

	Newborn Screen and Hemoglobin Electrophoresis OP-306-23	Dept:	Outpatient Phlebotomy 324306
		Effective Date:	February, 2019
		Revised Date:	
		Contact:	Rinard Howard
Name & Title: Gregory Pomper, MD Medical Director		Date:	
Signature:			

1) General Procedure Statement:

- a. **Purpose:** Newborn Screening (NBS) is the practice of testing every newborn for harmful or potentially fatal conditions that are not otherwise apparent at birth; including newborn blood spot screening, hearing screening, and pulse oximetry screening for Critical Congenital Heart Disease (CCHD).
- b. **Responsible Department/Scope:**
 1. Procedure owner/Implementer: Outpatient Phlebotomy
 2. Procedure prepared by: Rinard Howard, MHA PBT – ASCP
 3. Who performs procedure: Outpatient Phlebotomy staff

2) Newborn Screen/ Hemoglobin Electrophoresis :

1. The newborn screen will be completed on all newborns ideally at 24 hours plus one minute of age or immediately prior to discharge, whichever comes first. Blood spot specimens will be collected on the NBS filter paper.
2. If the initial specimen for an infant is collected prior to 24 hours of age and before the infant has been discharged, the infant’s parents must be notified that a repeat screen at 3-5 days of age is required. They may return to the birthing hospital for recollection of the specimen or they may choose to return to their primary health care provider or a local county health department for collection. Document where the family indicates they will go for collection of the repeat screen.
3. Hemoglobin Electrophoresis will be performed at the request of your healthcare provider. The form should come to the laboratory with all information completed by the provider. The phlebotomist should use a push button blood collection kit (Butterfly needle) and a syringe to collect the specimen from the adult patient.

3) Procedure:

1. Appropriately greet the patient
 - By Last Name
 - By the ticket number pulled
2. Phlebotomy Technician ask the patient to state their full name and date of birth (DOB)
 - If patient is a minor child or cannot answer for themselves the parent/guardian will answer on their behalf
3. Phlebotomy Technician properly identifies self
4. Phlebotomy Technician obtains the NBS form and reviews it to make sure
 - Ensure it has been completed by the patient's healthcare provider
 - Ensure the expiration date has not passed
5. Prepare the site and collect the blood spot specimen:
 - a. Wash hands vigorously.
 - b. Confirm identity of infant.
 - c. Warm site with commercial heel warmer or warm, moist cloth – not to exceed three minutes.
 - d. Wearing powder-free gloves, cleanse infant's heel with appropriate antiseptic solution indicated for infant's gestational age.
 - e. Allow heel to air dry completely.
 - f. To obtain sufficient blood flow, puncture the infant's heel at the most medial or lateral portion of the planter surface of the heel with a sterile lancet or heel incision device.
 - g. Gently wipe away first blood drop with sterile gauze pad. Allow another large blood drop to form.
 - h. Lightly touch filter paper to large blood drop. Allow blood to soak through and completely fill circle with single application of blood. (*To enhance blood flow, apply gentle intermittent pressure to area surrounding puncture site*). Apply blood to one side of filter paper only and ensure the blood soaks through the paper to the other side before moving on to the next filter paper circle. Do not contaminate the filter paper by touching the specimen or the preprinted circles with your fingers.
 - i. Although not the preferred method, applying blood collected in a sterile/clean nonheparinized tube onto the preprinted circles of the filter paper is an acceptable alternative to applying the blood directly from the heel puncture site.
 - Fill remaining circles in the same manner. If blood flow is diminished, repeat heel stick. After the specimen is collected, elevate the infant's foot and, using sterile gauze, briefly apply gentle pressure to the puncture site until the bleeding stops. Do not apply adhesive bandages.
 - j. **Blood spots must air-dry horizontally on a nonabsorbent open surface for at least three to four hours at ambient temperature and away from direct sunlight and moving sources of air. Blood spots on**

the filter paper should not be heated, stacked, or allowed to touch other surfaces during the drying process.

- To assist in the drying process, use the protective cover by simply elevating the filter paper to gently rest on the edge of the protective cover.
 - After drying, the protective cover should be placed over the blood spots to prevent contamination.
 - To avoid cross-contamination, do not allow filter paper blood spots to come into contact with each other.
6. Once the specimen has dried for the specified time properly package the form and have it transported to the Send-Out Lab department to be properly shipped to State Testing Facility

4) Collection Errors:

- Do not use tubes or syringes with heparin in them
- Do not use tubes or syringes with EDTA in them

Note: This could lead to errors in test results

5) Training:

NC requires that anyone collecting this test should complete the online training once a year.

- The training can be found on the NC State Laboratory of Public Health website (Newborn Screening Form Training <https://slph.ncpublichealth.com/newborn/SpecimenCollection.asp>)
- MTS training website – Assigned by Outpatient Phlebotomy Manager

6) Related Procedures:

Outpatient Blood Collection

Outpatient Blood Collection Adverse Reactions

7) References:

State Lab, NCDHHS. “Newborn Screening: Resources and Updates.” *Newborn Screening*, 27 Sept. 2018, slph.ncpublichealth.com/newborn/resourcesupdates.asp.

8) Attachments:

Newborn Screen Form

Hemoglobin Screening Form

9) Revised/Reviewed Dates and Signatures:

Reviewed/Revised Date: _____ By: _____
(Medical Director/Designee)

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