

Royal Hospital for Women (RHW)
BUSINESS RULE
COVER SHEET



Health
South Eastern Sydney
Local Health District

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EXECUTIVE SPONSOR	S Bolisetty (Medical Co-Director Newborn Care Centre); S Wise (Nursing Co-Director Newborn Care Centre)
AUTHOR	N Gaunker (CNS)
SUMMARY	To provide safe and effective topical antiseptic preparations in newborn infants to reduce nosocomial sepsis

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Antisepsis in the Newborn Care Centre

RHW CLIN006

This Clinical Business Rule is developed to guide safe clinical practice in Newborn Care Centre (NCC) at The Royal Hospital for Women. Individual patient circumstances may mean that practice diverges from this Clinical Business Rule. Using this document outside the Royal Hospital for Women or its reproduction in whole or part, is subject to acknowledgement that it is the property of NCC and is valid and applicable for use at the time of publication. NCC is not responsible for consequences that may develop from the use of this document outside NCC.

1. BACKGROUND

Newborn infants, particularly preterm and extremely low birth weight infants, in intensive care units are susceptible to sepsis. It is necessary to identify effective and safe topical antiseptics to reduce nosocomial sepsis in infants.

2. RESPONSIBILITIES

Medical and Nursing Staff

3. PROCEDURE

3.1 Equipment

- 0.5% chlorhexidine swabsticks
- 2% chlorhexidine with 70% alcohol

3.2 Clinical Practice

- Skin preparation for all procedures (includes intravenous cannulation, arterial lines, peripherally inserted central catheters, blood culture collections, lumbar puncture, suprapubic taps, urinary catheter insertion, intercostal catheters, umbilical lines etc.) and all dressing changes:
 - Chlorhexidine 0.5% solution for all infants
- For line connections (e.g. cleaning hub connectors prior to connecting fluids, when accessing for medications and during line changes):
 - Antiseptic Wipes containing 2% chlorhexidine gluconate with 70% isopropyl alcohol

Note: This policy covers antiseptic preparations prior to any non-surgical invasive intervention. Antiseptic preparations for invasive surgical procedures in the Newborn Care Centre or Operating Theatres are beyond the scope of this guideline.

3.3 Educational Notes

- Chlorhexidine (CHG) has a broad-spectrum bactericidal activity and effective against some viruses and fungi. It is also effective against resistant organisms, including methicillin-resistant *S. aureus*, vancomycin-resistant enterococci, and various *Streptococcus* and *Pseudomonas* species.¹ The major advantage of chlorhexidine is a persistent antimicrobial effect that lasts as long as 6 hours after application.²
- Three small RCTs have assessed short-term efficacy of skin antiseptics prior to peripheral cannulation or venepuncture. These showed that:
 - 0.5% CHG provides better bacterial clearance compared with 0.05% CHG³
 - 1% CHG provides better bacterial clearance compared with 10% povidine-iodine⁴
 - 0.015% CHG may be as efficacious as 0.5% CHG (small numbers)⁵
- While higher strength chlorhexidine may be efficacious, safety is a concern.⁵⁻⁷

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3.4 Abbreviations

NCC	Newborn Care Centre	RCT	Randomised Controlled Trial
CHG	Chlorhexidine Gluconate		

3.5 References

1. Ponnusamy V, Venkatesh V, Clarke P. Skin antisepsis in the neonate: What should we use? *Curr Opin Infect Dis* 2014;27:244-50.
2. Adams-Chapman I, Stoll B. Prevention of nosocomial infections in the neonatal intensive care unit. *Curr Opin Pediatr* 2002;14:157-64.
3. Lilley C, Powls A, Gray A. A prospective randomised double blind comparison of 0.5% versus 0.05% aqueous chlorhexidine for skin antisepsis prior to line insertion in neonates. *Arch Dis Child* 2006;91:A18.
4. Nuntnarumit P, Sangsuksawang N. A randomized controlled trial of 1% aqueous chlorhexidine gluconate compared with 10% povidone-iodine for topical antiseptic in neonates: effects on blood culture contamination rates. *Infect Control Hosp Epidemiol* 2013;34:430-32.
5. Bredemeyer SL, Reid S, Evans N, et al. Randomised controlled trial of two strengths of topical aqueous chlorhexidine for prevention of nosocomial infection in neonates born before 29 weeks. *Journal of Paediatrics and Child Health* 2011;47:64-5.
6. Chapman AK, Aucott SW, Milstone AM. Safety of chlorhexidine gluconate used for skin antisepsis in the preterm infant. *J Perinatol* 2012;32:4-9.
7. Chapman AK, Aucott SW, Gilmore MM, et al. Absorption and tolerability of aqueous chlorhexidine gluconate used for skin antisepsis prior to catheter insertion in preterm neonates. *J Perinatol* 2013;33:768-71.

4. RELATED BUSINESS RULES AND POLICY DOCUMENTS

- RHW NCC Medical CBR - Chest drain - Insertion and removal of Intercostal Catheter using Safe-T-Centesis
- RHW NCC Medical CBR - Umbilical Catheterisation
- RHW NCC Nursing CBR - Arterial Line - Blood Sampling
- RHW NCC Nursing CBR - Blood Culture – Blood Culture Collection
- RHW NCC Nursing CBR - Peripheral Intravenous Cannula Insertion and Dressing
- RHW NCC Nursing CBR - PICC Insertion
- RHW NCC Nursing CBR - PICC Removal
- RHW NCC Nursing CBR - Sterile aseptic procedures - scrubbing and closed gloving

5. CULTURAL SUPPORT

- When clinical risks are identified for an Aboriginal family, they may require additional supports. This may include Aboriginal health professionals such as Aboriginal liaison officers, health workers or other culturally specific services.
- For a Culturally and Linguistically Diverse CALD family, notify the nominated cross-cultural health worker during Monday to Friday business hours.
- If the family 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.

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6. IMPLEMENTATION PLAN

This Clinical Business Rule will be distributed to all medical, nursing and midwifery staff via @health email. The Clinical Business Rule 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 Clinical Business Rule. The Clinical Business Rule will be uploaded to the Clinical Business Rule tab on the intranet and staff are informed how to access.

7. RISK RATING

- Low (5 years)

8. NATIONAL STANDARDS

- Standard 1 Clinical Governance
- Standard 3 Preventing and Controlling Healthcare-Associated Infection
- Standard 5 Comprehensive Care

9. REVISION AND APPROVAL HISTORY

Date	Revision No.	Author and Approval
Aug 2005	1	NCC LOPs Committee
16.8.2016	2	S Bolisetty (lead clinician)
7.4.2020	3	NCC LOPs Committee; Approved by Quality & Patient Safety Committee
21.9.2023	4	N Gaunker (CNS); Approved by NCC CBR Committee
18.10.23	4	Endorsed at RHW SQC