



TECHNICAL PROCEDURE

TITLE: FINGERSTICK, CAPILLARY			
PROCEDURE NUMBER: SC 010.3			
Performing site	<input type="checkbox"/> X SYSTEM <input type="checkbox"/> UCMC LAB / POC <input type="checkbox"/> WCH LAB / POC <input type="checkbox"/> DRAKE LAB / POC	<input type="checkbox"/> DEACONESS <input type="checkbox"/> DRAKE LTAC <input type="checkbox"/> OUTREACH <input type="checkbox"/> PATHOLOGY	<input type="checkbox"/> WEST CHESTER HEM/ONC <input type="checkbox"/> STUDENT HEALTH
SITE EFFECTIVE DATE: 12/15/14		SUPERSEDES: 11/1/12	RETIRED DATE:
WRITTEN/REVISED BY: Anthony R. Jackson, BA, PBT(ASCP)			DATE: 12/1/2014
MEDICAL DIRECTOR: signature on file			DATE: on file
MEDICAL DIRECTOR: signature on file			DATE: on file
Technical Director/Clinical Consultant: not applicable			Date: not applicable

BIENNIAL REVIEW (SIGNATURE / DATE)		

REVISION HISTORY (see retired versions for prior summary of changes)		
VERSION	DATE	SUMMARY OF CHANGES
SC010.1	7/01/10	Addition of UC Health Logo. Removed references to non UC Health laboratories. Associate review not required.
SC010.2	11/1/12	Changed logo to UC Health Lab logo. Associate review not required.
SC010.3	12/15/14	Addition of labeling requirements. Mobile Care Phlebotomy initialing exemption.

I. Purpose:

Knowledge of the proper techniques to be used when performing a skin puncture is necessary to assure collection of an adequate blood specimen that is suitable for testing with a minimum of trauma to the patient.

Finger puncture is performed on adults when there are no accessible veins, to save veins for other procedures such as chemotherapy, when the patient has thrombotic tendencies, and certain bedside and home testing procedures such as glucose monitoring.

Finger puncture is the preferred method of obtaining blood from children over 1 year of age. A heel stick is the preferred method for collecting blood from children under 1 year of age. Obtaining blood from young children by venipuncture may be difficult, may be potentially hazardous and obtaining large quantities of blood may result in anemia. Puncturing deep veins in children may cause cardiac arrest, hemorrhage, venous thrombosis, and reflex arteriospasm, damage to surrounding tissues or organs, infection and injury from restraining the infant or child during the collection procedure.

CAUTION: All specimen material should be considered potentially hazardous and thereby handled according to practices of Universal Precautions. Use of proper personal protective equipment (i.e. Lab coats, gloves) must be used for procedures in which exposure to blood or other potentially infectious material is reasonably anticipated to occur.

II. Responsibility:

Associates performing a capillary finger puncture,

III. Materials:

Gloves
Alcohol Prep Pad (70% isopropyl)
Gauze pads (2 x 2)
Warmer device or warm clothe
Sharps container to dispose of used lancet
Micro collection tubes
Slides (if applicable)
Disposable gloves
Sterile automated skin puncture device (lancet)

IV. Procedure:**A. Prepare for specimen collection**

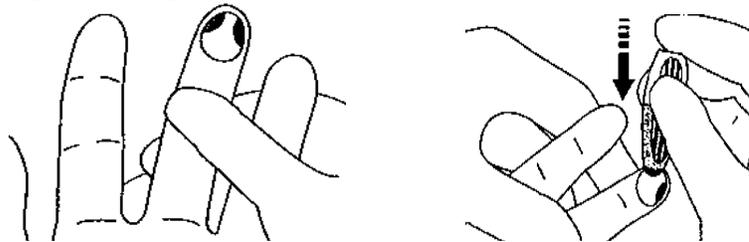
1. Refer to *Venipuncture, Adult* (SC004) and *Mobile Care Phlebotomy* (SC077) for detailed information.
2. Policies can be located on the UC Health Sharepoint site or in the Specimen Collection manual located in the laboratory.

B. Select a capillary puncture site

1. Select a finger that is not cold, cyanotic, bruised, cut, swollen, or has a rash.
2. Use the non-dominant hand.
3. Do not puncture the index finger which is more callused and used by the patient frequently and the fifth or little finger because the amount of tissue between skin surface and bone is the thinnest in these fingers.
4. Select the central palmar surface of the fingertip section of the **fourth** (ring) finger first, followed by the **third** (middle) finger. The puncture should be made at the thickest part of the finger (not the sides or extreme tip where the tissue is not as thick).
5. Place a chemical warmer or warm washcloth on the finger for approximately 3-5 minutes, to increase the blood flow to the area by seven fold.
6. Gently massage the finger five or six times from the base to the tip of the finger to aid in the blood flow.
7. Cleanse the finger with an alcohol pad and allow to air dry. Alcohol residue on the finger may cause a sting sensation and hemolysis of the red cells. Alcohol will also prevent formation of rounded drops of blood.
8. Betadine should not be used for skin puncture because it may lead to falsely elevated levels of potassium, phosphorous and uric acid.

C. Performing the Skin Puncture

1. Remove the lancet from the protective package. Pull off protective tab of lancet and place in trash receptacle.
2. Hold the patient's finger firmly with one hand and place the lancet on the finger perpendicular (across the fingerprint). This will allow the blood to form a bead or drop that is easily collected. If the puncture is made parallel to the fingerprint, the blood will run down the finger, making the collection a difficult procedure.



3. To activate the lancet, press lancet firmly against the puncture site. Do not remove the device from the site until an audible click is heard.
4. Wipe the first drop of blood with gauze. This will remove any fluids or tissue that may contaminate the sample.

5. Gently massage the finger from the base to tip. Do not squeeze or milk the finger as this may cause the sample to hemolyze creating erroneous test results.
6. Collect the desired amount for testing.
 - a. Touch the “scoop” of the micro collection tube to the drop of blood and let the drop of blood run down the walls of the tube.
 - b. Occasionally, tap the tube gently to encourage the blood to settle to the bottom of the tube. Do not use a “scooping” motion against the surface of the skin. Scraping against the skin activates platelets and may also cause hemolysis.
 - c. Fill tubes to the proper volume. For EDTA tubes, fill between 250-500 uL.
 - d. Cap micro collection tubes with the caps provided and mix additive tubes by inversion 8-10 times.
 - e. When finished, apply pressure to the site with gauze until bleeding has stopped. Keep the site elevated.
 - f. Dispose of the contaminated lancet in the sharps container.
 - g. Label all tubes with name, date of birth, date, time, ID number or medical record number, and phlebotomist’s initials.
 - **NOTE:** Mobile Care Phlebotomy (MCP) samples have the collector identity automatically embedded in the collection process and do not require the collector to provide initials or a signature on the tube label.
 - h. If insufficient sample was obtained because the blood stopped flowing, the puncture may be repeated at a different site, using a clean lancet.

D. Tests that cannot be performed by capillary puncture

Some tests cannot be performed on a capillary sample. Examples: ESR (erythrocyte sedimentation rate), coagulation tests, blood cultures, high volume requirements.

E. Order of Draw for Capillary Specimens:

1. Blood gas
2. Slides/smears
3. EDTA micro collection tubes
4. Other additive micro collection tubes
5. Serum micro collection tubes

F. References

1. CAP General Checklist, April 2014
2. Procedures and Devices for the Collection of Diagnostic Blood Specimens By Skin Puncture; Approved Standard – Fifth Edition. CLSI H4-A5 Vol. 24, No. 21.
3. BD Microtainer Lancet
4. Phlebotomy Handbook, Blood Collection Essentials, Garza & Becan-McBride 7th edition, 2005.