



Collecting summary

No one likes causing an infant pain. But screening and its benefits are important for the infant's future health.

Although we try our best to screen every infant, every time, sometimes we have to deal with outside circumstances that can make this difficult. Every infant's situation is different and each one can bring unique challenges, possibly leading to the infant needing to have blood spots collected again.

Every blood spot needs certain characteristics to be correctly analyzed. Without all of these characteristics, the screen results may not be accurate. That means the infant would need to have blood spots collected again.

In addition, missing, illegible, or incorrect blood spot card (requisition) information is the most common reason for an infant needing to have blood spots collected unnecessarily.







Documenting

Document according to your local practices and professional guidelines. Some examples of important points to document are included in each *essentials* resource.

For more information

visit www.ahs.ca/newbornscreening

Staff Education


-  Filling Out the Blood Spot Card
-  Collecting the Blood Spots
-  Getting Great Blood Spots
-  Drying & Transportation
-  Special Situations when Collecting
-  NICU

Clinical Policy Suite

- Newborn Blood Spot Screening Policy
- Newborn Blood Spot Screening Sample Collection Procedure

The blood spot card

The most common reason a blood spot card is not filled out correctly is simply overlooking something that needs to be done. Remember

- don't use a blood spot card that was given to a parent
- make sure the blood spot card is not expired **Expires  YYYY-MM-DD**
- use a blood spot card that has been stored away from heat, direct sunlight and water
- the fold-over cover should cover the filter paper area at all times until the time of collection
- handle the blood spot card carefully – contaminants from gloved hands, alcohol, petroleum jelly, cleaning products or any other source can affect the accuracy of the screen results

Filling out the blood spot card means using a specimen label or filling out the blood spot card manually

- put the specimen label on the front of the blood spot card

When filling out the blood spot card manually, please

- print clearly
- use black ink
 - the Alberta Newborn Screening Lab requires black ink on the blood spot card

Blood spot card information is important to

- confirm the infant's identity
- interpret the screen results accurately

If blood spot card information is missing, incorrect or illegible, the infant may need to have blood spots collected again or diagnosis and treatment may be delayed while the Alberta Newborn Screening Lab corrects the data. Make all reasonable efforts to find missing or unavailable information for the blood spot card, but make sure you send the blood spot card to the Alberta Newborn Screening Lab even if some information is not available.

Comforting the infant

Comforting and keeping the infant warm during the heel poke can not only reduce trauma for an infant, it can also improve the quality of the blood spots by increasing the infant's blood flow. Some optional methods of comforting the infant are

- encouraging the mother to breastfeed during the heel poke
- swaddling the infant and holding them in an upright position
- suggesting the infant be held close to the parent's skin
- removing as few clothes as possible, only exposing the foot
- using a heel warmer or a soft cloth moistened with warm water that can be held comfortably to the inside of your forearm for several seconds

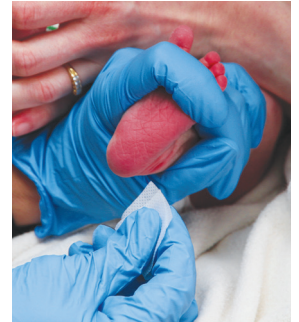


Your hands

- wash your hands before and after poking the heel
- wear disposable, powder-free gloves

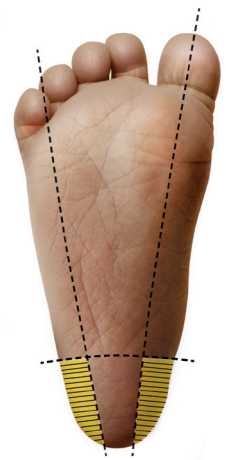
The infant's heel

- clean the infant's heel with a 70% isopropyl alcohol wipe
- let the heel air dry naturally – don't wipe the heel with anything else before the heel poke
- hold the infant's heel firmly as shown in the picture



The heel poke

- make sure the infant is between 24 and 72 hours old, but as close to 24 hours as possible
 - if the infant is going to be discharged before they are 24 hours old and the most responsible health practitioner (MRHP)*, usually a nurse, believes the infant may be difficult to find after being discharged
 - collect the blood spots before the infant is discharged (even if this is before the infant is 24 hours old)
 - let zone public health nursing services know that the infant will need the blood spots collected again when they are between 24 and 72 hours of age
- make sure the heel is positioned below the heart
- make sure to poke the heel only in the yellow shaded places shown in the picture
 - puncturing other areas of the foot may cause injury to nerves, tendons, cartilage or bone
- hold the Alberta Newborn Screening Program (ANSP) approved lancet, BD Quikheel™ or Tenderfoot®, placing according to lancet manufacturer's instructions
- press the trigger all the way down
- dispose of the lancet properly in a sharps box/puncture-proof container
- wipe away the first drop of blood after the heel poke with a clean or sterile gauze pad – it may have cellular material or skin mixed with the blood that can affect the accuracy of the screen results
- don't squeeze or "milk" the heel while collecting the blood spots – this can cause other fluids to mix with the blood which can affect the accuracy of the screen results

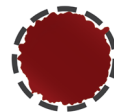


* The MRHP is the health practitioner who has responsibility and accountability for treatments and procedures provided to an infant.

The blood spots

- only put blood on the front of the filter paper – the part of the card with the circles
- gently touch a circle of the filter paper to a drop of blood
- don't press the filter paper to the infant's heel
- fill the "Start Here" circle before moving on to the next circle
- let the blood soak the filter paper inside the circle
 - if one drop of blood does not fully fill a circle, a second drop of blood can be added as long as the first drop is still wet
- apply gentle, short intervals of pressure to the heel if you need to (without "milking" or squeezing the heel)


Start Here



A second heel poke?

- if the infant's heel does not bleed enough to fill the circles on the blood spot card, you can poke the other heel
 - if poking the other heel is not possible, poke the same heel on the opposite side
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After collecting the blood spots

- elevate the infant's foot above their body and apply pressure to the infant's heel with a clean or sterile gauze pad
- if the infant continues to bleed, hold the clean or sterile gauze pad to the heel (do not use adhesive bandages or tape because of possible allergic reactions)
- watch the infant's heel to make sure it stops bleeding
- encourage the parent to comfort the infant
- dispose of gloves and wash your hands again
- record the date and time of collection
- double check the accuracy and completion of the blood spot card, when manually filling out the blood spot card
- record your collector I.D.
- record the Collection Location Code 
- document in the infant's health record that the blood spots were collected, when manually filling out the blood spot card
- when using specimen label documentation is done within the order electronically
- mark the "Collected" box in the "Blood Spot Screen" field and record the date and time on the notice of birth (if you have the notice of birth)
- if the blood spots were not collected, document in the infant's health record why the infant didn't get the newborn blood spot screen

Can't get five quality blood spots?

If you can't get five fully-saturated, clean, non-layered blood spots, dry the card anyway and send it to be transported. Four full blood spots may be enough to analyze.

If it is not possible to get four fully saturated blood spots after two heel pokes, send the card anyway and work with the parent to arrange collecting the infant's blood spots with a new blood spot card at a different time. All blood spot cards used to screen an infant must be sent to the Alberta Newborn Screening Lab regardless of quality.

Drying

You've hit the mark – great blood spots! What's next?

- the blood spot card needs to dry horizontally and suspended without touching the fold-over cover or another blood spot card
 - this may be on a commercial drying rack or something else used for this purpose
 - make sure to dry the blood spot card for **at least three hours** away from direct sunlight
 - if the blood spots are not completely dry but need to be moved from the infant's home to a health centre, hospital, public health unit or lab, the blood spot card can be put into a box that separates the cards and then air dried at the new location
 - the fold-over cover should not be closed over the blood spots until they have dried for at least three hours
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Transportation

Transportation details are up to your site, as long as the blood spot card is

- packaged and sealed in a paper envelope addressed to the Alberta Newborn Screening Lab with your facility's return address

University of Alberta Hospital
Department of Laboratory Medicine
Room 4B2.10
Alberta Newborn Screening
8440 – 112 Street NW
Edmonton, Alberta T6G 2B7

- sent to be transported as soon as possible after drying for at least three hours and the fold-over cover is closed over the blood spots
- packaged and sealed in a paper envelope (plastic bags, including biohazard bags, cause heat build-up that can affect the quality of the blood spots and should not be used)
- transported according to your local practices (don't use Canada Post)

This will allow every blood spot card to get to the Alberta Newborn Screening Lab within 72 hours of collecting the blood spots and be analyzed accurately.

NOTE: If packaging multiple blood spot cards in one envelope rotate the blood spot cards so the blood spots from each card are on opposite ends and also so they fit better in the envelope.

Special situations

Life circumstances for new parents and guardians can be very complex. For information about how to handle special situations, see the *Special Situations when Collecting essentials*.

