

## 10 CARE OF NEONATE

### 10.3 NEONATAL SCREENING

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10.3.3.2 Newborn Screening Test  
Section B  
Clinical Guidelines  
King Edward Memorial Hospital  
Perth Western Australia

### 10.3.3 BLOOD – COLLECTION FROM A NEONATE

#### 10.3.3.2 NEWBORN SCREENING TEST (GUTHRIE)

##### AIM

To enable early detection of phenylketonuria, congenital primary hypothyroidism, galactosaemia, cystic fibrosis and a range of disorders of amino, organic and fatty acid metabolism.

##### CRITERIA

##### TEST ALL NEONATES AFTER 48 HOURS OF AGE

- All neonates that are transferred home prior to 48 hours of age must have follow up arranged to complete a Newborn Screening Test (NBST) with the Visiting Midwifery Service.
- All neonates that require a blood transfusion or exchange transfusion prior to 48 hours of age are to have a NBST collected prior to commencement of the transfusion.
- If neonatal death is anticipated, where possible, collect NBST prior to death.

##### EQUIPMENT

As for [Capillary Blood Collection Procedure B 10.3.3.1](#) plus neonatal screening card.

##### PROCEDURE

1. Identify when the neonate is due for the test, and ensure that the timing of collection is appropriate. Perform collection prior to a feed.
2. Ensure parents have been provided with the information pamphlet '[Your Newborn Baby's Screening Test](#)' prior to collection. Discuss the procedure with parents and obtain verbal consent and record their consent to collection and testing on MR216. The record must also show the date of consent, who consented and who obtained the consent.

Where parents do not give consent for the test write REFUSED and the NEONATES DETAILS on the neonatal screening card and send to PMH Clinical Biochemistry. Document in baby's medical record and sign.

3. Clearly print ALL the required information on the NBST card.
4. When handling the card, ensure the collection circles are not touched or contaminated by oils or sweat.
5. Refer to the procedure instructions on reverse of card. Collect blood as per [Capillary Blood Collection Procedure](#).

6. Collect the sample on the back of the card. Ensure all three circles are completely filled and that blood has penetrated both sides of the card. Do not layer new blood over partially dry blood from a previous attempt.
7. Place the neonates' addressograph on the back of the NBST card and check against neonates' identity band. Check that all required information is correctly documented on the NBST card.
8. Place the NBST card on the drying rack and allow to dry for  $\geq 4$  hours at room temperature before sending to Princess Margaret Hospital Clinical Biochemistry in designated envelopes.
  - Keep the cards separate and avoid touching or smearing the blood spots.
  - Avoid excess heat or direct sunlight and never store cards in a closed areas such as a drawer or in a refrigerator.
  - The sample must be totally dry before placing in the envelope.
9. Document the NBST card number, sample collection date and time in the following places:
  - Neonatal History – MR 410 (Visiting Midwifery Service do not need to document here)
  - Care of the Well Neonate – MR 425.10
  - Perinatal Database (Stork)

## REFERENCE

Government of Western Australia. Child and Adolescent Health Service. Services A-Z. WA Newborn Screening Program.2010. Avail at [http://www.pmh.health.wa.gov.au/services/newborn/health\\_professionals/collection.htm](http://www.pmh.health.wa.gov.au/services/newborn/health_professionals/collection.htm)