

Emergency Airway Management in the Critically Ill Patient Online Course



Author	Dr Peter Stuart FACEM
Peer Review	Dr Geoff Oddie FACEM, Dr Joy Treasure RACGP MClined, Dr Jason Bament FRACGP FACRRM DipEM
Latest Review	January 2023
Accreditation:	RACGP (Activity Number 409655) & ACRRM (Activity Number: 29006) for the 2023-2025 triennium

Learning outcomes

At the completion of the workshop the participants should be able to:

1. Discriminate the clinical features indicating an immediate threat to the airway
2. Prioritise the immediate management of life threatening airway obstruction
3. Differentiate the emergency patient requiring definitive management of the airway
4. Structure the definitive management of the airway in the emergency patient
5. Outline the steps in preparing equipment, patient and staff for rapid sequence intubation
6. Summarise the pharmacology of the drugs used to facilitate rapid sequence intubation
7. Prioritise the steps in performing endotracheal intubation and managing the patient with difficult or failed intubation

Summary of the e-Learning Program

The e-learning is interactive and requires the clinician to consider a range of the clinical problems and scenarios and provide a response. At the end of each topic a summative quiz is used to evaluate learning and understanding of the topic material. There are four topics with a total course time of 6 hours.

The four topics are

1. Core Airway Principles
2. Preparing for Definitive Airway Management
3. Pharmacology of the agents required in rapid sequence intubation
4. Rapid sequence intubation - procedure and complications

Outline of the Program

1. Principles: Recognising and Managing Airway Obstruction (95 mins)

Module summary: In the management of the acutely ill patient, the assessment and management of the airway is the first priority. As complete airway obstruction can lead to cardiac arrest in as little as 4 to 10 minutes and irreversible CNS damage within 3 to 5 minutes, the ability to manage the compromised airway is one of the most important (life-saving) skills clinicians require in managing the emergency patient.

Protecting or establishing an airway can be extremely anxiety provoking but, in the majority of cases, is relatively straight forward. The following module focuses on the assessment of the airway, identification of when intervention is required, and describes options for managing airway compromise.

Interaction/Assessment:

- Chapter Reading: ABCDs of Emergency Medicine – Recognising and Managing Airway Obstruction
- Video eTutorial: Assessment and Management of the Airway
- Interactive module: Recognising and Managing Airway Compromise
- Topic Quiz – Airway Compromise

2. Preparing for Endotracheal Intubation (85 mins)

Module summary: Indications for endotracheal intubation in the emergency patient include the establishment and protection of the compromised airway and/or facilitating mechanical ventilation in a patient with respiratory failure. Endotracheal intubation may be associated with significant complications and should therefore be undertaken only in circumstances where the clinician is skilled in the procedure and after all airway and resuscitation equipment have been checked.

Interaction/Assessment:

- Chapter Readings: ABCDs of Emergency Medicine – RSI – Preparing Patient/Equipment, Preoxygenation
- Interactive module: Preparing for endotracheal intubation
- Topic Quiz – Preparing for ETT

Clinical Resources / Further Reading

- ABCDs of Emergency Medicine – Advanced Airway Management
- ABCDs of Emergency Medicine – Rapid Sequence Intubation
- Clinical Management Summary: Rapid Sequence Intubation

3. Pharmacology of Rapid Sequence Intubation (85 mins)

Module summary: Even in a patient who is deeply unconscious attempted intubation without appropriate sedation or paralysis may trigger vomiting with the risk of aspiration and laryngeal spasm resulting in severe hypoxia. Other complications include raised intracranial pressure and injury to the vocal cords. Drugs are used to ensure an adequate level of sedation is achieved and the patient is paralysed resulting in relaxation of the vocal cords to facilitate endotracheal intubation.

Interaction/Assessment:

- Chapter Reading: RSI – Drugs, Team, Plan for a Difficult Airway
- Interactive module: Clinical Pharmacology of RSI Agents
- Topic Quiz – RSI Drugs

Clinical Resources / Further Reading

- ABCDs of Emergency Medicine – Rapid Sequence Intubation
- Clinical Management Summary: Rapid Sequence Intubation

4. Procedure for Intubation / Failed Intubation (85 mins)

Module summary: The procedure involves selecting the correct size ETT, positioning of the head, insertion of the laryngoscope, locating landmarks, placement of the ETT through the cords to the correct depth, and checking the position of the tube. Prolonged and repeated attempts to intubate should be avoided. A failed intubation plan should be decided and all equipment required be immediately available before attempting intubation.

Interaction/Assessment:

- Chapter Reading: Procedure, Post Intubation, Failed Intubation
- Interactive module: Endotracheal intubation
- Topic Quiz – Procedure for ETT

Clinical Resources / Further Reading

- ABCDs of Emergency Medicine – Rapid Sequence Intubation
- Clinical Management Summary: Rapid Sequence Intubation
- Difficult Airway – Review (NEJM May 2021)

5. Final Post Course Assessment Quiz (30 mins)

Final Course Quiz – Emergency Airway Management