

**Tennessee Department of Health  
Women's Health & Genetics**

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[Newborn Hearing](#)  
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**State Holidays (Jul-Sep)**

July 4 Independence Day  
Sept 1 Labor Day

**Newborn Screening results: Heat-Affected, Unsats, and Batching**

It's that time of year! The HEAT of summer is here and it can AFFECT newborn screening results.

Tips to beat the heat:

- Do NOT put in outside metal receptacles at the post office
- Mail inside the post office
- Use priority or overnight mail, if unable to use courier service



many of the genetic disorders can lead to mental retardation, and even death. Yet timely treatment can be as simple as a diet change and/or medications.

**BATCHING—What Is It?**

Batching is holding specimens and sending them in bulk.

- All specimens should be mailed daily and within 24 hrs of collection

Batching specimens can lead to delayed treatment, and increases the risk of altered results, and unsatisfactory specimens.

Time saving tips for quicker f/u:

- Train all staff about newborn screening (NBS) and collection.
- Make sure the filter card is filled out completely and accurately: Include correct date and time of collection, feeding status, phone numbers, addresses, provider, transfusion date
- Notify NBS f/u of PCP changes immediately if abnormal or unsatisfactory
- Send all f/u including lab results to NBS program
- Notify NBS f/u program of an infant's death immediately

**UNSATS and ABNORMALS**

Time is critical when it comes to newborn screening follow-up (f/u). If untreated,

## Newborn Hearing Screening

**Claire's Law  
Newborn Hearing Screening  
Effective July 1, 2008**

- Mandates hospitals to conduct newborn hearing screening prior to discharge and home births prior to one month of age
- Mandates insurance to cover newborn hearing screening



Claire



**Meet:**  
Mark Gaylord, MD, Neonatologist  
University of Tennessee Medical Center  
American Academy of Pediatrics—Tennessee  
Chapter Champion for Newborn Hearing

The mission of the Department of the Health is to promote, protect, and improve the health of persons living in, working in, or visiting the state of Tennessee.

For additional information contact Jacque Cundall RN, BSN, Newborn Hearing Coordinator by phone: 615-262-6160 or email: [Jacque.Cundall@state.tn.us](mailto:Jacque.Cundall@state.tn.us)

## *Tennessee Newborn Screening Program*

### **Common Causes of Unsatisfactory Specimens**

Technologists closely examine each filter card for quality and quantity before performing tests. A satisfactory specimen is a drop of whole blood applied evenly and allowed to soak through the filter card and can be seen clearly with no white showing through on the other side. Preferably these spots should be large enough to punch out **six 1/8 inch discs** with no white areas. Both sides of filter card should look the same after collection.

Unsatisfactory Reason	POSSIBLE CAUSE
>6 months	Infant greater than 6 months of age at time of collection
<24 hours	Specimen collected before the infant was 24 hours of age
>10 days	Specimen received greater than 10 days after the date of collection Delay in the U.S. Postal service or a delay in the hospital mail service **Mail specimens within 24 hours of collection
Accident	Laboratory Accident
Altered Card	Use of capillary tube or syringe to apply the blood can scratch the filter card Rubbing the spot when it is still wet Pressing the heel to the filter card during the collection process
Both Sides	Applying blood to both sides of the filter card (Recognized by holding specimen up to a light and seeing shadows)
Cells & Serum Separated	The usual cause is squeezing the heel during the specimen collection Waiting too long for the drop of blood to form or by clotted blood Applying blood with a capillary tube device, blood not well-mixed
Clotted Specimen	Improper puncture Application of blood with a capillary tube device Waiting too long for a drop of blood to form
Contaminated	Specimen contaminated with alcohol, water, formula, urine, or hand lotion, etc
Detached	Blood spot filter paper detached from the information portion of the card
Filter Paper Expired	Specimen collected on expired filter paper
Heated	Too long in transit, especially during the summer Heating a specimen to dry it **Heat and humidity can affect test results **Will appear much darker than usual
Inaccurate Information	Information on form was inaccurate or incorrect (for example: wrong date of birth, and/or time of collection)
Incomplete Information	All or part of the blanks of the form were not filled out completely (for example: missing date and/or time of collection)
No Blood	Form received with no blood on filter paper
Nonuniform	Applying many small drops of blood to each circle Applying blood with any type of capillary tube Touching the blood drops when they are wet Uneven soaking through the filter card caused by exposure to moisture Glove powder touching filter card area before collection The use of hand creams or lotions Contaminated surfaces with any of the above contaminants
Poly Bag	Specimen received in a sealed poly bag, plastic zip lock bag, plasticene envelope, or plastic shipping bag
Quantity Not Sufficient	The drops of blood are too small Improper use of lancet or dropping blood from a capillary tube device
QNSCOM	Quantity not sufficient to complete testing (Some tests could not be complete due to insufficient blood)
Supersaturated	The drops of blood are too large The drops of blood overlap or touch one another The filter card is pressed against the puncture site The blood is dropped in very large drops from a capillary tube