The Hierarchy of Evidence

The Hierarchy of evidence is based on summaries from the National Health and Medical Research Council (2009), the Oxford Centre for Evidence-based Medicine Levels of Evidence (2011) and Melynyk and Fineout-Overholt (2011).

I Evidence obtained from a systematic review of all relevant randomised control trials.

II Evidence obtained from at least one well designed randomised control trial.

III Evidence obtained from well-designed controlled trials without randomisation.

IV Evidence obtained from well designed cohort studies, case control studies, interrupted time series with a control group, historically controlled studies, interrupted time series without a control group or with case- series

V Evidence obtained from systematic reviews of descriptive and qualitative studies

VI Evidence obtained from single descriptive and qualitative studies

VII Expert opinion from clinicians, authorities and/or reports of expert committees or based on physiology

Melynyk, B. & Fineout-Overholt, E. (2011). *Evidence-based practice in nursing & healthcare: A guide to best practice (2nd ed.).* Philadelphia: Wolters Kluwer, Lippincott Williams & Wilkins.

National Health and Medical Research Council (2009). *NHMRC levels of evidence and grades for recommendations for developers of guidelines* (2009). Australian Government: NHMRC. http://www.nhmrc.gov.au/_files_nhmrc/file/guidelines/evidence_statement_form.pdf

OCEBM Levels of Evidence Working Group Oxford (2011).*The Oxford 2011 Levels of Evidence*. Oxford Centre for Evidence-Based Medicine. http://www.cebm.net/index.aspx?o=1025

Intermittent oesophageal pouch suction for the neonate/infant with unrepaired oesophageal atresia (including long-gap)

Reference ***(include title, author, journal title, year of publication, volume and issue, pages)***	**Evidence level (I-VII)**	**Key findings, outcomes or recommendations**
Hawley, AD & Harrison D. 'Suctioning Practices for the upper oesophageal pouch in infants with unrepaired oesophageal atresia in Australia and New Zealand.' P105. *Perinatal Society of Australia and New Zealand Annual Congress* March 2003, Hobart, Australia.	VI	'Intermittent suctioning of the upper oesophageal pouch was used in 15% of NICUs. 23% of NICUs used a combination of intermittent and Replogle suction.' 'There are varied practices throughout Australian and New Zealand NICUs with regards to suctioning of the upper oesophageal pouch in infants with unrepaired oesophageal atresia.' 'There is no evidence available in the literature outlining which method results in the best outcomes (short and long term) to infants and children with this condition.' 'Further research needs to be undertaken to establish the most appropriate method for providing suction of the proximal oesophageal pouch.'

Hawley, A. 2001. Long-gap Oesophageal Atresia – A Nursing Perspective. *Journal of Child Health Care.* 5 (1). Pp.19-25.	VII	Discussion included: 'Problems identified with Replogle tubes: • Difficulty with correct placement • Tubes moving out of the correct position • Trauma to the oesophageal pouch from continuous suction or misplaced tube. • Blockage with possible aspiration • Difficulty with size 10fg Replogle tubes in premature infants (due to the large diameter of the tube).' 'Since the late 1970s, the practice at the RCH has been to suction all neonates and infants with OA intermittently….a size 8 fg suction catheter (size 7 in premature neonates) is used to intermittently aspirate the proximal oesophageal pouch. Intermittent suction is performed approximately 10-30 minutely or more frequently if necessary….time between suctioning should not exceed 30 minutes due to the risk of aspiration of saliva' 'In a retrospective review of histories of infants with long-gap OA since 1980, there have been no episodes noted of significant respiratory compromise associated with this technique of suction.'

Telfer, H.M. and McDonnell, G.E. (1991). Nursing Care. In Beasley, S.W., Myers, N.A., and Auldist, A.W. (eds). Oesophageal Atresia. Chapman & Hall Medical, London, pp. 265-274.	VII	Discussed: 'The blind upper pouch should be suctioned every 10 to 15 minutes or more frequently if required….The initial suction determines how far subsequent catheters need to be inserted and this measurement can be displayed on the baby's cot. The upper pouch should be kept empty in a manner which avoids trauma to the mucosa: a size 8-10 French gauge suction catheter should be introduced gently through the mouth until resistance is felt; the catheter is then withdrawn slightly before suction is applied to avoid direct trauma or perforation of the fundus of the pouch.'
Ho T & Mok, J. 2006. 'An infant with long gap oesophageal atresia: A case report.' *Journal of Neonatal Nursing*. 12: 103-109.	VII	Discussed: Initially use Replogle tube suction & changed to intermittent oesophageal pouch suction.
Newborn Services Clinical Guideline: Neonatal Surgery 'Oesophageal Atresia with a distal Tracheo-oesophageal Fistula' 2012. http://www.adhb.govt.nz/newborn/guidelines/Surgery/SurgeryTOF.htm	VII	'Adequate drainage of the upper pouch is essential. This can be either by intermittent suction every 15 minutes or via insertion of a Replogle tube as far as it will go and placed on continuous low pressure suction. Flush with 0.9% NaCl usually Q15-30 minutes.'
Johnson PRV, 2005. 'Oesophageal Atresia.' *Infant*. 1 (5); 163-167.	VII	'The most important elements of the preoperative management of the non-ventilated baby with OA/TOF are prevention of aspiration of pharyngeal secretions and gastric contents through the TOF. The former is treated either by regular intermittent suctioning or continuous aspiration of the upper pouch using a double-lumen lower pressure catheter, the Replogle tube.'