



University of the Philippines Manila
THE HEALTH SCIENCES CENTER
COLLEGE OF NURSING



World Health Organization Collaborating Center for Nursing Leadership and Development
Commission on Higher Education Center of Excellence
 Sotejo Hall, Pedro Gil St., Ermita, Manila

N11 – NURSING FOUNDATION II

Name: _____ **Group:** _____ **Date:** _____

TITLE:	INTRAVENOUS FLUID THERAPY
DEFINITION/ DESCRIPTION:	An essential intervention when clients are unable to take sufficient food and fluids orally. It is an efficient and effective method of supplying fluids directly into the intravascular fluid compartment and replacing electrolyte losses.
PURPOSES:	Intravenous therapy may be used for fluid volume replacement, to provide glucose (dextrose) the main fuel for metabolism, to correct electrolyte imbalances, to deliver medications, and for blood transfusions. In emergency situations, it is used to establish a lifeline for rapidly needed medications.

PROCEDURE 01: SETTING UP/ CHANGING/ DISCONTINUING IV INFUSION

A. SETTING UP AN INTRAVENOUS INFUSION

	Procedure	Done	Observed	Not Done	Remarks
1.	Verify doctor’s order (type of solution, the amount to be administered, the rate of flow or time over which the infusion is to be completed) and make I.V. label.				
2.	Introduce self. Confirm patient’s identity. Check the name on the patient’s identification bracelet (if available), using two patient identifiers (ask the patient’s full name and date of birth).				
3.	Explain to the client what you are going to do, why it is necessary, and how he or she can participate.				
4.	Explain procedure to patient and/or significant others and assess patient’s vein; choose appropriate vein; location, size, condition, secure consent if necessary.				
5.	Washes hands and maintain asepsis throughout the preparation and during the therapy.				
6.	Prepare necessary materials in an IV tray.				

	Procedure	Done	Observed	Not Done	Remarks
7.	Check the sterility and integrity of the IV solution and IV set and other devices.				
8.	Place IV label or tag on IV container (client's name, room number, solution, drug incorporation, bottle sequence and duration, IV flow rate.				
9.	Open the seal of the IV solution and disinfect port with cotton balls with alcohol.				
10.	Open infusion set aseptically (IV set); slide the tubing clamp along the tubing until it is just below the drip chamber to facilitate its access, then close the clamp. Leave the ends of the tubing covered with the plastic caps until the infusion is started.				
11.	Spike the container aseptically. Remove the cap from the spike and insert the spike into the insertion site of the bag or bottle.				
12.	Hang the solution container on the pole. Adjust the pole so that the container is suspended about 1 m (3 ft) above the client's head. Fill drip chamber by squeezing it gently to at least half full and prime the tubing aseptically.				
13.	Prime the tubing as described below. <i>The term prime means "to make ready" but in common use refers to flushing the tubing to remove air.</i> Remove the protective cap of the distal end of the tubing and hold the tubing over a container.				
14.	Release the clamp and let the fluid run through the tubing until all air bubbles are removed. Remove air bubbles by tapping the tubing if necessary, to help the bubbles move, if any, then put back the cover of the distal end of the IV tubing (get ready for IV insertion).				

	Procedure	Done	Observed	Not Done	Remarks
15.	<p><i>After the IV insertion,</i></p> <p>Attach the distal end of the infusion tubing to the catheter hub. Open the clamp to initiate the infusion.</p> <p>Watch closely for any signs that the catheter is infiltrated. Infiltration occurs when the tip of the IV is outside the vein and the fluid is entering the tissues instead. It is manifested by localized swelling, coolness, pallor, and discomfort at the IV site.</p>				
16.	<p>Ensure appropriate infusion flow. Adjust the infusion rate of flow according to the order.</p> <p>Loop the tubing and secure it with tape.</p> <p>Apply a padded arm board to splint the joint if needed.</p>				
17.	<p>Document all assessments and interventions. Record the venipuncture on the client's chart, location of, amount and type of solution used, including any additives; flow rate; and the client's general response.</p>				

B. CHANGING AN IV INFUSION CONTAINER/SOLUTION

PURPOSE: To maintain the flow of required fluids; to maintain sterility of the IV system and decrease the incidence of phlebitis and infection; to maintain patency of the IV tubing.

ASSESSMENT:

- Presence of fluid infiltration, leakage, bleeding, or phlebitis at IV site
- Allergy to tape or iodine
- Infusion rate and amount absorbed
- Blockages in IV system
- Appearance of the dressing for integrity, moisture, and need for change

	Procedure	Done	Observed	Not Done	Remarks
1.	<p>Verify doctor's order; countercheck IV label, bottle number or bottle sequence, type, correct dose of additives (if any), duration of infusion</p>				
2.	<p>Introduce self.</p> <p>Confirm patient's identity. Check the name on the patient's identification bracelet (if available), using two patient identifiers (ask the patient's full name and date of birth).</p>				

	Procedure	Done	Observed	Not Done	Remarks
3.	Explain to the client what you are going to do, why it is necessary, and how he or she can participate.				
4.	Assess IV site for redness, swelling and pain (presence of infiltration or inflammation).				
5.	Wash hands before and after procedure. Observe other appropriate infection prevention procedures.				
6.	Prepare necessary materials (IV solution, IV label, disinfectant, IV tray).				
7.	Check the sterility and integrity of the IV solution and tubing.				
8.	Calibrate new IV bottle according to duration of infusion. Attach the IV tag or label.				
9.	Open and disinfect rubber port of IV solution to follow.				
10.	Close the clamp or kink tubing, remove the spike from the used IV container and apply to the new IV solution/container aseptically. Hook the new IV container to the IV stand.				
11.	Release the tubing and open the clamp of the newly hooked IV container. Regulate the flow rate based on duration of infusion. Remove air bubbles (if any).				
12.	Discard all waste materials according to HICU guidelines.				
13.	Evaluate status of IV site, patency of IV system, and accuracy of flow. Document all relevant information accordingly and endorse to incoming shift.				

C. DISCONTINUING AN IV INFUSION

PURPOSE: To discontinue an IV infusion when the therapy is complete or when the IV site needs to be changed.

ASSESSMENT:

- Appearance of the venipuncture site
- Any bleeding from the infusion site
- Amount of fluid infused
- Appearance of IV catheter

	Procedure	Done	Observed	Not Done	Remarks
1.	Verify written doctor's order to discontinue IV including IV medicines.				
2.	Introduce self. Confirm patient's identity. Check the name on the patient's identification bracelet (if available), using two patient identifiers (ask the patient's full name and date of birth).				
3.	Explain to the client what you are going to do, why it is necessary, and how he or she can participate. Assess and inform the patient of the order. Explain the reason for discontinuing the IV.				
4.	Prepare necessary materials: IV trays or injection trays, cotton balls with alcohol or antiseptic solution. plaster or micropore tape.				
5.	Wash hands before and after procedure. Don gloves (optional).				
6.	Assist the client to a comfortable position, either sitting or lying. Expose the IV site but provide for client privacy. Place a gauze pad under the extremity that has the IV.				
7.	Close clamp of the IV tubing.				
8.	Moisten adhesive tapes around the IV cannula using cotton balls with alcohol. Remove plaster gently.				
9.	Assess the venipuncture site.				
10.	Get cotton ball with alcohol & without applying pressure on the IV site remove IV cannula pulling it out along the line of the vein. Immediately apply pressure on the IV site using dry sterile cotton ball or sterile dressing, for 2 to 3 minutes. Hold the client's arm above heart level if any bleeding persists. Teach the client to inform the nurse if the site begins to bleed at any time or the client notes any other abnormalities in the area.				
11.	Secure with a dressing and plaster.				

	Procedure	Done	Observed	Not Done	Remarks
12.	Inspect IV catheter for completeness. Report a broken catheter to the nurse in charge or primary care provider immediately				
13.	Discard all waste material including the IV cannula according to HICU guidelines. Conceal/discard any client information on the IV tags or labels.				
14.	Document time of removal of IV solution, status of insertion site and integrity of IV catheter, client's response and endorse to incoming shift. Report significant deviations from normal to the primary physician.				

<i>Name of Student Observer & Signature</i>	<i>Name of Faculty & Signature / Date</i>

TITLE:	BLOOD TRANSFUSION THERAPY
DEFINITION/ DESCRIPTION:	<p>A blood transfusion is the introduction of whole blood or blood components into venous circulation.</p> <p>Patient Safety Goals: Goal: Improve the accuracy of patient identification.</p> <ul style="list-style-type: none"> • Before initiating a blood or blood component transfusion: <ul style="list-style-type: none"> • Match the blood or blood component to the order. • Match the patient to the blood or blood component. • Use a two-person verification process or a one-person verification process accompanied by automated identification technology, such as bar coding.
PURPOSES:	<ul style="list-style-type: none"> • To restore blood volume after severe hemorrhage • To restore the oxygen-carrying capacity of the blood • To provide plasma factors, such as antihemophilic factor (AHF) or factor VIII, or platelet concentrates, which prevent or treat bleeding

PROCEDURE 02: BLOOD TRANSFUSION

	Procedure	Done	Observed	Not Done	Remarks
1.	Verify the doctor's order.				
2.	Observe the ten (10) R's when preparing and administering any blood component.				
3.	Introduce self. Confirm patient's identity. Check the name on the patient's identification bracelet (if available), using two patient identifiers (ask the patient's full name and date of birth).				
4.	Explain the procedure/rationale for giving blood transfusion to patient and significant others and secure consent. Get patient's history of previous transfusion.				
5.	Explain the importance of the benefits on Voluntary Blood Donation (RA 7719-National Blood Service Act 1994).				
6.	Request blood/blood component from hospital blood bank to include blood typing and X-matching.				
7.	Obtain compatible blood from hospital blood bank. Observe the blood for abnormal color, RBC clumping, gas bubbles, and extraneous material. Return outdated or abnormal blood to the blood bank.				

	Procedure	Done	Observed	Not Done	Remarks
8.	<p>Warm blood at room temperature by wrapping the blood bag with a towel.</p> <p>If the start of the transfusion is unexpectedly delayed, return the blood to the blood bank after 30 minutes. Do not store blood in the unit refrigerator.</p>				
9.	<p>With another nurse countercheck the following before transfusion: <i>doctor's order, transfusion consent form</i>; verify the compatible blood to be transfused against the cross-matching sheet or form noting <i>client identification, unit or ward identification, ABO grouping & RH type, serial no. of blood and expiry date</i> with the blood bag label.</p>				
10.	<p>Have a doctor and a nurse assess patient's condition. Get the baseline vital signs BP, CR, temperature before transfusion. Refer to MD accordingly.</p>				
11.	<p>Give pre-meds 30 minutes before transfusion if any, as ordered by the doctor.</p>				
12.	<p>Wash hands before and after the procedure.</p>				
13.	<p>Prepare equipment needed for BT (IV injection tray, compatible BT set, IV catheter, needle G18/19, plaster tourniquet, blood component to be transfused, Plain NSS 500cc, IV set, G 18 needle (if needed only), IV hood, gloves, sterile 2x2 gauze or transparent dressing.</p>				
14.	<p>If main IVF is with dextrose 5%, initiate a separate IV line with appropriate IV catheter and use a normal saline (0.9% NaCl) solution; regulate IV drops to KVO.</p>				
15.	<p>Invert the blood bag gently several times to mix the cells with the plasma.</p> <p>Expose the port on the blood bag by pulling back the tabs. Open compatible blood set aseptically and spike blood bag carefully, prime tubing and remove air bubble (if any). Use needle G 18 or 19 for side drip. Clamp the blood administration set.</p> <p>Suspend the blood bag on the IV stand or pole.</p>				
16.	<p>Disinfect the Y-injection port of IV tubing (plain NSS) and insert the needle from the blood administration set and secure with adhesive tape.</p>				

	Procedure	Done	Observed	Not Done	Remarks
17.	Close or clamp the IV fluid of Plain NSS or regulate to KVO (based on doctor's order) while transfusion is going on.				
18.	Transfuse the blood via injection port at 10-15 drops initially for 15 minutes and then regulate at ordered rate of doctor (usually based on patients' condition).				
19.	Observe patients on an ongoing basis for any untoward signs and symptoms such as flushed skin, chills, elevated temperature, itchiness, urticaria and dyspnea, or back pain. If any reaction occurs, stop the transfusion. Open IV line with NSS and report to the doctor immediately.				
20.	Swirl the bag occasionally to mix the solid and the liquid elements. One blood filter should be used for one or two units of blood to prevent sluggish rate of transfusion. During transfusion assess the client, including vital signs, per policy. If the client has a reaction and the blood is discontinued, send the blood bag and tubing to the laboratory for investigation of the blood.				
21.	If blood is consumed, close roller clamp of BT set then disconnect from IV lines then regulate the IVF as ordered.				
22.	Continue to observe patient after, for delayed reaction could still occur. Monitor vital signs and reassure patient.				
23.	Carryout post-blood transfusion ORDERS SUCH AS RE-CHECK Hgb and Hct, bleeding time, serial platelet count, etc.				
24.	Discard blood bag and BT set according to the HICU guidelines.				
25.	Remind the doctor about the administration of Calcium Gluconate if patient had several units of blood transfusion (4-6 or more units of blood).				
26.	Document in the patient's chart. Record starting the blood, including vital signs, type of blood, blood unit number, sequence number (e.g., #1 of three ordered units), site of the venipuncture, size of the catheter, and drip rate. Record patient's reaction or absence of reaction to the transfusion. After termination of blood transfusion, Record				

	Procedure	Done	Observed	Not Done	Remarks
	<p>completion of the transfusion, the amount of blood absorbed, the blood unit number, and the vital signs. If the primary IV infusion was continued, record connecting it.</p> <p>Also record the transfusion on the IV flow sheet and intake and output record.</p>				

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PROCEDURE 03A: ADMINISTERING DRUGS THRU IV PUSH

A. IV PUSH

	Procedure	Done	Observed	Not Done	Remarks
1.	Countercheck medication card against the written doctor's orders.				
2.	Observe 10 Rs when preparing and administering medication.				
3.	Explain procedure to patient (the name of medicine and action interaction of medication to patient care) before administering.				
4.	Wash hands before and after the procedure (use gloves especially for chemotherapeutic drugs).				
5.	Check IV site (if infiltrated or out of vein; if there are signs of swelling, redness, phlebitis, do not give the drug.				
6.	Check for skin test of drug for IV push, drug-drug, drug-IV fluid incompatibility, dosage (computation).				
7.	Prepare the necessary materials for the procedure such as: right drug, right diluent needed, I.V. injection tray, syringes and needles.				
8.	Disinfect the injection port of the diluent (if in vial) and the drug,. Aspirate the right amount of diluent and dilute the drug (if the drug needs to be diluted).				
9.	Aspirate the right drug dose, disinfect the Y-injection port of the IV administration set; pierce through the bull's eyed rubber port; kink the tubing; push IV drug slowly as ordered or as per manufacturer's instructions. Observe precautionary measures during drug administration.				
10.	Flush IV tubing after drug administration with IV fluid (aspirate IV fluid using same syringe and push IV fluid slowly).				
11.	Regulate IV fluid infusion as ordered (if needed).				
12.	Discard sharps and other waste according to HICU guidelines.				

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B. IV PUSH VIA HEPLOCK					
	Procedure	Done	Observed	Not Done	Remarks
1.	Countercheck medication card against the written doctor's orders.				
2.	Observe 10 Rs when preparing and administering medication.				
3.	Explain procedure to patient (the name of medicine and action interaction of medication to patient care) before administration.				
4.	Wash hands before and after the procedure (use gloves especially for chemotherapeutic drugs).				
5.	Gather equipment such as IV tray, Heparin solution, Normal Saline diluent, 3 pieces 2.5 cc syringes				
6.	Prepare medication to be administered e.g., antibiotic, and draw it up into a syringe.				
7.	Fill a tuberculin syringe with Heparin solution. Heparin solution is usually prepared with 0.1cc heparin plus 0.9 cc normal saline.				
8.	Fill the 2 2.5cc syringes with isotonic solution or normal saline 1cc each.				
9.	Swab injection port with alcohol or iodophor swab. Insert saline syringe into port. <i>Take note: Some drugs are incompatible with heparin. Saline syringe is also used to check the patient of the infusion set. If so, draw 2 syringes with 2 2.5cc saline solution and use one syringe at a time.</i>				
10.	Insert medication into injection port. Inject medication into the vein, timing the flow rate according to doctor's order or drug manufacturer's instruction.				
11.	Insert the saline syringe and flush the line.				
12.	Observe patient for any adverse reactions.				
13.	Insert heparin syringe; Rationale: <i>The Heparin should prevent the formation of clot in the catheter.</i>				
14.	Remove syringe and return the cover of the injection port aseptically.				

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PROCEDURE 03B: INCORPORATION OF DRUG INTO IVF

C. INCORPORATION OF DRUG INTO IVF

	Procedure	Done	Observed	Not Done	Remarks
1.	Countercheck medication card against the written doctor's orders.				
2.	Observe 10 Rs when preparing and administering medication.				
3.	Explain procedure to patient (the name of medicine and action interaction of medication to patient care) before administration.				
4.	Wash hands before and after the procedure (use gloves especially for chemotherapeutic drugs).				
5.	Check IV site (if infiltrated or out of vein; if there are signs of swelling, redness, phlebitis, do not give the drug.				
6.	Check for skin test result of drug for IV push, drug- drug, drug-IV fluid incompatibility, dosage (computation).				
7.	Prepare the necessary materials needed for the procedure such as: injection tray, syringes needed right drug to be incorporated either vial or ampule.				
8.	Disinfect injection port of the vial and aspirate the drug aseptically.				
9.	Put down the bottle, kink the tubing, remove the administration set from the bottle aseptically; disinfect the bottle's rubber stopper; incorporate the right drug to the IVF bottle; return the administration set to IVF bottle aseptically; swirl bottle to mix the drug with the IVF and regulate the flow rate as ordered.				
10.	Observe and reassure the patient.				
11.	Document in the patient's chart.				
12.	Discard sharps and other waste according to HICU guidelines.				

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PROCEDURE 03C: INCORPORATION OF A DRUG INTO SOLUSET					
	Procedure	Done	Observed	Not Done	Remarks
1.	Countercheck medication card against the written doctor's orders.				
2.	Observe 10 Rs when preparing and administering medication.				
3.	Explain procedure to patient (the name of medicine and action interaction of medication to patient care) before administration.				
4.	Wash hands before and after the procedure (use gloves especially for chemotherapeutic drugs).				
5.	Check IV site (if infiltrated or out of vein; if there are signs of swelling, redness, phlebitis, do not give the drug.				
6.	Check for skin test result of drug for IV push, drug- drug, drug-IV fluid incompatibility, dosage (computation).				
7.	Prepare the necessary materials needed for the procedure such as: right drug, right diluent needed, IV injection tray, syringes and needles.				
8.	Check present IV fluid label, level & incorporated medicine in the soluset or IV bottle. If with incorporated medicine, check for drug-drug incompatibility, if the ongoing IV fluid in the soluset is to be consumed in 6-8 hours, ask from the doctor an order for IVF to be used solely for drug administration and keep the whole set sterile for succeeding doses.				
9.	Aspirate prepared right drug with correct dose; add desired IVF diluent into soluset by opening the clamp on the bottle then close the clamp after, disinfect rubber injection port of the soluset and incorporate the drug. Mix gently.				
10.	Open the clamp of the airway at the soluset.				
11.	Regulate flow rate of IVF infusion (if to run for 30 mins. Or 1 hour).				
12.	Place IV label on soluset indicating drug administration.				
13.	Document in patient's chart the drug administered.				
14.	If incorporated medicine is consumed, clamp airway of soluset; add IVF and regulate flow rate of main IVF as ordered. Remove IV label from soluset.				

	Procedure	Done	Observed	Not Done	Remarks
15.	Document in patient's chart and Kardex (of changes in IV rate/time due).				
16.	Observe patient for any untoward effect.				

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