



HEALTH HOLDING
HAFER ALBATIN HEALTH
CLUSTER
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HOSPITAL

Department:	Maternal Intensive Care Unit		
Document:	Departmental Policy and Procedure		
Title:	IV Therapy Through Infusion Pump and Syringe Pump in Maternal Intensive Care Unit		
Applies To:	All Maternity Intensive Care Unit Staff		
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1. PURPOSE:

- 1.1 To establish procedural guidelines in starting IV infusion via syringe and infusion pump.
- 1.2 To ensure high quality of nursing practice during the procedure.
- 1.3 To enable the nurse to function in a consistent and standardized manner.

2. DEFINITIONS:

- 2.1 **Intravenous Infusion** – the slow introduction, over hours or days, of fluid into the bloodstream through a cannula (thin plastic tube) inserted into a vein.

3. POLICY:

- 3.1 It is a policy of critical care department that all Intravenous fluid therapy shall be prescribed by the attending physician.
- 3.2 All vasoactive drugs ordered shall be infused using either syringe or infusion pump.
- 3.3 All MICU nurses may initiate IV Therapy via Infusion/ Syringe pump.
- 3.4 IV fluids of patients who are under strict intake and output monitoring should be.
- 3.5 Regulated through or by an IV infusion pump.
- 3.6 Strict aseptic technique must be observed in intravenous therapy via Infusion/Syringe pump.
- 3.7 Injectable caps should be disinfected with 70% alcohol utilizing friction and allowed to air dry 30 seconds before accessing the system.

4. PROCEDURE:

- 4.1 IV infusion Through Infusion Pump
 - 4.1.2 Perform Hand Hygiene.
 - 4.1.3 Explain the procedure to the patient.
 - 4.1.4 Gather and prepare the required equipment.
 - 4.1.5 Read the MAR and select the proper medication/ IVF from the unit stock.
 - 4.1.6 Compare the label with Medication Administration Record. Check expiration dates. Confirm the prescribed or appropriate infusion rate. Calculate the drip rate.
 - 4.1.7 Transport the prepared equipment to the client's bedside carefully.
 - 4.1.8 Spike IV Solution.
 - 4.1.9 Close the regulating clamp on the set tubing before hanging bag.
 - 4.1.10 Prime tubing by opening regulating clamp and allowing tubing to fill with IV solution.
 - 4.1.11 Label the IV fluid with date and time ml/hour, time started, time complete, Signature.
 - 4.1.12 Perform Hand Hygiene.
 - 4.1.13 Identify the Patient.
 - 4.1.14 Wear personal protective equipment.

- 4.1.15 Clarify for any allergies.
- 4.1.16 Assess the IV site for the presence of infiltration or inflammation.
- 4.1.17 Check the patency of IV cannula (check the back flow and flush the cannula with 3 ml normal saline to make sure the IV cannula is working).
- 4.1.18 Turn on infusion pump, check the function status. Open the door and insert IV tubing according to manufacturer's guide line.
- 4.1.19 Close the door.
- 4.1.20 Set the parameter for operation according to manufacturer's guide line parameter may include.
 - 4.1.20.1 Infusion e.g. primary
 - 4.1.20.2 Volume to be infused
 - 4.1.20.3 Rate
 - 4.1.20.4 Start infusion pump when parameters are set.
 - 4.1.20.5 Observe the infusion is running properly.
 - 4.1.20.6 Remove personal protective equipment wash hand.
 - 4.1.20.7 Replace all things.
 - 4.1.20.8 Document in nursing note:
 - 4.1.20.8.1 Type of fluid.
 - 4.1.20.8.2 Rate of IV infusion.
 - 4.1.20.8.3 Starting time.
 - 4.1.20.8.4 Any drug diluted.
 - 4.1.20.8.5 Response of patient to the therapy.
 - 4.1.20.9 IV Therapy through Syringe Pump
 - 4.1.20.9.1 Perform Hand Hygiene.
 - 4.1.20.9.2 Explain the procedure to the patient.
 - 4.1.20.9.3 Clarify for any allergies.
 - 4.1.20.9.4 Gather and prepare the required equipment.
 - 4.1.20.9.5 Read the MAR and select the proper medication.
 - 4.1.20.9.6 Obtain medication, check label on individual medication package with the patient medication record for:
 - 4.1.20.9.6.1 Correct medication
 - 4.1.20.9.6.2 Correct dose & frequency
 - 4.1.20.9.6.3 Expiration Date
 - 4.1.20.9.6.4 Route of administration
 - 4.1.20.9.7 Compare the label with Medication Administration Record. Check expiration dates. Confirm the prescribed or appropriate infusion rate. Calculate the infusion rate.
 - 4.1.20.9.8 Dilute the medication according to protocol.
 - 4.1.20.9.9 Transport the prepared equipment to the client's bedside carefully.
 - 4.1.20.9.10 Identify the patient using two patient identifier (4 names for Saudi or complete name for Non-Saudi and MRN).
 - 4.1.20.9.11 Using aseptic technique, remove the cap on the tubing and the cap on the syringe, taking care to not contaminate either end.
 - 4.1.20.9.12 Attach micro bore tubing to syringe and holding syringe upright, expel air from medication syringe before priming tubing.
 - 4.1.20.9.13 Hold syringe downward, carefully primer the micro bore tubing with medication by applying gentle pressure to syringe plunger.
 - 4.1.20.9.14 Place label on the tubing with appropriate date and time, dilution, dose started.
 - 4.1.20.9.15 Assess the IV site for the presence of infiltration or inflammation.
 - 4.1.20.9.16 Check the patency of IV cannula. (Check the back flow and flush the cannula with 3 ml normal saline to make sure the IV cannula is working). Taking care not to contaminate the dead-end cap, stopcock, and syringes.

- 4.1.20.9.17 Cleans the access port with alcohol swab and allow drying.
 - 4.1.20.9.18 If there is no any infusion on going don't flush, aspirate first using very little force to check for lumen patency and also if there is any blood clot in the lumen it will come out then Flush catheter with 5-10 ml normal saline.
 - 4.1.20.9.19 If using pressure flushing system activates the fast flush release to check the patency of the lumen.
 - 4.1.20.9.20 Insert syringe into the syringes pump according to manufacturer's direction.
 - 4.1.20.9.21 Attach prime IV tubing into access port.
 - 4.1.20.9.22 Program pump to the appropriate rate and begin infusion. Set alarm if recommended by the manufacturer.
 - 4.1.20.9.23 Perform Hand Hygiene.
 - 4.1.20.9.24 Evaluate patient's response to medication within appropriate time frame.
 - 4.1.20.9.25 Monitor IV site at periodic intervals.
 - 4.1.20.9.26 Document in Nurse's notes.
- 4.2 Cleaning of Infusion Pump
- 4.2.1 Always keep the system clean.
 - 4.2.2 Use a soft cloth dampened with warm water to wipe off IV fluid drops on exterior surface.
 - 4.2.3 If disinfection is necessary, Use the following disinfecting agent.
 - 4.2.4 Chlorhexidine 2.5ml + water 97.5 ml.
 - 4.2.5 After using the agent wipes off it with the soft cloth dampened with water.
 - 4.2.6 Alert
 - 4.2.6.1 Avoid wiping the system with solvent like alcohol and thinner.
 - 4.2.6.2 Turn off the power and disconnect AC and DC power cable before cleaning the system.
- 4.3 Cleaning the syringe pump
- 4.3.1 Clean using mild soap suds. Do not use spray disinfectant at the main connection.
 - 4.3.2 Before operation the device allow to air the device for at least one minute.

5. MATERIAL AND EQUIPMENT:

- 5.1 Medication prepared in labelled syringe
- 5.2 Infusion/ syringe pump and tubing
- 5.3 3 – way stop cock
- 5.4 Sterile needle (21-23 gauge)
- 5.5 Antiseptic Swab
- 5.6 Tape (optional)
- 5.7 Label for tubing
- 5.8 Medication Administration Record (MAR)
- 5.9 IV Pole
- 5.10 IV fluids as prescribed
- 5.11 Health Care Waste Bag
- 5.12 Sharp receptacle
- 5.13 Micro bore tubing for syringe pump
- 5.14 Standard Macro drip sets deliver form 10 to 20 drops/ml, depending on the manufacturer.

6. RESPONSIBILITIES:

- 6.1 Physician
- 6.2 Nurse








7. APPENDICES:

N/A

8. REFERENCES:

8.1 Guidelines for Adult ICU Care/ Ministry of Health, General Directorate of Health Centers- Riyadh, 2013

9. APPROVALS:

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