INTUBATION - DIFFICULT
Supporting information

This guideline has been prepared with reference to the following:

British Association of Perinatal Medicine. Managing the Difficult Airway in the Neonate: A BAPM Framework for Practice. 2020.

https://www.bapm.org/resources/199-managing-the-difficult-airway-in-the-neonate

Grein AJ & Weiner GM. Laryngeal mask airway versus bag-mask ventilation or endotracheal intubation for neonatal resuscitation. Cochrane Database Syst Rev 2018:18:CD003314

https://www.cochranelibrary.com/cdsr/doi/10.1002/14651858.CD003314.pub3/full

Resuscitation Council (UK). Resuscitation guidelines. 2015

https://www.resus.org.uk/resuscitation-guidelines/

Johansen L, Mupanemunda R & Danha R. Managing the neonate with a difficult airway. Infant. 2012; 8; 116-9

Zhu XY, Lin BC, Zhang QS et al. A prospective evaluation of the efficacy of the laryngeal mask airway during neonatal resuscitation. Resuscitation. 2011;82:1405-9

Beylacq L, Bordes M, Semjen F et al. The i-gel, a single use supraglottic airway device with a noninflatable cuff and an esophageal vent: an observational study in children: Acta Anaesthesiol Scand 2009;53: 376–379

Joshi NA, Baird M, Cook TM. Use of an i-gel for airway rescue; Anaesthesia. 2008;63:1020-1

Wharton NM, Gibbison B, Gabbott DA et al. I-gel insertion by novices in manikins and patients. Anaesthesia. 2008;63:991-5

Trevisanuto D, Verghese C, Doglioni N et al. Laryngeal mask airway for the interhospital transport of neonates. Pediatrics. 2005;115:e109-11

https://pediatrics.aappublications.org/content/115/1/e109.long

A visual grading system is useful in identifying which patients will be difficult to intubate?
The Cormack-Lehane system (Cormack 1984), which classifies into four grades, views of the glottic opening during direct laryngoscopy, has been found anecdotally to be appropriate for neonates (Wheeler 2007). Wheeler (2007) argues however, that additional procedures are required to assess severity and that the four grade system is “more useful as a means to facilitate communication of the degree of difficulty between providers and not as a screening tool for predicting a difficult airway at the bedside”
A number of researchers focusing on adult medicine including Yentis (1998) have argued for a more sensitive scoring system. Yentis, when comparing identification of difficult intubations among 663 adult patients using the Cormack-Lehane system and a modified system which divides grade 2 into 2a (part of the vocal cords are visible) and 2b (only arytenoids or very posterior origin of cords visible), found the latter system to be superior and more useful for anaesthetists.

Cormack R. & Lehane J. Difficult tracheal intubation in obstetrics. Anaesthesia 1984 39:1105–11

Wheeler DS “Assessment and Management of the pediatric airway” In Wheeler DS, Wong HR and Shanley THP (eds.) Pediatric Critical Care Medicine: Basic Science and Clinical Evidence, 224-52

Yentis SM & Lee DJ. Evaluation of an improved scoring system for the grading of direct laryngoscopy. Anaesthesia 1998 53 (11): 1041–1044

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Evidence Level: III

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