

Special Circumstances in Newborn Screening

Transfusions + samples collected at less than 24 hours of life

It is appropriate to collect a blood spot specimen at less than 24 hours of age in these instances:

- Prior to the transfusion of blood products
- When death is imminent
- Prior to early discharge
- Prior to transfer to another facility

Specimens collected prior to 24 hours of age are invalid for endocrine and amino acid screening. In this situation a repeat newborn screening (NBS) sample will need to be collected when baby is greater than 24 hours of age.

The administration of blood products before collection of the initial newborn screening sample invalidates certain screening results. Therefore, every effort should be made to collect a NBS specimen prior to transfusion of blood products (see above), however if the first specimen is collected after a transfusion:

- An additional NBS specimen must be collected at greater than 48 hours post transfusion for Severe Combined Immunodeficiency (SCID) screening.
- An additional NBS specimen must be collected at 120 days post transfusion for Biotinidase Deficiency, Galactosemia, and Hemoglobinopathy screenings.

Circumstance	Screening is invalid for	Action Needed
Infant was transfused prior to collection of their initial NBS	<ul style="list-style-type: none"> • Biotinidase Deficiency (BIO) • Galactosemia (GALT) • Hemoglobinopathies (Hgb) • Severe Combined Immunodeficiency (SCID) 	<ul style="list-style-type: none"> • Collect a repeat NBS at 48 hours post transfusion (for SCID) • Collect a repeat NBS at 120 days post transfusion for BIO, GALT, and Hgb
Initial NBS was collected at less than 24 hours of life	<ul style="list-style-type: none"> • Endocrine • Amino Acids 	<ul style="list-style-type: none"> • Collect a repeat NBS when infant has reached > 24 hours of life