessment of peripheral intravenous catheters insertion site – catheter position, patency/ occlusion, limb symmetry, and signs of phlebitis.
 - 4.1.2 Assessment of PIVC dressing and splints: check dressing – if it's intact, clean and dry or if it's loose or if visible ooze of blood was present underneath the dressing.
 - 4.1.3 Assessment of IV lines, equipment and IV fluid infusions:

- 4.1.3.1 If the patient is receiving continuous IV fluid infusion – observation of the IV site, type of fluid and volume infused, accurate rate of infusion for patient are observed hourly and document in the flow sheet.
 - 4.1.3.2 If the patient is having intermittent infusion, eight hourly assessment is needed. If the patient no longer requires IV access for infusions, remove the cannula to avoid complications.
- 4.2 Preventive Measures:
 - 4.2.1 Avoid using winged blood collection device (butterflies) for infusion.
 - 4.2.2 Avoid areas difficult to immobilize if possible (elbows, wrist, and knees).
 - 4.2.3 Tape properly and secure to promote circulation.
 - 4.2.4 Do not tape proximal to IV site to prevent 'tourniquet' effect.
 - 4.2.5 Do not tape over IV insertion site.
 - 4.2.6 Limit peripheral intravenous Dextrose to 12.5%.
 - 4.2.7 Dilute medications appropriately before administration.
 - 4.2.8 Avoid peripheral infusion of Calcium Gluconate if possible.
- 4.3 Management:
 - 4.3.1 The recommended immediate management is to immediately stop the infusion/injection.
 - 4.3.2 Under no circumstances should the device be flushed.
 - 4.3.3 Remove the catheter.
 - 4.3.4 Elevate the affected extremity.
 - 4.3.5 Apply a saline soaked gauze (it will draw the infusate out and prevent a scab from forming).
 - 4.3.6 Do not apply warm or cold compress.
 - 4.3.7 Administer analgesia as required.
 - 4.3.8 Continue monitoring the site, as signs such as erythematous ulceration can be delayed for 48 hours post – extravasation. This should be done at least eight hourly and document in the medical record file.

5. MATERIALS AND EQUIPMENT:

N/A

6. RESPONSIBILITIES:

- 6.1 Physician
- 6.2 Nurse

7. APPENDICES:

N/A

8. REFERENCES:

- 8.1 [Http://www.rch.org.au/policies/centralvenousaccessdevicemanagement/](http://www.rch.org.au/policies/centralvenousaccessdevicemanagement/).
- 8.2 Ibrahim Amjad MD et al. A New Approach to Management of Intravenous infiltration in Pediatric Patients. Journal of infusion Nursing. 2011; 242 - 249.
- 8.3 [Http://www.gosh.nhs.uk/health - professionals/guidelines/extravasation/and-/infiltration](http://www.gosh.nhs.uk/health-professionals/guidelines/extravasation/and-/infiltration).
- 8.4 Guide to extravasation Management in Adult and Pediatric: [icmwk.com/wp – content/ uploads/ 2016/ extravasation management](http://icmwk.com/wp-content/uploads/2016/extravasation-management).

9. APPROVALS:

	Name	Title	Signature	Date
Prepared by:	Ms. Asmaa AlShammary	Head Nurse of PICU		January 12, 2025
Prepared by:	Dr. Eman Abdelhakim Amer	Pediatric Specialist		January 12, 2025
Reviewed by:	Mr. Sabah Turayhib Al Harbi	Director of Nursing		January 13, 2025
Reviewed by:	Dr. Ali Alfayez	PICU Head of the Department		January 13, 2025
Reviewed by:	Mr. Abdulelah Ayed Al Mutairi	QM&PS Director		January 17, 2025
Reviewed by:	Dr. Tamer Mohamed Naguib	Medical Director		January 19, 2025
Approved by:	Mr. Fahad Hazam Al Shammari	Hospital Director		January 26, 2025