

PRE-COURSE READING: CICO- Can't Intubate can't ventilate.

Please ensure you are familiar with the Algorithm we will be using in this course. The document has been included in your pre-reading.

Appendix 1 PS61 Guidelines for the Management of Evolving Airway Obstruction: Transition to Can't Intubate Can't Oxygenate (CICO). Cognitive Aid.

LEARNING OBJECTIVES:

This course has been designed in accordance with the ANZCA CPD course guidelines. The course has been designed to address the following learning objectives:

1. Apply criteria to recognise when a CICO situation has arisen.
2. Communicate clearly to others that a CICO situation exists*.
3. Explain the steps and decision-making points in one of the recognised difficult airway algorithm that addresses CICO (refer to list of recognised algorithms above).
4. Be fluent with equipment and procedures relevant to the preferred emergency algorithm for infraglottic rescue*.
5. Direct/team-lead an emergency response for CICO including the following steps*:
 - a. Clearly explain supraglottic airway rescue strategies (technical expertise is assumed)
 - b. Transition to CICO
 - i. Anticipate and mobilise resources for imminent infraglottic rescue
 - ii. Recognise and declare CICO (As per definition of CICO above)
 - c. Infraglottic airway rescue
 - i. Implement the chosen emergency algorithm
 - ii. Continue supraglottic airway rescue

DEFINITIONS AND TERMS *Appx 12 ANZCA

No universally agreed definitions exist for much of the nomenclature around CICO. For the purposes of clarifying terms that are used within this document, the following definitions are provided. Alternative definitions may be used in CICO workshops, however providers should demonstrate that these have equivalent meaning.

Can't Intubate Can't Oxygenate (CICO)

Where airway obstruction exists in the upper airway (including the larynx) that cannot be relieved by airway management interventions delivered above the point of obstruction (ie: supraglottic), and which results in an inability to oxygenate the patient with low or falling oxygen saturations.

Transition:

Transition is the phase of care leading up to, and including, a committed declaration of a CICO event. Transition has an ill-defined beginning - upper airway obstruction is evident and not resolved by initial attempts at supraglottic airway management. As the majority of these cases will be successfully managed by supraglottic rescue and or awakening the patient we assume transition infrequently involves an actual declaration of CICO but always involves a justifiable concern of an impending CICO. In that instance it also includes the decision to shift the focus of the resuscitation from supraglottic rescue to infraglottic rescue.

Supraglottic airway management

Airway management techniques performed above or through the larynx (including bag-mask ventilation, laryngeal mask, or endotracheal intubation) aimed to maintain airway patency.

Supraglottic airway rescue

Airway management techniques performed above or through the larynx aimed to restore airway patency. Appendix 12 | 2 of 3

Infraglottic airway rescue

Airway management techniques performed below the larynx via the anterior surface of the neck aimed to maintain or restore airway patency. This includes techniques such as needle or surgical cricothyroidotomy.

Clinical Lead

The medical officer nominated by each department/group to oversee the provision of the CICO education sessions conducted by that provider. Does not necessarily need to attend the session in person. Needs to be at level of Consultant, and appropriately skilled and experienced to oversee the development of the session content. Ideally the clinical lead will have medical education experience and/or credentials. May assume the role of lead facilitator for a particular session.

Lead Facilitator

The doctor who oversees the conduct of a CICO education session. Needs to be at a level of ATY2 or higher, and be appropriately skilled and experienced to deliver the content of the session. Ideally the lead-facilitator will have medical education experience and/or credentials.

Instructor

A doctor with relevant anaesthesia skills and experience who conducts the individual “hands-on” skills stations/scenario rehearsals with guidance from the lead facilitator. Ideally the instructors will have medical education experience and/or credentials.

Summary of the Transition to CICO:

SUMMARY OF KEY STEPS IN THE TRANSITION TO CICO – The VORTEX approach

The following steps are recommended:

3.1. Prevent airway obstruction through careful pre-anaesthesia assessment. Consider regional anaesthesia, awake intubation or awake tracheostomy in high risk patients. Be prepared to manage airway obstruction in all patients including low risk patients. Use specific criteria to guide extubation and monitor carefully afterwards

3.2. If airway obstruction occurs attempt *one or all* of the following three supraglottic rescue pathways until the obstruction is overcome: **See The Vortex ebook.**

- Bag Mask Ventilation (BMV)
- Insertion of a supraglottic device (SGD), including the Laryngeal Mask Airway (LMA)
- Endotracheal Intubation (ETT).

3.3. Attempt to deliver oxygen continuously via face mask, nasal prongs or a SGD.

3.4. If airway manoeuvres in **one pathway** are substantially attempted without success then escalate the emergency response with the following:

- Call for skilled assistance from anaesthetic colleagues, surgeons, other critical care clinicians and or nursing colleagues.
- Consider awakening the patient, if feasible
- Note the time, verbalise concerns if present, and encourage others to speak up at any time if concerned.

3.5. If airway manoeuvres in **two pathways** are substantially attempted without success then escalate the emergency response with the following:

- Mobilise resources for infraglottic rescue including briefing the team

3.6. If airway manoeuvres in **three pathways** are substantially attempted without success then escalate the emergency response with the following:

- Declare CICO verbally and initiate infraglottic rescue immediately using a Front of Neck Access (FONA) technique (e.g. scalpel/bougie, needle/cannula).

ADDITIONAL OPTIONAL PRE-READING MATERIAL:

The following algorithms are recommended by ANZCA and the Airway Special Interest Group as being suitable for use in infraglottic rescue and should be read in conjunction with the accompanying background articles:

- CICV Algorithm. Heard AM, Green RJ, Eakins P. The formulation and introduction of a 'can't intubate, can't ventilate' algorithm into clinical practice. *Anaesthesia*. 2009; 64(6):601-8.
- Heard A. Percutaneous Emergency Oxygenation Strategies in the "Can't Intubate, Can't Oxygenate" Scenario. 2013. Ebook.
- Difficult Airway Society (DAS) Failed Ventilation.
- Henderson JJ, Popat MT, Latta IP, Pearce AC. Difficult Airway Society guidelines for management of the unanticipated difficult intubation. *Anaesthesia*. 2004; 59: 675-94
- Canadian Difficult Airway Focus Group
- Law J et al. The difficult airway with recommendations for management – Part 1 – Difficult tracheal intubation encountered in an unconscious/induced patient. *Canadian Journal Anaesthesia*. 2013 (60): 1089-1118.

Highly recommended pre-reading for participants:

- Greenland KB, Acott C, Segal R, Goulding G, Riley RH and Merry AF. 2011. Emergency surgical airway in life-threatening acute airway emergencies – why are we so reluctant to do it? *Anaesthetic Intensive Care* 39(4): 578-584