

PLACE LOGO HERE

Difficult Airway Alert

(Affix identification label here)

URN

Family name:

Given name(s):

Address:

Facility

Date of birth:

Sex

☐ M

☐ F

☐ I

To the patient

- During your recent procedure your airway was found to be more difficult to manage than in most other people. This can make it more difficult to get oxygen to the lungs, heart, brain and other vital organs, which can potentially lead to serious and harmful outcomes, including death.
- Please keep this letter safe and show it to your doctor if you are admitted to hospital, and show it to the anaesthetic doctor if you need an operation or a procedure requiring anaesthesia or sedation.

To the GP:

- Please copy this letter with any future referrals where procedures requiring anaesthesia or sedation are likely.

Summary of Airway Management

Date of intervention

☐ Elective

☐ Emergency

Patient weight (kg):

Reason for airway intervention

Was difficulty predicted?

☐ Yes

☐ No

Details:

Bag mask ventilation

Subjective

☐ Easy

☐ Difficult

☐ Impossible

Capnography¹

☐ A

☐ B

☐ C

☐ D

Method

☐ 1 hand²

☐ 2 hands²

☐ OPA

☐ NPA

☐ Not attempted

Comments:

Supraglottic airway ventilation

☐ Easy

☐ Difficult

☐ Impossible

☐ Not attempted

Comments:

Tracheal intubation

☐ Easy

☐ Difficult

☐ Impossible

☐ Not attempted

Comments:

Direct laryngoscopy C&L

☐ Grade 1

☐ Grade 2

☐ A

☐ B

☐ Grade 3

☐ A

☐ B

☐ Grade 4

Comments:

Video laryngoscopy

Type of VL:

Blade:

POGO score:

Comments:

Was a muscle relaxant used?

☐ BMV

☐ SGA

☐ Direct laryngoscopy

☐ Video laryngoscopy

Details:

Was front of neck access attempted?

☐ Yes

☐ No

Details:

Equipment and techniques used:

(Provide details of equipment/techniques used successfully or unsuccessfully. Where relevant, include comments on patient positioning and factors which may have contributed to difficulty).

¹See over for grading capnography reference image.

²Ventilation 1 or 2 hands for mask; OPA, oropharyngeal airway; NPA, nasopharyngeal airway; VL, videolaryngoscope; POGO, percentage of glottic opening.

If you require further information, please contact the Anaesthetic Department or facility where the procedure took place.

DIFFICULT AIRWAY ALERT

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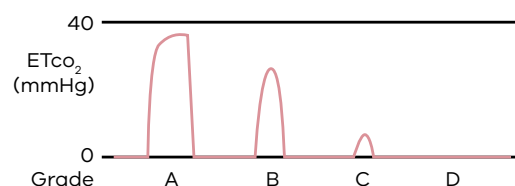
Difficult Airway Alert

Summary of Airway Management (continued)

Reference images

Image 1: Grading mask ventilation by best capnograph. (Adapted from Lim & Nielsen. *Br J Anaesth.* 2016;117(6):828-9).

Best capnograph achieved:



Grade A: plateau present

Grade B: no plateau, $ETco_2 \geq 10$ mmHgGrade C: no plateau, $ETco_2 < 10$ mmHgGrade D: no $ETco_2$

How this was achieved:

1 hand for mask

2 hands for mask

Oropharyngeal airway

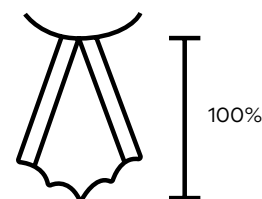
Nasopharyngeal airway

Neuromuscular blocker

Image 2: Grading direct laryngoscopy by Cook's modification of Cormack & Lehane score. (Adapted from Cook. *Anaesthesia.* 1999;54(5):496-7).

Image 3: Percentage of glottic opening (POGO) score represents the portion of the glottis visualised. (Levitan *et al.* *Anaesthesia.* 1999;54(10):1009-10).

	Grade	Description
	1	Most of cords visible
	2a	Posterior part of cords visible
	2b	Arytenoids only visible
	3a	Epiglottis visible and liftable
	3b	Epiglottis visible and adherent
	4	No laryngeal structures visualised



For further information, see Difficult Airway Alert support document and glossary of terms

Follow-up Care

Copies of ALERT letter (tick when completed)

☐ One copy of letter to patient☐ One copy of letter in case notes☐ One copy of letter to GP☐ One copy of letter in Anaesthetic Department

Actions (tick when completed)

☐ Spoken to patient☐ Anaesthetic record documentation complete☐ Medical record alert completed in case notes☐ Medical record alert added to EMR

Senior Clinician attending (print name):

Qualifications/Level of Training:

Date:

If you require further information, please contact the Anaesthetic Department or facility where the procedure took place.

DO NOT WRITE IN THIS BINDING MARGIN

PLACE LOGO HERE

Difficult Airway Alert

Support document and glossary of terms

The *Difficult Airway Alert* form has been developed with the intention of being a concise and effective communication tool regarding a difficult airway event, in order to reduce the risk of future airway morbidity in at risk patients.

The need to balance level of detail with simplicity must be recognised. This form does not take the place of a detailed pre-anaesthetic airway assessment.

This support document is intended to complement the form and clarify potential areas of confusion.

Airway Management

Difficult airway

The term "Difficult Airway" refers to the presence of any clinically significant threat to oxygenation and/or ventilation with difficulty in any of the key domains of airway management. That is, difficult or impossible bag-mask ventilation, supraglottic airway insertion, tracheal intubation or front of neck access¹².

Bag mask ventilation (BMV)

BMV can be graded objectively by its outcome on the capnograph³. Record the subjective feel of mask ventilation as Easy, Difficult or Impossible and grade the capnograph (A–D). Finally, document airway adjuncts and manoeuvres utilised to achieve the best capnograph, and whether or not muscle relaxant was used.

Supraglottic airway (SGA) ventilation

Consider describing difficulty with placing the device(s) as well as adequacy of ventilation.

Easy	Placement of and adequate ventilation via SGA possible with first or second selected device
Difficult	SGA ventilation clinically inadequate* or unstable despite use of two or more different devices
Impossible	Unable to place or ventilate via SGA device

*Clinically adequate ventilation: greater than 7ml. kg⁻¹ oropharyngeal leak pressure of greater than 20cm H₂O¹⁴

Tracheal intubation

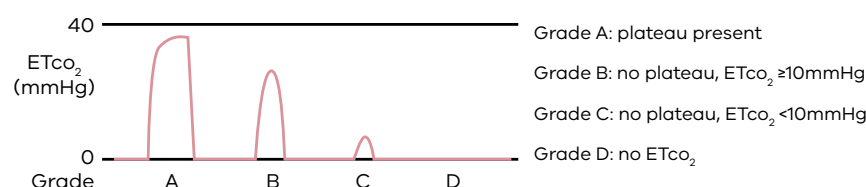
Easy	Direct intubation achieved easily
Difficult	Intubation required multiple attempts or additional equipment
Impossible	Intubation failed

Neuromuscular blockade

The use of neuromuscular blockade is an integral component of airway management. Document the elements of airway management for which muscle relaxant was used.

Bag mask ventilation

Best capnograph achieved:



How this was achieved:

1 hand for mask
2 hands for mask
Oropharyngeal airway
Nasopharyngeal airway
Neuromuscular blocker

Image 1: Grading mask ventilation best capnograph
(Adapted from Lim & Nielsen. *Br J Anaesth.* 2016;117(6):828–9)

Airway Management

Grades 1 to 4 refer to the view as described by Cormack & Lehane⁵. Where possible, please also refer to modified categorisation as described by Cook⁶.

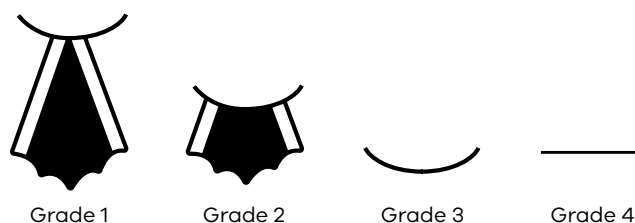


Image 2: Cormack and Lehane views
(Clinical Excellence Division, Queensland Health 2018⁷)

Modified C&L grade	Description	Direct laryngoscopy was
1	Most of cords visible	Easy
2a	Posterior part of cords visible	Easy
2b	Arytenoids only visible	Restricted
3a	Epiglottis visible and liftable	Restricted
3b	Epiglottis visible and adherent	Difficult
4	No laryngeal structures visualised	Difficult

Adapted from Cook. *Anaesthesia*. 1999; 54(5):496–7.

Videolaryngoscopy

The percentage of glottic opening (POGO) score represents the portion of the glottis visualised, having a linear span from the anterior commissure to the Interarytenoid notch⁸.

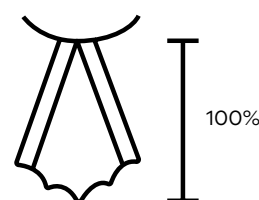


Image 3: POGO score 100% (Levitan et al. *Anaesthesia*. 1999; 54(10):1009–10)

Can I record my airway assessment?

Patient features contributing to difficulty (e.g. syndromes/ anatomical abnormalities) should be recorded in the free-text section addressing whether or not airway difficulty was predicted. A dedicated area to record airway assessment has not been included as this should be apparent when conducting a pre-operative airway assessment. Any conditions that are reversible or not obvious should be documented.

When should I use a Difficult Airway Alert?

Reason to report should include any clinically significant threat to the maintenance of oxygenation and/or ventilation. Consider the following suggested indications for providing an Alert.

Suggested indications for providing a Difficult Airway Alert

- Difficult or impossible direct laryngoscopy:
 - C&L 4
 - C&L 3 with difficulty passing ETT
- Difficult or impossible **videolaryngoscopy**:
 - POGO 0% or difficulty passing ETT
- Impossible **bag-mask ventilation**
- Impossible **supraglottic airway device** placement
- Any airway difficulty requiring awakening the patient and subsequent awake intubation
- Any 'cannot intubate, cannot oxygenate' events with or without emergency front of neck access
- Any permanent space-occupying lesions or barriers with the potential risk of airway obstruction⁹
- Patients where an awake intubation technique was required as the primary airway management plan

References:

- Bradley P, et al. Airway Assessment. ANZCA, 2016. www.anzca.edu.au/getattachment/eff1ab5d-46cf-46db-95ef-5e65ecb88c26/PU-Airway-Assessment-20160916v1
- Baker P, et al. How do anaesthetists in New Zealand disseminate critical airway information? *Anaesth Intensive Care* 2013; 41:334–41
- Lim, K & Nielsen, J. Objective description of mask ventilation. *Br J Anaesth* 2016;117(6):828–9
- Kumar, CM et al. Time to consider supraglottic airway device oropharyngeal leak pressure measurement more objectively. *Acta Anaesthesiol Scand* 2021;65:142–5
- Cormack R & Lehane J. Difficult tracheal intubation in obstetrics. *Anaesthesia*. 1984; 39(11):1105–11
- Cook T. A grading system for direct laryngoscopy. *Anaesthesia*. 1999; 54(5):496–7
- Clinical Excellence Division, Queensland Health 2018
- Levitan R et al. A grading system for direct laryngoscopy. *Anaesthesia*. 1999; 54(10):1009–10
- Shaeuble J & Ganter M. Clarifying the indications for difficult airway alert forms. *Anaesthesia*. 2015; 70(4):505–6

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