

Royal Hospital for Women (RHW)
NEONATAL BUSINESS RULE
COVER SHEET



Health
South Eastern Sydney
Local Health District

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EXECUTIVE SPONSOR	Sally Wise, Nursing Co- Director Neonatal Services Srinivas Bolisetty, Medical Co- Director Neonatal Services
AUTHOR	Eszter Jozsa (CNS)
SUMMARY	To guide clinicians in the administration of exogenous surfactant safely via endotracheal tube (ETT).
Key Words	Surfactant, invasive administration via ETT, sterile technique

Contents

1 BACKGROUND 3

2 RESPONSIBILITIES 3

3 PROCEDURE 3

 3.1 Equipment 3

 3.2 Clinical Practice 4

 3.2.1 Preparation 4

 3.2.2 Administration 5

 3.2.3 Post- Administration monitoring 5

 3.3 Documentation 6

 3.4 Abbreviations 6

 3.5 CBR Implementation Plan 6

 3.6 Related Policies/procedures 6

 3.7 References 6

4 ABORIGINAL HEALTH IMPACT STATEMENT DOCUMENTATION 7

5 CULTURAL SUPPORT 7

6 NATIONAL STANDARDS 7

7 REVISION AND APPROVAL HISTORY 7

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Within this document we will use the term woman, this is not to exclude those who give birth and do not identify as female. It is crucial to use the preferred language and terminology as described and guided by each individual person when providing care.

1 BACKGROUND

Neonates in NCC may require surfactant administration via an endotracheal tube (ETT) based on clinical condition such as prematurity or respiratory distress syndrome.

2 RESPONSIBILITIES

2.1 Medical – identify infants requiring surfactant and administer surfactant via ETT

2.2 Nursing/midwifery – prepare infants prior to procedure, provide assistance during the procedure and observe for changes in clinical condition post administration. Attend to necessary investigations such as a blood gas post administration.

3 PROCEDURE

3.1 Equipment

- Surfactant pack (Picture 1 and Picture 2)
 - Dressing pack
 - Sterile plastic drape
 - Sterile gloves
 - Sterile scissors or surgical blade
 - Size 5 FG intragastric tube (IGT)
 - Drawing up device
 - 5 mL feeding syringe

NOTE

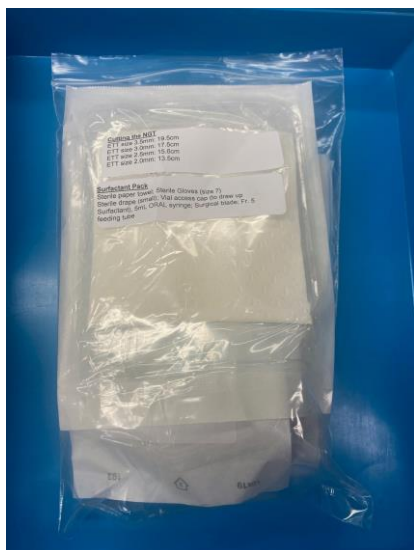
- Curosurf should be refrigerated at +2-+8 °C.
- Should be warmed to room temperature and gently turned upside down to obtain a uniform suspension before use.
- DO NOT SHAKE AMPOULE

- Surfactant (Curosurf®) 240 mg/3mL or 120 mg/1.5mL kept refrigerated in medication room.

3.2 Clinical Practice

3.2.1 Preparation

1. Inform parents if present.
2. Ensure resuscitation equipment is available and functioning.
3. Confirm ETT position and assess infant for equal air entry.
4. Perform ETT suctioning.
5. Position the infant supine.
6. Check the correct amount of surfactant prescribed.



Picture 1



Picture 2



Picture 3

3.2.2 Administration

1. Clean work surface with neutral detergent and cover with sterile plastic drape.
2. Perform hand hygiene.
3. Administering medical officer to perform surgical hand wash and put on sterile gloves.
4. Measure the ETT from the tip to the end of connector - minus 1 cm to obtain the required insertion length.
5. Cut feeding tube with sterile scissors or surgical blade to the measured length.
6. Draw up surfactant with the drawing device to the feeding syringe. (Picture 3)
7. Prime the IGT until the calculated dose of surfactant remains in the syringe.
8. Disconnect the ventilation circuit from the ETT.
9. Insert IGT into the ETT. Inject the surfactant in a single bolus dose.
 - If large volume of surfactant, medical staff may decide to give in divided doses
10. Withdraw the IGT and either provide intermittent positive pressure ventilation via Neopuff™ or re-connect ETT to ventilation circuit.
11. Hold ETT upright to check the administered surfactant has drained.
12. Dispose of sharps and equipment correctly and clean work surface.
13. Perform hand hygiene.

3.2.3 Post- Administration monitoring

- Observe the neonate for:
 - Respiratory effort
 - Changes in heart rate
 - Changes in oxygen saturations
 - Changes in oxygen requirement
 - Changes in colour and perfusion
 - Monitor for change in the neonate's tidal volumes.
- Take a blood gas 20-40 minutes post surfactant administration or as prescribed by the medical team.

NOTE

- ETT suctioning can not be performed for a minimum of 6 hours post surfactant administration

Surfactant - Administration via Endotracheal Tube (Neonate)

3.3 Documentation

- eRIC

3.4 Abbreviations

ETT	Endotracheal Tube	IGT	Intragastric Tube
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3.5 CBR Implementation Plan

The revised CBR will be distributed to all medical, nursing and midwifery staff via @health email. The CBR will be discussed at ward meetings, education and patient quality and safety meetings. Education will occur through in-services, open forum and local ward implementation strategies to address changes to practice. The staff are asked to respond to an email or sign an audit sheet in their clinical area to acknowledge they have read and understood the revised CBR. The CBR will be uploaded to the CBR tab on the intranet and staff are informed how to access

3.6 Related Policies/procedures

- RHW NCC Medical- Minimally-Invasive Surfactant Therapy (MIST)

3.7 References

1. Zhu, J., Bao, Y., Du, L. *et al.* Less invasive surfactant administration versus endotracheal surfactant instillation followed by limited peak pressure ventilation in preterm infants with respiratory distress syndrome in China: study protocol for a randomized controlled trial. *Trials* **21**, 516 (2020).
2. Abdel-Latif ME, Davis PG, Wheeler KI, De Paoli AG, Dargaville PA. Surfactant therapy via thin catheter in preterm infants with or at risk of respiratory distress syndrome. *Cochrane Database of Systematic Reviews* 2021, Issue 5.
3. Gallup JA, Mbi Ndakor S, Pezzano C, Pinheiro J. Randomized Trial of Surfactant Therapy via Laryngeal Mask Airway Versus Brief Tracheal Intubation in Neonates Born Preterm. *The Journal of Pediatrics*. 2023; 254:17-24.
4. Chiesi Farmaceutici S.p.A. Australian product information - curosurf® (poractant alfa) suspension. 2022. <https://www.chiesi.com.au/curosurfPI.pdf>. Accessed 30/5/2024.
5. Engle WA. Surfactant-replacement therapy for respiratory distress in the preterm and term neonate. *Pediatrics* 2008;121:419-31.
6. Gardner SL, Carter BS, Enzman-Hines M, Hernandez JA. Surfactant Replacement Therapy in Respiratory Diseases, Chapter 23, Merenstein & Gardner's Handbook of Neonatal Intensive Care (7th Ed). Mosby Elsevier 2011:639 - 641.
7. Richard A, Polin RA, Carlo WA. Surfactant replacement therapy for preterm and term neonates with respiratory distress. *American Academy of Pediatrics* 2014;133:156-63. 12. d

4 ABORIGINAL HEALTH IMPACT STATEMENT DOCUMENTATION

- Considerations for culturally safe and appropriate care provision have been made in the development of this Business Rule and will be accounted for in its implementation.
- When clinical risks are identified for an Aboriginal and/or Torres Strait Islander woman or family, they may require additional supports. This may include Aboriginal health professionals such as Aboriginal liaison officers, health workers or other culturally specific services

5 CULTURAL SUPPORT

- For a Culturally and Linguistically Diverse CALD woman, notify the nominated cross-cultural health worker during Monday to Friday business hours
- If the woman is from a non-English speaking background, call the interpreter service: NSW Ministry of Health Policy Directive PD2017_044-Interpreters Standard Procedures for Working with Health Care Interpreters.

6 NATIONAL STANDARDS

- Standard 1 Clinical Governance
- Standard 3 Preventing and Controlling Infections
- Standard 4 Medication Safety
- Standard 5 Comprehensive Care
- Standard 6 Communicating for Safety
- Standard 8 Recognising and Responding to Acute Deterioration

7 REVISION AND APPROVAL HISTORY

Date	Revision No.	Author and Approval
2004	1	KB Lindrea (CNC) NCC Policy/Procedure Working Group
6/4/2010	2	C Powell (CNS) D Cooper (CNS), E Jozsa (CNE) KB Lindrea (CNC) NCC Policy/Procedure Working Group
24/9/2014	3	E Jozsa (CNE), KB Lindrea (CNC) NCC LOPs Committee

Royal Hospital for Women (RHW)

NEONATAL BUSINESS RULE

Surfactant - Administration via Endotracheal Tube (Neonate)

RHW CLIN088

27/6/2018	4	E Jozsa (CNE) KB Lindrea (CNC) NCC LOPs Committee
30/5/2024 11.7.2024	5	E Jozsa (CNS), Endorsed NCC CBR Committee
9.9.24		Endorsed RHW BRGC