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

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Reference *(include title, author, journal title, year of publication, volume and issue, pages)*	**Evidence level (I-VII)**	**Key findings, outcomes or recommendations**
McCormack, K. (2003). Endotracheal suctioning: A review and study into practice. *Journal of Neonatal Nursing*. 9(2):48-54.	**V**	• **Study to review suction practices of 226 nurses from 22 neonatal units** • **Factors covered: frequency of suctioning, number of practitioners and gloves, size and type of catheters, depth of suctionduration of sucking, hypoxaemia during suction, suction pressure, saline installation** • **Above factors related to available research regarding best practice for each factor**
Wallace,.J. (1998). Suctioning – a two edged sword: Reducing the theory-practice gap. *Journal of Neonatal Nursing*. 4(6)12, 14-17.	**V**	• **Review of literature and assessment of reliable literature related to ETT suction** • **Discussion includes advers effects, optimal duration of suction, negative vacuum pressure, depth suction catheter should be passed, necessity of instillation of saline, necessity to pre-oxygenate**
Young, J. (1995). To help or hinder: Endotracheal suction and the intubated neonate. *Journal of Neonatal Nursing*. 1(3): 23-28.	**V**	• **Establishment of guideline for safe and effective suction practice based on literature review** • **Factors discussed include complications, frequency, oxygen saturation, mucosal trauma, appropriate vacuum pressure, duration of suction, risk of infection, instillation of saline**
Daugherty Wrightson, D. (1999). Suctioning smarter: Answers to eight common questions about endotracheal suctioning in neonates. *Neonatal Network*. 18(1):51-55.	**V**	• **Addresses common questions about suction, using research findings. Issues addressed: indications for suction, depth of suction, number of catheter passes, necessity of saline instillation, necessity of chest physiotherapy, ways to minimize hypoxia and destauration, time required for recovery post suction**

Pritchard, M.A., Flenady, V., & Woodgate, P. (2003). Systematic review of the role of pre-oxygenation for tracheal suctioning in ventilated newborn infants. *Journal of Paediatrics and Child Health*. 39(3): 163-165.	**IV**	• **Review of evidence related to short term pre-oxygenation benefits versus long term morbidity** • **The decision whether to pre-oxygenate for tracheal suction in preterm ventilated neonates cannot be answered by this review**
St John, R.E. (2004). Protocols for Practice. Airway management. *Critical Care Nurse*. 24(2): 93.	**VII**	• **Discussion of clinical indications for ETT suction, amount of suction pressure required, suction catheter size, necessity for normal saline instillation**