Fetal Genotyping on MATERNAL PLASMA Maternal Fetal Medicine Instructions

Maternal Fetal Medicine Clinic Staff:

1. Testing Criteria for Fetal Genotyping
   Fetal genotyping will be provided in cases where:
   - The antibody is anti-D, anti-C, anti-c, anti-E, at a critical titre level, and the mother is at **16 weeks gestation** or later, OR
   - The antibody is anti-K, regardless of titre level, and the mother is at **20-28 weeks gestation** or later, OR
   - There has been a previous fetus/newborn affected by hemolytic disease of the fetus/newborn (HDFN), AND
   - The father is heterozygous for the corresponding antigen (or unknown).

2. Notify Canadian Blood Services Edmonton, of scheduled sample collection
   - Prior to sample collection, notify perinatal supervisor, Brenda Caruk by phone 780-431-8725 or email perinatal@blood.ca and provide the following details:
     - Patient’s full name and PHN
     - Date of sample collection
     - Sample collection location

3. Sample Requirements
   - Mother: 4 X 6 mL EDTA samples
   - Father: 1 X 6 mL EDTA sample, if testing for RhD (maternal anti-D is present)

4. Complete the International Blood Group Reference Laboratory requisition
   - Required for mother’s sample only

5. Complete CBS Perinatal requisition(s)
   - Always required for mother’s sample. Required for father sample, if testing for RhD (maternal anti-D is present).
   - Indicate on requisition(s) “For Fetal Genotyping. Keep Specimens at Room Temperature.”
     - For mother’s requisition
       - ☑ Mother – Follow-up when antibody present, for specimen type
       - ☑ Change draw instructions to draw Four 6 mL EDTA specimens
     - For father’s requisition, if testing for RhD (maternal anti-D is present)
       - ☑ Father, for specimen type

6. Complete Consent for Release of Neonatal Test Results to Canadian Blood Services
   - Attach to International Blood Group Reference Laboratory requisition
   - **Samples not accompanied by a signed consent will not be processed**

7. Provide mother with:
   - Completed requisitions
     - International Blood Group Reference Laboratory
     - Canadian Blood Services (CBS) Perinatal requisition
   - Completed Consent for Release of Neonatal Test Results to Canadian Blood Services (attached to requisition)
   - Fetal Genotyping on Maternal Plasma Collection Site Instructions

8. Send parent(s) to laboratory collection site
   - Collection can occur Monday to Wednesday only
   - Notify CBS ASAP if predetermined sample collection date or location changes

Effective Date: 2019-09-06