Self Directed Learning Package

Capillary Blood Sampling

A Beyond Entry-Level Competency

Until Further Notice This SDLP Applies Only To: NICU (RNs & LPNs) & IWK/EHS Life Flight (RNs & RRTs) – July 20, 2016

June 2016

IWK Health Center
Women’s Newborn Health Capillary Blood Sampling

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Review Process
This Self Directed Learning Package (SDLP) will be reviewed/ revised every three years or earlier in the event of policy/practice changes. The next scheduled review/revision date is 2019.
# Capillary Blood Sampling

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Purpose

This self directed learning package (SDLP) is designed to provide information to the Registered Nurses (RNs) and Licensed Practical Nurses (LPNs) in the Women’s Newborn Health Program. The purpose of this package is to develop and/or update the knowledge necessary to perform Capillary Blood Specimen Collection safely and competently within the IWK Health Centre for the newborn.

Eligibility

Participants who have been hired within the designated areas of the IWK Health Centre that have declared Capillary Blood Specimen Collection as a required skill, are required to participate in this learning process. These participants are expected to attain/maintain certification in this competency as well as, successful completion of hands on unit-specific orientation at the IWK.

Designated areas:

- Birth Unit (BU)
- Family Newborn Care Unit (FNCU)
- IWK/EHS Life Flight /Transport Team
- Neonatal Intensive Care Unit (NICU)
- WNBH Resource Nurses

Certification/Recertification Process

Capillary Blood Specimen collection is a Beyond Entry Level Competency (BELC) for nurses, health professionals and requires initial certification and recertification annually.

Initial assessment of competence requires successful completion of the capillary sampling SDLP, demonstration of competency with direct supervision, documentation of certification on competency validation checklist and completion of the capillary blood sampling workshop.

Annual recertification of competence with direct observation is the responsibility of the nurses and health professionals performing the BELC. Recertification (required with greater than 6 months leave or in the event of policy changes) includes completion of the following:

- Review of the Capillary Blood Sampling policy.
- Demonstration of competency in the presence of a preceptor, who is certified in the skill
- Documentation of recertification

Certification and recertification for nurses is recorded and tracked on eSource.

Specific units have exemptions for annual recertification, such as NICU (refer to Approval and Performance of Beyond Entry Level Competencies (BELCs) by Registered Nurses - Administrative Policy #324.2).
Upon completion of the self-directed learning package the learner will be able to:

1. Understand principles related to pain assessment, neuroprotection & developmental care. These include but are not limited to positioning, 24% sucrose administration, thermoregulation and decreased noise & lighting.

2. Importance of minimizing infant stress with proper preparation of the infant (skin-to-skin contact breastfeeding, skin to skin contact with sucrose administration, facilitated tucking and/or non nutritive sucking non-nutritive sucking).

3. Identify the correct site, device and collection equipment required for capillary blood sampling.

4. State the correct procedure for confirming patient identification

5. Understand the correct process of entering information into the Meditech system to print labels (when required)

6. Describe the requirements for correctly labeling blood specimens

7. Demonstrate the proper technique for capillary blood sampling.


Learning activities to complete these objectives are:


2. Review Policy #8530 – Capillary Blood Sampling for Infants Less than 6 Months of Age in the Women’s Newborn Health Program.

3. Complete the post-test.

4. Successfully demonstrate five capillary blood collections (that have valid results) in the presence of a preceptor to complete certification process.
Women’s Newborn Health Capillary Blood Sampling

Introduction

Capillary blood sampling is a safe and effective procedure for collecting blood from neonates. The heel is the recommended site for collection of skin puncture specimens on infants less than six months old.

Capillary blood sampling is a painful procedure and has the potential of increasing morbidity and mortality to the infant through risk of sepsis, inadequate pain control, stress, trauma to the heel/foot.

Minimizing these risks may positively impact the infant’s recovery from illness. Principles related to pain assessment; neuroprotection & developmental care should be considered. These include but are not limited to positioning, 24% sucrose administration, thermoregulation and decreased noise & lighting.

Nurses and health professionals collect capillary blood for routine laboratory testing based on various considerations:

- Urgency of the test
- Infant’s sleep/wake state
- Amount of blood required
- Condition of the heels

Heel punctures should NOT be used (another sampling method should be considered):

- For tests requiring more than 1.5 milliliters of blood.
- For tests requiring no dilution of blood by interstitial fluids (e.g. coagulation)
- When infants have poor peripheral circulation
- When heels are in poor condition
  - Edematous
  - Injured
  - Bruised
  - Infected
  - Anomalous

The maximum number of skin pokes that may be performed by an individual nurse during a single collection is two (2), provided heels are in good condition. If the blood sample is not obtained, the nurse will discuss with the authorized prescriber and re-examine the method of sampling. Additionally, issues with samples such as hemolysis & clotting may require alternate collectors or methods.
Risks and Hazards

The risk of dangerous complications of heel skin puncture is minimal when nurses follow the recommended guidelines. Some of the adverse effects may include:

- Lacerations
- Blood loss
- Chronic scarring
- Infection of the puncture site
- Damage to arteries
- Abscess formation
- Sepsis
- Inadequate pain control
- Stress/Pain
- Bruising or loss of skin integrity
- Calcified nodules
- Cellulitis
- Osteomyelitis
- Nerve damage
- Erroneous laboratory values may result from the following:
  - Contamination of specimen with tissue fluid.
  - Contamination of specimen with health center antiseptic cleaner.
  - Hemolysis of specimen
  - Inadequate warming or poor circulation at puncture site.

Guidelines for Neonatal Glucose Monitoring & Care Directive (# 80.46)

Clinical Signs of Hypoglycemia:
Infants with clinical signs of hypoglycemia (symptomatic) are considered to be at higher risk for long term neurological complications. It is critical to measure serum glucose levels to determine whether the signs disappear with the administration of sufficient glucose. If not, other diagnoses must be considered.

Infants (especially preterm) may be hypoglycemic, but they may be asymptomatic. There may be a clustering of episodic, clinical signs that include:

- Tremors, jitteriness, seizures, eye rolling, limpness or lethargy
- Apneic spells or tachypnea, cyanosis
- Abnormal cry (high-pitched or weak)
- Poor feeding
- Hypothermia or episodes of sweating, sudden pallor
- Cardiac arrest.

Well infants at risk for neonatal hypoglycemia include:

- Small for gestational age (SGA): weight less than the 10th percentile
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- Large for gestational age (LGA): weight more than the 90th percentile
- Preterm: less than 37 weeks gestation
- Infants of Diabetic Mothers (IDM): both gestational and non-gestational diabetics regardless of the use of insulin
- Infants with a known family history of metabolic conditions associated with hypoglycemia in the newborn period

All unwell infants and infants admitted to NICU are at risk for hypoglycemia.

**Note:** An infant that was unwell and is now well will have monitoring parameters that fall outside of the guidelines outlined in this policy

**Principals of Capillary Blood Collection**

Blood specimens must be collected in the proper collection tubes and containers and in the right order of draw. The proper order in which blood-collection tubes should be filled is designed to prevent the carryover of additives from one tube to the next. Such carryover can alter the composition of the next tube and can lead to misleading or erroneous results that affect patient care.

Most blood tests are performed on anticoagulated whole blood, plasma, or serum. It is important that the correct type of collection tube is used to ensure that the appropriate type of specimen is available for the specific analyte or testing procedure. Collection tubes used for blood collection are colour-coded to reflect the type of anticoagulant, or additive contained within the tube. The type of anticoagulant or additive will indicate the type of specimen that is required for testing.

The gel tubes provide a physical barrier between the serum or plasma following centrifugation. The gel also prevents any changes that occur when serum or plasma is allowed to remain in contact with the cells for prolonged periods of time prior to testing (e.g. falsely decreased glucose values if not removed from the cells within a certain amount of time). Serum separator tubes contain a clot activator (glass or silica particles) to facilitate clotting. Although clot activators may shorten the time it takes for the specimen to clot, manufacturers stress that such tubes facilitate complete clotting, not rapid clotting, yielding serum that is less likely to contain fibrin strands that can interfere in testing.

**Preparation for Capillary Blood Sampling**

Laboratory tests require a physician’s/MW/NNP’s written or verbal order.

Tests must then be entered into the computer system by the nurse or ward clerk to obtain labels that will be placed on the collection tubes.
Women’s Newborn Health Capillary Blood Sampling

Assemble the Following Equipment
- Disposable Gloves
- Specimen labels
- Collection tubes and carrier tubes for blood gas specimens as ordered
- Tenderfoot® Device (select appropriate size based on patient’s weight) see Appendix C
- Hospital approved antiseptic wipe (select appropriate solution based on gestational age)
- Dry gauze
- Heel warmer for warming foot
- Sucrose 24%

Order of infant blood collection:
- Blood Gas
- Hematology
- Chemistry
- Newborn Screen
- Other

1. Blood Gas/Ionized Calcium/Lactate
   - Specimen must not contain air bubbles and must be free flowing.
   - Must be mixed gently 5x by inversion after collection. Ensure magnetic flea is free flowing.

2. Hematology
   - Includes CBC, BCP, ZPP, ESR, and/or FER.
   - Specimen cannot be clotted.
   - Mix gently 10x after replacing cap.

3. Pre-approved Blood Bank
   **Pre-approved** capillary blood group type and screen
   This must be pre approved by one of the following: Hematopathologist, Manager of Blood Transfusion Services or Transfusion Quality Specialist, after hours contact on call hematopathologist.
   The 3 ml EDTA tube is preferred. Please contact blood bank for minimum volume required, as there is some leeway depending on the patient hgb.

4. Chemistry
   - Includes all routine liver and kidney function tests, electrolytes, and endocrine functions.
   - Blood should be free flowing to prevent hemolysis.
   - Mix gently a minimum of 10x for Lithium Heparin and 5x for SST tubes.

5. Newborn Screening Blotters
   - Ensure the filter paper circles of the NBS Blotter are completely saturated.
6. **Non-additive tubes (Red)**
   Non-additive tubes can be mixed by inversion

**Interferences**
Include:
- Specimen integrity techniques (e.g. scraping the tube against the puncture site)
- Hemolysis (e.g. excessive squeezing)
- Under/over filled tubes which alter the ratio of blood to anticoagulant which may result in inaccurate results.

**Preparation of Infant:**

**Positioning:**
The infant will be positioned in such a way as to minimize infant stress and maintain adequate thermoregulation.

*Skin-to-Skin Breastfeeding*
Preferred position is skin-to-skin breastfeeding throughout procedure

*Skin-to-Skin with Sucrose*
Position skin-to-skin, with 24% sucrose with non-nutritive sucking.

*Sucrose*
Provide 24% sucrose as per Medication Management Policy 20.36, *Oral Sucrose Administration for Minor Procedural Pain Management in Infants Less than or Equal to 12 Months of Age*. Allow 2 minutes between administration of sucrose and the introduction of the heel poke.

*Facilitated Tucking and/or Non-Nutritive Sucking*
When skin-to-skin contact is not possible, bundle the infant and offer 24% sucrose with non-nutritive sucking (pacifier) to reduce stress.

**Collecting the Sample**

1. Verify orders and specimen labels
2. Verify the infant’s name and K# match those on the specimen labels
3. Perform hand hygiene and don gloves
4. Position infant
5. Choose site and apply approved Chemical Heel Warmer

- The foot should be warmed for five (5) minutes before collection of a blood gas.
- **Note:** If blood gases are not requested, it is permissible to omit warming of foot prior to blood collection provided that a good flow of blood can be obtained. However if the infant is cold to the touch, warming the foot increases the blood flow sevenfold and allows for an easier collection with less squeezing and bruising, as well as more accurate results.
- **Note:** Chemical heel warmers should **not** be used if the infant’s skin is impaired in any way. Extra caution is required for monitoring premature infants when using chemical heel warmers.

6. Cleanse site with hospital approved antiseptic wipe and allow to air dry.

7. Firmly align lancet parallel against the length of the foot with the selected site (do not puncture through previous sites). Hold in position, and depress button on top of lancet. See diagrams for appropriate sites (shaded areas):

8. Discard lancet, and wipe away the first drop of blood with the gauze (to prevent tissue contamination of the sample).

9. Collect specimen in appropriate order (blood gas, hematology, chemistry, newborn screen, other).

10. Apply appropriate pressure to the foot to produce blood flow. Avoiding excessive dorsiflexion of the infant’s foot, alternately compress and release the heel, allowing for capillary refill between compressions. This will help prevent hemolysis of the sample and bruising of the foot.

- **Capillary Gas Tube:** Place the capillary gas tube to a drop of blood from the puncture site in an almost horizontal position. By capillary action, the gas tube will fill. Ensure no air bubbles are present. Once the gas tube is completely filled, both ends must be sealed and the gas tube must be inverted 5 times so that the filler (also known as “the flea”) will prevent coagulation of the blood.

[https://www.bd.com/vacutainer/labnotes/Volume20Number1/](https://www.bd.com/vacutainer/labnotes/Volume20Number1/)
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- **Microtainer Collection.** Position the microtainer at 30-45° angle from the surface of the puncture site. Touch the scoop of the microtainer tube to the drop of blood and let the drop of blood run down the walls of the tube. Occasionally tap the tube gently to encourage the blood to settle to the bottom of the tube. When collecting the blood into the tube, avoid “scooping” the blood droplets to prevent hemolysis of the sample. Cap the microtainer with the correct colored top and mix 10 times. Gas tubes must not contain air bubbles.

11. Other specimens collected in tubes containing an anti-coagulant, make sure to tip the tube back and forth to ensure mixing.

12. When you have finished collecting all of the blood needed, hold gauze on the puncture site until bleeding stops.

13. Ensure that you place the correct label on the correct tube before placing the tubes in the sealable plastic bag. Bar code is to be placed lengthways on the tube to ensure scanning of sample is possible.

14. Excessive crying may adversely affect the concentration of some constituents (e.g. leukocyte count and capillary blood gases). If the specimen is collected while the patient is crying, it is recommended that this be noted in the collection comments in Meditech.

15. Document the following on the patient’s health care record:
   - specimen collection
   - method (POC or capillary)
   - specific collection site
   - number of attempts required for the specimen collection
   - infant response
   - sample result
   - additional interventions

**Labeling and Sending the Sample**

1. Before applying labels to the tubes, ensure that you have written N for nurse, collector’s initials, and the time of collection on the label. Example N/DH 0800

2. Ensure that you place the correct label on the correct tube before placing the tubes in the sealable plastic bag.

3. Include any extra labels in the outside pouch of the same bag.

4. Send the bag in the pneumatic tube system to the lab or hand-deliver the sample to the lab.
Documentation of Capillary Blood Sampling

Capillary blood sampling will be documented on the permanent health record. This includes the following:

- Number of attempts required for the specimen collection.
- Test collected
- Medications given
- Time of collection
- Site of collection
- Comfort measures
- Pain Score
- Collector signature
- Respiratory Settings for Blood Gases (form #0374) if applicable & send to lab with sample.
Post Test

1. **True** or **False**: The condition of an infant’s heels is taken into consideration before attempting capillary blood sampling.

2. **True** or **False**: Heel puncture should NOT be used for blood tests requiring more than 1.5 milliliters of blood.

3. The maximum number of skin pokes that may be performed by an individual nurse during a single collection is:
   a. Two
   b. Three
   c. Four
   d. There is no maximum number

4. A potential dangerous complication of heel skin puncture in neonates is:
   a. Skin rash
   b. Infection of the puncture tract
   c. Hyperthermia
   d. Hypoglycemia

5. The correct order of blood collection is:
   a. CBC, Chemistry, Other, Blood Gas
   b. Chemistry, Other, Blood Gas, CBC
   c. Blood Gas, Other, CBC, Chemistry
   d. Blood Gas, CBC, Chemistry, Other

6. **True** or **False**: ALL laboratory tests require a physician’s written or verbal order.

7. The blue/pink Lancet is used for infants greater than what weight?
   a. 800 grams
   b. 1000 grams
   c. 1200 grams
   d. 2500 grams

8. What are three comfort measures used prior to and during capillary blood sampling?
   __________________________________________________
   __________________________________________________
   __________________________________________________

9. Why is the first drop of blood wiped away after initial heel puncture?
   a. To prevent blood from dripping onto the infant’s bed
   b. To prevent tissue contamination of the sample
   c. To prevent hemolysis of the sample
   d. To prevent air bubbles
10. **True** or **False**: “Scooping” of the blood droplets ensures maximal volume collection.

11. What is the most appropriate way to apply pressure to the infant’s foot in order to produce blood flow?
   a. Apply no pressure, allow droplets of blood to flow by gravity
   b. Apply firm and constant pressure to the infant’s heel
   c. Alternately compress and release the heel for one-second intervals
   d. Alternately compress and release the heel allowing for capillary refill between compressions

12. **True** or **False**: All heel skin punctures require a band-aid after collection.

16. Name 2 essential pieces of information that must be written on the label prior to sending the sample to the lab:

    ______________________
    ______________________
Answers to Post-Test

1. True
2. True
3. A
4. B
5. D
6. True
7. D
8. Sucrose, Skin-to-Skin contact, non-nutritive sucking, bundling
9. B
10. False
11. D
12. False
13. Initials, Time of collection
Beyond Entry-Level Competency Validation Checklist:
Capillary Blood Sampling

<table>
<thead>
<tr>
<th>Performance Criteria</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
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</thead>
<tbody>
<tr>
<td>1. Checks physician/NNP/MW order for required tests.</td>
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<td>2. Gathers &amp; prepares equipment</td>
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<tr>
<td>3. Performs hand hygiene &amp; dons gloves</td>
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<td>4. Correctly identifies infant.</td>
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<td>5. Takes measures to ensure pain management (non pharmacological, pharmacological &amp;</td>
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<tr>
<td>Pain score). Seeks assistance of second person (if needed)</td>
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<tr>
<td>6. Chooses appropriate puncture site &amp; warms infant’s foot</td>
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<tr>
<td>7. Cleanses site with hospital approved antiseptic wipe &amp; allows to air dry</td>
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<td>8. Punctures site using proper technique</td>
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<tr>
<td>9. Wipes away first drop of blood</td>
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<tr>
<td>10. Collects specimens</td>
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<tr>
<td>11. Applies pressure to puncture site until bleeding ceases</td>
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<td>12. Writes appropriate information on specimen label (N/ Initials &amp; time of</td>
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<tr>
<td>collection)</td>
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<tr>
<td>13. Labels specimens</td>
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<tr>
<td>14. Places specimens in sealable plastic bag &amp; places extra labels in side pouch</td>
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<tr>
<td>15. Sends specimens to lab in BIOHAZARD bag (via pneumatic tube system or hand</td>
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<td>delivery)</td>
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Signature of Preceptor

________________________________________  ______________________
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________________________________________  ______________________
Definitions

**Additive** – in a specimen collection tube, any ingredient that is placed in a collection container to facilitate an intended function (e.g. to prevent the blood from clotting or to prevent glycolysis); NOTE: while the container closure is not considered an additive, it may contain or be coated with additives, which, if they come into contact with the specimens, may be considered additives.

**Anticoagulant** – agent that prevents coagulation of blood or blood products.

**Neonatal Hypoglycemia:** Hypoglycemia is defined as a blood glucose level less than 2.6 mmol/L with a desired range of glucose values of 2.6 mmol/L – 6 mmol/L.

**Neonatal Hyperglycemia:** is defined as a blood glucose value greater than 8.3 mmol/L.

**Separator gel** – insert material that undergoes a temporary change in viscosity during centrifugation; NOTE: it has a density intermediate to cells/clots and plasma/serum.

**Specimen (patient)** – the discrete portion of a body fluid or tissue taken for examination, study or analysis of one or more quantities or characteristics to determine the character of the whole.
References


RELATED DOCUMENTS

Policies:

IWK Clinical Policy 1100 Patient Identification.

IWK Infection Control Policy IC205.2 Hand Hygiene.

IWK Laboratory Policy 3313 Heel Puncture Collection on Neonate & Infant (DRAFT).

IWK Laboratory Policy 3311 Identification and Handling of Diagnostic Laboratory Specimens.

IWK Laboratory Information System Policy 3301 Labeling of Specimens.

IWK Laboratory Policy 3302 Specimen Containers and Volumes.

IWK Health Center Policy #8530 (July 2016), Capillary Blood Sampling for infants less than 6 months of age in the Women’s Newborn Health Program

IWK Medication Management Policy/Procedure 20.36 Oral Sucrose Administration for Minor Procedural Pain Management in Infants Less Than or Equal to 12 Months of Age.

IWK Medication Management Policy 10.11 24 Hour Medication Administration Record/cMAR.

IWK NICU Policy 40047 – Infant Identification Policy.

IWK NICU Policy 8665 Kangaroo Care: Skin –to- Skin Contact in NICU.

IWK Policy 1519 Pain Management

IWK Policy 3101 Point of Care Testing


Nova Scotia District Health Authorities/ IWK Policy 685.1Breastfeeding.

IWK Self Directed Learning Package Capillary Blood Sampling.

Pamphlets:

Reducing Newborn Stress PL-0827

Skin to Skin Contact PL-0586
Web Site:
www.phlebotomypages.com/new_draw.htm
http://findarticles.com/p/articles/mi_m3230/is_5_36/ai_n6077822


Videos:

NICU Developmental Care E Source Learning Video: Capillary Blood Gas Sampling.

The Power of a Parents Touch (2015) Downloaded on August 31, 2015 from https://www.youtube.com/watch?v=3nqN9c3FWn8
Appendix A – Microtainer Tubes

<table>
<thead>
<tr>
<th>Tube Type</th>
<th>Description</th>
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<tbody>
<tr>
<td><strong>100 µL Gas tubes</strong></td>
<td>safeCLINITUBES by Radiometer (ref# 942-892). Capillary tubes containing electrolyte-balanced heparin, mixing wire (flea), and plastic caps. Capillary tubes must be completely filled and free of bubbles. Bubbles in the specimen can alter the gas parameters and will not be aspirated by the gas analyzers. Mix blood well after collection to reduce clotting.</td>
</tr>
<tr>
<td><strong>500 µL EDTA</strong></td>
<td>(lavender) BD microtainer tubes (ref#365974). Used for hematological testing. Contains K&lt;sub&gt;2&lt;/sub&gt;EDTA that was spray-coated and then dried on the interior surface of the microtainer reservoir. Each tube contains sufficient K&lt;sub&gt;2&lt;/sub&gt; EDTA to anticoagulate 500µL of capillary blood. EDTA functions as an anticoagulant by chelating calcium preventing the continuation of the coagulation process after blood is collected. EDTA also reduces platelet activation but does not eliminate it completely. Analysis must be performed within 4 hours of collection (manufacturer’s recommendation). Fill recommendations are between 250-500 µL. Must be mixed 10x by inversion. <strong>Note:</strong> Some patients have sensitivity to EDTA which results in irreversible platelet clumping. Alternative tube collection would be sodium citrate (3.2%) as used in coagulation studies, thus a venous collection must be performed.</td>
</tr>
<tr>
<td><strong>600µL SST</strong></td>
<td>(yellow or gold) BD microtainer tubes (ref #365967). These tubes contain a clot activator and polymer gel. The inside walls of serum tubes contain a silicone coating that reduces the adherence of red cells to tube walls. They are also coated with micronized silica particles that increase surface area. Particles in the white film on the interior surface activate clotting when tubes are mixed 5 times by inversion. Fill recommendations are between 400-600 µL. Used for Endocrine function testing, some therapeutic drug monitoring, ferritin, and can be used for routine chemistry testing. Must be mixed 5x by inversion.</td>
</tr>
<tr>
<td><strong>600µL PST</strong></td>
<td>(Mint or light green) BD microtainer tubes (ref#365985). These tubes contain the optimum amount of additive, lithium heparin, to anticoagulant the specified volume of capillary blood. They contain lithium heparin and a polymer gel. When centrifuged, these tubes will yield plasma. Fill recommendations are between 400-600 µL. Used for stat and urgent chemistry testing and some therapeutic drug monitoring. Must be mixed 10x by inversion.</td>
</tr>
<tr>
<td><strong>500µL No Additive</strong></td>
<td>(Red) BD microtainer tubes (ref#365957). These tubes contain no additive and will yield serum when centrifuged. Fill recommendations are between 250-500 µL. Used for drug therapy.</td>
</tr>
</tbody>
</table>
Newborn Screen

The filter paper blotter is touched gently against a large drop of blood and is allowed to soak into the filter paper in the designated circles. Only a single application of blood to the circle should be made to one side of the blotter (front or back). The blotter is examined to ensure the filter paper is saturated from front to back. The blotter should be placed flat in an appropriate drying rack after collection for a minimum of 3 hours prior to testing. The protective paper flap should be folded over once the blood spot has dried.

NOTE: Blood should never be collected in capillary tubes and then transferred to the filter paper circles as specimens may have started to clot.

Appendix B - Specimen and Collection Requirements

How labels look when printed:
Extra Labels. Please send these to lab with specimens, as it may save reprinting labels.

Extra labels are to be placed in the outside pouch of the baggie which will hold the blood work.

Demographic Label:
This label is located in the upper left hand section of the printed labels. It contains all information needed to identify your patient before collecting the sample.
Women’s Newborn Health Capillary Blood Sampling

Preferred Label:
This label is to be attached to your collection tube. It is located in the lower left side of the printed labels, underneath the demographic label.

Blood Bank Labels:
The demographic label is to be signed by two individuals:
- The person who collected the specimen.
- The person who assisted with the identification (staff/pt).

The specimen label is to be initialed by the Individual who collected the specimen.

Abbreviations found on labels:

<table>
<thead>
<tr>
<th>Abbreviation</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>SST</td>
<td>Serum Separator Tube. Yellow-Gold top tube with gel at bottom of the tube.</td>
</tr>
<tr>
<td>LAV</td>
<td>Lavender top tube. No gel.</td>
</tr>
<tr>
<td>G or GREEN</td>
<td>Light (mint) green top tube with gel at bottom of the tube.</td>
</tr>
</tbody>
</table>
Women’s Newborn Health Capillary Blood Sampling

<table>
<thead>
<tr>
<th>Color</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>PINK</td>
<td>Light pink top tube. No gel.</td>
</tr>
<tr>
<td>COAG</td>
<td>Light blue top tube. Liquid anticoagulant in the bottom.</td>
</tr>
<tr>
<td>MICRO</td>
<td>Microtainers are used for pediatric collections. Volumes of blood needed for microtainers are shown on the ‘preferred label’. NOTE: that Microtainers hold approximately 1 ml of blood – To determine how much blood will be required for testing, see “How Much Blood Do I Need”.</td>
</tr>
<tr>
<td>Y/GMICRO</td>
<td>Yellow top OR green top. If you have a choice between using a Green or a Yellow-Gold (SST) collection tube the green tube would be preferred. (Specimens collected in yellow top tubes must sit for 30 minutes before processing).</td>
</tr>
</tbody>
</table>

**Tube Handling:**
Check the expiry dates on all vacutainers before using them. If the tube is expired, discard it.

Although all ‘preferred labels’ for tubes must be initialed and have the collection time written on them, please be aware that all specimens for Blood Bank (Type and Screen) require extra identification procedures.

All specimens for Blood Bank MUST have:
- The demographic label signed by the person drawing the blood; and
- The ‘preferred label’ on the tube MUST be initialed by the person drawing the blood
- Attach the preferred label for tube (which must also be initialed) to the tube. Partially attach the signed demographic label by a corner to the top of the tube, keeping the backing of the label in place.
- Please place the specimen in a re-sealable disposable bag and place all remaining labels in the pocket of the bag and send to the lab with the sample.

*When labeling your tubes, please place the bar code label to run along the length of the tube, so that it may be scanned.*
## Tenderfoot® Heel Incision Device

<table>
<thead>
<tr>
<th>Product</th>
<th>Depth</th>
<th>Length</th>
<th>Color</th>
<th>Indications</th>
</tr>
</thead>
<tbody>
<tr>
<td>Micropreemie</td>
<td>0.655mm</td>
<td>1.4 mm</td>
<td>Blue</td>
<td>Less than 1000 grams</td>
</tr>
<tr>
<td>Preemie</td>
<td>0.85 mm</td>
<td>1.75 mm</td>
<td>White</td>
<td>1000-2500 grams</td>
</tr>
<tr>
<td>Newborn</td>
<td>1.0 mm</td>
<td>2.5 mm</td>
<td>Pink/Blue</td>
<td>Greater than 2500 grams – 9kg</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Gestational Age</th>
<th>Skin Preparation</th>
<th>Information</th>
</tr>
</thead>
</table>
| Less than 34 weeks (corrected age)      | 2% AQUEOUS CHLORHEXIDINE GLUCONATE (alcohol-free) | 1. Rapidity of action is rapid & intermediate.  
2. Residual activity is excellent.  
3. **Use with Neonates less than 34 weeks gestation (corrected age).**  
4. Potential to cause damage to the hearing or balance functions of the ear, nerve tissue, and blurred vision/decreased visual acuity with direct exposure.  
5. **Caution:** because of the risk of burns, antiseptic should not pool on skin especially in infants less than 28 weeks gestation.  
6. **Note:** Requires longer drying time as it is alcohol free. |
| Equal to or greater than 34 weeks (corrected age) | 2% CHLORHEXIDINE in 70% ALCOHOL              | 1. Rapidity of action is rapid & intermediate.  
2. Residual Activity is excellent.  
3. **Do not use on infant less than 34 weeks gestation (corrected age).**  
4. Potential to cause damage to the hearing or balance functions of the ear, nerve tissue, and blurred vision/decreased visual acuity with direct exposure.  
5. **Caution:** because of the risk of burns, antiseptic should not pool on skin, especially in infants less than 28 weeks gestation. |