**Therapeutic Phlebotomy Portable Balance**

|  |  |
| --- | --- |
| **Purpose**  | This procedure describes the operation and maintenance of the Portable Balance that is used exclusively for the weighing of  the blood bag after a Therapeutic Phlebotomy   |
| **Scope**   | This procedure pertains to UPMC Hanover   |
|  **Equipment**  |  * Scale
* Calibrated Weights (One- 500 G, one 200 G and one – 100 G)
* Instruction Manual
* AC Adapter
* Batteries

  |
| **Supplies**  | * Phlebotomy bag
* Gauze
* Water
* Gloves

  |
| **PROCEDURE** | **Step**  | **Action**  |
| Scale inspection and weight verification  | On the day of use, QC the scale with the calibrated weights and record them on the Blood Bag Scale Maintenance and QC sheet.* Wipe off the scale with water and gauze. No harsh chemicals.
* Record the value of the 1-200 G and 1-100 G weights. ( Range: 280 – 320 G)
* Record the value of the 1-500 G weight. (Range: 480 – 520 G )
* Contact the Blood Bank Supervisor with any discrepancies BEFORE performing the phlebotomy.

  |
| **Installation**  | 1  | The Transportation Lock is located under the balance. * Rotate the pointer Left to the “Unlocked Position”

  |
|   | 2  | Use the balance on a firm steady surface, like the floor. **Adjust the leveling feet so the bubble is centered in the circle.**   |
|   | 3  | The scale is powered by batteries or AC Adapter.   |
|   |   |   |
|  **Buttons**  | 1  | **ZERO:** * Short press (when On):  Sets display to Zero
* Short press (when Off): Turns the balance On.
* Long press (when On): Turns the balance Off

  |
|   | 2  | **TARE:** * Place an empty blood collection bag on the balance
* Short press: Enter – This clears the Tare value.
* Long press: Enters User Menu

  |
|   | 3  | **FUNCTION MODE:**             Long press: Selects active Mode   |
|   |   |   |
| **Operation**  | 1  | Turn the Transportation Lock located under the balance to the “Unlocked Position”.   |
|   | 2  | Short press the “Zero” key to turn on the balance.  Place on the floor near the Phlebotomy bed.   |
|   | 3  | Place the 200 G and 100 G weights (300 G +/- 10) on the balance.  Record results on the Maintenance sheet.   |
|   | 4  | Add the one 500 weight to the scale (500 +/- 10).  Record results on the Maintenance Log. Remove all weights and properly store them in their protective containers.   |
|   | 5  | Press and hold **MODE** until “**Weigh**” is displayed.   |
|   | 6  | Place an empty blood collection bag on the balance pan when you are ready to start the phlebotomy.   |
|   | 7  | Press the **TARE** button. Leave the bag on the balance until the completion of the phlebotomy   |
|   | 8  | Record the weight on the Maintenance Log and the Therapeutic Phlebotomy Record that gets sent to the Blood Bank. .  |
|   | 9  |  Visually monitor volume of blood being drawn. **Weight should be between 380-475 G**  The Blood Bank staff will calculate the volume of blood collected can be assessed in terms of gram weight by multiplying the volume collected by the specific gravity of blood (1.053)   |
|   | 10   | Clean the balance pan with water and gauze |
|   | 11  | Press and hold the **ZERO**button to shut off the scale |
|   | 12  | Turn the Transportation Lock to the “Locked Position” |
|   | 13  | Place balance and weights in their protective box |
|      |   |  |
| **Initial Calibration**  | **Step**  | **Action**  |
|   | 1.  | All Calibrations will be performed by the Blood Bank staff both initially and on a yearly basis.  |
|   |   |  |
|   |   |
|   |   |
|  **References**  |   Portable Balances Instruction Manual AABB Technical Manual, 18th Edition.  Bethesda, MD 2014.    |

  **Therapeutic Phlebotomy Procedure**

|  |  |
| --- | --- |
| **Purpose**  | Therapeutic phlebotomy is effectively used in the treatment of both polycythemia and hemochromatosis.  The process removes between 250-500 mL of blood from the patient at one time.  Phlebotomy provides a safe effective means of correcting erythrocytosis.  It is useful therapy when there is a need to acutely lower the hematocrit/iron.  With each unit removed (250-500 mL), approximately 250 mg of iron is removed. The physician monitors the frequency and the volume with regards to the patient’s hematocrit and/or iron levels.   |
| **Scope**  **Policy**  | This procedure pertains to UPMC Hanover  The Outpatient Phlebotomy Department at UPMC Hanover, Main Hospital, provides therapeutic phlebotomy procedures to inpatients or outpatients as requested by physicians.  **The initial physician request for therapeutic phlebotomy must be approved by the Laboratory Medical Director and include all of the following:** * The patient’s diagnosis
* The blood volume to be removed
* The Hemoglobin (Hgb) and/or Hematocrit (Hct) at which to perform/discontinue the procedure
* The frequency of repeating the procedure, if needed, until the desired Hgb/Hct has been obtained

This procedure is only scheduled Monday through Friday at 1030 am (as trained staff are available to perform the procedure).  The Laboratory Medical Director accepts responsibility for the patients undergoing the therapeutic phlebotomy.  In the event of an adverse reaction, the phlebotomy staff will call a “Condition Care” where trained UPMC Hanover Emergency Response Staff will assume care and treatment of the patient.   |
| **Equipment**  | * Hemostat
* Cot & pillow
* Blood pressure cuff
* Scale
* Calibrated Weights
 |
| **Supplies**  | * Phlebotomy bag
* Alcohol preps
* Gauze
* Gauze bandage wrap
* Gloves

  |
| **PROCEDURE** | **Step**  | **Action**  |
| Scale inspection and weight verification  | On the day of use, QC the scale with the calibrated weights and record them on the Blood Bag Scale Maintenance and QC sheet.* Wipe off the scale with water and gauze. No harsh chemicals.
* Record the value of the 2-200 mg weights. ( Range: 380 – 420 mg)
* Record the value of the 2-200 mg and 1-100 mg weights. (Range: 480 – 520 mg)
* Contact the Blood Bank Supervisor with any discrepancies BEFORE performing the phlebotomy.

  |
|   | 1  | Obtain a copy of the patient’s physician request for the procedure.   **This information must be clear BEFORE starting the procedure.****Consult the physician or physician’s office staff to clarify any questionable order.**   |
| Request and Consent  | 2  | **The form *must* contain the following:** 1. Request for “therapeutic phlebotomy”
2. Patient’s clinical diagnosis
3. Amount of blood to be removed in mL
4. The Hgb and/or Hct at which to perform/discontinue the procedure
5. If the request is intended to be a “standing order,” it must contain the frequency of repeating the procedures.

  |
|   | 3  | **IF THIS IS THE FIRST REQUISITION OF A STANDING ORDER or A REQUEST FOR A SINGLE Therapeutic Phlebotomy PROCEDURE, the phlebotomist performing the therapeutic phlebotomy, MUST bring the order to the Laboratory Medical Director (or designee) for approval PRIOR to performing the phlebotomy!**(See instructions below.)   |
|   |   |   |
| Preliminary Testing  | 1  | Locate the order in EPIC Beaker or the manual request.  |
|   | 2  | NOTE:  An **H&H**(Hemoglobin & Hematocrit) will *automatically*be included in the Therapeutic order.  If the physician has requested a full CBCAD (or other CBC test), then the HH should be deleted and the CBC test ordered instead.   |
|   | 3  | Examine the request for any **additional lab orders** (i.e. FE, BMP, etc)   |
|   | 4  | **Draw the preliminary testing** (H&H plus any pre-procedure lab tests ordered by the physician) per standard venipuncture procedure. NOTE:  Only hemoglobin or hematocrit testing is STAT for possible phlebotomies.  Iron and iron testing are not performed STAT.  Iron tests are usually monitored after a phlebotomy procedure is completed.   |
|   | 5  | Ask patient to wait in the outpatient waiting area until STAT testing is completed.   |
|   | 6  | **Label the specimen** as a STAT and **hand deliver**it to a technologist in the Hematology area of the Core Lab.   |
|   | 7  | After testing is complete, the technologist will print a copy of the results from the DxH. * Hand the printout to the phlebotomist. They will take the needed documentation to the Medical Director, if applicable.

  |
|   | 8  | **If:**         This is the patient’s *initial* therapeutic phlebotomy request (including the first request of a new standing order),  **Then:**   Take both the **original requisition and the H&H results to the Medical Director for approval.**He or she will sign, date, and time the original requisition (after reviewing the physician orders and H&H results).  Then take both documents back to the OP Phlebotomy area. **OR** **If:**         This is a subsequent phlebotomy performed as part of a *valid* standing order, **Then:**   Take the H&H results back to the OP Phlebotomy area.   |
|   | 9  | Using the patient result printout, the clin tech will log the H&H result in logbook.  ***Compare at least 2 patient identifiers on the original requisition and the result printout for accuracy prior to entering results into logbook.***   |
|   | 10  | Notify patient whether or not phlebotomy procedure is necessary as outlined by the ordering physician’s criteria.   |
|   | 11  | **If the procedure is NOT needed,** DELETE the PHLEB test in the computer system.  The computer will require you to enter an appropriate deletion comment.  (For example, “patient H&H did not meet physician criteria.”)  **If the procedure IS needed,** continue as directed below:   |
|   | 12  | Make a copy of the Medical Director-approved request and file it in the Therapeutic Phlebotomy logbook.   |
|   | 13  | Explain the procedure to the patient.  Answer any questions the patient may have.   |
|   | 14  | Instruct patient to sign for consent to perform the procedure.   |
|   | 15  | File signed consent in the Therapeutic Phlebotomy logbook.   |
|   |   |   |
|   | **Step**  | **Action**  |
| Phlebotomy Procedure  | **Observe the patient for adverse reactions****during and immediately following the procedure.****IF ANY ADVERSE REACTIONS OCCUR, IMMEDIATELY DISCONTINUE THE PROCEDURE AND CALL X2999, REPORTING A “CODE CARE” IN THE OUTPATIENT LABORATORY.**Adverse Reactions**may include (but are not limited to):**  |
| * Nausea
* Vomiting
* Dizziness
 | * Fainting
* Hematoma
* Seizure

 |
|   | 1  | **Identify patient by asking them to state their full name and birth date.  Confirm information with specimen request and computer labels.**   |
|   | 2  | Position patient on cot with head raised.  |
|   | 3  | Remove the bag and needle from the sterile packaging and inspect for visible damage.  |
|   | 4  | Ensure luer caps and connectors are secure and clamps are set to desired positions, ensure air vent cap on bag is open.   |
|   | 5  | Secure the phlebotomy bag onto its holder.  |
|   | 6  | Check to make sure that the needle wing protector is securely locked into the stopper.  |
|   | 7  | Apply tourniquet or blood pressure cuff (inflated to 60-80 mm Hg) to arm.  Palpate vein. Release tourniquet/cuff once desired vein is located.  |
|   | 8  | Thoroughly prepare and clean the venipuncture site.  |
|   | 9  | Reapply blood pressure cuff and inflate to 40 mm Hg.  Have patient open and close hand until previously selected vein is again prominent.  After the skin has been prepared, it must not be touched again.  |
|   | 10  | Uncover sterile needle and perform venipuncture immediately.  Once the bevel has penetrated the skin, palpation of the skin above the needle stem may be performed with a gloved finger, provided the needle is not touched.  Tape the tubing to the patient’s arm to hold needle in place, if appropriate.  |
|   | 11  | Open clamps on needle set and large bore extension tube to facilitate flow.  |
|   | 12  | Instruct patient to open and close their hand slowly every 10-15 seconds during collection.  Blood flow should remain fairly brisk.  Repositioning of the needle may be necessary to allow continuous flow on a difficult stick.  |
|   | 13  | Place the blood collection bag on the scale. Zero the scale. Visually monitor volume of blood being drawn. Volume should be between 380-475 mL The volume of blood collected can be assessed in terms of gram weight by multiplying the volume collected by the specific gravity of blood (1.053)   |
|   | 14  | **When other blood tests must be collected before stopping the procedure:**1. Ensure blood collection holder (BCH) and multi sample luer adapter (MSLA) are securely connected.
2. Close clamp below Y of tubing.
3. Securely connect BCH/MSLA to female luer at end of extension line.
4. Open clamp closest to BCH/MSLA and female luer connection.
5. Insert a vacutainer tube into the BCH firmly, continue this process for all tubes to be collected.
6. Once collection is complete, close clamp closest to adapter.
 |
|   | 15  | After desired amount has been drawn, close the clamp nearest to the venipuncture site.  Release the blood pressure cuff and deflate cuff. |
|   | 16  | Remove needle from the arm, apply pressure directly to the site with gauze.  Have patient raise arm, elbow straight, and hold gauze firmly over the site with the other hand. |
|   | 17  | Immediately discard the needle assembly, tubing, and filled phlebotomy bag into a sharps biohazard container. |
|      |   |  |
|   | **Step**  | **Action**  |
| Post Venipuncture  | 1  | Check the venipuncture site.  Apply a pressure bandage once bleeding has stopped.  Review the post-phlebotomy instructions with the patient.  |
|   | 2  | Document any adverse reactions and action taken on therapeutic log sheet. |
|   | 3  | Keep the patient ten to fifteen minutes, or until they feel all right to leave the laboratory.  Orange juice and water may be offered to the patient if needed. |
|  Documentation  |   |  |
|   | **Step**  | **Action**  |
|   | 1  | Document on the “Therapeutic Phlebotomy Identification Form” the date, H&H, volume removed, lot number of the phlebotomy bag and site of venipuncture.  |
|   | 2  | On the Therapeutic Phlebotomy ID Form document: * Place chart label
* Requesting Physician
* Date
* Volume removed
* Phlebotomist name
* Send completed form to Blood Bank.
 |
|   |   |
| **Procedure notes**  | * In general, therapeutic phlebotomy carries the same possible risks as with any blood donation such as nausea, vomiting, dizziness, fainting, hematoma (bruise from blood leaking under skin at the needle puncture site), seizures or local infection.  Patients will be observed for adverse reactions during and immediately after the procedure.

 * A ‘Condition Care’ MUST BE CALLED for any patient who develops an adverse reaction to the therapeutic phlebotomy.  The nursing supervisor, accompanied by ED nursing staff, will arrive post haste in the laboratory when the condition is called using the EMERGENCY extension 111.  The staff will closely monitor the patient to determine any specific needs before allowing discharge.

 * Only the *initial* therapeutic phlebotomy order must be reviewed by the Medical Director (or designee).  If the patient is to have a standing order, the subsequent orders (up until the 6 month standing order time frame has expired) may be performed without Medical Director review.

 * Clinical technicians perform scheduled therapeutic phlebotomies at the Main Hospital Outpatient Laboratory area only.

 * Procedure scheduling is at the discretion of available trained staff, typically Monday through Friday at 1030. Exceptions to scheduling are permitted, as long as a trained clinical technician is available to perform the procedure and the initial request has been approved by the Medical Director.

  * Please explain to the patient, as needed, that the Therapeutic Phlebotomy procedure may be delayed due to high volume testing in the Hematology Lab or availability of the Medical Director to review the initial order.

   |
| **References**  | Clinical Hematology and Fundamentals of Hemostasis, D Harmening Pittiglio, Philadelphia, PA 1988. AABB Technical Manual, 18th Edition.  Bethesda, MD 2014. CardioMed Supplies Inc “Instruction for Use” insert for phlebotomy bag set.   |
| **Related Documents**  | * Routine Blood Specimen Collection for Adults and Children
* The Care of Fainting Patients in the Outpatient Phlebotomy Department

      |

**Therapeutic Phlebotomy Record** **UPMC  Hanover Laboratory**

300 Highland Ave. Hanover PA, 17331

Date and Time: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Patient Hct:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

\*\***Amount should be between 380 – 475 g**

\*\*Amount :\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Drawn by:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Blood Bank Technologist**

\*\*Amount x 1.053 = \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_mL

Entered in Sunquest by:\_\_\_\_\_\_\_\_\_\_\_\_\_\_

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Therapeutic Phlebotomy Record** **UPMC Hanover Laboratory**

300 Highland Ave. Hanover PA, 17331



Date and Time: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Patient Hct:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

\*\***Amount should be between 380-475 g**

\*\*Amount -  \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Drawn by:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ **Blood Bank Technologist**

\*\*Amount x 1.053 = \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_mL

Entered in Sunquest by:\_\_\_\_\_\_\_\_\_\_\_\_\_\_