

# Module 4: Pre-test Information and DBS Collection for Infant Virological Testing

Infant HIV Testing  
Training Curriculum for  
Healthcare Providers

# Session 4.1

## Infant HIV Testing: Pre-test Information

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### **Session Objective**

- Conduct the HIV pre-test information session for HIV-exposed infant testing



# Routine HIV Testing

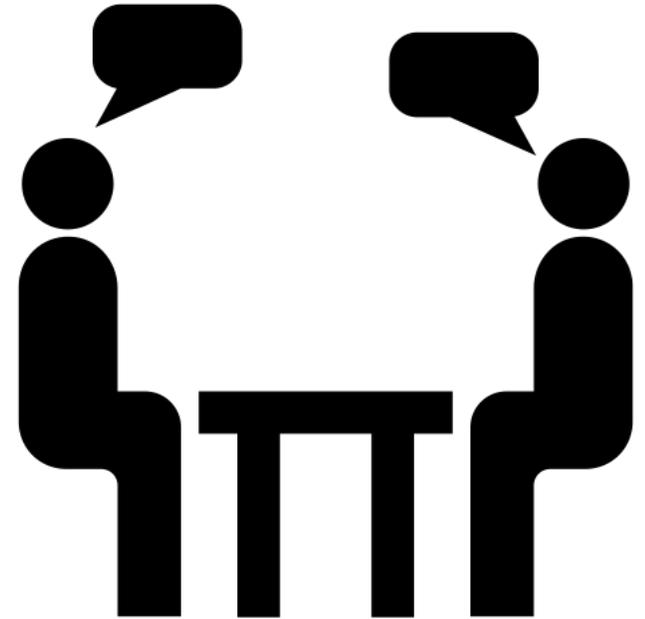
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- WHO recommends ***routine*** HIV testing for infants whose mothers are living with HIV
- Like other diagnostic tests, routine HIV testing requires:
  - **Consent:** testing must be voluntary
    - Provide brief pre-test information to the caregiver
    - Get verbal agreement for testing (written consent is not required)
  - **Opportunity to refuse testing:**
    - Inform caregiver of testing process and right to decline testing

# Routine HIV Testing

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- Testing of infants may be conducted by healthcare providers—nurses, midwives, doctors, counsellors, social workers, and laboratorians—or lay providers who are trained and supervised
- WHO recognizes the importance of task sharing with lay providers to support implementation of infant HIV testing
  - Lay providers perform functions related to healthcare delivery
  - Lay providers do not have a formal certificate or degree but are trained
  - Lay providers relieve upper level healthcare providers of certain day-to-day activities



# HIV Testing of HIV-exposed Infants: The Pre-test Session

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- Although PMTCT interventions are very effective, they do not eliminate the risk of HIV transmission to the infant
- Routine HIV testing of HIV-exposed infants is necessary
- Benefits of testing infants in the first 6 weeks of life:
  - Provide reassurance to families, particularly if infant tests HIV-negative
  - Identify infected infants early so that they can initiate ART early, thereby increasing chance of survival

# HIV Testing of HIV-exposed Infants: The Pre-test Session

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- Pre-test information may be provided in a group setting and then continued with a one-to-one discussion between caregiver and provider
- Healthcare provider is expected to use listening and learning skills, see *Appendix 4A: Listening and Learning Skills Checklist*
- The key points and model scripts should be adapted to meet the client's situation, based on:
  - Type of test used
  - Infant age
  - Whether the test is an initial or follow-up test

# HIV Testing of HIV-exposed Infants: The Pre-test Session

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- *What do you say during the pre-test session to the caregiver of an HIV-exposed infant who is being tested for HIV at 4–6 weeks of age?*

# Pre-test Session, HIV-exposed Infant, NAT

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Key point	Script/Key points NAT (0–18 months of age)
<b>1. Assess the parent/caregiver's and child's knowledge of HIV and the diagnostic procedure.</b>	<p>Use a question and answer format to gauge level of understanding:</p> <ul style="list-style-type: none"><li>• <i>What is HIV?</i></li><li>• <i>How is HIV passed from mother to baby?</i></li><li>• <i>How can mother-to-child HIV transmission be prevented?</i><ul style="list-style-type: none"><li>• Emphasize the importance of the breastfeeding mother taking and adhering to her ART regimen.</li></ul></li></ul>

# Pre-test Session, HIV-exposed Infant, NAT

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Key point	Script/Key points NAT (0–18 months of age)
<b>2. HIV testing is routine for all HIV-exposed infants/benefit of testing</b>	<ul style="list-style-type: none"><li>• <i>Even if you and the baby received medicine for PMTCT, there is still a small chance that he is HIV-infected</i></li><li>• <i>Because of this small chance, we routinely test babies for HIV at this age</i></li><li>• <i>If your baby is HIV-infected, the sooner we know the sooner we can start him on ART; if we can start ART before he gets sick he'll stay healthier longer</i></li><li>• <i>We will do a test today, and your baby should be re-tested at regular intervals until a final test after the end of breastfeeding</i></li></ul>

# Pre-test Session, HIV-exposed Infant, NAT

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Key point	Script/Key points NAT (0–18 months of age)
<b>3. How the test will be conducted</b>	<ul style="list-style-type: none"><li data-bbox="784 558 2313 886">• <i>We will take a few drops of blood by pricking the [heel, toe or finger based on age]</i><ul style="list-style-type: none"><li data-bbox="876 733 2313 886">• <i>The blood will be collected on a card that will be sent for testing</i></li></ul></li><li data-bbox="784 911 2237 1058">• <i>Although we strongly recommend testing, you have the right to decline</i></li><li data-bbox="784 1082 2354 1325">• <b>If the test result is not available same day:</b> <i>We will schedule you for an appointment to return for your result</i></li></ul>

# Pre-test Session, HIV-exposed Infant, NAT

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Key point	Script/Key points NAT (0–18 months of age)
<b>4. Confidentiality</b>	<ul style="list-style-type: none"><li>• <i>The test result and anything we discuss today is confidential/private and will not be shared with anyone else unless you give permission</i></li></ul>

# Pre-test Session, HIV-exposed Infant, NAT

Key point	Script/Key points NAT (0–18 months of age)
<b>5. Explanation of result.</b>  <b>5a. What a positive result means</b>	<ul style="list-style-type: none"><li>• <i>If the baby's test result indicates that he/she is HIV-positive, he will be started on ART right away</i></li><li>• <i>ART will help him to stay healthy.</i></li></ul>
<b>5b. What a negative result means</b>	<ul style="list-style-type: none"><li>• <i>If the baby tests HIV-negative, then this is the first test in a series of tests to confirm that he doesn't have HIV</i></li></ul> <p><b>Adapt based on infant age:</b> <i>Your baby will also be tested at 9 months of age and 3 months after breastfeeding ends (or at 18 months if you stop breastfeeding early)</i></p>

# Pre-test Session, HIV-exposed Infant, NAT

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Key point	Script/Key points NAT (0–18 months of age)
<b>6. Return</b>	<ul style="list-style-type: none"><li>• <b>POC testing:</b> <i>Your result will be ready in an hour</i></li><li>• <b>If the test result is not available same day:</b> <i>You will need to return to the clinic in ___ weeks for the baby’s result. If the result comes back early, we may also contact you so that you can get the test result as soon as it is available. If you agree that we can contact you, we’d like to make sure that we have your correct phone number and address. [Confirm contact information]</i></li></ul>
<b>7. Client questions</b>	<ul style="list-style-type: none"><li>• <i>What questions do you have about HIV testing?</i></li></ul>

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## Child Health Card

- Please refer to country Child Health Card/Booklet and/or mother's health card and identify where to record information on the pre-test session

# Exercise 1

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Infant HIV testing pre-test information:  
Role play

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# Session 4.2: Dried Blood Spot Collection, Drying, Packing and Shipment

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## **Session Objectives**

- Understand the steps in collecting a blood sample using dried blood spot (DBS) procedure
- Dry, pack and store DBS specimens to send to the laboratory
- Distinguish between valid and invalid DBS samples
- Record DBS results in the designated database or register/log and follow up on missing or delayed results



# DBS Introduction

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HIV infection in children under 18 months can be diagnosed with virological testing using NAT technologies. NAT can be conducted on:

- **High throughput instruments:**
  - Operated by trained laboratorians
  - Based in regional laboratories
  - Use DBS specimens
- **PoC/near PoC instruments:**
  - Alere™ q HIV-1/2 Detect uses drops of freshly collected blood samples
  - Cepheid AB Xpert® HIV-1 Qual Assay can use either drops of freshly collected blood or DBS

# DBS Technology

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- Widely used in US & Europe since the 1970s to screen newborns for genetic disorders
- More recently, used to test samples for HIV using NAT and for viral load testing
- Overview of procedure:
  - Small drops of whole blood are taken from a heel, toe, or finger using a lancet
  - Blood is collected on strips of special filter paper
  - Paper is then dried, packaged, and sent to a lab for analysis
- Advantages of DBS testing:
  - Lower volume of blood required for testing ⇒ specimen collection is easier
  - DBS specimens have longer lifespan, more stable ⇒ easier to store & transport to distant laboratories
  - Because specimens are dried, they pose little biohazard risk ⇒ safer to handle

# Healthcare Provider's Responsibilities for DBS collection

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- Collect valid samples
- Label the samples correctly
- Dry, package and store samples appropriately until they are transported to the laboratory
- Correctly complete all related documentation



- The collection procedure you are about to learn is for DBS specimens that are sent to a laboratory for testing
- POC testing follows different procedures depending on platform used
  - Providers using POC testing should receive additional training on these methods

# DBS Collection, Getting Started: Documentation

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1. **The laboratory requisition form**, sent with samples to laboratory, typically includes:
  - Child's name
  - Date of birth
  - Mother's name
  - Child/patient identification number
  - Name of clinical site
  - Name of provider requesting the test
  - Information about where to send the results
  - Date and time of specimen collection
- Complete for each specimen sent to the lab

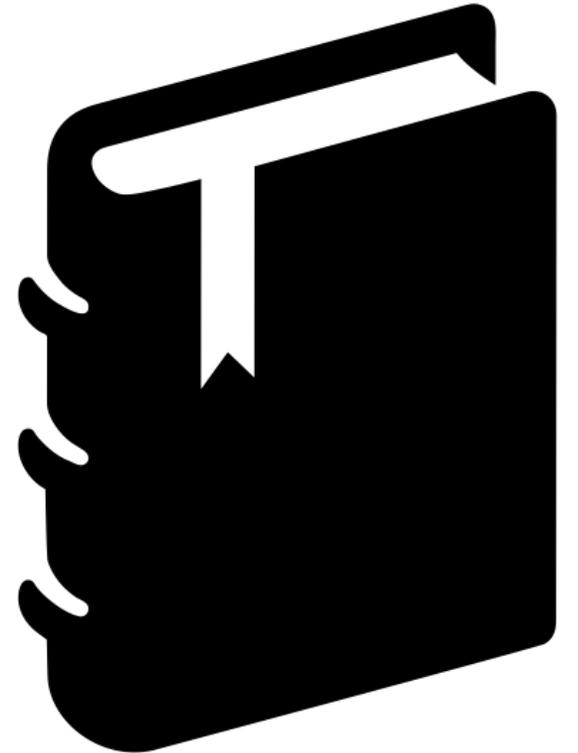
***A sample laboratory requisition form appears in Appendix 4B***

# DBS Collection, Getting Started: Documentation

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2. **Specimen delivery/transport checklist** tracks quantity and quality of specimens along the chain of custody
3. **Electronic (database) or paper-based register/log** used for recording and tracking NAT specimens and results, for example:
  - EID/NAT/DBS Specimen Tracking Register/Log or
  - Baby Testing and Follow-up Register/Log

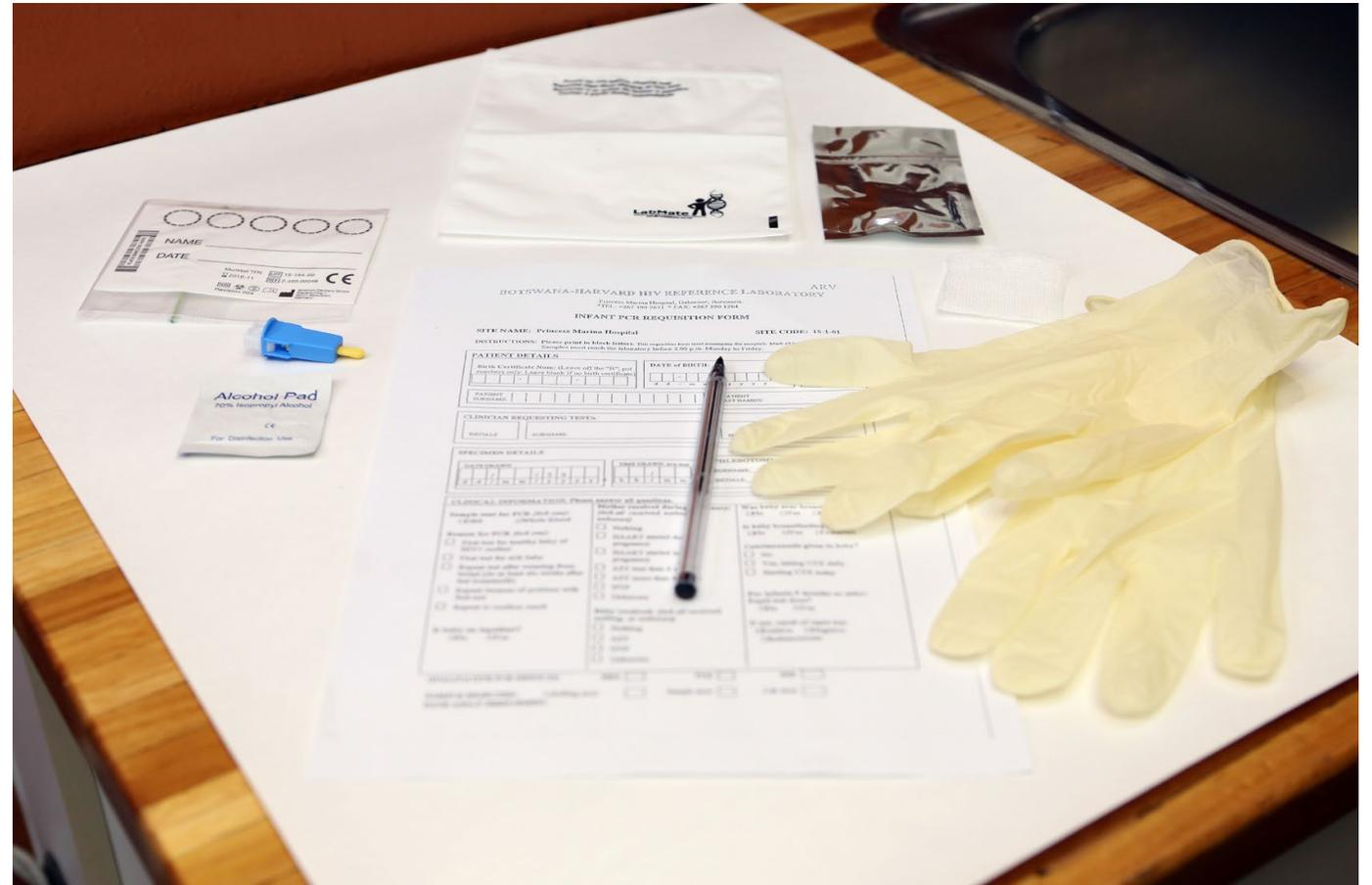
*A sample specimen delivery/transport checklist appears in Appendix 4C*



# DBS Collection, Necessary Supplies

Supplies needed to collect a DBS specimen from an infant or child:

- DBS cards
- 2mm lancets
- Gloves, preferably powder-free
- Pen
- Laboratory requisition forms
- Disinfectant for skin, such as 70% spirits
- Gauze or cotton wool
- Sharps container



# DBS Collection, Necessary Supplies

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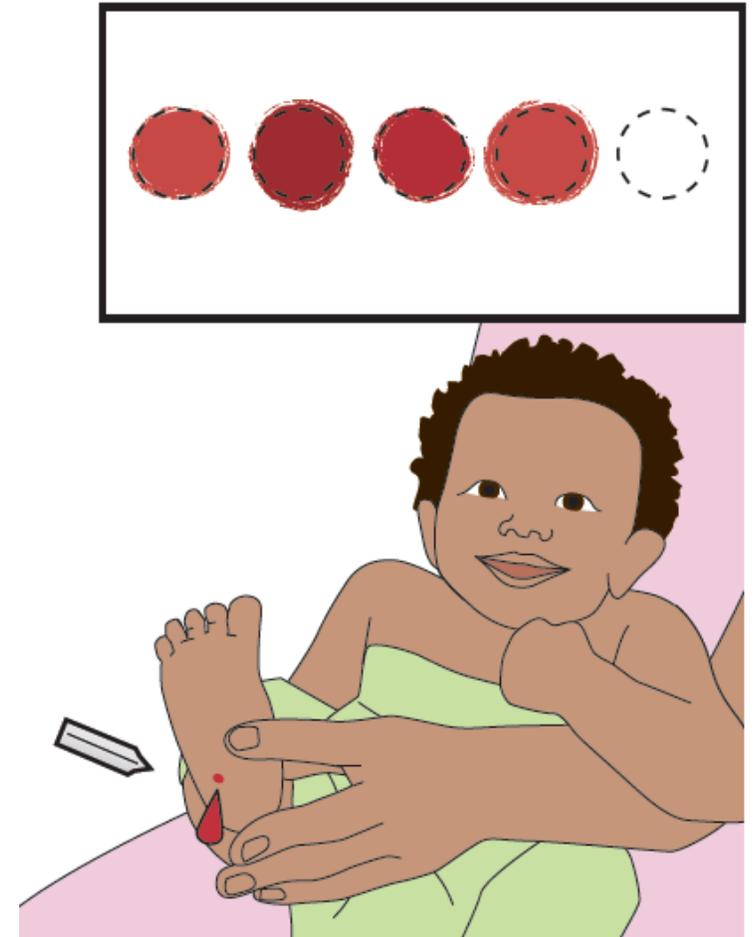
Supplies required for DBS drying and packaging include:

- Gloves, preferably powder-free
- Drying racks
- Glassine paper
- Sealable plastic bags
- Desiccant packets
- Humidity cards
- Envelopes for mailing
- Marker/pen
- Specimen delivery checklist

# Universal Precautions, When Collecting Specimens

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- *What are some examples of safety practices that should be followed when collecting blood specimens?*



# Universal Precautions, When Collecting Specimens

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- Wear gloves when in contact with blood, body fluids, secretions, excretions, mucous membranes and contaminated items
- Wear gloves when handling the DBS card (even before it has blood on it)
- Wash hands **before** putting on gloves and immediately **after** removing them
  - If using gloves with powder, wash the powder off (after putting on gloves)
- Handle sharps with care and dispose in sharps containers
- Clean up spills promptly
- Ensure that contaminated patient care equipment, supplies and linen are discarded, disinfected or sterilized
- In the event of a sharps injury, inform supervisor immediately and follow national protocol for PEP

# Procedure for DBS Blood Sample Collection

1. Gather all necessary supplies
2. Complete all necessary documentation including:
  - Clinic register(s)
  - Lab requisition form
  - Label the DBS card with baby's name, birth date, site code, date of collection, time of collection, and any other requested information

BABY'S NAME

NAME BABY'S NAME DOB: 11/3/2006

DATE 3/10/06 15:00

CE ISO Lot-No. S&S 5039W-041 Expiry Date: 2007-08

# Procedure for DBS Blood Sample Collection

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- Do not touch the circles with anything other than infant's blood
  - Your hands, glove powder, ink, or dirt will affect the result
- It is important not to contaminate cards by contact with blood from other sources such as touching another DBS card

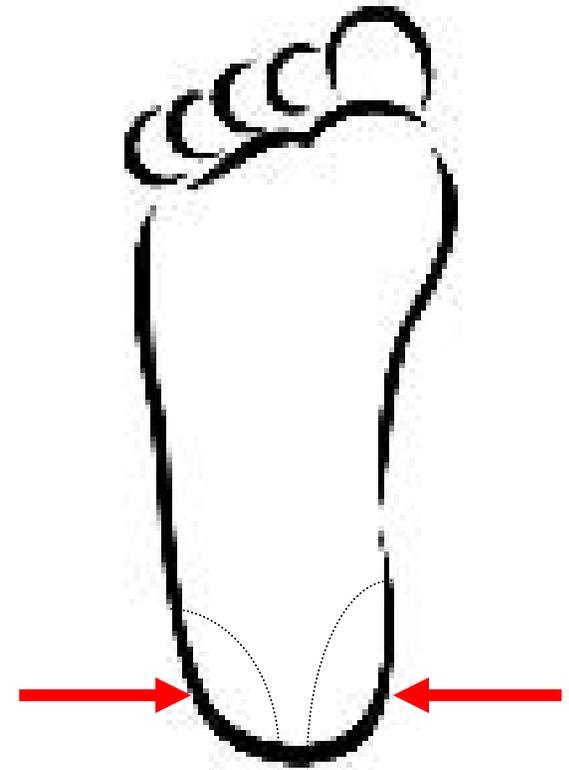
# Procedure for DBS Blood Sample Collection

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3. **Decide where you will prick the infant** according to baby's size and age:

## **Heel prick:**

- Small infants up to about 4 months & up to 5 kg
- The best area is the lateral section of the heel
- Do not prick the back of the heel where the bone is

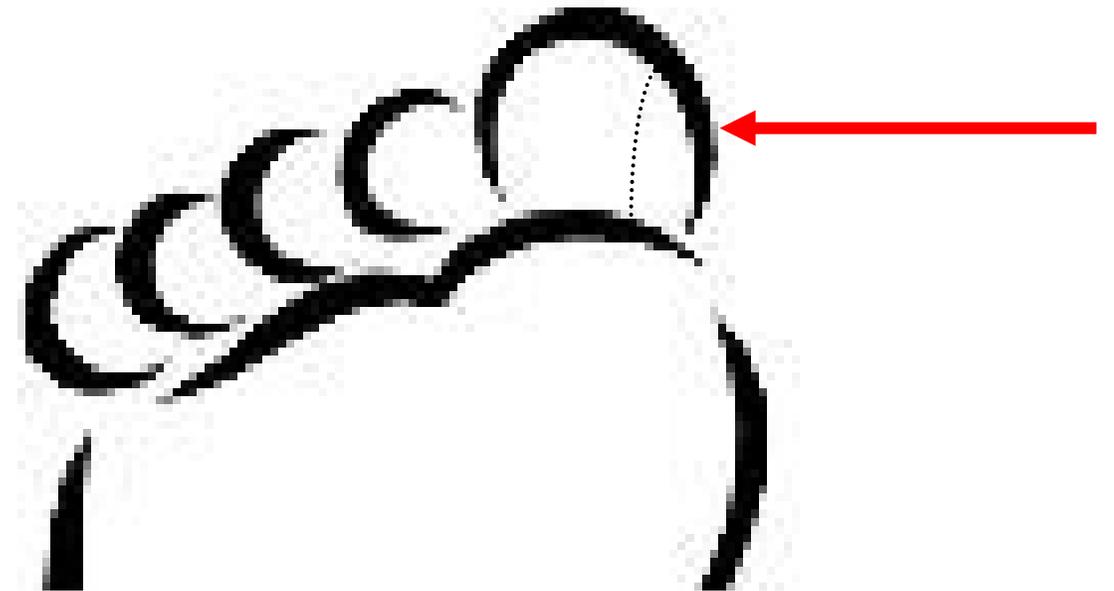


# Procedure for DBS Blood Sample Collection

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## Prick the big toe:

- Larger infants between 4 and 10 months, or 5–10 kg:
  - Never stick the other toes in children; it is too easy to hit and damage the bone
  - The lateral side or outside part of the big toe works best
  - Do not prick the very end of the toe where the bone is close to the skin

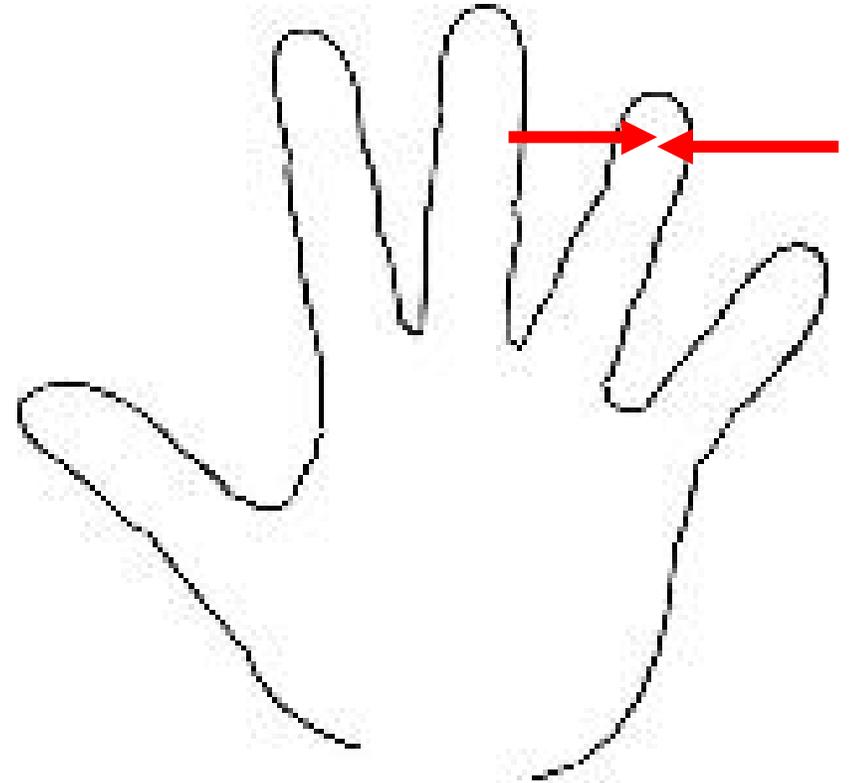


# Procedure for DBS Blood Sample Collection

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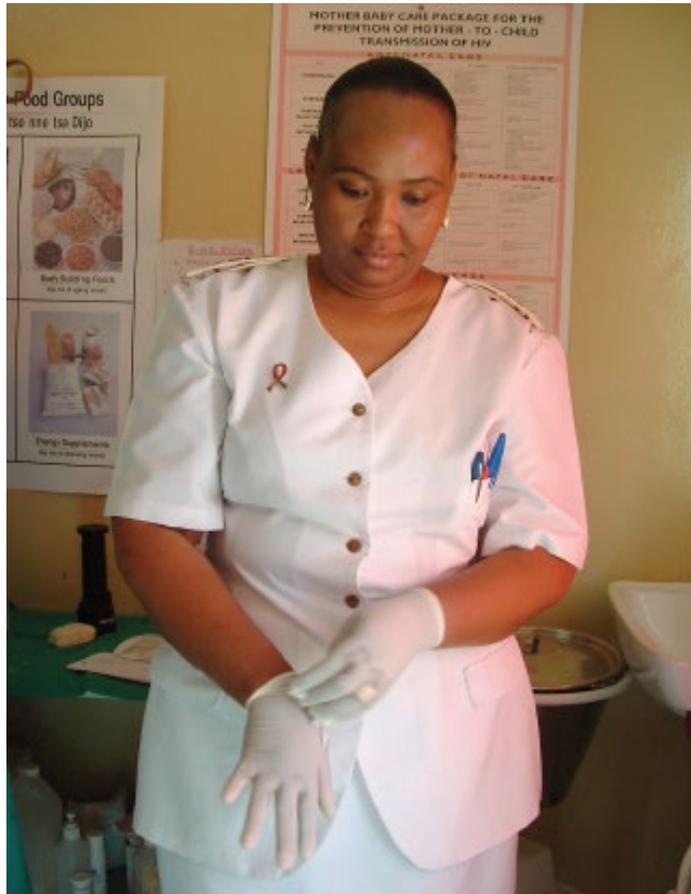
## Finger prick:

- Older infants over 10 month or 10 kg+
- The best finger is the ring finger on the left hand; least used by the baby
- Select the lateral side of the fingertip
- Do not stick the very end of the finger where the bone is close to the skin
- Thumb is not recommended because it is the most painful



# Procedure for DBS Blood Sample Collection

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## 4. Wash hands and then put on powder-free gloves

- If powdered gloves are used, rinse gloved hands to remove powder

# Procedure for DBS Blood Sample Collection

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## **5. Position the baby and clean the area to be pricked:**

- Have the mother sit on the examination bed with baby on her lap
- Show her how to properly hold the baby depending on the site to be pricked
- The baby's foot or hand should be below the level of his heart
- Warm the area you will prick, especially if the infant is cold
  - The mother can hold the baby's foot or hand in her hand
  - Rubbing it gently may help
  - A cloth or nappy soaked in warm water can be used—keep on for about 3 minutes

# Procedure for DBS Blood Sample Collection

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## 5. Clean the area to be pricked (continued):

- Clean the area with 70% spirit or alcohol swabs
- Allow to dry for 30 seconds so that the spirit does not mix with the blood when you prick the site



# Procedure for DBS Blood Sample Collection

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6. **Gently squeeze and release** the area to be pricked until it is ready to be bled
- Prick the infant's heel, toe or finger with a 2mm lancet
  - This lancet is the correct length to puncture safely without damaging baby's bone



# Procedure for DBS Blood Sample Collection

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- 7. Wipe away the first drop of blood with dry cotton wool**
  - Allow a large drop to form on the puncture site

# Procedure for DBS Blood Sample Collection

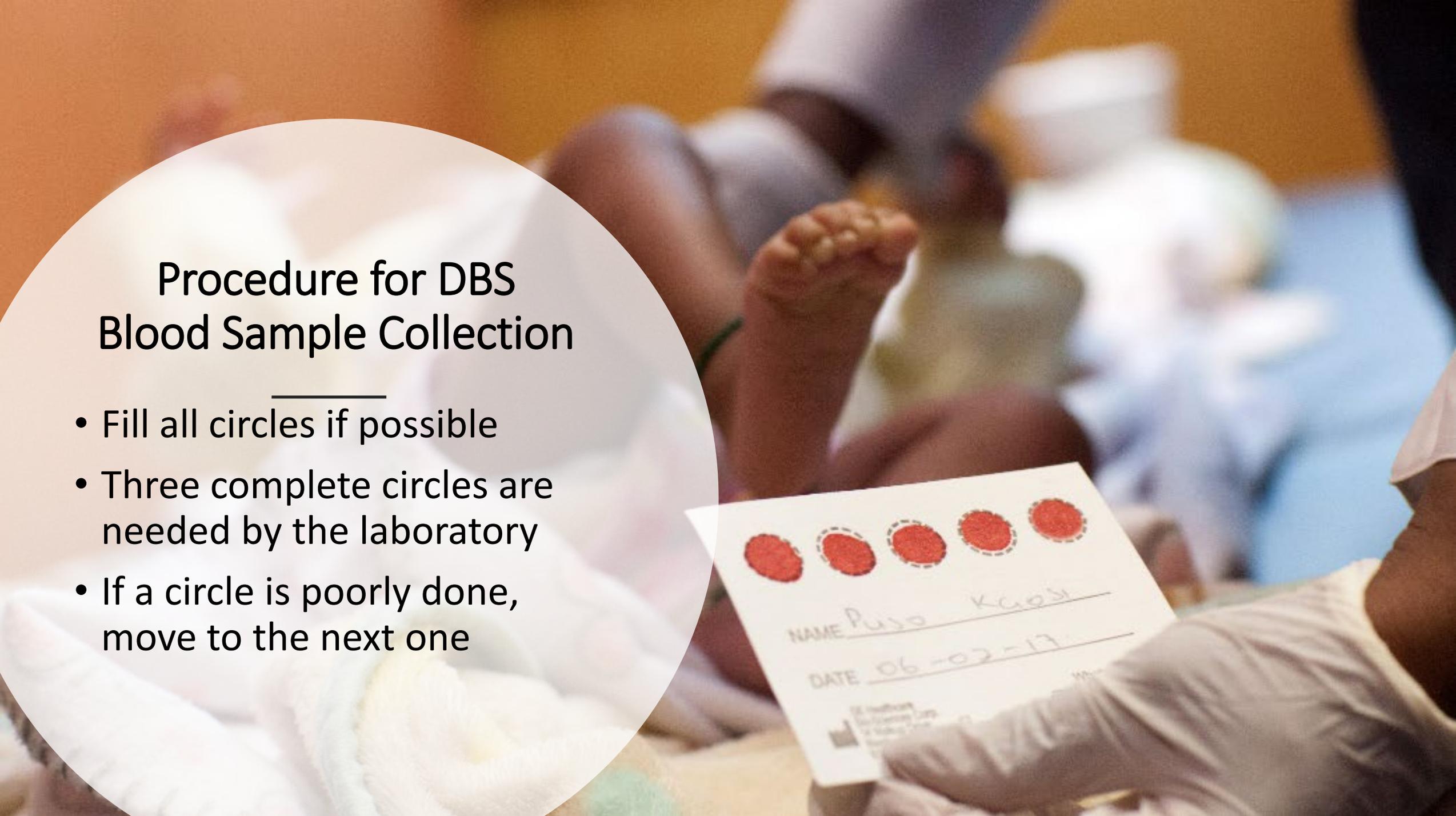
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8. **Touch the DBS card gently** against the large drop and allow it to completely fill the circle on the paper
- The first drop should fill the circle
  - Do not press the paper against the heel, toe or finger
  - Just allow the droplet to touch the paper

## Procedure for DBS Blood Sample Collection

- Fill all circles if possible
- Three complete circles are needed by the laboratory
- If a circle is poorly done, move to the next one



NAME Pusa KGBJ

DATE 06-02-17

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# Procedure for DBS Blood Sample Collection

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## Tips:

- Do not “milk” or squeeze the area that has been punctured ⇒ this will cause tissue fluid to mix with blood and contaminate the sample
- If there is not enough blood, you can gently pump and release or apply gentle pressure to the above the puncture site
  - If this is not successful, you may need to prick the infant in another location
- **Note: It is important not to touch the circles with anything other than the infant’s blood; fingerprints, glove powder, ink or dirt may all affect the result.**

# Procedure for DBS Blood Sample Collection

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- When enough circles have been filled:
  - Clean puncture site
  - Press with cotton wool until bleeding stops
  - Do not use a bandage
- Ensure wound is clean and bleeding has stopped for at least 5 minutes
- Complete documentation and recheck the wound before the baby leaves

***See “Appendix 4E: Collection of DBS from Infants for PCR Testing”; also available at [https://www.childrenandaids.org/HEI Toolkit](https://www.childrenandaids.org/HEI_Toolkit)***

Drying and  
Packaging DBS  
for Transport to  
the Laboratory,  
**Supplies**



DBS Card



Drying Rack



Glassine Paper



Desiccant Packs



Humidity  
Indicator



Individual Bag (Left)/  
Batch Bag (Right)

# Drying DBS for Transport to the Laboratory

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- 1. Leave DBS on a drying rack in a clean, dry, protected area until dried completely** ⇒ at least 4 hours or overnight
  - While drying, DBS should not be touched
  - Keep out of direct sunlight
  - If your site collects DBS for both EID and VL, then dry in separate racks
    - Label one **drying rack** for EID DBS and the other for VL DBS
    - Label the **DBS cards** “EID” or “VL” at the time of specimen collection
- 2. Keep lab request forms with DBS cards**

# Drying DBS for Transport to the Laboratory



# Packaging DBS for Transport to the Laboratory

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## Key points

- Separate each DBS card with glassine paper so that the cards do not contaminate each other
- Package DBS for EID and VL at different times to prevent contamination
- Packaging may depend on clinic volume and available supplies

# Packaging DBS for Transport to the Laboratory



1. Place each DBS in a glassine paper or envelope so that DBS cards will not have direct contact with one other
2. Insert up to 10 individually wrapped DBS cards into the batch bag
  - Add 10 desiccant packets
3. Add at least one humidity card per batch bag
  - Gently press the bag to remove air before sealing

***See Appendix 4F: Drying and Packaging DBS Samples for Transport if glassine packaging is not available***

# Packaging DBS for Transport to the Laboratory

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4. Place the bag of DBS, all the DBS lab forms and the specimen delivery checklist into shipping envelope
  - Use specimen delivery checklist to verify that you have a lab form for each DBS
  - Label the envelope with:
    - Clinic name
    - “EID” or “VL”
    - Date specimens will be sent to lab
  - Place the envelope in designated area to be picked up

# Packaging DBS for Transport to the Laboratory

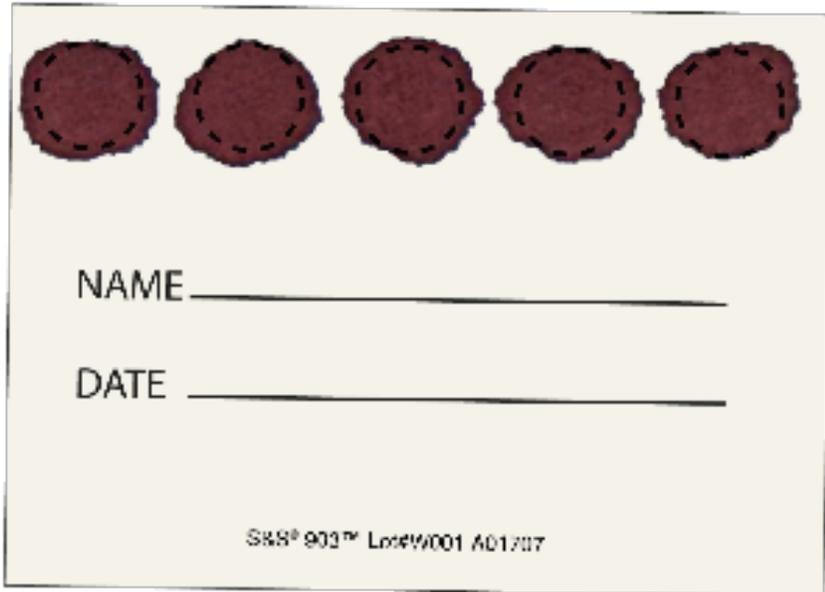
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5. After the DBS has been prepared for transport, it can be stored at room temperature for up to two weeks
  - If DBS specimens cannot be shipped within two weeks, store at  $-70^{\circ}\text{C}$  until shipment (or  $-20^{\circ}\text{C}$  if freezer at  $-70^{\circ}\text{C}$  is not available)
  - If a sample has been at the clinic for longer than two weeks without appropriate storage, then a new sample is needed



# Valid and Invalid DBS Specimens

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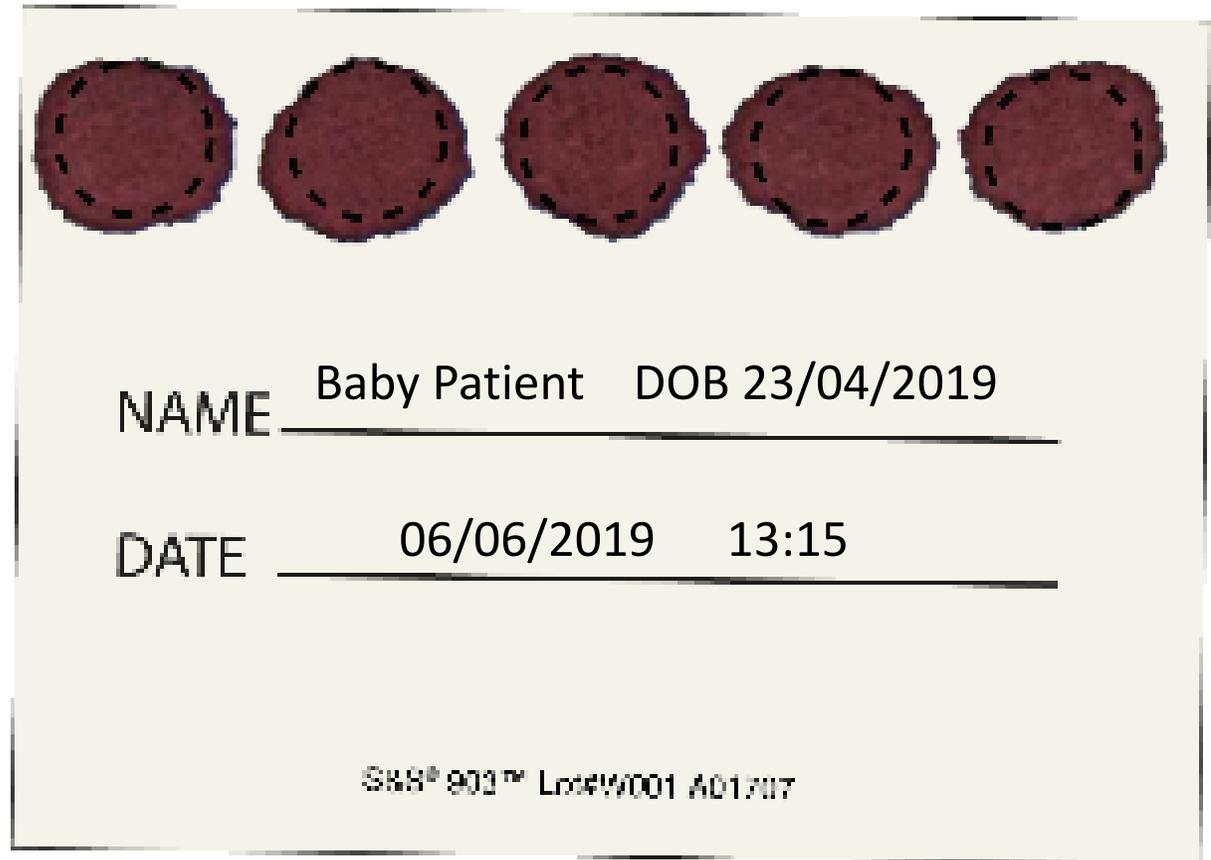
**Above is a valid DBS specimen**

- When specimens are not collected correctly, they may be rejected by the laboratory or the result may be inaccurate
- Try to fill all 5 spots on the card completely
  - If that is not possible, at least 3 completely filled spots are needed
  - Remember: 3 well-filled spots are better than 5 partially filled spots

# Valid DBS Specimen

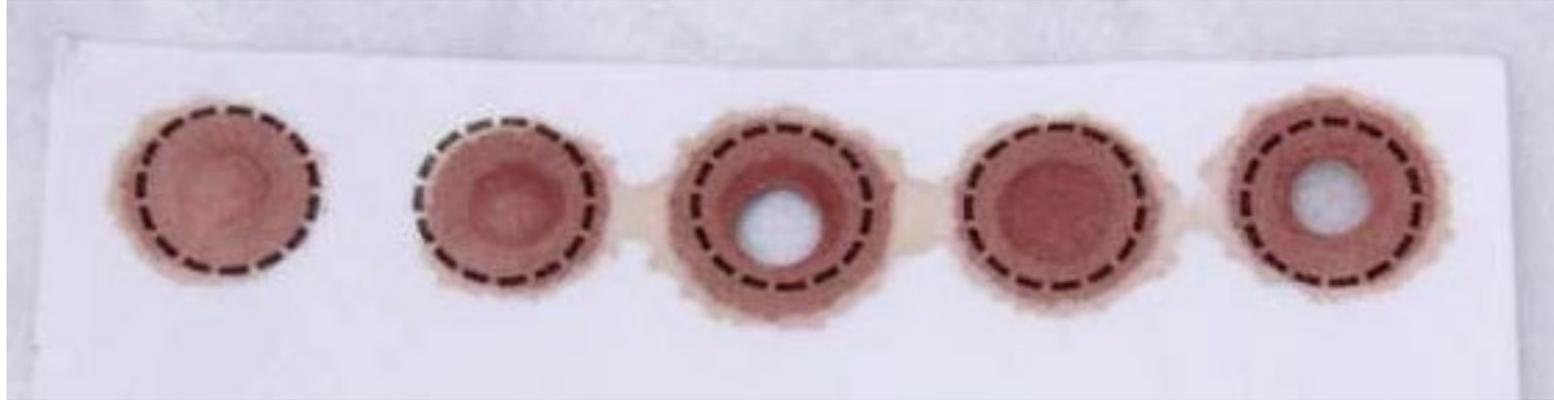
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- Circles are completely filled
- The card has been labelled with appropriate identification
- Blood is soaked through to the other side of the card



# Valid DBS Specimen

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- Blood is spreading from one circle to another due to anaemia (anaemic blood is more fluid)
  - This is still considered a valid specimen
- Note: the third and fifth circles have been punched by laboratory staff

Photo: WHO. Blood Collection and Handling — Dried Blood Spot (DBS)

# Valid DBS Specimen

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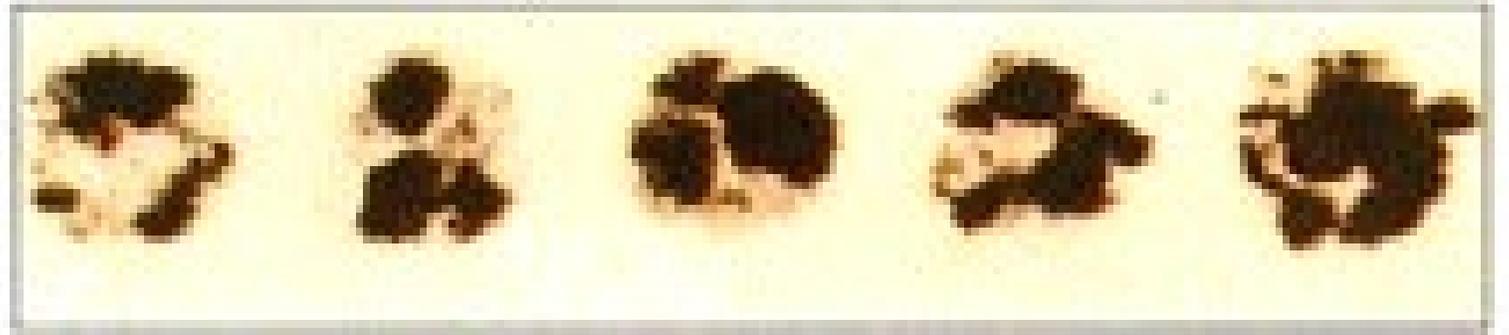
- Circles are imperfectly misaligned
- Some slightly over or under filled
- This specimen is also valid

Photo: Thumbay Labs. <http://www.thumbaylabs.com/guidelines.html>

# Invalid Specimens

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- *Why do you think this specimen was not acceptable?*



- Not enough blood for testing



# Not Enough Blood for Testing

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- *Why did this happen?*

**Possible causes:**

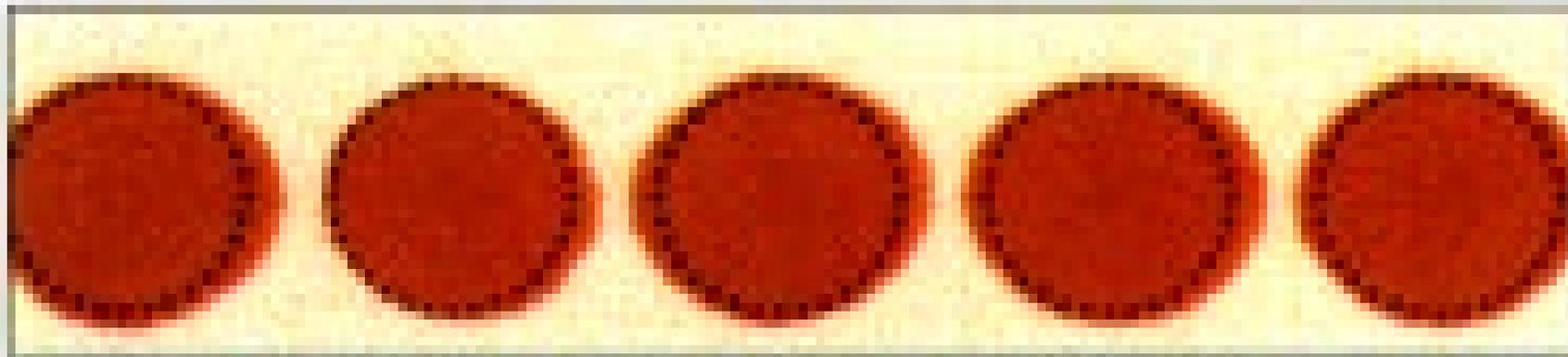
- Removing filter paper before blood had completely filled circle or before blood has soaked through to the other side
- Applying blood to filter paper with a capillary tube
- The filter paper coming in contact with gloved or un-gloved hands or substances such as hand lotion or powder, either before or after blood specimen collection



# Invalid Specimens

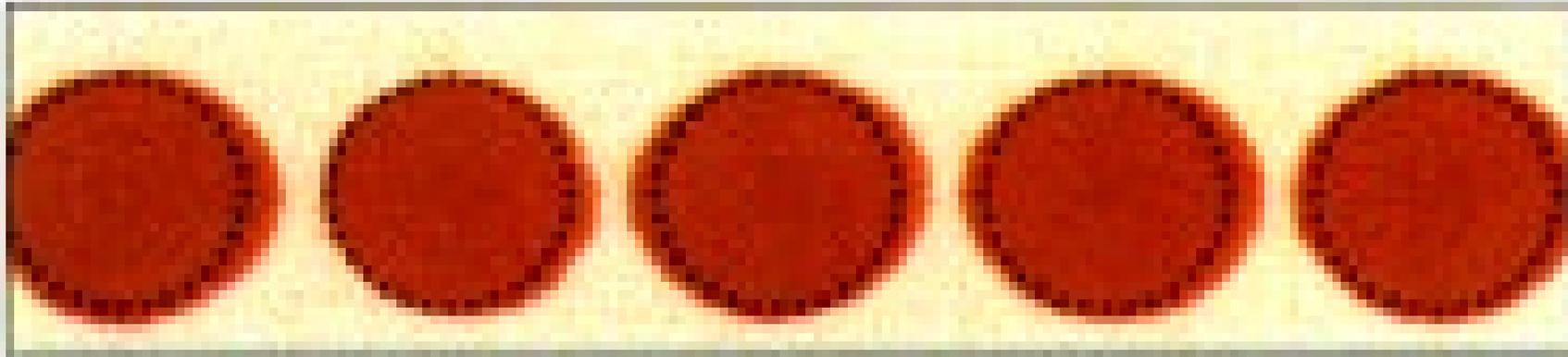
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- *Why do you think this specimen was not acceptable?*
- **Specimen is bright red**



# Specimen is Bright Red

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- ***Why did this happen?***

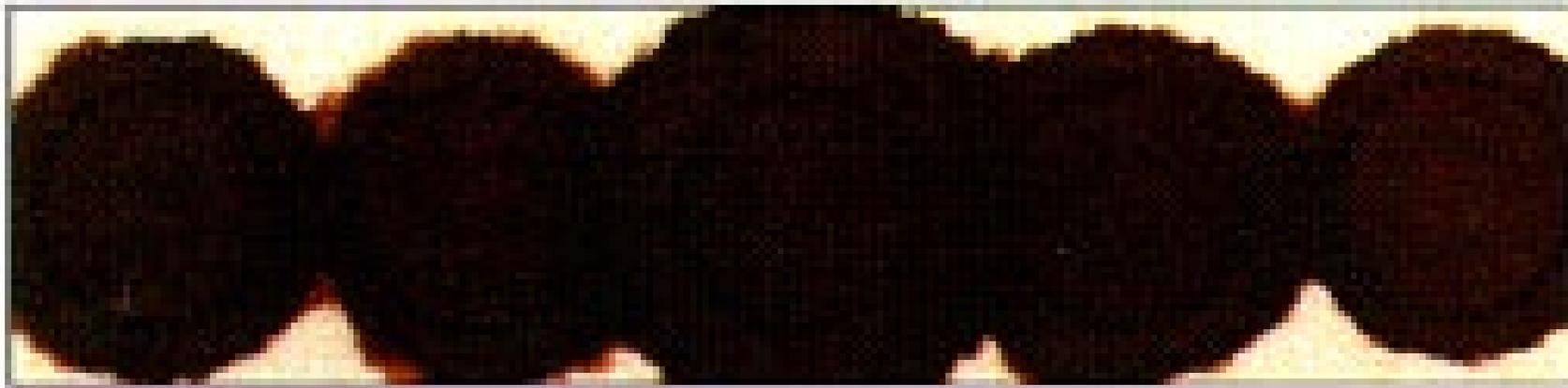
## **Possible cause:**

- Specimen was not dried before mailing
- DBS specimens must dry a minimum of 4 hours before packaging and shipping

# Invalid Specimens

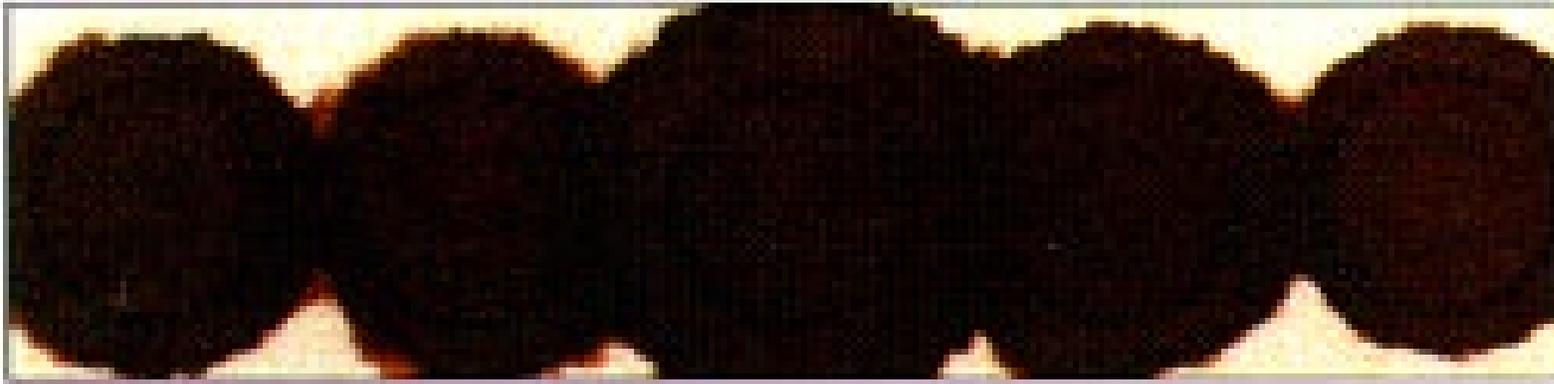
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- *Why do you think this specimen was not acceptable?*
- **Specimen is too saturated**



# Specimen Saturated

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- *Why did this happen?*

## **Possible causes:**

- Both sides of the card were soaked
- Blood may have been applied with a syringe

# Invalid Specimens

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- *Why do you think this specimen was not acceptable?*
- **Specimens appear clotted or layered**



# Specimens Clotted or Layered

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- ***Why did this happen?***

## **Possible cause:**

- Touching the same circle on the filter paper several times to blood drop
- Filling circle on both sides of filter paper

# Invalid Specimens

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- *Why do you think these specimens were not acceptable?*
- **Specimen exhibits serum rings, serum has separated from cells**



# Specimen Exhibits Serum Rings

## Serum has Separated from Cells

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- ***Why did this happen?***

**Possible causes:**

- Not allowing alcohol to dry at puncture site before making skin puncture
- Allowing filter paper to come in contact with alcohol, hand lotion, etc.
- Excessive milking or squeezing area surrounding puncture site
- Drying specimen improperly
- Applying blood to filter paper with a capillary tube



# Invalid Specimens

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- *Why do you think this specimen was not acceptable?*
- **Contaminated sample spots**



# Contaminated Sample Spots

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- ***Why did this happen?***

## **Possible cause:**

- Another liquid has been in contact with the card e.g., water, urine, tea, coffee, etc

# Common DBS Errors

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Error/Problem	Solution
<b>Labelling and documentation errors</b>	<ul style="list-style-type: none"><li>• Complete DBS card, lab requisition forms and all other documentation completely, accurately and with legible handwriting</li></ul>
<b>Yellow rings around the spots due to disinfectant or tissue fluid contamination</b>	<ul style="list-style-type: none"><li>• Allow disinfectant to dry completely before pricking the patient</li><li>• Do not squeeze the skin directly around the spot where the patient was pricked</li></ul>
<b>Scratches or smudges on the filter paper</b>	<ul style="list-style-type: none"><li>• Do not scratch or dab blood on the filter paper surface</li></ul>

# Common DBS Errors

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Error/Problem	Solution
<b>Drops are too small</b>	<ul style="list-style-type: none"><li>• Warm the site</li><li>• Apply pressure (but not right at the site)</li><li>• Consider choosing another site</li><li>• For fingerpick: ensure hand is below the level of the heart</li></ul>
<b>Caking or layering blood on the filter paper</b>	<ul style="list-style-type: none"><li>• Do not put a new drop of blood on top of a drop that is already dry</li></ul>
<b>Drop is not centred on the card</b>	<ul style="list-style-type: none"><li>• Ensure site is centred directly over the centre of the spot</li><li>• Show caregiver how to hold the infant/child firmly so that he/she is not moving during the procedure</li></ul>
<b>Specimens are not dried or packaged properly</b>	<ul style="list-style-type: none"><li>• Do not start packaging until DBS specimens are completely dry (4 hours or longer). See Appendix 4F</li></ul>

# Responsibilities of the Laboratory

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1. Lab acknowledges receipt of all specimens by completing and returning the specimen delivery checklist
2. Any specimen rejected at the laboratory should be identified on specimen delivery checklist
  - Lab immediately informs sending facility that sample was rejected and reason for rejection
  - Facility traces infants and organizes drawing of a new sample as soon as possible
3. All specimens should be entered in the register
  - Lab keeps the second copy of the checklist for reference
4. Lab ensures there is a system to notify a health facility of a positive infant virologic test result on the same day of testing

# Ways to Return Results from the Lab to the Health Facility

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- *How are infant HIV test results returned to your clinic?*

# Ways to Return Results from the Lab to the Health Facility

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- Even when results are returned as hard copies, WHO recommends use of technology to expedite return of results to the clinic and, in turn, to the patient.

## Examples of methods for returning results electronically:

**(1) Short message service (SMS) printers:** Small battery operated printers that can take a SIM card and receive messages without the need for a handset

- SMS printers can receive and print test results without computer or internet access



# Ways to Return Results from the Lab to the Health Facility

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## **(2) SMS text messages:**

- Can notify health providers of test results and notify caregivers that results are available at the health facility
- Text messages to caregivers should encourage them to come to the clinic to get test results and not disclose any confidential information

## **(3) Secure webpage or electronic medical record system:**

- Password protected clinic-specific webpages on which results are posted to be accessed by clinic staff
- Viable option where clinics and laboratories have reliable access to the internet
- Some electronic medical record systems can flag positive results for the health care provider

# Ways to Return Results from the Lab to the Health Facility

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## (4) Telephone:

- To notify caregivers of test results, especially for urgent follow-up of positive test results.
- Always follow-up phone calls with paper printout for medical record

## Notes:

- In many settings, results are returned using a combination of methods, e.g., internet in urban centres and SMS printers in remote areas
- POC testing has the potential of same-day results
  - Avoiding the challenges of specimen transport and delayed turn-around time

# Steps When Receiving Results

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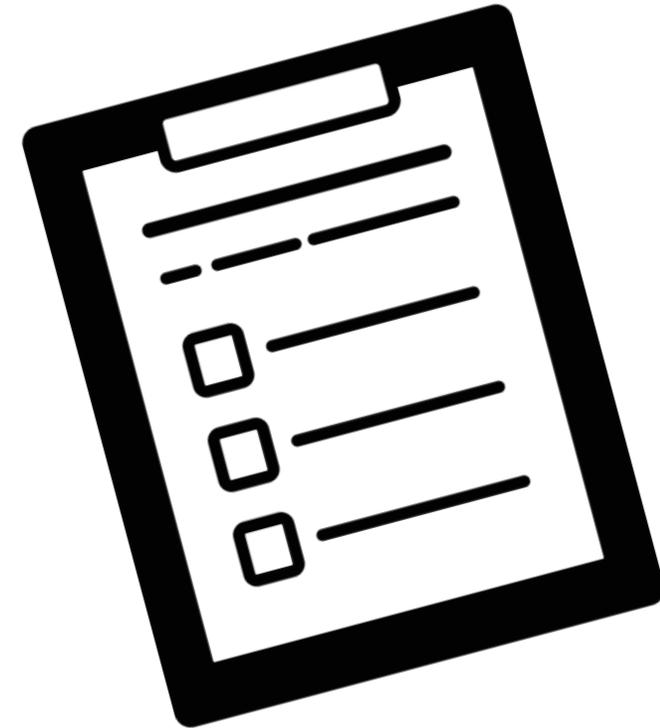
- *What do you do in your clinic when DBS test results are returned?*
- *What do you do if you do not receive results?*

# Steps When Receiving Results

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The steps are the same regardless of method of return (electronic or paper):

- Document receiving the results and date receipt/review of results
- Write the results in designated register and/or clinical database; and patient chart
  - File paper copies in patient chart
- If HIV-positive: re-enter baby's name, together with the necessary tracing details, in the designated register to enable prompt follow-up and linkage to ART



# Steps When Receiving Results

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- It is important that the designated register is completed accurately
- Registers are used for monitoring and reporting
- When the caregiver receives test result, enter the post-test counselling date in patient chart and register
- Ensure caregiver knows child will be retested:
  - If the 6-week NAT is negative, retest at 9 months **and** at 18 months or 3 months after completion of breastfeeding (whichever is later)
  - If the NAT is positive, collect a second DBS specimen to be retested for confirmation of the first result
    - Initiate child on ART immediately

# Tracking No Shows

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- *Do you think your clinic's procedure is effective, i.e., are you able to get results to caregivers quickly?*
- *What improvements need to be made to ensure caregivers get their infants' results efficiently?*

# Tracking No Shows

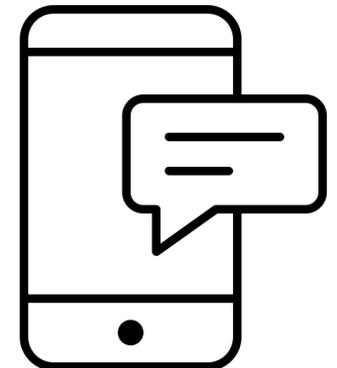
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- Every clinic should have a mechanism for identifying patients that did not attend for testing, scheduled clinic visits or for post-test result
- Use Infant DBS Register to identify patients who have not returned to receive test results
- Where available, use computer-based records and appointment systems to identify patients who miss appointments
- Ask patient at time of enrolment for permission to trace them by phone or home visit
- If the patient consents, document locator information (address/location and phone number) at the health facility

# Tracking No Shows

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- Once a patient has been identified as missing an appointment or lost to follow-up, that individual must be traced
- Where the technology is available, invite patients back into care using SMS messages, phone calls, or e-mail
- Where that technology is not available, then consider making a home visit
- Patients who have not yet collected a positive HIV test result, should be reached in person via an outreach worker or other peer navigator if they do not respond within 1–2 days of an electronic message



# Missing and Delayed Results

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- *What is turn-around time (TAT)?*
- *What is reasonable TAT? When will you say result is “lost”?*
- *What do you do if results are deemed “lost”?*

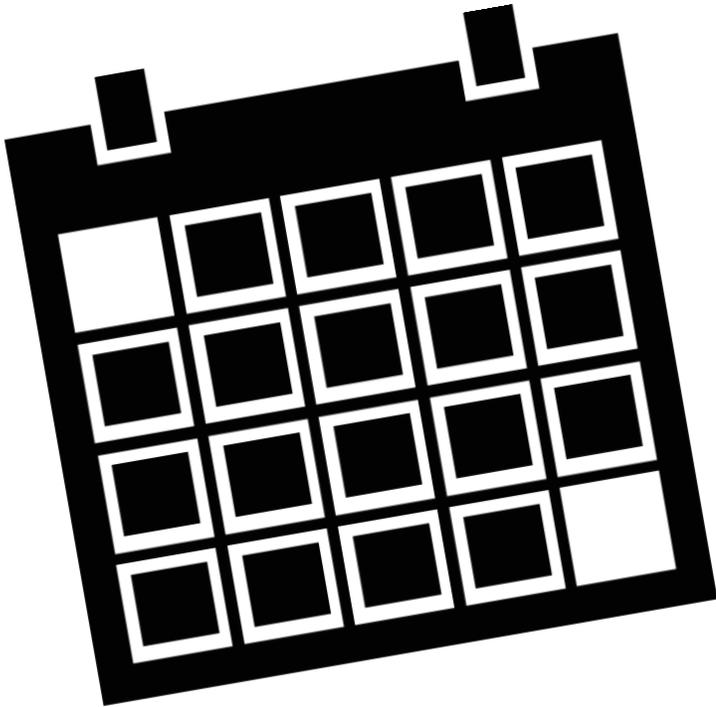
# Missing and Delayed Results

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- Healthcare providers have an important role in ensuring that all requested test results are returned in a timely manner
- NAT test results should be returned to caregiver as soon as possible, but at the very latest within 4 weeks of specimen collection
- HIV-positive infants should be identified and followed up as soon as possible to enable early initiation in care and treatment
- Responsibilities for ensuring timely results are:
  - Health facility: use the designated register to identify results not received within 28 days, and immediately notify the laboratory
  - Laboratory: check if samples were received, when was the test done and date when the results were dispatched

# Re-collection of Specimens

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- If results have not been received within 28 days and tracing result with the laboratory is unsuccessful
  - ⇒ Use the post-test appointment to take another DBS specimen
- If infant did not have an appointment or does not show for the appointment
  - ⇒ Phone or visit the caregiver as soon as possible to ask them to come in for retesting

# Exercise 2

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**DBS specimen collection practice: Pair work**

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# Exercise 3

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Packing samples and receiving results:  
Demonstration in large group

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# Module 4: Key Points

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- HIV testing of HIV-exposed infants is routinely conducted at the 4–6 weeks, 9 months and 18 months of age (or 3 months after stopping breastfeeding, whichever is later). The pre-test counselling should cover 7 points:
  1. **Assess:** assess caregiver's knowledge of HIV
  2. **Routine testing:** explain that we routinely test all HIV-exposed babies for HIV
  3. **Explain the procedure:** discuss the steps of the testing procedure
  4. **Confidentiality:** explain that the discussion is private
  5. **Result:** explain what a positive or negative result means
  6. **Return:** discuss when to return for results and routine care
  7. **Questions:** ask if the caregiver has any questions

# Module 4: Key Points

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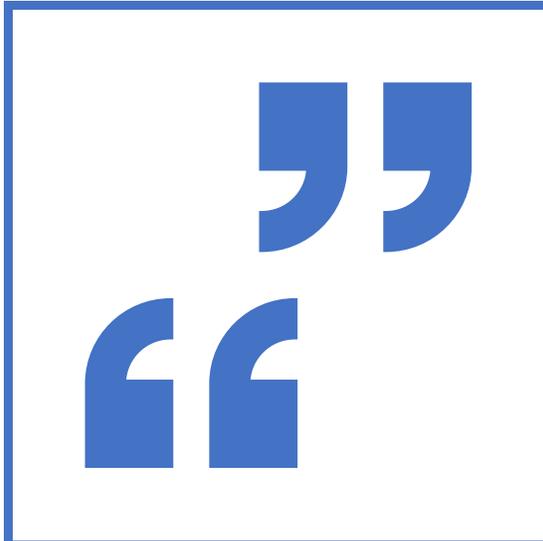
- Dried blood spot (DBS) refers to small drops of whole blood that are collected on strips of special filter paper that are then dried. If properly dried and stored, specimens remain stable for an extended period of time and can be transported with minimal special handling to a central laboratory
- Follow standardized procedures for collecting, drying and packaging DBS specimens, including complete and accurate documentation
- When results are received, record them in the designated register/database as well as the patient chart

# Module 4: Key Points

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- If a client does not come for the scheduled post-test counselling session, ensure s/he is tracked by phone, text or e-mail if available. If she does not respond to electronic messaging, or does not have a phone, reach her in person via outreach staff
- If a positive NAT result is received, trace the caregiver immediately for post-test counselling and ART initiation
- Actively follow up delayed results. If the patient shows for the post-test session and the results are not available, contact the laboratory. If the sample was lost or rejected by the laboratory, use the visit as an opportunity to take a new specimen for testing

# Credits



- “Discussion” icon by Hoeda from [the Noun Project](#)
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