

Royal Hospital for Women (RHW)

NEONATAL BUSINESS RULE

COVER SHEET



Health
South Eastern Sydney
Local Health District

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AUTHOR	E Jozsa (CNS)
SUMMARY	Continuous oesophageal pouch suction is used in the management of neonates with unrepaired oesophageal atresia waiting for surgical repair of the oesophagus. A double lumen replogle suction catheter is placed into the oesophageal pouch to remove saliva and secretion to prevent aspiration or pneumonia. This CBR outlines the principles of management of infants with a replogle tube in-situ prior to surgical repair.
Key Words	replogle tube, trachea-oesophageal atresia/fistula, perioperative management

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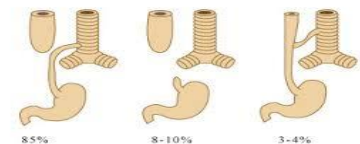
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Within this document we will use the term woman, this is not to exclude those who give birth and do not identify as female. It is crucial to use the preferred language and terminology as described and guided by each individual person when providing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

1 BACKGROUND

The aim of this CBR is to outline the principles of management of infants with a replegle tube in-situ prior of surgical repair of oesophageal atresia or fistula.

Definitions:

Replegle tube	A double lumen tube, where one is for drainage of saliva and the other for instillation of 0.9% sodium chloride and serves as an air vent.	
Oesophageal atresia (OA)	A congenital anomaly in which the oesophagus ends in a blind upper pouch and a possible tracheo-oesophageal fistula (TOF).	
Long-gap oesophageal atresia	Variants of OA with a large gap >4cm between the two ends of the oesophagus.	

2 RESPONSIBILITIES

2.1 Staff (medical, midwifery, Nursing, Allied health)

2.1.1. Medical –request the insertion of replegle tube and prescription of fluid order

2.1.2. Nursing – following procedural guideline to insert, secure and manage replegle tube

3 PROCEDURE

3.1 Clinical Practice points

3.1.1 Equipment

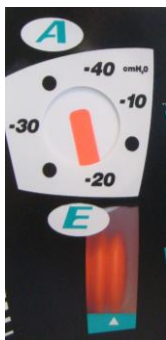
Replegle Tube - Set up and Management

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- Replegle suction catheter size Fg10 or Fg8
- Atrium Oasis Dry Under Water Seal Drainage (UWSD) Unit
- Suction regulator wall unit
- Suction tube
- Multidirectional stopcock (3 Way tap)
- 10 mL Syringe
- Infusion burette and giving set
- 0.9% Sodium Chloride 500 mL
- Duoderm
- Barrier film
- Non-stretch adhesive tape
- Scissors

3.1.2 Procedure

1. Clean working surface area with neutral detergent. Collect equipment.
2. Perform clinical hand wash.
3. Attach suction regulator unit to wall outlet.
4. Set up suction tubing and Atrium UWSD unit – refer to *Chest Drain - Set up of Atrium Oasis Dry Suction Under-Water Seal Drainage (UWSD) protocol*.
5. Set suction control dial to **-20cmH₂O**. (Picture 1) Ensure water seal is filled to 2cm line and the orange bellow is expanded.
6. Attach the infusion giving set to the 500 mL bag of 0.9% sodium chloride.
 - Change 0.9% sodium chloride and giving-set every 48hours.
7. Connect the infusion line to the 3-way tap. Prime the line. (Picture 5)
8. Perform clinical hand wash and don non-sterile gloves.
9. Gently, insert the replegle tube via the oro- or naso-pharynx until resistance is met. Withdraw the replegle tube by 0.5 cm.
 - Always have a spare Replegle tube and taping at the bedside in case of accidental dislodgement.
10. Secure the replegle tube with adhesive tape after applying barrier film and appropriate size duoderm to skin. (Picture 2,3,4)



Picture 1



Picture 2



Picture 3

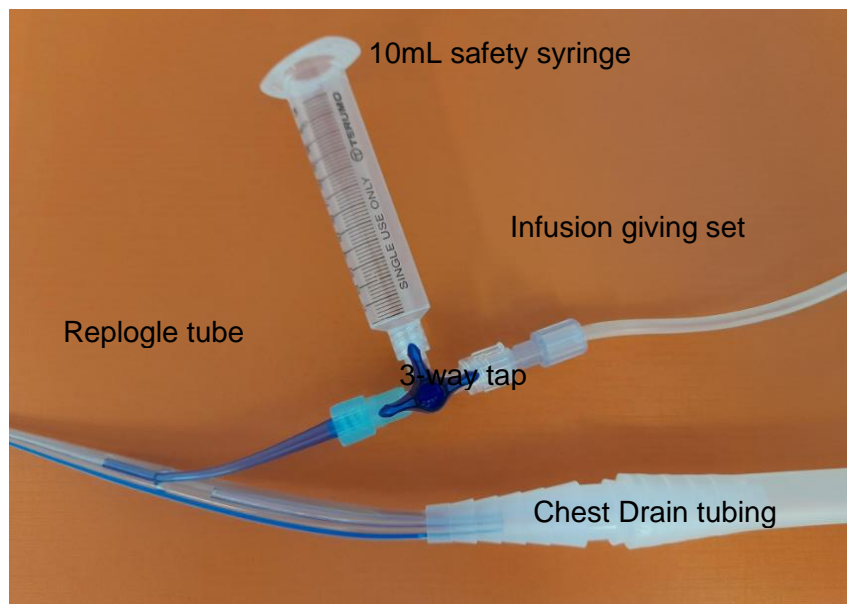


Picture 4

Replogle Tube - Set up and Management

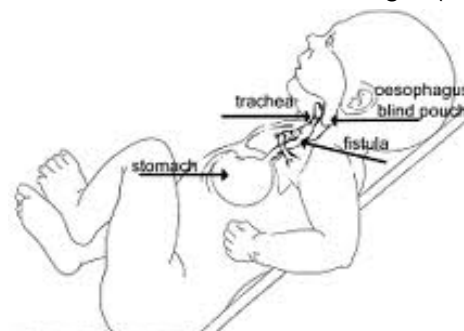
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11. Attach the infusion line with the 3-way tap to the blue connection of the replogle tube.
(Picture 5)
12. Infuse 0.9% sodium chloride at 5 mL/hour rate via infusion pump.
13. Attach the 10 mL syringe to the remaining third port of the 3-way tap and leave it open to air to create a safety valve to the infusion system. (Picture 5)
 - If water runs out of the air outlet of the 3-way tap, the replogle tube may be blocked. Inject 1mL of air via the air outlet to unblock
 - If flushing air is unsuccessful in clearing blockage, remove the replogle tube from the pouch, flush with normal saline and reinsert
 - If still unsuccessful, change the replogle tube



14. Connect the clear connection of the replogle tube to the Atrium UWSD suction apparatus.
 - Change and document the replogle tube and “Atrium” UWSD unit weekly.
15. Turn on the wall suction unit to **-100mmHg** and ensure Atrium suction control dial is set at -20cmH₂O.
16. Nurse the infant with head elevated at 30° to assist drainage. (Picture 6)

Picture 6



17. Document procedure in the patient's notes and record suction pressure, colour/consistency of the secretions and 0.9% sodium chloride infused hourly.

3.2 Documentation

- eRIC

3.3 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

3.4 Related Policies/procedures

- RHW NCC Nursing - Chest Drain - Set up of Atrium Oasis Dry Suction Under-Water Seal Drainage (UWSD)

3.5 References

1. Parolini F, Bulotta AL, Battaglia S, Alberti D. Preoperative management of children with esophageal atresia: current perspectives. *Pediatric Health Med Ther*. 2017 Jan 18;8:1-7.
2. Dingemann C, Eaton S, Aksnes G et al. ERNICA Consensus Conference on the Management of Patients with Esophageal Atresia and Tracheoesophageal Fistula Diagnostics, Preoperative, Operative, and Postoperative Management. 2020. *European Journal of Pediatric Surgery* DOI: 10.1055/s-0039-1693116.
3. Salik I, Paul M. Tracheoesophageal Fistula. [Updated 2023 Jan 23]. In: StatPearls [Internet]. Treasure Island (FL): StatPearls Publishing; 2024 Jan-. Available from: <https://www.ncbi.nlm.nih.gov/books/NBK535376/>
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5. Van Lennep M, Singendonk MMJ, Dall'Oglio L, Gottrand F, Krishnan U, Terheggen-Lagro SWJ, et al. Esophageal atresia. *Nat Rev Dis Primers*. 2019 Apr 18. 5 (1):26.
6. Saxena A K. Esophageal Atresia With or Without Tracheoesophageal Fistula Treatment & Management. Medscape overview. 2023. [Esophageal Atresia With or Without Tracheoesophageal Fistula: Practice Essentials, Pathophysiology, Etiology \(medscape.com\)](https://www.medscape.com/viewarticle/978457)

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 Deterioration

7 REVISION AND APPROVAL HISTORY

Date	Revision No.	Author and Approval
11/11/2005	1	KB Lindrea (CNC) RHW NCC QS committee
26/09/2014	2	E Jozsa (CNE) RHW NCC LOP committee
26/09/2017	3	E Jozsa (CNE) RHW NCC LOP committee
10/05/2024	4	E Jozsa (CNS) RHW NCC CBR Committee
18.11.24	5	Endorsed RHW BRGC