

PROTOCOL

TITLE: **I.V. THERAPY PROTOCOL (ADULT)**

PURPOSE: To outline information for administration of intravenous therapy.

LEVEL: Dependent _____ Independent _____ Interdependent X

CONTENT:

A. ASSESSMENT

1. Assess patient's tolerance to I.V. therapy. Discontinue therapy if signs of allergic reaction occur.
2. Assess daily the need to continue the vascular access.
3. IV access started under "unclean" conditions/environmental limitation, i.e., field starts, will be changed within 48 hours of admission.
4. Assess and evaluate all IV sites at the change of shift and every four (4) hours for signs of infiltration/infection/thrombophlebitis.
5. All IV continuous medication drips will run on a separate pump. A medication drip is not to be set up as a secondary on the pump, run as the primary on the pump. It is to be piggybacked into the lowest port of a main line IV.
6. Use of a main line with titrated medications: A main line of 250cc NS must be in place when a titrated medication is infusing. This main line will be not be on the pump and will remain off. This provides additional access if the titrated medication must be discontinued and fluid administered emergently.
7. All IV medication orders that require titration must have a physician order that states the medication is to be titrated. This order includes frequency of titration, reason for titration, maximum dosage.
8. Evaluation of all IV solutions for volume discrepancies is done by the incoming and off-going registered nurses every shift.

B. SYSTEM MAINTENANCE

1. Tubing: Label and change the following every 96 hours when site is changed:
 - a. Primary I.V. tubing
 - b. I.V.P.B. tubing (Primary or Secondary)
 - If the secondary tubing is left connected to the primary tubing at all times, the tubing can remain for 96 hours. Back-priming method must be used if more than one medication is going through the secondary tubing.
 - If the secondary tubing is disconnected at any time from the primary, tubing is changed every 24 hours (i.e. antibiotics that are not compatible).
 - c. Injection caps.
 - d. Pump tubing.
 - e. PCA tubing
 - f. Extension tubing
 - g. Use Primary IV pump tubing with glass bottles, vent port is to be opened.

If at any time the tubing is disconnected from the patient or pump setup, a dead end cap must be used to maintain a closed system (Luer lock plug).

2. Label and change every 24 hours:
 - a. TPN and Mannitol tubing (RN only).
 - b. Filter for TPN and Mannitol (RN only)
 - c. All IV solutions containers including PCA vial.

3. Label and change the following after each administration:
 - a. Blood
 - b. Blood Products
 - c. Lipids
 - d. Propofol – every 12 hours

4. Back-priming method
 - a. Eliminates the need to repeatedly connect and disconnect the secondary set
 - b. By reducing the number of infusion set connections and disconnections, it lowers the risk of micro-organisms being introduced into the system and causing infection
 - c. Cannot be used if primary and secondary fluids are incompatible or if primary fluid is a vasopressor or any other medication that cannot be temporarily stopped
 - d. Steps for back-priming
 - i. Establish back-priming is appropriate
 - ii. Connect secondary infusion set to bag/bottle to be infused. Prime infusion set.
 - iii. Clean injection port with alcohol and attach secondary set to primary set.
 - iv. Infuse medication.
 - v. When infusion is completed, leave it attached and resume primary infusion.
 - vi. **When the next dose of medication is due, stop the primary infusion. Hold the back prime button on the Abbot pump until the primary solution runs into the secondary tubing and medication bag/bottle.**
 - vii. Invert the secondary container and squeeze drip chamber to move excess fluid into the medication container.
 - viii. Detach the secondary medication container and attach the new medication container with next drug dose. Squeeze drip chamber.
 - ix. Start infusion.

5. IV Pumps
 - a. The clinical care area that the patient is admitted to must be selected when using the IV pump.
 - b. The drug library must be used when IV fluids or IV medication is being administered on the pump.

C. FLUID BALANCE

1. Follow IV Therapy Procedure (8620.001a) for proper labeling of IV system.
2. Maintain I&O on patients receiving continuous IV fluids.
3. Rate must be specified by MD order.
4. All fluids with additives must be reordered every 24 hours.
5. Plain I.V. fluids need to be reordered every 96 hours. All IV fluid bags are changed q24hours.
6. Clear and record total volume delivered on pump at the end of each shift.

D. PATENCY

1. Flush peripheral access devices with 2cc of Normal Saline before and after administration of medications or every 8 hours. (SAS Method)

2. To flush Central venous access lines:
 - a. Never use force to flush ports
 - b. Syringes with barrel capacity of less than 10ml must never be used unless it is the pre-filled syringe.
 - c. Flush with 10ml of Normal Saline after using a port.
 - d. When flushing after blood draw, use 20ml of Normal Saline.
 - e. Positive end pressure is to be maintained within the catheter lumen after flushing to prevent reflux.
 - f. Unused ports must be flushed once every 24 hours with heparinized saline (10 Units/ml). Use a pre-filled heparinized saline syringe.
 - g. Document flush on eMAR.

E. INFECTION CONTROL

1. Swab all access ports with alcohol before injection.
2. Change port needle every 7 days.

3. Restart saline locks/ peripheral IV cannulas every 96 hours or more frequently if there are any signs of inflammation, phlebitis, infiltration, pain and/or drainage.
4. Change Caps after blood draw.
5. Follow Central Line protocol for site care and catheter maintenance. Change dressing only if it becomes loosened or soiled.
6. Report to physician any I.V. site suspicious of infection.
7. Maintain a closed system between changes of components. All entries into tubing should be made through irrigation ports that are disinfected just prior to entry.
8. Strict aseptic technique will be adhered to during cannula placement and during any manipulation of the I.V. System.

F. DOCUMENTATION

1. Document all changes of I.V. tubing, injection caps, extension tubing and dressing changes.
2. Document I&O on any patient on I.V. therapy.
3. Document in nursing notes any exception to restarts of I.V. cannulas in 96 hours, i.e., patient refusal, poor venous access, physician orders.
4. Document any site that is red, warm, painful or swollen.
5. Complete an incident report for infiltrations of:
 - a. Any known subclavian infiltration
 - b. Any I.V. infiltration with added medication (including I.V.P.B.)

G. PATIENT TEACHING

1. The will education the patient about :
 - a. Infusions therapy, the infusion plan of care, purpose and expected outcomes.
 - b. Potential complications
 - c. Risks and benefits of infusion therapy
 - d. Care of the access device
 - e. Infection Prevention
 - f. Instruct patient to report any pain, swelling, redness, warmth, or a wet dressing to the nurse.

REFERENCES:

1. Intravenous Infusion Therapy for Nurses. Diane L. Josephsen, (Delmar) 2004
2. *Journal of Infusion Nursing, Standards of Practice*. Jan/Feb 2011, Volume 34, Number 1S (Lippincott, Williams and Wilkins) 2011.
3. CDC – Guidelines for the prevent of Intravascular Catheter Related Infections – August 9, 2011
4. Appendix B – Summary of Recommended Frequency of Replacements of Catheters, Dressings, Administration sets and fluids Hadaway L RNC *Delivering Multiple Medications via Back Priming*. Nursing 2004, Vol. 34, Number 3.