

## **V. Neonatal Screening**

### **1 Contact information**

General Enquiries	2319 8377
Neonatal Screening Laboratory	2319 8379
Scientific Officer (Medical)	2319 8389
Facsimile	2776 3795

### **2 Specimen collection & storage**

- (a) Collect specimens using safety precautions and personal protective equipment in accordance with infection control guidelines of your institution.
- (b) Dispose of any potentially contaminated materials used for specimen collection in accordance with infection control guidelines of your institution and Code of Practice promulgated by the Environmental Protection Department.
- (c) Cord blood
1. Clean the umbilical cord with sterile swabs before cutting to avoid contamination with maternal blood
  2. Take two specimen of cord blood from the placental side of the cord.
    - 2.5 ml cord blood in EDTA bottles for G6PD screening test
    - 2.5 ml cord blood in plain/gel bottles for hypothyroid screening test
  3. Blood samples should be well mixed immediately to prevent clot formation.
  4. Specimen must be labeled with the request form tag number and mother's name (for multiple birth please also state the twin no.), ID no. for sample identification. (gum label with mother's information can be stuck on specimen bottle)
  5. Store specimens at 4°C in refrigerator before sending to laboratory
- (d) Recall case / omitted sampling detected after birth
1. Specimen for hypothyroid test (1.5 ml blood in pediatric plain/gel specimen bottle) should be taken on / after Day 5
  2. Specimen for G6PD test (0.5 ml blood in pediatric EDTA specimen bottle) can be taken as soon as possible
  3. Specimen from transfused babies
    - Hypothyroid test 6 1 week after transfusion
    - G6PD test 6 3 months after transfusion
  4. Specimen labeled with the request form tag number and baby's name (eg B/O of Chan Siu Mei twin 1)
  5. Store specimen at 4°C in refrigerator before sending to laboratory
- (e) **Collection of inappropriate specimens or use of incorrect containers may result in delay in specimen processing or rejection of the request.**

### **3 Birth Registry**

For Cord blood samples only.

2 copies of the Birth Registry must be completed for the previous day (from midnight to midnight). These copies should be sent to the laboratory for crosschecking, daily from hospital and weekly from Maternity Homes.

### **4 Laboratory request forms**

(a) Cord blood screening specimen

1. Laboratory form, DH1782, obtainable from Neonatal Screening Laboratory, must be completed and accompany the specimen.
2. The following information must be provided on the form: Mother's name, baby's surname, baby's date of birth, baby's sex, contact number, address, hospital registration number, doctor's name and sender's signature.

(b) Recall case

1. Completed request form, DH161 or DH1782 must accompany the specimen.
2. The following information must be provided on the form: baby's name, baby's date of birth, baby's sex, doctor's name and sender's signature.
3. Please take **non cord blood** on the form and fill in the date of sample collection.

(c) Omitted sampling detected after birth

This applies to either when cord blood sample was omitted during deliveries in hospitals or Maternity Homes, or deliveries occur prior to arrival at various units.

1. Laboratory form, DH1782, obtainable from Neonatal Screening Laboratory, must be completed and accompany the specimen.
2. The following information must be provided on the form: Mother's name, baby's name, date of birth, baby's sex, contact number, address, hospital registration number, doctor's name and sender's signature.
3. Please tick **“non cord blood”** on the form and fill in the date of sample collection.

**(d) Incomplete patient information, inappropriate specimens or use of incorrect containers may result in delay in specimen processing or rejection of the request.**

### **5 Transport of specimen**

- (a) Ensure container is properly capped without leakage and placed in transparent plastic bag.
- (b) Keep specimens at 4°C if delay in transport to the laboratory cannot be avoided.
- (c) Keep specimen upright to minimize spillage.
- (d) Keep specimen at cool environment during transport.
- (e) There should be no direct contact between specimen and forms

**6 Turnaround time (TAT)**

- (a) The following TATs serve only as a general reference. In case confirmatory tests are required, the TAT may be lengthened accordingly.
- (b) For urgent requests, please contact laboratory staff for special arrangements.
- (c) Additional tests on specimens previously sent to the laboratory may be requested via telephone.

Such tests will be performed on the following conditions:

- Test(s) requested by a medical staff
- Appropriate clinical indications
- Sufficient amount of the appropriate sample available in the laboratory

Tests	TAT (days)
Hypothyroid test	3
G6PD test	2

**7 Reference range**

Reference ranges may be revised as needed. Please refer to the laboratory report for the most updated reference ranges.

**8 Critical Reporting by fax**

	<b>G6PD (U/gHb)</b>	<b>TSH (mIU/l)</b>
Screening specimen	Deficient (Both male & female)	Elevated (Both male & female)
	Borderline normal (Male only)	
Recall & Follow Cases	Not Applicable	Elevated (Both male & female)
Clinical Cases	Deficient (Both male & female)	> 100
	Borderline normal (Male only)	

**9 Test interference**

Users can contact Neonatal Screening Division to get information on interference/ limitation of assay method.