



Connecticut Newborn Screening Blood-Spot Specimen Collection Guidelines



CONNECTICUT NEWBORN SCREENING PROGRAM • April 2020

Newborn Screening Specimen (Filter Paper) Card

The Connecticut Newborn Screening Program's specimen (filter paper) cards come in various colors. It is important to check the expiration date located on right side beneath the circles on the filter paper. Specimens submitted on an expired card will be deemed unsatisfactory for testing. Collection instructions are located on the back of the card. It is important to accurately complete all information on the front of the card, especially the date and time of birth, estimated gestational age (EGA), birth weight and date and time of collection. This information is used in the interpretation of results. The information recorded on the card is also recorded in the CT Newborn Screening Program database (Maven) where available.

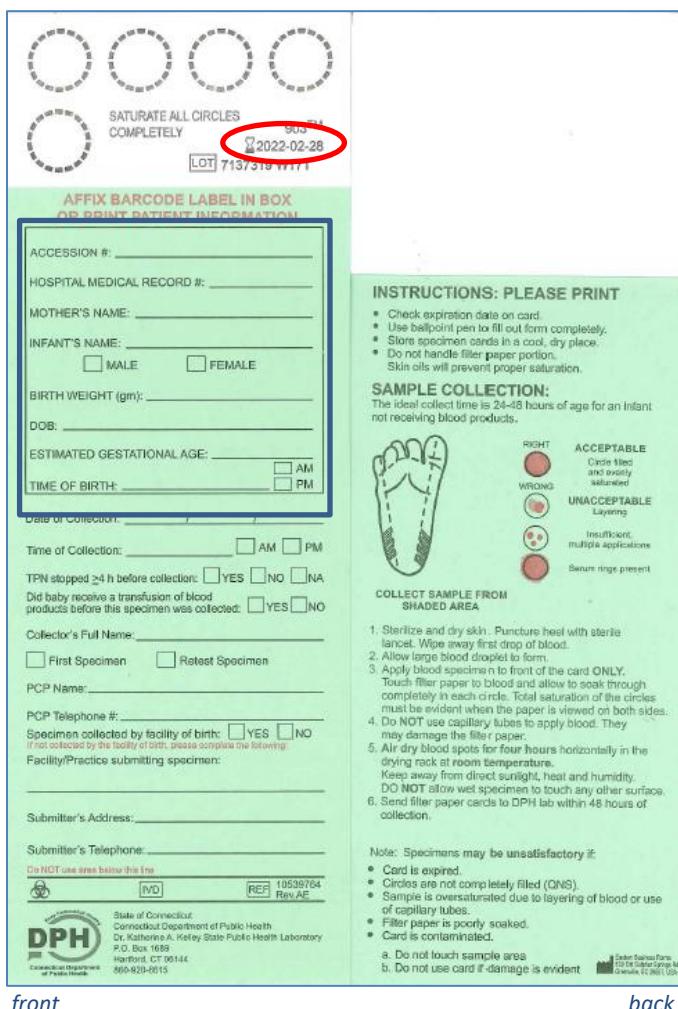


Figure 1

Obtaining a NBS Blood-Spot Specimen by Heel-Stick

Demographics

Complete the demographic information within the square (fig. 1) of the NBS specimen card, including the accession number (an 8-digit number beginning with the numeral "7").

- If you do not have the accession number that was assigned to the baby, please contact the hospital of birth or the CT NBS program (860-920-6628).
 - If you do not have an accession number and are unable to immediately reach the CT NBS Program, submit the blood-spot specimen without the accession number and notify the CT when possible.

Procedure

- **Collect supplies**
 - sterile lancet (approx. 2.0 mm tip)
 - sterile gauze pads
 - gloves
 - sterile alcohol prep
 - soft cloth
 - NBS specimen card with demographics completed
- **Check the expiration date**
 - Expiration date is located next to hour glass (fig. 1).
 - Discard expired cards or cards without dates. Specimens submitted on expired cards will be deemed unsatisfactory (UNSAT) and require collection of another bloodspot specimen.
- **Select proper site for heel-stick**
 - Hatched /// areas (fig. 2) indicate safe areas for puncture.
 - Hold the infant's limb in a dependent position and gently massage site.
 - Warm the heel by applying a warm moist towel for 3 minutes (not hotter than 42°C).
 - Clean site with alcohol swab (do not use Betadine/providone iodine).
 - Allow site to dry thoroughly before puncturing.
 - Not allowing site to dry thoroughly can result in dilution of the specimen and a specimen that is UNSAT for testing.
 - Puncture heel with lancet.
 - Wipe away the first drop of blood with sterile gauze.
 - Allow a large drop of blood to form.

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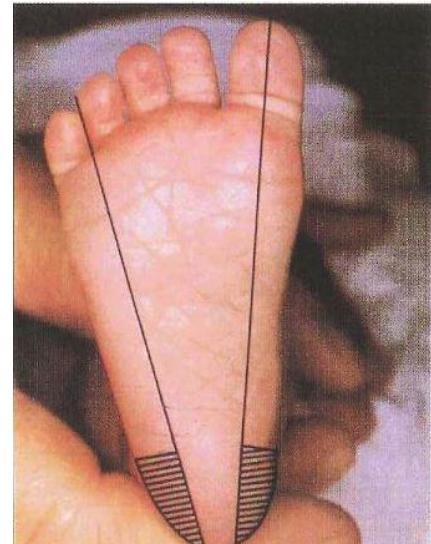


Figure 2

- Touch the filter paper circle on the front of card (fig. 3) to blood drop.
 - Allow the blood to soak through until the circle is fully saturated from front to back (blood should be visible on back of card). Do not apply blood to the back of the card.
 - Do not layer blood (don't apply multiple drops to one circle).
 - Do not touch the filter paper to the baby's skin or with your fingers.
 - For very ill or very low birth weight babies, it is more important to saturate as many circles as possible rather than to put a small amount of blood in each circle.



Figure 3



Valid specimen:

Completion of Specimen Collection Information and Drying

- Complete the remainder of the information on the lower portion of the specimen card.
 - It is essential to complete all requested information on the lower portion of the card
 - Parenteral Nutrition (PN or TPN) and transfusions (platelets, plasma and RBCs) can affect certain tests, making the results invalid, so please record this information on the specimen card and in Maven (when available).
- Enter specimen collection information in Maven and generate the NBS barcode label (where available).
 - Place the barcode label over the square with the demographic information on the NBS specimen card (fig. 1).
- Allow the blood spots to dry at least 4 hours in a horizontal position.
 - Do not stack specimens
 - Dry in a climate controlled area, free from possible contamination

Shipping

- Place the dry specimen in the envelope provided
- Shipping within 24 hours of specimen collection is recommended and is consistent with national timeliness guidelines. [See CT NBS Timing of Blood-Spot Collection Guidelines](#).
 - Send by same day (preferred) or next day courier or place in mail.
 - Record shipping date and tracking number (if applicable) in Maven and/or patient record (for quality assurance purposes).
- The State Laboratory receiving personnel and/or security guards will accept specimen delivery 24 hours per day, 365 days per year.
- If mailing the NBS specimen please send to the CT NBS Program, State Laboratory, PO box 1689, Hartford, CT 06144-1689. Next day or two day delivery is preferred.
- Couriers are to deliver NBS specimens directly to the CT NBS Program, State Laboratory, 395 West Street, Rocky Hill, CT 06067. Instruct the courier to avoid exposing the envelope to sunlight, heat and humidity, as this can affect screening results.
- See the Centers for Disease Control and Prevention Blood-spot Shipping Guidelines at https://www.cdc.gov/labstandards/pdf/nsqap/Bloodspot_Transportation_Guidelines.pdf.