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## Appendix F – Capillary blood sample collection protocols

### INSTRUCTIONS FOR COLLECTING CAPILLARY BLOOD SAMPLES CHILDREN (UNDER 7 YEARS)

#### STATION 1: RECEPTION AREA

##### Clinic reception staff:

1. Meet and greet study participants and their parents/guardians.
2. Review Information Sheet and respond to any inquiries posed by parents/guardians concerning their child(ren)'s participation in the research study.
3. Obtain informed consent from parent/legal guardian and review forms for completeness.
4. Label the consent form with the child's name and unique identification (ID) code.
5. Update the electronic database.

#### STATION 2: HAND WASHING AREA

1. Wash the child's hands/foot with soap and warm water.
2. Rinse.
3. Scrub hand/foot to be tested with a single use antiseptic impregnated surgical scrub brush for three minutes, including under finger/toe nails with a single use soft scrub brush. **Use a timer to ensure three minutes.**
4. Rinse.
5. Dry the area of the hand/foot with large sterile gauze.
6. Keep gauze on **until** the child enters the Blood Screening Area.
7. **IMPORTANT:** Once the hand/foot has been cleansed, it should **not** come in contact with any uncontrolled surfaces. **If contact is made** by the hand/foot with an uncontrolled surface (e.g., a tap), the affected hand/foot must be cleansed again.

#### STATION 3: BLOOD SCREENING AREA

##### Finger/Heel Prick Procedure (Clinical and Laboratory Standards Institute, 2008)

1. Identify the participant (the child) and verify their unique ID code from the consent form.
2. The lab technician should wash their hands.
3. The participants should be positioned and reassured about the procedure.
4. The puncture site (e.g. the hand or foot) should be inspected.

5. Using the warming device, the puncture site should be warmed. Follow the manufacturer's instructions.
6. Remove the warming device.
7. Put on gloves.
8. Assemble and inspect equipment.
9. Cleanse the puncture site with 70% isopropyl alcohol. Allow the area to air dry. If the puncture site is still moist the blood will not well up but begin to run.
10. Remove the lancet from its container and grasp the lancet between the thumb and forefinger. Puncture the skin using sterile disposable lancet.
  - a. **IMPORTANT:** For infants *less than one year old* : Puncture the lateral or medial plantar surface of the heel
  - b. **IMPORTANT:** For children *over one year old*: Puncture the palmar surface of the distal segment of the middle or ring finger. Puncture should be made perpendicular to fingerprints; otherwise the blood will run down the finger.
11. Dispose of used lancet in sharps container.
12. Gently wipe away first drop of blood with a sterile piece of gauze.
13. Collect approximately .5 ml of free flowing blood into a lavender microtainer (# 365974) containing EDTA anticoagulant.
14. Cover the puncture site with a piece of sterile gauze.
15. Enlist the parent/guardian's assistance in slightly elevating the hand/foot of the child while applying pressure to the puncture site until bleeding stops. Drop contaminated swabs and tissues and all non-sharp materials into a biohazard bag.
16. Seal microtainer and mix according to manufacturer's instructions. (e.g., The tube should immediately be inverted 8 to 10 times in order to properly dissolve the spray-dried anticoagulant to prevent hemolysis.)
17. Label microtainer with participant's unique ID code.
18. Apply sterile adhesive bandage to puncture site.
  - a. **NOTE:** The use of adhesive bandages on children **under two years of age** is *not* recommended, as the bandages can *irritate an infant's sensitive skin* and be a *potential choking hazard* to older infants.
19. Give the child a reward for participating (e.g., a sticker)
20. Place the labeled microtainer in blood rack in cooler.