Royal College of Anaesthetists

Difficult Airway Society

Tayside Mastery Learning Programme

Appendix 1: Mapped Curriculum Competencies for Core Anaesthetic Trainees

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Overview

The following appendix sets out to map “Tayside Mastery Learning Programme: Introduction to Airway Management” to the RCoA Curriculum for CCT in Anaesthetics as set out in Annex B of the curriculum. It has been sub-divided into curriculum competencies pertaining to the Initial Assessment of Competency (0-3months), Introduction to Anaesthetic Practice (3-6months) and Core Anaesthetia (6-24months) stages of training.

Assessments to be used for Initial Assessment of Competencies (0-3 months):

Airway Assessment

- Preoperative assessment of a patient who is scheduled for a routine operating list (ACEX - IAC_A01)
- Discuss how the airway was assessed and how difficult intubation can be predicted (CBD - IAC_C03)

Intubation/RSI

- Demonstrate Rapid Sequence Induction (ACEX - IAC_A04)

Supraglottic Airway

- Manage anaesthesia for a patient who is not intubated and is breathing spontaneously (ACEX - IAC_A02)

Extubation

- Recover a patient from anaesthesia (ACEX - IAC_A05)

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- Demonstrates the routine for dealing with failed intubation on a manikin (DOPS - IAC_D06)
- Discuss the routine to be followed in the case of failed intubation (CBD - IAC_C08)

Introduction to Anaesthetic Practice – the start of training (3-6 months):

Airway Assessment

- Explains the methods commonly used for assessing the airway to predict difficulty with tracheal intubation (Pre-operative assessment OA_BK_05)
- Performs a relevant clinical examination including when appropriate:
    - Airway Assessment/dentition (Pre-operative assessment OA_BS_02)
- Makes appropriate plans for anaesthesia:
    - Plans appropriate anaesthetic technique (Pre-operative assessment OA_BK_06)

Pre-Oxygenation/BMV

- In respect of the induction of anaesthesia:
    - Describes the effect of pre-oxygenation and knows the correct technique for its use (Induction of General Anaesthesia IG_BK_03)
- Describes the principles of management of the airway including:
    - Techniques to keep the airway open and the use of facemasks, oral and nasopharyngeal airways and laryngeal mask airways (Induction of General Anaesthesia IG_BK_04)
- Demonstrates effective pre-oxygenation (Induction of General Anaesthesia IG_BS_07)
- In respect of airway management:
    - Positions the patient for airway management
    - Maintains the airway with oral/nasopharyngeal airways
    - Ventilates the lungs with a bag and mask
      (Induction of General Anaesthesia IG_BS_10)
- Maintains a clear airway using basic techniques with or without simple adjuncts:
    - Head tilt
    - Chin lift
    - Jaw thrust
    - Oro- and nasopharyngeal airways
      (Management of respiratory and cardiac arrest in adults and children RC_BS_04)

Intubation/RSI

- Lists the indications for Rapid Sequence Induction (Pre-operative assessment OA_BK_06)
- Recalls the factors that influence the risk of gastric reflux/aspiration and lists strategies to reduce it (Premedication PD_BK_05)
- Describes rapid sequence induction of anaesthesia (Perioperative management of emergency patients ES_BK_04)
- In respect of tracheal intubation:
    - Lists its indications
    - Lists the available types of tracheal tube and identifies their applications
    - Explains how to choose the correct size and length of tracheal tube
    - Explains the advantages/disadvantages of different types of laryngoscopes and blades including, but not exclusively, the Macintosh and McCoy
    - Outlines how to confirm correct placement of a tracheal tube and knows how to identify the complications of intubation including endobronchial and oesophageal intubation
    - Explains how to identify patients who are at increased risk of regurgitation and pulmonary aspiration and knows the measures that minimise the risk
    - Categorises the signs of pulmonary aspiration and the methods for its emergency management

(Induction of General Anaesthesia IG_BK_04)

- In respect of airway management:
    - Successfully places nasal/oral tracheal tubes using direct laryngoscopy
    - Confirms correct tracheal tube placement
    - Uses bougies correctly
    - Secures and protects LMAs/tracheal tubes during movement, positioning and transfer
    - Correctly conducts RSI
    - Correctly demonstrates the technique of cricoid pressure
      (Induction of General Anaesthesia IG_BS_10)
- Manages rapid sequence induction in the high risk situation of emergency surgery for the acutely ill patient (Induction of General Anaesthesia IG_BS_13)
- Demonstrates correct use of advanced airway techniques including:
    - Tracheal intubation
      (Management of respiratory and cardiac arrest in adults and children RC_BS_04)

Supraglottic Airway

- In respect of airway management:
    - Inserts and confirms placement of a Laryngeal Mask Airway (Induction of General Anaesthesia IG_BS_10)
- Demonstrates correct use of advanced airway techniques including:
    - Supraglottic devices, including but not limited to LMA, Proseal, LMA supreme, iGel
      (Management of respiratory and cardiac arrest in adults and children RC_BS_04)

Extubation

- Describes the care of an unconscious patient in the recovery room, including safe positioning (Postoperative and recovery room care PO_BK_03)
- In respect of restoring spontaneous respiration and maintaining the airway at the end of surgery:
    - Explains how to remove the tracheal tube and describes the associated problems and complications
    - Recalls/describes how to manage laryngospasm at extubation
    - Recalls/lists the reasons why the patient may not breathe adequately at the end of surgery
    - Recalls/identifies how to distinguish between the possible causes of apnoea
    - Lists the possible causes of postoperative cyanosis
    - Describes how to evaluate neuro-muscular block with the nerve stimulator
      (Postoperative and recovery room care PO_BK_03)
- With respect to oxygen therapy:
    - Lists its indications
    - Lists the techniques for oxygen therapy and describes the performance characteristics of available devices
    - Recalls/explains the causes and management of stridor
      (Postoperative and recovery room care PO_BK_03)
- Performs safe tracheal extubation (Postoperative and recovery room care PO_BS_01)
- Evaluates neuromuscular blockade using a nerve stimulator (Postoperative and recovery room care PO_BS_02)
- Transfers an unconscious patient from the operating theatre to the recovery room (Postoperative and recovery room care PO_BS_03)

Unanticipated Difficult Airway + eFONA

- In respect of tracheal intubation:
    - Discusses the methods available to manage difficult intubation and failed intubation (Induction of General Anaesthesia IG_BK_04)
- Demonstrates failed intubation drill (Induction of General Anaesthesia IG_BS_12)

Core Anaesthesia (3/6-24 months):

Airway Assessment

- Explains the methods commonly used for assessing the airway to predict difficulty with tracheal intubation (Airway – AM_BK_01 – cross ref Pre-operative assessment)
- Demonstrates satisfactory proficiency in performing a relevant clinical examination and assessment of the airway and dentition (Airway – AM_BS_01)
- Lists specific conditions that may complicate airway management [e.g. anatomical variation; tumour; bleeding] (Head, neck, maxilla-facial and dental surgery EN_BK_01)
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Pre-oxygenation/BMV

- Describes the effect of pre-oxygenation and knows the correct technique for its use (Airway – AM_BK_02 - cross ref Introduction of GA)
- Describes the principles of management of the airway including techniques to keep the airway open and the use of facemasks, oral and nasopharyngeal airways and laryngeal mask airways (Airway - AM_BK_03 - cross ref Introduction of GA)
- Lists advantages and disadvantages of different techniques for airway management during resuscitation, including but not limited to:
    - Oro and nasopharyngeal airways
    - Laryngeal Mask type supraglottic airways including but not limited to: LMA, Proseal, LMA supreme, iGel, Tracheal intubation
      (Airway – AM_BK_11 – cross ref Management of respiratory and cardiac arrest)
- Demonstrates effective pre-oxygenation, including correct use of the mask, head position and clear explanation to the patient (Airway – AM_BS_04 - cross ref Introduction of GA)
- In respect of airway management:
    - Demonstrates optimal patient position for airway management, including head tilt, chin lift, jaw thrust
    - Manages airway with mask and oral/nasopharyngeal airways
    - Demonstrates hand ventilation with bag and mask [including self- inflating bag] (Airway – AM_BS_05 - cross ref Introduction of GA & Management of cardiac and respiratory arrest)
- Demonstrates the ability to maintain anaesthesia with a face mask in the spontaneously breathing patient (Airway -
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Intubation/RSI

- In respect of tracheal intubation:
    - Lists its indications
    - Lists the available types of tracheal tube and identifies their applications
    - Explains how to choose the correct size and length of tracheal tube
    - Explains the advantages/disadvantages of different types the laryngoscopes and blades including, but not exclusively, the Macintosh and McCoy
    - Outlines how to confirm correct placement of a tracheal tube and knows how to identify the complications of intubation including endobronchial and oesophageal intubation
    - Explains how to identify patients who are at increased risk of regurgitation and pulmonary aspiration and knows the measures that minimise the risk
      (Airway – AM_BK_06 - cross ref Induction of GA & Emergency surgery)

- Discusses the indications for RSI (Airway – AM_BK_09 – cross ref Induction of GA)
- Discusses the different types of laryngoscope blades available in routine practice and the indications for their use (Airway – AM_BK_13)
- Outlines the advantages/disadvantages and reasons for development of new laryngoscopes (Airway – AM_BK_14)
- In respect of airway management:
    - Demonstrates correct head positioning, direct laryngoscopy and successful nasal/oral intubation techniques and confirms correct tracheal tube placement
    - Demonstrates proper use of bougies
    - Demonstrates correct securing and protection of LMAs/tracheal tubes during movement, positioning and transfer
    - Correctly conducts RSI sequence
    - Correctly demonstrates the technique of cricoid pressure (Airway – AM_BS_05 - cross ref Introduction of GA & Management of cardiac and respiratory arrest)

Supraglottic Airway

- In respect of airway management:
    - Able to insert and confirm placement of a Laryngeal Mask Airway (Airway – AM_BS_05)
    - Demonstrates correct use of advanced airway techniques including but not limited to Proseal, LMA supreme, iGel (Airway – AM_BS_06 - cross ref Intraoperative care)
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Extubation

- In respect of restoring spontaneous respiration and maintaining the airway at the end of surgery:
    - Explains how to remove the tracheal tube and describes the associated problems and complications
    - Recalls/describes how to manage laryngospasm at extubation
    - Recalls/lists the reasons why the patient may not breathe adequately at the end of surgery
    - Recalls/identifies how to distinguish between the possible causes of apnoea
    - Lists the possible causes of postoperative cyanosis
    - Understands how to evaluate neuro-muscular block with the nerve stimulator (Airway – AM_BK_07 – cross ref Postoperative and recovery room care)
- With respect to oxygen therapy
    - Lists its indications
    - Knows the techniques for oxygen therapy and the performance characteristics of available devices
    - Describes the correct prescribing of oxygen
    - Recalls/explains the causes and management of stridor (Airway – AM_BK_08 – cross ref Postoperative and recovery room care)
- Describes the care of the airway in an unconscious patient in the recovery room, including safe positioning (Airway – AM_BK_10 – Post- operative and recovery room care)
- Demonstrates appropriate management of tracheal extubation, including:
    - Assessment of return of protective reflexes
    - Assessment of adequacy of ventilation
    - Safe practice in the presence of a potentially full stomach

(Airway – AM_BS_12 – cross ref postoperative and recovery room care).

- Manages anaesthesia so as to achieve smooth emergence, with minimal airway disturbance, laryngospasm and bronchospasm (Head, neck, maxilla-facial and dental surgery – EN_BS_04)
- Demonstrates awareness of the increased risk of airway complications postoperatively and takes precautions to assist in their early recognition and prompt management (Head, neck, maxilla-facial and dental surgery – EN_BS_05)

Unanticipated Difficult Airway + eFONA

- In respect of tracheal intubation:
    - Discusses the methods available to manage difficult intubation and failed intubation (Airway – AM_BK_06 - cross ref induction of GA & emergency surgery)
- Describes the management of the 'can't intubate, can't ventilate' scenario (Airway – AM_BK_16)
- Demonstrates failed intubation drill (Airway – AM_BS_09 - cross ref induction of GA)
- Demonstrates management of 'can't intubate, can't ventilate' scenario (Airway – AM_BS_10 - cross ref Critical incidents)
- Demonstrate surgical cricothyroidotomy (Airway – AM_BS_15)
- Recalls/describes the causes, detection and management of the following specific conditions:
    - Difficult/failed mask ventilation (Critical Incidents - CI_BK_13)
    - Failed Intubation (Critical Incidents - CI_BK_14)
    - Can't intubate, can't ventilate (Critical Incidents - CI_BK_15)
- Discusses the importance of understanding the need for the following attitudes and behaviours
    - Awareness of human factors concepts and terminology and the importance of non-technical skills in achieving consistently high performance such as: effective communication, team-working, leadership, decision-making and maintenance of high situation awareness (Critical Incidents - CI_BK_31)
- Demonstrates good non-technical skills such as effective communication, team-working, leadership, decision-making and maintenance of high situation awareness (Critical Incidents - CI_BS_01)
- Demonstrates the ability to recognise early a deteriorating situation by carefully monitoring (Critical Incidents - CI_BS_02)
- Explains the principles of the emergency management of the obstructed airway including tracheostomy (Head, neck, maxilla-facial and dental surgery EN_BK_01)