

**SALEM HOSPITAL  
SALEM, OREGON 97309**

<b>Department: Phlebotomy</b>	<b>TITLE: BLOOD COLLECTIONS, VENIPUNCTURE</b>
Area: Phlebotomy	Effective Date: 04/01/96
Authored By: Cindy Humphrey, Diane Duncan	Revised: 09/26/2000, 10/10/03
Policy #: B-7	
Attachments:	Date removed from service:

**PURPOSE:** A procedure for the collection of blood specimens, via venipuncture with minimal trauma to the patient.

**EQUIPMENT:**

There are 3 types of drawing systems, Vacutainer, syringe, and Butterfly, all of which can be used to perform a venipuncture.

**TUBE TYPES:**

- A. Non-additive (Red) 7 ml.
- B. Non-additive (Gold, serum separator tube)
- C. Coagulation (Blue, sodium citrate) 4.5 ml. or 2.7 ml.
- D. Heparin (Green, lithium) 4.5 ml.
- E. Hematology (Lavender, EDTA) 4 ml
- F. Blood Bank (Lavender, EDTA) 6 ml.
- H. Glucose (Gray, Potassium oxalate/sodium fluoride) 5 ml.
- G. Lead (Royal Blue) 7ml see chemistry
- H. HLA (Yellow ACD) 10 ml.
- I. (Green, sodium heparin) 10 ml.

**NOTE:** The tubes with additives need to be filled or dilution factors can compromise the specimen.

**PROCEDURE:**

1. The phlebotomist must wash their hands, prior to attending to the patient, with either soap or water or "waterless soap."
2. Patient identification is made by cross-checking the patient orders against patient armband. See procedure: Positive Patient Identification 2.25.
3. For situations where the patient has an IV running, see "Venipunctures with IV's running (B-8)".

4. Prep the site chosen:
  - A. Average venipuncture - Cleanse the site with 70% alcohol using a circular motion from the intended site of puncture to the periphery.
  - B. Blood culture - Use a "sepp" (2% Iodine Tincture) for blood cultures. Squeeze the ampule until the inner portion breaks and the solution runs into the tip.  
Prep the site in a circular motion, starting at the intended site of puncture and moving to the periphery. **Allow the solution to dry.** The site may be covered with sterile gauze. It is important that the solution dry completely- It is not bactericidal when wet.
  - C. Arterial Blood Gases - Use a "Sepp" swab for drawing ABG'S. The site should be prepped with a circular motion starting at the intended site of puncture and moving to the periphery. **Allow the solution to dry.**
  - D. Blood Alcohols - Use a betadine swab (not the sepps) for drawing a blood alcohol. An alcohol swab must not be used in any portion of the procedure. Apply the betadine in a circular motion from the intended puncture site to the periphery. **Allow the solution to dry.** Patients who are allergic to iodine must be prepped by washing the area. Alcohol must not be used. A soap solution is also available that does not contain alcohol.
5. Organize for proper needle disposal. Vacutainer holders, needles, blood gas syringes and butterflies have a needle protector attached and are safe until disposed. Needles must not be recapped under any circumstances.
6. Apply the tourniquet leaving plenty of room below to perform the venipuncture. (The tourniquet must be released within 1 minute because it becomes uncomfortable and could cause hemoconcentration).
7. Apply a clean pair of gloves in the presence of the patient.
8. Initiate the venipuncture by taking hold of the patient's arm gently. With the index finger and thumb of the 'off' hand (left if you are right handed and right if you are left handed) stretch the skin above and below the vein and hold taut.
9. With the needle at approximately a 15-degree angle from the skin and running in the same direction as the vein, insert the needle with the bevel side up. Palpation after the needle has been inserted is acceptable. This may be needed if the needle is next to the vein and

slight readjustment is needed to enter the vein. The phlebotomist may feel a 'pop' when the needle enters the vein.

10. Proceed with the collection of the specimen(s).
11. When using the Vacationer system carefully push the tubes into the holder puncturing the tube stopper with the needle within the holder and allow the blood to flow into the tube. If collection of multiple specimens is needed the tubes should be placed in and taken out of the vacationer holder gently as not to disturb the needle in the vein. Tubes must be filled in the following order to prevent contamination by anticoagulants to other tubes.
  1. Non-additive tubes (red, non-additive) 7 ml. draw
  2. Coagulation (blue, sodium citrate) 4.5 ml. or 2.5 ml. draw.
  3. Heparin (Green, sodium or lithium heparin) 5 ml. draws.
  4. EDTA-K3 (lavender top) 5 ml., 3 ml., or 2 ml. draws.
  5. Glucose (Grey, potassium oxalate/sodium fluoride) 5 ml. draws

**NOTES:**

The tubes with additives need to be filled to the colored line on the label or dilution factors can compromise the specimen. Immediately after each tube 2 through 5 is drawn invert 5-10 times to avoid clotting.

12. Terminate the venipuncture
  - A. Release the tourniquet.
  - B. Place sterile gauze over the site and remove the needle from the patient's arm, at the same time apply pressure to the site.
  - C. Use tape (paper is the preferred choice) or a Band-Aid to secure the sterile gauze in place. Create a good pressure bandage. Instruct the patient to leave covered for 15 minutes. If the patient is currently taking any anticoagulation medications hold pressure on the site for a couple of minutes to avoid any bleeding or hematoma.
  - D. **Two** Stick limit for each phlebotomist/patient.
13. When distributing the blood into the appropriate tubes if a syringe was used, attach a new needle to the syringe. **Leave the tubes in the phlebotomy tray rack while puncturing them to avoid the possibility of an accidental needle stick.** Distribution should be done in the same order as with the vacationer and should be done quickly and carefully to avoid any possibility of the specimen clotting. Mix well.
14. Dispose of all contaminated supplies by following the *Safe Handling & Disposal of Blood Collection Supplies*".

15. Label the specimens at the bedside according to the *Positive Patient Identification* procedure 2.25 found elsewhere in this manual.
16. Follow *Post Phlebotomy Care (B-6)* procedure found elsewhere in this manual.
17. Hands must be washed after removal of gloves.
18. Return the specimens to the laboratory in a timely manner. Special drawing requirements and times are located elsewhere in this manual.

#### **LIMITATIONS OF PROCEDURE:**

1. Clotted sample in an anticoagulated tube.
2. Hemolyzed specimen.
3. Sample not mixed adequately (clot specimens are an exception).
4. Transporting at an inappropriate temperature (i.e. not placed on ice, not kept at 37 C. See specimen list).
5. Contamination of specimens by anticoagulants if tubes are not filled in the proper order.
6. Sample drawn in the wrong tube type.
7. Samples drawn above an IV- Diluted specimen.

#### **CAUTIONS:**

1. After labeling tubes, recheck each tube for proper identification.
2. All sharps and contaminated objects must be disposed of properly. **Never recap a needle.**
3. The tourniquet must be released within 1 minute. If left on the arm it could cause severe permanent harm to the patient. If a tourniquet must be reapplied it must be after two minutes.

#### **REFERENCES:**

1. National Committee for Clinical Laboratory Standards, Procedures for the Collection of the Diagnostic Blood Specimens by Venipuncture- Approved Standard-4<sup>th</sup> Ed.,, NCCLS publication Vol. 18 No. 7 Villanova, Pa: NCCLS- 1998.

2. Garza and Beca-McBride. Phlebotomy Handbook., 5<sup>th</sup> Ed.  
Appleton-Century-Crofts. East Norwalk, Ct.: 1984

**DISTRIBUTION OF PROCEDURE:**

COM  
DOS  
Employee Health  
Keizer outpatient lab  
Phlebotomy department  
869 Medical Center Drive  
Outpatient/Donor Room  
Urgent Care  
Occ. Med.

<b>PROCEDURE ACCEPTANCE AND REVIEW</b>	
<b>VALIDATED BY:</b>	<b>DATE:</b>
<b>SECTION SUPERVISOR:</b>	<b>DATE:</b>
<b>ADMIN. DIRECTOR:</b>	<b>DATE:</b>
<b>PATHOLOGIST:</b>	<b>DATE:</b>
<b>Reviewed Annually By:</b>	<b>DATE:</b>
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