

**CONWAY REGIONAL HEALTH SYSTEM  
CLINICAL LABORATORY**

**Venipuncture**

**POLICY**

Venipunctures are required to draw large amounts (greater than 2 mls) of blood for tests performed in the laboratory. Refer to the computer generated label for guidance concerning the types of tubes required and the volume of blood to be submitted. The accuracy of tests depends greatly on the quality of the specimen. For this reason, proper specimen collection and handling while in transport to the lab are of the utmost importance.

**MATERIALS**

1. Blood collection tubes. Pediatric tubes may be utilized if problems with sample size are anticipated.
2. Tourniquet. Latex free tourniquets are available for patients with latex allergies.
3. 2x2 gauze or cotton ball
4. Isopropyl Alcohol pads
5. Syringes – 10cc preferred
6. Needles – 21g or less
7. Vacutainers
8. Biohazard disposal container
9. Paper tape or bandage
10. Butterfly needles – 21g or less
11. Gloves.

**SAFETY**

1. Observe universal safety precautions. Observe all applicable isolation procedures.
2. Wash hands prior to and after performing phlebotomy. Dispose of gloves prior to leaving the patient room.
3. Gloves are to be worn during the phlebotomy. Palpation of puncture site may be performed without gloves unless patient skin is broken.
4. No recapping of needles. No bending or breaking of needles.
5. Needles are to be immediately disposed of in biohazard, puncture proof containers.

## PROCEDURE

1. Identify the patient by comparing the patient's full name and medical record number on the request form with the information on the patient's identification bracelet.
2. Assemble the required equipment. Place needles on the syringe or vacutainer, depending on the phlebotomist's preference.
3. Have the patient to close their hand tightly. The veins should become more prominent and easier to find.
4. Select the appropriate vein for venipuncture. The larger and fuller median cubital and cephalic veins are the most frequently used. The veins in the wrists, hands and ankles are also acceptable for venipuncture. Punctures in the feet are to be avoided in diabetic patients. Venipunctures should not be performed in the following areas:
  - ◆ Extensively scarred areas.
  - ◆ Around a hematoma.
  - ◆ Arms receiving IV therapy. If no other veins are acceptable, the specimen may be collected in an arm with an IV, but MUST be collected below the IV so that the specimen is not diluted with IV fluid.
  - ◆ Arm with cannula, fistula, or vascular graft (shunt).
5. Cleanse the venipuncture site with an alcohol pad and allow the area to dry. Cleansing procedure will be different for blood cultures and alcohols. Refer to procedures as contained in the Users Guide to Lab Services.
6. Apply the tourniquet just above the venipuncture site. This makes the vein more prominent and easier to enter. Never leave the tourniquet on for longer than one to two minutes. If a tourniquet must be applied for the preliminary vein selection, it should be released and reapplied after a wait of 2 minutes.
7. Venipuncture procedure using a needle and syringe:
  - A. Attach the appropriate needle to the syringe. Butterfly needles may be used if venipuncture is anticipated to be difficult.
  - B. Place the patient's arm in a downward position if possible.
  - C. Hold the needle in line with the vein.
  - D. Turn the needle so that the bevel side is in the upward position.
  - E. With one motion, push the needle into the vein.
  - F. Withdraw the desired amount of blood by pulling back slowly on the stopper.
8. Venipuncture procedure using vacutainer tubes:
  - A. Attach the appropriate needle to the vacutainer holder.

- B. Tap all tubes containing additives to dislodge the additive from the stopper.
- C. Place the collection tube into the holder. DO NOT puncture or loosen the stopper as this will result in loss of vacuum. See notes below concerning the order in which tubes are to be filled.
- D. Place the patient's arm or other venipuncture site in a downward position while maintaining the tube below the site while the needle is in the vein.
- E. Use the same needle insertion procedure as described in the syringe section above.
- F. With the needle in the vein, grasp the holder and push the collection tube forward until the stopper is punctured by the needle.
- G. Fill the tube until the vacuum is exhausted and the blood flow ceases.
- H. Remove the tube from the holder and immediately mix any tube containing additive. Do not shake tubes. Rotate gently about 3 seconds.
- I. To obtain additional specimen, insert the next tube into the holder and repeat above procedure.

NOTE: If a blood sample is unattainable:

- ◆ Change the position of the needle.
- ◆ Try another tube, the tube in use may not have sufficient vacuum.
- ◆ Loosen the tourniquet.
- ◆ Probing is not recommended. In most cases, another puncture in a site below the first site is advised. Start at the largest vein obtainable.
- ◆ It is advisable not to attempt a venipuncture more than twice on the same patient. Have another person attempt to draw the specimen or notify the physician.

9. Remove tourniquet.
10. Ask the patient to open their hand after enough blood has been collected.
11. Place a folded clean gauze or cotton ball over the venipuncture site and remove the needle slowly. Slip the gauze over the site and apply mild pressure until bleeding has stopped. The use of band-aids, tape, or adhesive strips is not recommended.
12. Fill appropriate tubes for syringe drawn specimens.

13. Tubes are to be filled in the following order.
    - ◆ Culture tubes (blood cultures)
    - ◆ Red top
    - ◆ Blue top
    - ◆ Green top
    - ◆ Purple top
    - ◆ Gray top
  14. Label all tubes with requisition labels, phlebotomist's initials, date and time. If there are no labels, hand-write the patient's name, medical record number, location, phlebotomist's initials, date and time on each tube. Patient pre-printed chart labels may be utilized.
  15. Dispose of all needles and syringes in biohazardous materials disposal containers. Vacutainer holders are reusable.

References: NCCLS, ASH-3, Standard Procedures for the Collection of Diagnostic Blood Specimens by Venipuncture, 1980.

Phlebotomy Handbook, Garza and Becan-McBride, Fifth Edition, 1999.

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10/15/04

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