

# Emergency Airway Management in the Critically Ill Patient Online Course



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The airway is the first priority in the assessment and management of the seriously ill or injured patient. What happens in the first minutes of a resuscitation may significantly determine a patient's chances of survival, risk for complications and long term disability. In this topic we examine the procedure and techniques for treating airway obstruction and explore the procedure for providing definitive airway management using the technique of rapid sequence intubation.

## 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, each expected to take the medical practitioner 105 minutes to complete with a total course time of 7.5 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

## Pre – Course Quiz

### 1. Approach to Airway Compromise

**Module summary:** The airway is the first priority in the acutely ill or injured patient. Protecting or establishing an airway can be extremely anxiety provoking but in the majority of cases follows a straight forward approach.

#### Interaction/Assessment:

- Interactive module: Airway in the Unconscious patient (Formative assessment: 75 mins)
- Video eTutorial : Principles of Airway Management (14 mins)
- Topic Quiz – Principles of Airway Management (Summative assessment: 30 mins)

### 2. Preparing for Definitive Airway Management

**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:

- Interactive module: Preparing for endotracheal intubation (Part 1) (Formative assessment: 75 mins)
- Topic Quiz – Preparing for ETT (Summative assessment: 30 mins)

### 3. Pharmacology of Rapid Sequence Intubation

**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:

- Interactive module: Drugs in Rapid Sequence Intubation (Part 2) (Formative assessment: 75 mins)
- Topic Quiz – RSI Drugs (Summative assessment: 30 mins)

## 4. Endotracheal Intubation

**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:**

- Interactive module: Procedure for Endotracheal intubation (Part 3) (Formative assessment: 75 mins)
- Topic Quiz – Procedure for ETT (Summative assessment)

## 5. Final Post Course Assessment Quiz

Final Course Quiz – Emergency Airway Management (Summative assessment: 30 mins)