

Newborn Screening (NBS) Guidelines for NICU and Special Care Infants

- If an infant is unlikely to survive, an attempt should be made to collect the specimen prior to death. If infant expires prior to newborn screening, complete a missed newborn screen form and fax to 614-644-4648.
- **Transfusion**
 1. Pre-transfusion specimen
 - Collect a pre-transfusion specimen even if infant is less than 24 hours of age.
 - If the infant is over 24 hours of age at time of the pre-transfusion specimen, then the need for additional specimens is dependent on the results of the pre-transfusion specimen.
 2. Post-transfusion specimen
 - A post-transfusion specimen is required if no pre-transfusion specimen was collected or if the pre-transfusion specimen was collected before 24 hours of age.
 - Collect a post-transfusion specimen between 24 hours and 5 days of age (preferably between 24 and 48 hours of age). If possible, collect post transfusion specimen at least 24 hours after transfusion.
 3. If no pre-transfusion specimen was collected (or transfusion occurred in utero)
 - Collect a specimen between 24 hours and 5 days of life (preferably between 24 and 48 hours of age).
 - A repeat specimen should be collected 30 days* following the final blood transfusion, **OR** obtain quantitative Biotinidase, IRT, and GPUT 30 days following the final blood transfusion .
 - Obtain a hemoglobin electrophoresis or HPLC 60-90 days following the final blood transfusion
 4. ECMO
 - If possible, obtain a NBS prior to initiation of ECMO even if infant is less than 24 hours of age.
 - Collect a specimen between 24 hours and 5 days of life (preferably between 24 and 48 hours of age).
 - Additional screening should be by the recommendation of the attending physician.
- **TPN or Amino Acid / Carnitine enhanced formula**
 1. Collect an initial specimen between 24 hours and 5 days of age (preferably between 24 and 48 hours of age) regardless of TPN status.
 2. The need for additional specimens is dependent on the results of the initial specimen. If multiple amino acids are elevated on the initial specimen, collect a repeat specimen at least 3 hours after TPN has been discontinued.
- **Transport**
 1. If no transfusion is required, the facility caring for the infant at 24 hours of age should collect the newborn screening specimen.
 2. If an infant requires a transfusion prior to 24 hours of age, the facility performing the transfusion should assure that a pre-transfusion specimen is collected. The facility caring for the infant 24 hour after the transfusion should collect the post-transfusion specimen.

Follow-up of screening results

- **17OHP / CAH positive:**
 1. Examine infant for signs of congenital adrenal hyperplasia (CAH).
 2. If CAH is not suspected based on exam, collect a repeat NBS specimen within 10 days of notice.
 3. If CAH is suspected based on exam, perform diagnostic 17OHP level and refer to endocrinology.
- **Thyroid**

A thyroid panel is recommended prior to discharge on all special care infants regardless of screening results. The age at which the thyroid panel is performed is at the recommendation of the attending physician.
- **Report all diagnostic results to ODH**

The responsibility for follow-up testing and notification of diagnostic test results to ODH rests with the primary care providers (PCP). For infants in the hospital, the attending physician is considered the PCP.

* ODH does not provide normal ranges for children >7 days of age which may generate at risk reports on results otherwise normal for age levels.