

BLOODSPOT SCREENING • 1/2

INTRODUCTION

- Screen babies on day 5 of age (date of birth = day 0) for the following conditions:
 - sickle cell disease
 - phenylketonuria (PKU)
 - congenital hypothyroidism (CHT)
 - cystic fibrosis (phased implementation)
 - medium chain acyl co-A dehydrogenase (MCADD) deficiency
 - maple syrup urine disease (MSUD)
 - isovaleric acidaemia (IVA)
 - glutaric aciduria type 1(GA1)
 - homocystinuria (HCU)

Obtain pre-transfusion bloodspot samples as previous blood transfusions can falsify results

TIMING

Co-ordinate with other tests when possible to minimise invasive procedures

If transfused before day 5

- Collect first bloodspot card before transfusion
 - fill 1 circle
 - mark card 'pre-transfusion'
- Collect second bloodspot card at aged 5–8 days and ≥ 72 hr after blood transfusion
 - fill 4 circles
 - record whether plasma or red cells transfused
- Staple pre-transfusion and second bloodspot card together and send to **West Midlands screening centre** via courier service after validation check
- If baby has not received a blood transfusion the pre-transfusion bloodspot card can be discarded appropriately

Multiple transfusions between aged 5–8 days

- Collect 4 bloodspots within this window. Complete with as much time-lapse as possible from any transfusion
- If ≤ 3 clear days between the last transfusion and routine sample, a repeat sample to be taken ≥ 3 clear days after the last transfusion

No transfusions before day 5

- Collect routine bloodspot card at day 5
 - fill 4 circles and send to **West Midlands screening centre** via courier service after validation check, irrespective of milk feeds or gestational age

Preterm babies <32 weeks (≤ 31 weeks and 6 days) will require repeat sample at 28 days or discharge home, whichever is the sooner for CHT. Collect 2 bloodspots. Mark the sample 'CHT preterm' and write the gestational age on the card

CONSENT AND INFORMATION

- Person undertaking procedure must:
 - explain pre-transfusion screening procedure to parents
 - provide national pre-screening leaflet at least 24 hr before procedure
- It is mandatory to include baby's NHS number on the bloodspot card
- If screening declined:
 - for all conditions – send completed card to screening laboratory (without blood sample) clearly marked DECLINE – ALL CONDITIONS
 - inform GP, health visitor and Child Health Records Department, in writing, of conditions baby not screened for
 - template letters available from: <https://www.gov.uk/government/publications/declined-newborn-blood-spot-screening-template-letters>

Further information

Detailed information regarding the UK Newborn screening programme can be sourced from:

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- Newborn bloodspot screening programme handbook:
<https://www.gov.uk/government/publications/health-professional-handbook-newborn-blood-spot-screening>
- Standards for NHS newborn bloodspot screening:
<https://www.gov.uk/government/publications/standards-for-nhs-newborn-blood-spot-screening>
- Newborn bloodspot screening sampling guidelines:
<https://www.gov.uk/government/publications/newborn-blood-spot-screening-sampling-guidelines>