



NEONATAL CARE

NEONATAL SCREENING

BLOOD – COLLECTION FROM A NEONATE

Keywords: heel prick, sucrose, neonatal blood collection, neonatal screen, venepuncture, oral sucrose for procedural pain, CBG, capillary blood, blood collection from a neonate

AIMS

- To ensure blood collection from a neonate is performed appropriately.
- To ensure the sample is labelled correctly.

KEY POINTS

1. The Phlebotomy Team is available on Page Number 3258 and 3259 for collection of blood specimens of difficult bleeds between 1400 and 1500 weekdays.
2. Collection of blood specimens takes place Monday to Friday, Round 1 between 0800 and 1000, and Round 2 between 1030 and 1200.
 - Improperly or inappropriately labelled specimens will **not** be processed by the laboratory, **nor will they be returned.**¹ The requestor is notified and a recollection to be arranged.¹ To avoid this happening, it is advisable to check with a second midwife that the details on the blood sample match the request form and the baby identification before sending it to the laboratory.
3. If multiple birth, and the neonate has no first name to confirm identity, ensure that the correct neonate (e.g. twin 1 or tw2, triplet 1/2/3) is written on the sample and request form (and that these match the neonate), otherwise the sample will not be accepted.¹
4. Printed neonate addressograph labels may be used to label specimens **except** Transfusion Medicine samples.¹
5. All Transfusion Medicine samples must be handwritten and initialled by the collector, with date and time of collection.¹ The collector must sign the “Collection Details” section of the request form.¹ This includes the Coombs test (direct / indirect) / direct antiglobulin test (DAT).
6. Mothers should be advised there is evidence showing benefit, safety and effectiveness of using comfort measures (such as skin to skin,² kangaroo care, swaddling / facilitated tucking or rocking / holding)³, sucking related interventions (using breastfeeding, breast milk⁴ or non-nutritive sucking³), and use of sucrose available for neonates undergoing blood collection to reduce procedural pain⁵. With maternal consent these measures should be implemented.
7. Venepuncture for neonatal blood collection when done by a trained practitioner causes less pain than a heel lance⁶, therefore at KEMH if a large amount of blood is to be collected (e.g. Newborn Screening test and additional blood tests) then venepuncture should be considered.

8. For procedural instructions of collecting capillary blood from a neonate, see KEMH Clinical Guidelines, O&M, [Capillary Blood Collection \(Heel Stab\)](#).

SAFETY POINTS FOR COLLECTION OF BLOOD SPECIMENS

- Safe collecting procedures should be followed.
 - [Infection Control Manual](#) (including Prevention & Management of Infectious Diseases: [Standard Precautions](#) & [Hand Hygiene](#))
 - [Haematology Transfusion Medicine Protocols](#) (if relevant)
 - Clinical Guideline, O&M, Neonatal, [Capillary Blood Collection \(Heel Stab\)](#) (for procedural instructions).
- Work with only one neonate at a time.
- The request form must be completed and signed by the Medical Officer / Midwife (selected tests only) or CPOE (electronic order form) with requesting Medical Officer details. For Registered Midwives requesting pathology tests, see KEMH Clinical Guidelines, O&G, [Standard Protocols](#).
Do not proceed with specimen collection if any discrepancies are noted on the request form. Contact the Medical Officer to complete request form or re-issue.
- The neonate must have their own identity band prior to collection of blood (except cord blood).
- Label the sample **at the bedside** immediately **after** collection.
- Baby specimens must be labelled with **THREE** points of identification:
 - baby UMRN¹ and
 - baby last name¹ and
 - baby first name if this is registered in TOPAS (**if no first name, DOB must be used¹** –
 - if neonate is from a multiple birth and the neonate does not have a first name, use DOB plus identify multiple on specimen e.g. TW1 (twin 1), TR3 (triplet 3) etc.¹ Ensure the label, pathology request form and neonate matches, otherwise the sample will be rejected for testing.¹
 - date and time of collection **plus the initial of collector** • Sign the “collection details” on the request form.
- Place the label horizontally. Ensure that if a pre-printed label is used, that there is a gap at the back of the tub, and that the label does not extend past the end of the tube.
- Enclose the sample and form into a biohazard bag
- Check with a second midwife that the details on the blood sample match the baby’s identification label and the request form before sending it to the laboratory.

HINTS TO REDUCE CLOTTING PROBLEMS WHEN COLLECTING A BLOOD SPECIMEN

- Never shake or tap the blood tube
- Gentle swirling of the blood tube during collection
- Ensure gentle inversion of the tube once the lid is applied

PAIN MANAGEMENT

Sucking-related interventions have been shown to be an effective treatment for pain reactivity and immediate pain-related regulation.³ Rocking / holding the term neonate has also been shown to be useful for immediate pain-related regulation.³

Breastfeeding, or using breast milk, should be initiated to alleviate procedural pain,⁴ and alternatively sucrose is also effective for reducing pain.⁵ While the use of sucrose is safe and effective, further research is required to determine the most effective dosage.⁵

Mothers should be advised of optional practices to manage pain for the neonate prior blood collection:

- oral sucrose⁵
- non-nutritive sucking³
- skin to skin,² kangaroo care, rocking / hold the neonate, swaddling / tucking³.
- breast milk⁴
- breastfeeding where feasible⁴

SUCROSE DOSAGE FOR THE NEONATE

See NCCU Clinical Guidelines, Pain Assessment and Management: '[Oral Sucrose for Procedural Pain Relief](#)' for the full guideline and exclusions to use.

- The dosage should be administered two minutes prior to the procedure with the neonate in 'feeding position'. The dose is given on the anterior part of the tongue, and then a pacifier may be offered, with the mother's consent (if parent has supplied a pacifier/dummy). The effect lasts approximately 5 minutes.

Note: Pacifiers are not supplied to KEMH wards. See Clinical Guideline, O&M, Neonatal Feeding: [Use of Artificial Teats/Dummies](#).

Dosage for a term neonate

Sucrose 25% solution – Term: administer 0.5 – 1.0mL (give in 0.25mL aliquots).

Dosage for a preterm neonate

Sucrose 25% solution: Preterm: ≥1500g 0.25mL

- **Note:** The total dose in 24 hours should **not exceed** 3 mL if the neonate's weight is >1500g. Refer to NCCU guideline above for other neonates.
- Document the amount given, including the total over a 24 hour period in the neonatal feed chart- comments section.

REFERENCES / STANDARDS

1. PathWest Laboratory Medicine WA. Minimum requirements: Clinical samples and request form. 2015. In: Global documents and forms manual [Internet]. **Pathlines: Intranet**. Available from: <http://pathlines.health.wa.gov.au/FastTrack/>.
2. Johnston C, Campbell-Yeo M, Fernandes A, Inglis D, Streiner D, Zee R. Skin-to-skin care for procedural pain in neonates (Review). **Cochrane Database of Systematic Reviews**. 2014(1). Available from: <http://onlinelibrary.wiley.com/doi/10.1002/14651858.CD008435.pub2/pdf>.
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5. Stevens B, Yamada J, Lee GY, Ohlsson A. Sucrose for analgesia in newborn infants undergoing painful procedures (Review). **Cochrane Database of Systematic Reviews**. 2013(1). Available from: <http://onlinelibrary.wiley.com/doi/10.1002/14651858.CD001069.pub4/pdf>.
6. Shah VS, Ohlsson A. Venepuncture versus heel lance for blood sampling in term neonates (Review). **Cochrane Database of Systematic Reviews**. 2011(10). Available from: <http://onlinelibrary.wiley.com/doi/10.1002/14651858.CD001452.pub4/pdf>.

National Standards – 1- Care Provided by the Clinical Workforce is Guided by Current Best Practice; 5- Patient Identification and Procedure Matching; 7- Blood and Blood Products Legislation -

Related Policies – [Operational Directive 0486/14: WA Health Patient Identification Policy 2014](#)

Other related documents – KEMH: Clinical Guidelines:

- O&G, [Standard Protocols](#): Pathology: Ordering by Midwife/ Nurse/ NP: [Cord Blood Group: Requesting of](#)
- O&M, [Neonatal Care: Capillary Blood Collection \(Heel Stab\)](#); [Newborn Screening Test \(Guthrie\)](#)
- [Neonatal Postnatal Wards Guidelines](#)
- [Haematology Transfusion Medicine Protocols](#)
- NCCU [Section 1: Resuscitation and Admission](#): [Ordering Blood Test Guidelines](#)
- NCCU [Section 3 Pain Assessment & Management](#): [Oral Sucrose for Procedural Pain Relief](#)

RESPONSIBILITY

Policy Sponsor	Nursing & Midwifery Director OGCCU
Initial Endorsement	September 2001
Last Reviewed	September 2015
Last Amended	
Review date	September 2018

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