Several essential steps go into successful specimen collection. This procedure describes the sequential manner in which one would progress through the collection process.

I. Specimen Collection – Blood

A. General Phlebotomy Considerations

1. Since prolonged stasis due to the application of a tourniquet can result in alteration of some chemical values, a tourniquet should be removed from the patient within 1 minute of application.
2. Venipuncture should not be performed while IV solutions are being administered when possible.
3. A syringe that was used to inject IV solutions should not be used for blood collection.
4. Blood samples should be collected in appropriate tube for the test requested. See the Lab Service Manual for details.
5. If a patient has received radioisotope material just before having blood drawn for any radioassay, the test results may not be valid.
6. Phlebotomy trays and supply sources should be replenished and restocked at the end of each shift in preparation for the next shift.
7. Do not place the phlebotomy trays on the patient's bedside table.
8. Avoid discussion concerning the medical condition of the patient or answering any questions regarding what the tests are for. Notify the patient that these types of questions are better answered by his/her physician.

B. Safety Precautions

1. All Edward employees responsible for collecting patient specimens are trained on the proper protocol for handling blood and body fluids.
2. Employee hands are washed or sanitized between each patient by either using a hospital approved hand sanitizer or washing in a sink per hospital policy.
3. Clean gloves are put on prior to blood collection in the presence of the patient.
4. In the event of clothing or skin contamination with blood, the garment or skin must be decontaminated prior to proceeding to the next patient.

C. Blood Volume Considerations

1. It is Edward Hospital practice to minimize the amount of blood collected from a patient for laboratory testing. This is accomplished in the following ways:
   a) The HIS is programmed with rules for combining blood tubes to be collected from each patient when possible.
   b) When possible, the smallest vacutainer tube available is used in collecting blood (ex: pediatric/neonate patient’s will be drawn using pediatric tubes instead of 7ml adult tubes).
   c) Extra vacutainer tubes are not collected on a routine basis.
II. Patient Identification

A. Outpatient and physician office

1. Ask the patient to state their name and date of birth. If the patient is a child or infant, the parent or adult with the child must provide the child's name and date of birth.
2. Confirm the name and date of birth provided by the patient against the test requisition and/or LIS test label.
3. Two unique patient identifiers must be used every time a patient sample is obtained and labeled.

III. Blood Collection - Venipuncture

A. Tourniquet Application and Vein Identification

1. Examine both arms for adequate veins.
2. Avoid using areas with heavy bruising.
3. Tie the tourniquet tightly around the patient's arm, but not so tightly as to cause pain.
4. Do not leave the tourniquet on the patient’s arm for more than 1 minute.
5. If a vein becomes evident about the time the tourniquet should be removed, remove the tourniquet and allow the patient to dangle their arm for several minutes before reapplying the tourniquet and re-palpitating for a vein.
6. Patient’s may be asked to clench their fist several times. Excessive fist clenching can also cause hemoconcentration and should be avoided.

B. Decontamination of the Venipuncture Site

1. Clean gloves are put on prior to blood collection in the presence of the patient.
2. Alcohol swabs must be used for cleansing the venipuncture site.
3. Scrub the site somewhat vigorously and allow the area to dry completely before proceeding with the venipuncture.
4. Do not re-palpitate the area once it is cleansed.

C. Venipuncture

1. Hold the patient’s arm below the venipuncture site with one hand and pull the skin tightly with the thumb to stabilize the vein.
2. Insert the needle quickly and smoothly at approximately a 15-degree angle with skin into the vein. The needle should run in the same direction as the vein and should be inserted with the bevel facing up.
3. As the blood begins to flow instruct the patient to open their fist if it was clenched.
4. Remove the tourniquet upon obtaining venous access or after the blood collection is complete, but prior to withdrawing the needle from the vein.
5. Allow blood to flow into the vacutainer tubes until they are filled completely.
6. If blood flows into the tube, then stops, the needle should be moved slightly forward or backward to re-secure venous access. Probing is not recommended since it is painful to the patient. If this slight movement does not result in the free flow of blood again, remove the tourniquet and look for an alternate site.

7. Upon completion of specimen collection, place a gauze pad over the venipuncture site and remove the needle from the patient’s arm. Using the needle safety device, cover the needle.

8. Apply pressure to the patient’s arm until there are no signs of bleeding from the site.

9. Apply a bandage or gauze with tape to the venipuncture site.

IV. Blood Collection - Finger Puncture

A. Choose a finger that is not cold or swollen; the best choice is the 4th, or ring finger of the non-dominant hand.

B. Gently massage the finger 5-6 times from the base to the tip to aid blood flow.

C. Cleanse the finger with alcohol and allow to air dry.

D. Remove the protective cover from the lancet tip and without touching the tip, make a puncture halfway between the center of the ball of the finger and the side. The cut should be across the fingerprints to produce a large drop of blood.

E. Wipe the first drop of blood away with gauze.

F. Fill the appropriate microcontainers or filter paper cards as necessary. Care should be taken to avoid clotting of specimens requiring whole blood samples.

G. Apply pressure to the puncture and observe that the site is no longer bleeding. Apply a bandage to the site if needed.

V. Blood Collection - Heelstick

A. Pre-warm the heel of the infant for at least 5 minutes using a heel warmer.

B. Cleanse the site with alcohol and allow to air dry.

C. The site of the puncture should be the lateral or medial portion of the planter surface of the heel.

D. Using the lancet device, make an incision on the heel then wipe away the first drop of blood.

E. Fill appropriate microcontainers or filter paper cards as necessary. Care should be taken to avoid clotting of specimens requiring whole blood samples.

F. Apply pressure to the puncture and observe that the site is no longer bleeding. Apply a bandage to the site if needed.

VI. Blood Collection - Butterfly Draws for Coagulation Testing

A. When using a winged blood collection set for venipuncture and a coagulation tube is the first tube to be drawn, a discard tube should be drawn first.

B. The discard tube must be used to fill the blood collection tubing dead space and to assure maintenance of the proper anticoagulant/blood ratio.

C. The discard tube cannot be a red top and must be a blue top because of the additives in the red top.
VII. Vacutainer Tube Draw Order

A. The order in which the vacutainer tubes are drawn is an important consideration due to the different additives contained within the vacutainer.

B. Vacutainer tubes should be collected in the following order:
   1. blood culture vials
   2. blue top – Sodium Citrate
   3. gold top or red top/serum separator
   4. green top - heparin or gel separator tube with heparin
   5. purple top – EDTA
   6. gray top

C. Specimen Label Crosswalk

**VACUTAINER® BLOOD COLLECTION**

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