

TRAINING UPDATE

Lab Location: SGMC
Department: Phlebotomy

Date Implemented: 7.6.2017
Due Date: 7.24.2017

DESCRIPTION OF PROCEDURE REVISION

Name of procedure:

Heelstick Specimen Collection

Description of change(s):

1. Added pictures for collecting heelstick specimens.
2. Added requirement to use an extender with microtainer tubes. We will label microtainer tubes in the same manner as regular vacutainer tubes.
3. Updated instructions for positioning the baby during heelstick.

Electronic Document Control System



Document No.: SGAH.P02[2]

Title: Heelstick Specimen Collection

Owner: LESLIE BARRETT

Status: INWORKS

Effective Date: 04-Aug-2017

Next Review Date:

Non-Technical SOP

| | | |
|--------------------|--------------------------------------|------------------------|
| Title | Heelstick Specimen Collection | |
| Prepared by | Samson Khandagale | Date: 3/19/2009 |
| Owner | Samson Khandagale | Date: 3/19/2009 |

| Laboratory Approval | | |
|--|------------------|------------------------------|
| Print Name and Title | Signature | Date |
| <i>Refer to the electronic signature page for approval and approval dates.</i> | | |
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| Local Issue Date: | | Local Effective Date: |

| Review: | | |
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| Print Name | Signature | Date |
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1. PURPOSE
 To describe the equipment, sites, and steps required to perform capillary blood collection via heelstick.

2. SCOPE
 All infants under the age of 1 year will have blood collected using the heelstick procedure unless otherwise noted by the provider or specimen requirements.

3. RESPONSIBILITY
 All phlebotomists must understand and adhere to this procedure when performing heelstick collections.
 The field operations supervisor/manager is responsible for the content and review of the procedure.

4. DEFINITIONS
 Capillary collection: The technique of pricking the skin of the fingertip or heel to obtain a blood specimen from the tiny vessels near the surface.


5. PROCEDURE

| Step | Action |
|------|--|
| 1 | Laboratory staff members are only allowed to collect blood specimens with a valid order. Refer to the patient identification and specimen labeling procedure for additional details. |

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| Step | Action |
|------|--|
| 2 | Introduce yourself to the patient using AIDET technique (Acknowledge, Introduce, Duration, Explanation, Thank you). |
| 3 | Wash hands and don latex-free gloves. |
| 4 | Identify the patient per procedure. |
| 5 | Assemble the supplies needed for the capillary collection in the presence of the patient. Do not place supplies directly on the patient or patient's bed. <ul style="list-style-type: none"> A. Latex-free gloves B. Alcohol prep pad (70% isopropyl alcohol) C. 2x2 sterile gauze D. Lancet (one that is designed to enter no deeper than 2-3 mm) E. Warming device F. Band-Aid or tape G. Collection tubes (ensure the expiration date of tubes has not been exceeded) H. Biohazard sharps container |
| 6 | Determine the site to be used for blood collection. <ul style="list-style-type: none"> A. The best location for a heel puncture is the most medial or lateral portions of the plantar surface of the heel, not on the posterior curvature to avoid the calcaneus. B. Never punctures on the posterior curvature of the foot. Skin puncture on this area may result in injury to the nerves, tendons, and cartilage. C. Do not puncture through previous sites that may be infected.  |
| 7 | Apply a warming device to the puncture site for 3-4 minutes. This will allow the blood flow to increase up to sevenfold to this area. Note: A heel-warmer is regulated and will maintain an even heat source for capillary response and flow. Other means to warm the skin may cause burning or hemolysis. |
| 8 | Whenever possible, the infant should be positioned on his/her back (supine position). This allows the foot to hang lower than the torso and improves blood flow. |


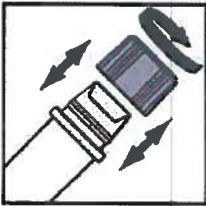
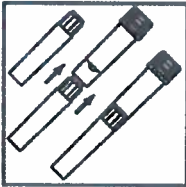
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| Step | Action |
|------|--|
| 9 | <p>Cleanse the puncture site with an alcohol prep pad.</p> <ul style="list-style-type: none">A. Begin at the venipuncture site and rub outward in concentric circles.B. Allow the alcohol to air dry completely before proceeding. <p>Disinfection occurs by air drying and wet alcohol can hemolyze the red blood cells.</p> |
| 10 | <p>Remove the closure from the tube(s) and place it on a convenient surface. The closure may also be nested on the base of the tube.</p>  |
| 11 | <p>Puncture the skin with an approved lancet.</p> <ul style="list-style-type: none">A. Remove the safety clip. Do not touch the trigger or the blade-slot.  <ul style="list-style-type: none">B. Hold the ankle area by placing your fingers on the on the bottom of the foot while placing your thumb behind the heel as shown.C. Raise the foot above the baby's heart level.D. Place the blade-slot surface of the device flush against the heel so that its center point is vertically aligned with the desired incision site. Ensure that both ends of the device are in contact with the skin, and depress the trigger.  <ul style="list-style-type: none">E. Immediately discard the lancet device in a biohazard sharps container.F. Lower the foot so it is level with or below the baby.G. Wipe away the first drop of blood with gauze. |
| 12 | <p>Determine which tube should be filled first based on the capillary tube order of draw.</p> |

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| Step | Action |
|------|--|
| 13 | <p>Hold the microtainer tube at a 30-45° angle from the surface of the heel (puncture site). Touch the collector end reservoir to the drop of blood. After the first 2-3 drops of blood, the blood will freely flow to the bottom of the reservoir.</p> <p>Note: Alternate pressing the lateral three fingers, followed by a milking motion of the second finger, to express blood. Relax the fingers for a few seconds periodically to allow refilling. Caution should be used to limit squeezing with the fingertips. Allowing large droplets to form will help to prevent hemolysis.</p>  |
| 14 | <p>Replace the closure by twisting and pressing cap downward until a snap is heard. Immediately mix the sample by inverting the filled tube a minimum of 10 times.</p>  |
| 15 | <p>Fill the remaining tubes in the same manner. Be sure to follow the capillary tube order of draw.</p> |
| 16 | <p>When all tubes have been collected, cover the puncture site with gauze and hold pressure for 3-5 minutes or until bleeding stops. The parent (or another adult) can assist with this task if he/she is able.</p> |
| 17 | <p>Cover the puncture site with gauze and tape or a Band-Aid after the bleeding has stopped.</p> |
| 18 | <p>Insert an extender into the bottom of each microtainer tube, as required, and properly label each tube per procedure.</p>  |
| 19 | <p>Recheck the tube labeling by comparing the name and MRN on each tube to the name and MRN on the patient's hospital ID band.</p> |

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| Step | Action |
|------|--|
| 20 | Place the specimens in a biohazard bag and seal. A. Do not put more than one patient's specimens in a bag. B. Never transport specimens that are not contained in a biohazard bag. |
| 21 | Clean the work area by discarding all used materials in the appropriate waste container. Do not leave any trash behind. |
| 22 | Thank the patient and wish him/her a good day. |
| 23 | Wash your hands and proceed to the next assignment. |
| 24 | Deliver the specimens to the laboratory via hand-delivery or pneumatic tube. |

Adverse Reactions

Follow these steps if an inpatient experiences an adverse reaction during the blood collection process. Follow the procedure, "Outpatient Emergency Assistance" if an outpatient experiences an adverse reaction during the blood collection process.

| Step | Action |
|------|--|
| 1 | Immediately discontinue the collection procedure. |
| 2 | Press the nurse call button and explain that the patient is having an adverse reaction to the procedure. Do not leave the bedside until a nurse arrives. |
| 3 | Answer any questions that the patient/parent poses and assist the nurse as needed. |
| 4 | Ask the nurse when you can return to complete the procedure and document the nurse's name. |
| 5 | Document the adverse reaction on a PI/Variance form. |
| 6 | Reschedule the draw per procedure using code "NOTP" for "test not performed." Refer to procedure, "Rescheduling Blood Draws." |
| 7 | Return to redraw the patient at the rescheduled time. Check with the nurse before proceeding with the blood collection. |

Unobtainable Specimens

| Step | Action |
|------|--|
| 1 | If a phlebotomist is not successful in obtaining a blood specimen after one heelstick, he/she may attempt to collect the sample one additional time. Do not attempt the patient more than twice. |

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| Step | Action |
|------|---|
| 2 | <p>If the phlebotomist is not successful after the second stick, he/she will:</p> <ul style="list-style-type: none"> A. Notify the nurse that he/she was unable to obtain the specimen and another phlebotomist will return. B. Notify the supervisor, group lead, or field ops representative in charge to assign another phlebotomist. C. A second phlebotomist will be sent immediately for Timed, ASAP, or STAT collections D. For routine collections of other tests, the collection time will be rescheduled for the next hour. |
| 3 | <p>If a second phlebotomist is unable to collect the specimen after 2 attempts, he/she will:</p> <ul style="list-style-type: none"> A. Notify the nurse and request that the hospitalist be contacted to obtain the required specimen. B. Give the patient labels and appropriate collection tubes to the nurse. C. Reschedule the collection per the instructions above. |

Safety Notes:

A Phlebotomist must NEVER ...

- Mix blood from one tube into another tube.
- Store or carry specimens in the pocket of a labcoat.
- Allow transporters or other hospital staff to deliver lab-collected specimens to the laboratory without prior approval from a supervisor or lead.
- Discuss reports or results with any patient.
- Use any phlebotomy equipment that has not been supplied by the laboratory on any patient.

6. RELATED DOCUMENTS

SOP: Patient Identification and Specimen Labeling

SOP: Pediatric Collection

Form: Capillary Tube Order of Draw (AG.F382)

7. REFERENCES

1. Jacobs DS, et al, Laboratory Test Handbook, 4th edition, OH: Lexi-Comp Inc., 1996, 330-331.
2. Henry, J.B., MD (ed) *Clinical Diagnosis and Management by Laboratory Methods*, 12th edition. W.B. Saunders Company, 2001, pages 487-488.

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8. REVISION HISTORY

| Version | Date | Reason for Revision | Revised By | Approved By |
|---------|---------|---|--------------|--------------|
| | | Supersedes SOP P003.002 | | |
| 000 | 11/4/13 | Section 3: update title of staff performing. Add review responsibility Section 4: specify who performs infant venipuncture Section 5: add Newborn metabolic screen card Section 6: add Microvette® collection container, add apply mild pressure, update bandaging Section 7: add Finger Stick SOP Footer: version # leading zero's dropped due to new EDCS in use as of 10/7/13 | S Khandagale | S Khandagale |
| 1 | 7/5/17 | Header: Added WAH Section 5: Updated wording and formatting for clarity. Added pictures. Re-numbered section (deleted separate equipment section) Section 6: Added order of draw | SCodina | NCacciabeve |

9. ADDENDA AND APPENDICES

None

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