

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



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SUMMARY	To guide safe use of the TransWarmer® at birth or during transport of a neonate from birth unit/Operating Theatre/ Medical Resonance Imaging or during clinical procedures within Newborn Care Centre.
Key Words	Neonate, Hypothermia, TransWarmer®, Temperature

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

1 BACKGROUND

The TransWarmer® is a gel-filled, disposable thermal mattress designed to provide up to two hours of warming for safe management of hypothermia in neonates. The TransWarmer® is indicated when other methods of keeping the neonate warm are insufficient or not available (e.g. during transport)

The aim of this CBR is to guide clinicians in the safe use of the TransWarmer® mattress at birth or during transport of a neonate from birth unit/Operating theatre/Medical Resonance Imaging (MRI) or during clinical procedures within Newborn Care Centre or to provide additional warmth during transport of neonate within the hospital or between hospitals.

2 RESPONSIBILITIES

2.1 Staff

- 2.1.1 Medical (SRMO/Registrar/Neonatal Nurse Practitioner [NNP])- Identify any neonate that may require TransWarmer® to avoid hypothermia.
- 2.1.2 Nursing- Identify any neonate that may require TransWarmer® use, ensure TransWarmer® is available for use, activate TransWarmer® mattress, manage neonate on TransWarmer®, check temperature of neonate regularly, remove TransWarmer® after 2 hours of use.

3 PROCEDURE

3.1 Equipment

- TransWarmer® mattress

3.2 Clinical Practice

1. Identify the neonate who requires TransWarmer® mattress use.
 - Common indications include:
 - Preterm neonates <28 weeks or <1000 g at birth when axillary temperature <36.5 degrees despite NeoHelp™
 - Preterm neonates for transport to NCC when axillary temperature <36.5 degrees prior to moving
 - Neonates for transport to/from Operating Theatre or MRI with axillary temperature <36.5 degrees

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- Neonates undergoing a clinical procedure with axillary temperature <36.5 degrees
- Neonates with axillary temperature <36.5 degrees during transport within the hospital or between hospitals
- 2. Ensure TransWarmer® is clear and has not been activated prior to use.
- 3. Locate the metal disc in the mattress (Picture 1 [mark X]).
- 4. Bend and flex disc rapidly to activate until the gel slowly turns milky white (Picture 1 [mark Y]).
- 5. Knead the pack to increase activation (indicated by pack turning completely white).
- 6. Mold TransWarmer® mattress with the palm of hand to form a small “nest”/indentation in the fabric side.
- 7. Place neonate on the fabric side of activated TransWarmer® (Picture 2). Do not put on the clear side with writing (Picture 2).
- 8. Switch off any heating mattress to avoid skin injury.

Note

If using NeoHelp™ or freezer bag, leave the neonate in the bag while using the Transwarmer® mattress (Picture 2). Remove and replace NeoHelp™ if there is excessive fluid in the bag over an extended period post-resuscitation.

- 9. Check neonate's temperature after 10 minutes of using TransWarmer® mattress (avoid hyperthermia [temperature >37.5 degrees]).
- 10. Remove TransWarmer® mattress when normothermia (36.5-37.5 degrees) is achieved or 2 hours of use has passed.
 - If neonate still hypothermic (<36.5 degrees) at this time, place neonate on a new TransWarmer® mattress



Picture 1



Picture 2

3.3 Documentation

- eRIC
- NSW Health Newborn Resuscitation record (if required during resuscitation)

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3.4 Education Notes

- The TransWarmer® consists of two activatable materials, anhydrous sodium acetate and hydroxyethyl cellulose, which warms within 90 seconds and maintains 40 degrees for up to two hours.
- The gel is non-toxic and does not irritate the skins or eyes, in case direct contact is made.
- Designed for single use to minimise the risk of cross-contamination and is also radiolucent and MRI compatible.
- Ensure any surface heating mattress (in the incubator) is turned off whilst TransWarmer® to avoid overheating and burns.
- Do not place TransWarmer® directly on cold surfaces as heat is conducted to cold surfaces, reducing its efficiency.
- TransWarmer® provides warmth for two hours only. Remove from under the neonate after two hours of use to prevent recurrence of hypothermia.
- Activate TransWarmer® immediately prior to use to maximise use.
- TransWarmer® is to be stored at room temperature

3.5 Abbreviations

MRI	Medical Resonance Imaging	NNP	Neonatal Nurse Practitioner
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3.6 Related Policies/procedures

- RHW NCC CBR- Admission to NICU
- Delivery Management for Extremely Preterm Neonates less than 26 Weeks Gestation
- RHW NCC CBR- Delivery Management for Extremely Preterm Neonates (less than 26 weeks gestation) at the Royal Hospital for Women
- RHW NCC CBR- Neohelp™
- RHW NCC CBR- Surgery at bedside-Perioperative guidelines
- RHW NC CBR- Transfer of neonate on Non-Invasive respiratory support outside of newborn care centre
- RHW NCC CBR- Transfer of self ventilating neonate outside of newborn care centre
- RHW NCC CBR- Transfer of ventilated neonate outside of newborn care centre
- RHW NCC CBR- Umbilical Catheterisation

3.7 References

1. Liu Y, Lei M, Liu T, Li Y, Cui C, Ni L, et al. Efficacy and safety of the heated gel mattress for prevention of hypothermia in preterm infants during intra-hospital transport: a meta-analysis. *Nursing Communications*. 2018 Jan 1;2(3):132–40132–40.
2. McCall EM, Alderdice F, Halliday HL, et al. Interventions to prevent hypothermia at birth in preterm and/or low birth weight infants. *Cochrane Database of Systematic Reviews* 2018;2: CD004210
3. Traci West. Transwarmer Infant Mattress Demo [Internet]. YouTube. 2013 [cited 2025 Apr 8]. Available from: <https://www.youtube.com/watch?v=voJ8Jc7JyEs>

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 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
24.2.2022	1	A Sidhu (ACNE), M Kottackal (RN), S Binoy (NP)
8/4/2025 17.4.2025	2	S Binoy (NNP), A Sidhu (CNS) Endorsed by NCC CBR Committee
28.4.25	2	RHW BRGC