

About this survey

This survey survey is part of a research study looking at the different approaches to the prevention and management of "Can't Intubate, Can't Oxygenate" (CICO) events in anaesthetic departments and operating theatres of ANZCA training hospitals in Australia and New Zealand. The survey contains a number of questions relating to hospital and operating theatre demographics, as well as questions relating to equipment, training and protocols utilised within your hospital or department.

The data collection is de-identified. Data collected will be presented using pooled data and de-identified commentary. The survey instrument and overall study has been approved by the Northern Sydney Local Health District Ethics Committee: approval number RESP/16/343.

The investigators on this study are:

Chief Investigator: Adam Rehak

Other Investigators: Leonie Watterson, Sara-Catrin Cook and Douglas Dong

If you have any questions or concerns regarding this survey, do not hesitate to call us at the Sydney Clinical Skills and Simulation Centre - +61 2 9926 4646.

**By completing this survey you are providing consent for the data to be used and presented as described above.**

Thank you for agreeing to be part of this survey which should take no more than 10 minutes to complete.

Demographic information

\* 1. Please enter your Hospital code - this a three digit number provided in the email inviting you to participate

2. Where is your hospital located?

- Australia
- New Zealand

\* 3. Number of operating theatres in your hospital?

(not including satellite locations outside the main theatre block such as ERCP, endoscopy, angio, etc)

- |                           |                                    |
|---------------------------|------------------------------------|
| <input type="radio"/> One | <input type="radio"/> 4-8          |
| <input type="radio"/> Two | <input type="radio"/> 8-16         |
| <input type="radio"/> 3-4 | <input type="radio"/> More than 16 |

## CICO Preparedness Survey

### Section A: Terminology around "Can't Intubate, Can't Oxygenate" (CICO) events

**Can't intubate can't oxygenate (CICO) describes a failure to deliver oxygen as a result of upper airway obstruction which persists despite all reasonable supraglottic rescue manoeuvres. The following questions relate to the terminology used within your department around CICO events and their management.**

\* 4. Is the term "CICO" commonly used in your department to describe the situation of "can't intubate, can't oxygenate", as defined above?

- Yes  
 No

## CICO Preparedness Survey

### Section A: Terminology around "Can't Intubate, Can't Oxygenate" (CICO) events

\* 5. How is the term "CICO" most commonly pronounced by members of your department?

*(Selections appear in a randomised order)*

- |  |                                      |                               |
|--|--------------------------------------|-------------------------------|
| <input type="radio"/> Ky-koh                 | <input type="radio"/> See-eye-see-oh | <input type="radio"/> Kee-koh |
| <input type="radio"/> See-koh                | <input type="radio"/> Chee-koh       |                               |
| <input type="radio"/> Other (please specify) |                                      |                               |

## CICO Preparedness Survey

### Section A: Terminology around "Can't Intubate, Can't Oxygenate" (CICO) events

6. What term (if any), other than CICO, is used consistently within your department to describe the "can't intubate, can't oxygenate" situation?

## CICO Preparedness Survey

### Section A: Terminology around "Can't Intubate, Can't Oxygenate" (CICO) events

**The following question relates to the terminology used within your department to describe the procedures and techniques used to manage CICO situations**

\* 7. Which term(s) is/are commonly used in your department to describe the procedure(s) for rescuing a **CICO** situation using any cannula, scalpel or guidewire cricothyroidotomy/tracheotomy technique to restore oxygenation via an infraglottic route?

*(Multiple answers permitted. Selections appear in randomised order)*

- |  |   |
|--|---|
| <input type="checkbox"/> None                            | <input type="checkbox"/> CICO Rescue                        |
| <input type="checkbox"/> FONA (Front of neck access)     | <input type="checkbox"/> Percutaneous emergency oxygenation |
| <input type="checkbox"/> ESA (Emergency surgical airway) | <input type="checkbox"/> Emergency Cricothyroidotomy        |
| <input type="checkbox"/> Other (please specify)          |   |

## CICO Preparedness Survey

### SECTION B: Location and presentation of **CICO Rescue** equipment in your operating theatres

**The term CICO Rescue is used here as an umbrella term to describe any cannula, scalpel or guidewire cricothyroidotomy/tracheotomy technique used to restore oxygenation during an emergent CICO event. The following questions relate to the type, location, and presentation of the CICO Rescue equipment in your operating theatres.**

\* 8. Where is the equipment for **CICO Rescue** located in your operating theatre complex?

- In the difficult airway trolley
- At the "point-of-care" i.e. in every operating theatre or anaesthetic bay
- Both of the above
- Other

(please specify)

Section B: Location and presentation of **CICO Rescue** equipment in your operating theatres

The following questions refer to CICO Rescue equipment located in the difficult airway trolley or elsewhere outside the operating theatre

\* 9. What is the approximate ratio of the number of difficult airway trolleys to the number of operating theatres in your main operating theatre complex?

*(Select the closest approximation)*

- 1:1  1:2  1:3  1:4  1:5  1:6  1:8  1:10  1:12  1:16

\* 10. What CICO Rescue equipment is included in your difficult airway trolley?

*(Multiple answers permitted)*

- Equipment for cannula/jet insufflation techniques
- Equipment for scalpel-based techniques
- Equipment for percutaneous guidewire-based (Seldinger) techniques (e.g. Melker or Minitrach devices)
- Other (please specify)

\* 11. Is the **CICO Rescue** equipment on your difficult airway trolley in a clearly labelled drawer or shelf?

- Yes
- No
- Unsure

\* 12. Is the **CICO Rescue** equipment on your difficult airway trolley kept in a dedicated, labelled CICO pack?

- Yes
- No
- Unsure

\* 13. Is there a device capable of delivering oxygen insufflation through a cannula located on or with each difficult airway trolley? (This does not include the "potential" devices that could be constructed de novo from other materials such as giving sets and three-way taps, etc)

*(Multiple answers permitted)*

- No
- Unsure
- Yes - ENK, Rapid-O2 or other device attaching to a wall-mounted flowmeter
- Yes - Manujet or other hi-flow jet ventilator
- Yes, other (please specify)

## CICO Preparedness Survey

### Section B: Location and presentation of **CICO Rescue** equipment in your operating theatres

**The following questions relate to "point-of-care" CICO Rescue equipment - i.e. equipment located in each operating theatre or anaesthetic bay**

\* 14. Where is the "point-of care" **CICO Rescue** equipment in your theatres located?

- Mounted in a visible location (i.e. on a wall, the anaesthetic machine or the drug trolley)
- Stored in a drawer or cupboard
- Other

(please specify)

\* 15. Is the **CICO Rescue** equipment at the "point of care" kept in a dedicated, labelled CICO pack?

- Yes
- No

\* 16. What CICO Rescue equipment is kept at the "point-of-care"?

*(Multiple answers permitted)*

- Equipment for cannula/jet insufflation techniques
- Equipment for scalpel-based techniques
- Equipment for percutaneous guidewire-based (Seldinger) techniques (e.g. Melker or Minitrach devices)
- Other (please specify)

\* 17. Is there a device capable of delivering oxygen insufflation through a cannula located within each operating theatre or anaesthetic bay? (This does not include the "potential" devices that could be constructed de novo from other materials such as giving sets and three-way taps, etc)

*(Multiple answers permitted)*

- No
- Unsure
- Yes - Manujet or other hi-flow jet ventilator
- Yes - ENK, Rapid-O2 or other device attaching to a wall-mounted flowmeter
- Yes - Other (please specify)

## CICO Preparedness Survey

### Section C: **CICO Rescue** equipment in satellite locations

\* 18. Is anaesthesia or deep sedation administered in locations outside the main operating theatre complex of your hospital? e.g. angiography, MRI, endoscopy

- Yes
- No

## CICO Preparedness Survey

### Section D: **CICO Rescue** equipment in satellite locations

\* 19. Is there **CICO Rescue** equipment available in satellite locations within your hospital where anaesthesia or deep sedation is administered?

- Yes, in every location where anaesthesia or deep sedation is administered by anaesthetists
- Yes, in some locations where anaesthesia or deep sedation is administered by anaesthetists
- No
- Unsure

## CICO Preparedness Survey

### Section C: **CICO Rescue** equipment in satellite locations

\* 20. Is the **CICO Rescue** equipment in satellite locations standardised across all of these satellite locations?

- Yes, and is the same as the equipment in the main operating theatre complex
- Yes, but it is different from the equipment in the main operating theatre complex
- No
- Unsure

## CICO Preparedness Survey

### Section D: Cognitive aids for the management of difficult airways and **CICO** events

\* 21. Does your department display any cognitive aids or decision-support tools in the operating theatres to assist with management of difficult airways or CICO events?

*(Multiple answers permitted. Selections appear in randomised order)*

- No
- Unsure
- Yes...the DAS flowchart
- Yes...the Royal Perth Hospital CICO algorithm
- Yes...the ANZCA Transition to CICO cognitive aid
- Yes...the Vortex cognitive aid
- Yes...other (please specify)

## CICO Preparedness Survey

### Section E: Training and education in the prevention and management of **CICO** events

\* 22. Does your anaesthetic department, hospital or health service provide training or education in the prevention and/or management of **CICO events** for the anaesthetists and/or anaesthetic trainees at your hospital?

- Yes
- No
- Unsure

Section E: Training and education in the prevention and management of **CICO events**

\* 23. Is this training based on particular algorithms or approaches?

*(Multiple answers permitted. Selections appear in randomised order)*

- No
- Unsure
- Yes...the UK Difficult Airway Society guidelines
- Yes...the Royal Perth Hospital CICO algorithm
- Yes...the Vortex approach
- Yes...a locally developed algorithm or approach
- Yes...other (please specify)

\* 24. Who is included in this training?

*(Multiple answers permitted)*

- Anaesthetic registrars
- Anaesthetic consultants
- Anaesthetic nurses/technicians
- Unsure
- Other (please specify)

\* 25. Does this training provide hands-on experience with the same **CICO Rescue** equipment available in your operating theatres?

- Yes
- No
- Unsure

\* 26. Which of the following is included in the training for prevention and/or management of CICO events?

*(Multiple answers permitted)*

- CICO Rescue technical skills training
- Recognition of CICO and/or criteria for declaring CICO
- Upper airway rescue skills and/or decision-making to prevent CICO
- Communication and/or assertiveness (speaking up) skills
- Teamwork and/or leadership skills
- Unsure

\* 27. How frequently are these training sessions conducted?

*(This is NOT asking how frequently each staff member attends the sessions)*

- Once during each CPD triennium (i.e. once every three years)
- Once per year
- Multiple times each year
- Other (please specify)

\* 28. Is this training compulsory?

*(Multiple answers permitted)*

- Yes - for anaesthetic registrars
- Yes - for anaesthetic consultants
- No
- Unsure
- Other (please specify)

## CICO Preparedness Survey

### Section F: Quality assurance around **CICO** events and incidents involving difficult airway management

\* 29. Does your department maintain a registry of incidents involving difficult airway management, including **CICO** events?

- Yes
- No
- Unsure

\* 30. Does your department periodically conduct audits or reviews of incidents featuring difficult airway management?

- Yes
- No
- Unsure

\* 31. Are you aware of any **CICO** events or near misses within your department within the past five years?

- Yes...a CICO event
- Yes...a near miss
- No

## CICO Preparedness Survey

### Section F: Quality assurance around **CICO** events and incidents involving difficult airway management

\* 32. Have your department's current **CICO Rescue** equipment, training or protocols been modified as a result of the **CICO** event or near miss referred to in the previous question?

- Yes
- No
- Unsure

## CICO Preparedness Survey

### Section F: Quality assurance around **CICO** events and incidents involving difficult airway management

\* 33. What aspects of CICO Rescue management were modified as a result of the CICO event or near miss?

*(Multiple answers permitted)*

- Equipment type
- Equipment location
- Equipment packaging/presentation
- Training
- Protocols
- Other (please specify)

CICO Preparedness Survey

End Of Survey

**You have reached the end of the survey. Thank you very much for taking the time to assist us with our investigation. If you require any further information or wish to contact the authors please email Adam Rehak at [adam.rehak@health.nsw.gov.au](mailto:adam.rehak@health.nsw.gov.au)**

**If you have any concerns about the conduct of this survey, any of the information contained in it, or any other concerns, please contact:**

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