

PROTOCOL FOR: Intravenous (IV) Therapy: Peripheral
PROCEDURE FOR: Intravenous (IV) Fluid Administration
PROCEDURE FOR: Dressing/Catheter Site Care
PROCEDURE FOR: Flushing Peripheral Lines

PROTOCOL FOR: Intravenous (IV) Therapy: Peripheral

- POLICY:**
1. The RNs or LPNs will initiate, monitor and discontinue IV fluids per physician order.
 2. Appropriate hand cleaning, aseptic technique, sterile products, and gloves will be used when performing infusion procedures.
 3. No more than 2 attempts at cannulation shall be made by one individual. After 2 unsuccessful attempts at cannulation, additional attempts shall be made by someone with more experience. Only one catheter shall be used at each attempt.
 4. IV bags/bottles, tubing sets and IV site must be labeled with the date and time started or changed.
 5. IV bags/bottles must be changed every 24 hours.
 6. IV administration sets/tubing must be changed no more frequently than every 72 hours and no later than 96 hours. More frequent changes may be needed depending on the characteristics of the infusion (For example, 24 hours for lipids.). All add-on devices and secondary infusion sets should be changed at the same time as the IV administration set.
 7. The IV site must be changed no more frequently than every 72 hours and no later than 96 hours. An order from a licensed independent practitioner (LIP) must be obtained if an IV is to be left in place for a longer period of time.
 8. A catheter placed in an emergency situation where aseptic technique has been compromised shall be replaced no later than 48 hours; peripheral-short catheters should be replaced as soon as possible.
 9. All IV sites must have a dressing. Both gauze and transparent dressings are acceptable for peripheral intravenous lines. Gauze under a transparent dressing is considered to be a gauze dressing.
 - a. Dressings must be changed immediately if their integrity is compromised.
 - b. Tape and gauze dressings must be changed every 48 hours.
 - c. Transparent dressings must be changed every 72 hours.
 10. Assess and document the patient's comfort with the IV at least every 8 hours.
 11. The IV site must be assessed at least every 8 hours. More frequent site assessment is required during infusion of irritant or vesicant agents. The status of the IV site will be documented using the Phlebitis and Infiltration Recording Scales.

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a. Phlebitis Scale

- 0 = No symptoms
- 1+ = Erythema at access site with or without pain
- 2+ = Pain at access site with erythema and/or edema
- 3+ = Pain at access site with erythema and/or edema, streak formation, palpable venous cord

b. Infiltration Scale

- 0 = No symptoms
 - 1 = Skin blanched, edema < 1 inch in any direction, cool to touch, with or without pain
 - 2 = Skin blanched, edema 1 to 6 inches in any direction, cool to touch, with or without pain
 - 3 = Skin blanched, translucent; gross edema > 6 inches in any direction; cool to touch; mild to moderate pain; possible numbness
 - 4 = Skin blanched, translucent; skin tight, leaking; skin discolored, bruised, swollen; gross edema > 6 inches in any direction; deep pitting tissue edema; circulatory impairment; moderate to severe pain; infiltration of any amount of blood product, irritant or vesicant
12. Any infiltration of a blood component, irritant, or vesicant must be reported immediately to a LIP. For other infusions, phlebitis or infiltration scores of 2 or greater must be reported to a LIP. A nursing progress note must be written describing the infiltration, actions taken and response to treatment.
13. Peripheral lines not being used for continuous fluid administration will be flushed with normal saline solution every eight hours to assess and maintain patency.

DESIRED PATIENT

- OUTCOMES:**
- 1. Skin integrity around the IV catheter site will maintained.
 - 2. The patient will experience minimal/no complication related to peripheral IV access: infiltration, phlebitis, infection or catheter occlusion.
 - 3. The patient will experience no or minimal discomfort related to peripheral IV access.

**CLINICAL
ASSESSMENT AND**

- CARE:**
- 1. Assess peripheral IV sites for evidence of cannula-related complications at least every 8 hours. Evaluation should include: gentle palpation of insertion site through intact dressing and inspection of skin around the catheter site for erythema and edema.
 - 2. Assess whether the catheter type and size is appropriate for the fluid, medication or blood component to be administered.

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3. Assess catheter for patency at least every eight hours and more often as directed by prior assessments and types of fluids and medications being infused. If the IV is saline locked, flush per procedure.
4. Assess patient's comfort with the IV infusion at least every eight hours and PRN, if appropriate. If the patient complains of pain/tenderness, the dressing should be removed and the IV site inspected. If there are any signs of infiltration or phlebitis, the IV catheter must be removed and IV site changed unless medication-specific guidelines for infiltrate treatment dictate that the IV be left in place.
5. Assess the patient for systemic signs of infection at least every eight hours.
6. If the patient is restrained, the restraint should not interfere with the IV site. If necessary, the IV site should be changed.

- PATIENT TEACHING:**
1. Instruct the patient and/or family to report burning, pain, redness, leaking at the site, or swelling to the nurse or physician.
 2. Teach the patient how to safely maneuver the IV tubing and pole in regards to ADL's.

PROCEDURE FOR: Intravenous (IV) Fluid Administration

EQUIPMENT: Ordered IV solution
IV medication
Buretrol mini-infuser (for select infusion, such as Heparin)
Appropriate tubing, i.e., pump or solution administration set
Infusion Record

PROCEDURE:

- | <u>ACTION</u> | <u>POINTS OF EMPHASIS</u> |
|--|--|
| 1. Set up the ordered infusion with the appropriate tubing. Use Buretrol as appropriate. | 1. If there are any questions regarding drug compatibility, consult with pharmacist. |
| 2. Using friction, prep the luer-lock catheter cap with alcohol. | 2. Allow the alcohol to air dry. |
| 3. Luer-lock the infusion tubing onto catheter cap. | |
| 4. Initiate the infusion. Regulate the rate according to LIP order. | |
| 5. At the completion of the infusion, | |

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disconnect the tubing from catheter cap
and apply a cap to the tubing to
maintain sterility.

6.
 - a. If IV access is no longer required,
discontinue the IV.
 - b. If order is to saline-lock the line,
then prep (using friction) the
catheter cap with alcohol and flush
with 3ml normal saline or as per unit
standard.

PROCEDURE FOR: Dressing/Catheter Site Care

EQUIPMENT: Approved antiseptic agent
Transparent dressing or tap and 2X2 gauze

PROCEDURE:

<u>ACTION</u>	<u>POINTS OF EMPHASIS</u>
1. Remove the old dressing and examine the catheter insertion site for: erythema, infiltration and tenderness.	1. If signs of infiltration/phlebitis/ complications present, do not reapply the dressing. Remove IV and change the IV site unless infiltrate treatment will be administered through the IV catheter.
2. Cleanse the site with an approved antiseptic agent.	2. Allow the antiseptic to air dry on the skin.
3. FOR TRANSPARENT DRESSING: a. Secure a transparent dressing over catheter insertion site.	
4. Change IV tubing if appropriate.	4. Refer to policy statement #6.

PROCEDURE FOR: Flushing Peripheral Lines

EQUIPMENT: Normal saline flush
Alcohol swab
12ml syringe

PROCEDURE:

<u>ACTION</u>	<u>POINTS OF EMPHASIS</u>
1. Using friction, prep port with alcohol swab.	1. Allow the alcohol to air dry.
2. Check the catheter placement.	2. Aspirate for blood return or flush with NS to check catheter placement.

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3. Using a 12ml syringe, flush with a minimum of 3ml of normal saline solution.
3. A larger syringe site reduces pressure on the vessel and the catheter.
4. Document the date, time and site for all intravenous insertions in the patient's medical record. Document NS flush on appropriate unit flowsheet.

REFERENCES: <http://www.cdc.gov/mmwr/PDF/rr/rr5110.pdf> (accessed 7/09)

APPROVAL: Nursing Standards Committee
Infection Control Committee

EFFECTIVE DATE: 6/77

REVISION DATES: 5/80, 7/82, 3/86, 7/87, 10/88, 11/90, 7/93, 6/96, 10/97, 12/99, 5/00, 12/02, 4/03, 4/05, 5/07, 4/08, 12/08, 11/09

REVIEWED DATES: 7/09