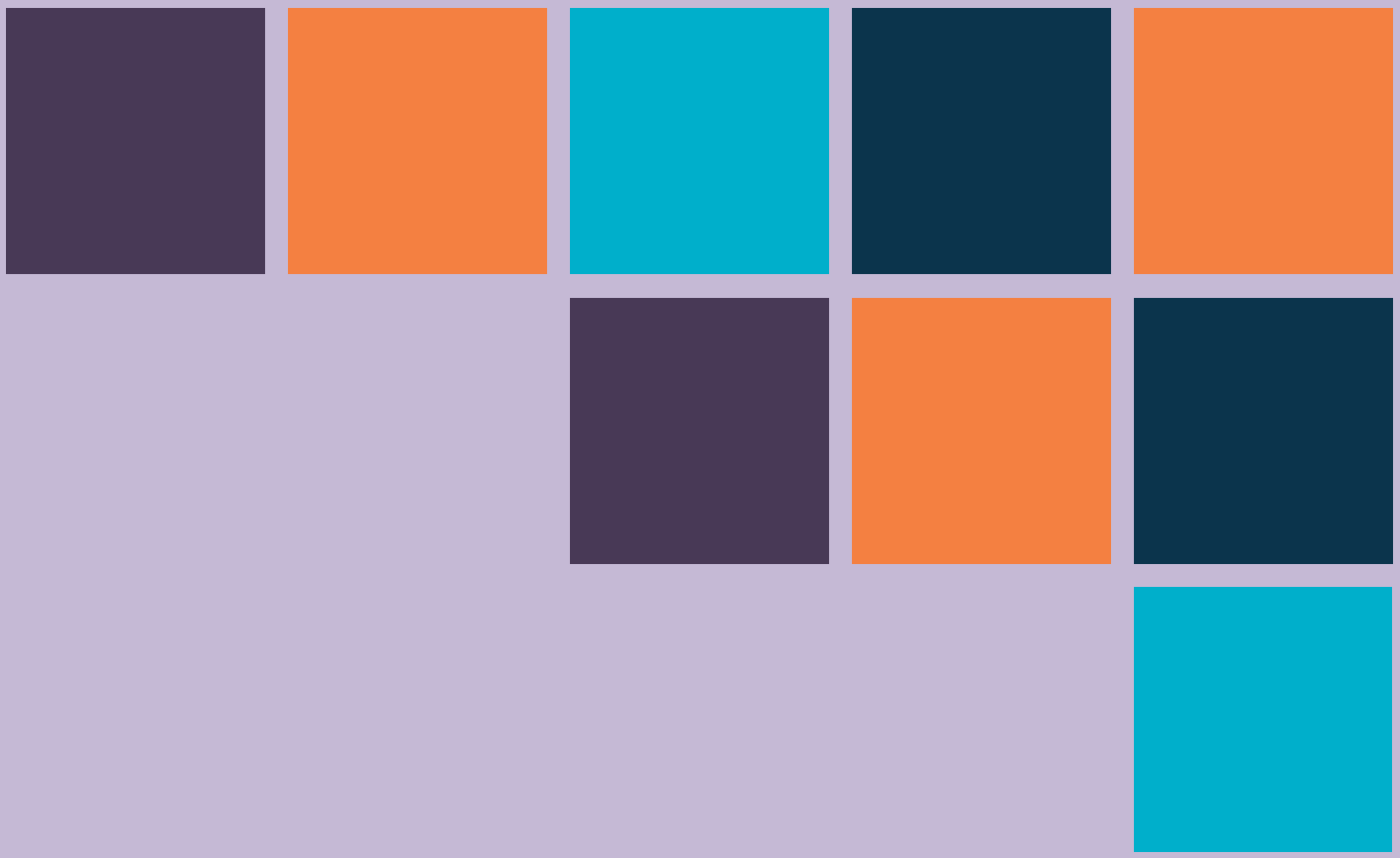
Advanced Airway Management for Advanced Critical Care Practitioners

ACCP Optional Skills Framework



The Faculty of Intensive Care Medicine

January 2022

Preface

The Faculty works with appropriate partner organisations to develop Optional Skills Framework Modules (OSFs) for Advanced Critical Care Practitioners (ACCPs) to undertake applicable to local patient need/ACCP development. In the case of this OSF the FICM ACCP Sub-Committee acknowledge and thank the input and expertise from the Royal College of Anaesthetists (RCoA), Difficult Airway Society (DAS), and Association of Anaesthetists (AoA) in forming this document.

These documents outline FICM approved modules which may be put in place locally only where there is a benefit to patient care/service need. They are designed solely for Advanced Critical Care Practitioners and are not applicable to other Advanced Practice groups.

These modules are optional and will not be applicable or appropriate for all Qualified ACCPs. The requirement to undertake these optional modules will be driven by local service need within your trust/ health board. Those FICM ACCPs who have advanced airway management as part of their current role and scope of practice may apply for recognition of this using the "Prior Learning" route in Appendix 7.

The responsibility for ensuring local procedures for risk, governance, evaluation and reporting in relation to use of OSFs remain with the trusts/health boards.

It is recommended that the following points are considered before any OSFs are implemented locally for ACCPs:

- They should be discussed by the ICU clinical team and agreed as appropriate for the patient/service need and the ACCP cohort.
- Use of an OSF for ACCPs is reviewed by the ICU governance group
- Risks to the patient, service and the ACCP are assessed and reviewed as part of the ICU governance process.
- Any adverse event or concerns should be reported and investigated using the trust/health board incident reporting system.
- ACCPs must keep a log of activity in relation to the OSF and discuss at yearly appraisals.
- ACCPs are recommended to advise their professional indemnity insurers of context and use of OSFs.
- The trained ACCP undertaking an OSF must have the support of a nominated consultant supervisor. The supervisor must be an ICU consultant who works regularly with the ACCP. It is recommended that the nominated supervisor liaises with the RCoA Airway Lead. The supervisor is responsible for:
  (i) Assisting with creating knowledge, skills and competency opportunities relating to the OSF
  (ii) Assessment and support throughout the completion of the OSF
  (iii) Supporting maintenance of the skill reported and audited via yearly FICM ACCP Personal Development Record (PDR).

Contents

1. Background

Since their introduction, the role of Advanced Critical Care Practitioners (ACCPs) has developed over time. Airway management is already part of core ACCP training. Advanced Airway Management for the purposes of this document is defined as Rapid Sequence Intubation (RSI) for emergency intubations in the critically ill, which is the insertion of a cuffed Endotracheal (ET) tube following induction of anaesthesia. Advanced Airway management is a key part of ICM Medical training. Training established ACCPs in Advanced Airway management would allow ACCPs to provide immediate resident ICU advanced airway support as defined in GPICS Edition 2 (Medical staffing standards 2.1:5), provide added safety during ACCP led intra and inter-hospital patient transfers as well as facilitating airway procedures in a busy Critical Care department including planned intubation and airway management during percutaneous tracheostomy.

2. Introduction

The following module and associated competencies have been developed for the training of ACCP's who have completed core training and hold FICM Membership as an ACCP. It is important to note that for the purposes of this document Advanced Airway skills for ACCPs would equate to core anaesthetic skills for anaesthetic trainees. Advanced airway management should be seen as an optional additional skill for ACCPs who wish to develop an enhanced role and where there is a clearly identified local service need, These competencies are based on the Airway Management curriculum of the Faculty of Intensive Care Medicine (FICM) 2019 Edition 5 version 2.4 and the Curriculum for a CCT in Anaesthesia published by the Royal College of Anaesthetists (RCoA) 2020 for core & intermediate level training, and have been adapted for use by non-anaesthetic practitioners working predominantly within a Critical Care environment. At present this is not part of the requirements for FICM core ACCP training.

Objectives

- Predict difficulty with an airway and enlist appropriate help.
- Manage induction and maintenance of anaesthesia by an intravenous technique within a Critical Care setting including resuscitation in the ward and emergency department environment in a predefined patient group.
- Maintain an airway & provide definitive airway management as part of emergency resuscitation or RSI as directed by the supervising Intensive Care consultant, within a defined scope of practice.
- Demonstrate safe management of failed intubation, oesophageal intubation and cannot intubate, cannot oxygenate scenarios.

3. Scope

Local trust/health board policy will define the scope of practice an individual ACCP should operate within. This scope of an individual ACCP's practice can be reviewed as they gain experience. Following OSF completion, a **suggested initial** patient criteria would be:

Inclusion

Any patient in Cardiac Arrest

Any Critical Care patient following discussion with the Supervising Intensivist who does not have any of the exclusions listed below.

Any critically ill patient where there is loss of airway during ACCP led transfer

Any critically ill patient where there is unplanned extubation on the ICU ward

Any deteriorating critically ill patient where emergent intubation will prevent cardio-respiratory arrest whilst senior assistance is summoned

Exclusion

Known or anticipated, difficult airway (to include anatomically, physiologically or logistically difficult airway).

Non emergent, pre-planned intubation with high FiO_2 requirement.

Non emergent, pre-planned intubation with known CVS instability as assessed by the FICM ACCP as requiring senior support.

Non emergent, pre-planned intubation when intracranial hypertension is likely.

Cervical Spine injury/ facial injuries where assessment or CT evidence suggests difficulty.

Delivery of Care

The ACCP will use a recognised intubation checklist.

The ACCP will work within a locally defined and agreed Induction Drug Guidance Framework in use on the ICU.

Alignment to Good Medical Practice

A FICM trained ACCP will be working within a medical model of care delivery; therefore, the competences are also aligned to the four domains of Good Medical Practice.

Domains of Good Medical Practice

Domain Descriptor:

1. Knowledge, skills and performance
2. Safety and quality
3. Communication, partnership and teamwork
4. Maintaining trust

Long Term Scope of Practice: The scope of this document covers the acquisition of Airway Skills that are analogous to RCoA Core Airway Skills. https://rcoa.ac.uk/training-careers/training-anaesthesia. It is possible following completion of this Module, an ACCP could further develop their Airway Skills to a more advanced level. This is however beyond the scope of this document and would be based on local trust/health board policies and service need.

4. Learning and Teaching

Aims

The aims of this Advanced Critical Care Practitioner (ACCP) Advanced Airway Competency are to:

- Enable ACCP training to a nationally agreed standard by a FICM Optional Skills Framework (OSF) for Advanced Airway Management.
- Able to predict difficulty with an airway and obtain appropriate help in a timely manner.
- Able to maintain an airway and provide definitive airway management as part of emergency resuscitation.
- Demonstrate the use and interpretation of waveform capnography.
- Demonstrate safe management of the failed intubation scenario to correctly identify tracheal and oesophageal intubation.
- Demonstrate knowledge and understanding of DAS guidelines for critically ill patients.
- Demonstrate safe management of the 'cannot intubate cannot oxygenate' scenario.
- Able to provide skilled assistance during planned airway procedures in Critical Care including intubation, bronchoscopy and percutaneous tracheostomy.
- To describe the core theoretical knowledge, practical skills and professional judgment required of an ACCP in the context of advanced airway management.
- The competences identify knowledge, common and specialist elements, which are deemed essential to the role to meet service needs.
- Each individual practitioner will take professional responsibility for their autonomous practice including acknowledgement of their limitations and when to 'refer the patient on' to medical colleagues or other appropriate professionals. The responsibility lies with the ICU consultant, clarification of who the Airway team lead is where the ACCP is working with a junior doctor should be clarified in local policies and ACCP Standard operating procedures.

Definitions

Supervision by airway competent medical colleagues (Anaesthesia/ICM Stage 2 and above) will remain a key part of ACCP Airway practice. During **module training** all ACCP advanced airway management will require at least **direct supervision,** defined as:

"The ACCP is working directly with a supervisor who is actually with the ACCP or can be present within seconds".

On completion of the Advanced Airway ACCP OSF, the ACCP will for appropriate patients be able to perform advanced airway management with local supervision, defined as the supervisor is:

"On-site and is immediately available for advice and is able to be with the ACCP within minutes of being called."

Following completion of the Advanced Airway Module, the ACCP should continue to risk assess individual Critical Care patients. **The level of supervision required for an individual case will vary depending on patient assessment, circumstance (i.e. degree of emergency) and local organisational factors.**

Structure of Training

The structure of training will involve an initial 3-month full time (or equivalent part time) attachment within the Anaesthetic/Theatre environment.

A period of supervised advanced airway management in the Critical Care environment to complete work-based assessments.

Final sign off by two ICM consultants following satisfactory completion of work based and simulation based OSCE assessments.

The ACCP will have a designated module supervisor who is an ICU consultant. The ACCP should meet with their supervisor at a minimum, once every 3 months.

Experience in training should be recorded in a logbook, including simulation exercises. A logbook should include details of number of elective theatre lists undertaken, numbers of procedures performed, sim sessions and workshops attended.

Recommended assessment processes

Assessment tools for advanced airway competencies are the same as those in use in the assessment of medical trainees.

Each competence is mapped to the relevant assessment tools as follows:

Assessment Tools

Code	Full name
D	Direct Observation of Procedural Skills [DOPS]
I	Mini-Clinical Evaluation Exercise [I-CEX]
C	Case Based Discussion [CBD]
S	Simulation
O	Observation of clinical practice

5. Training

Part 1 Training – Theatre-Based Training

During this period the trained ACCP should be given dedicated theatre time. It is recommended that this should be a full-time secondment from their normal ACCP job plan although it could be undertaken as a part time attachment comprising blocks of theatre time while the ACCP continues to undertake their duties within Critical Care. The duration of this initial training period will be defined locally but should be no less than the equivalent of a 3-month full time attachment. This period of training must be completed within 12 months from commencement.

The exact number of airway procedures to gain competence is not defined but it should include a mixture of ET intubations as well as further experience in the insertion of supraglottic airway devices. An Airway Logbook should be completed. This logbook should include:

- It is unlikely that competence will be achieved without performing over 60 intubations during Part 1 Theatre-Based Training. While this is an achievable number in a 3-month attachment, this period may need to be extended based on local circumstances; the key is continuity of training.
- Number of elective theatre lists undertaken.
- Numbers of procedures undertaken.
- Sim sessions/ workshops attended.

It is important that video laryngoscopy is used as part of the training, and this should be the VL used in the local ICU.

Time in theatre will be complemented by simulation training focusing on Airway Emergencies including failed intubation, oesophageal intubation and Cannot Intubate, Cannot Oxygenate (CICO) scenarios. During this time the ACCP will need to complete a minimum number of work-based assessments as outlined in the table below:

Workplace Based Assessment Tools	Number
Clinical Evaluation Exercise (CEX) Specific topics to cover should include: • patient airway assessment • prediction of difficulty • drug selection and rationale • prediction and planning for complications	10 (using specific proforma detailed in Appendix 3.)
Direct Observation of Procedural Skills (DOPS) Specific topics to cover should include: • RSI Intubation • Insertion of supraglottic airway • Direct Laryngoscopy • Video Laryngoscopy • Use of Macintosh blade +/- bougie use of hyperangulated blade and stylet • Assistance in difficult airway scenario • Oesophageal intubation	20
OSCE simulation assessments	Failed intubation and CICO scenarios Oesophageal intubation

Theatre-based training - Simulation

The use of simulation will assist in the teaching and assessment of some aspects of this section e.g., failed intubation drill according to DAS Guidance 2018.

Learning outcomes

- To conduct safe induction of anaesthesia confidently.
- To recognise and treat immediate complications of induction including tracheal tube misplacement, oesophageal intubation, and adverse drug reactions.
- To manage the effects of common complications of the induction process.
- Demonstrates safe practice behaviours, including briefings, checklists and debriefs.
- Demonstrates correct pre-anaesthetic check of all equipment required ensuring its safe functioning (including the anaesthetic machine/ventilator).
- Demonstrates safe rapid sequence intubation and establishment of ventilation.
- Demonstrates competency in direct laryngoscopic and video laryngoscopic guided intubation.
- Shows awareness of the potential complications of the process and how to identify and manage them.
- Demonstrates the use of and interpretation of waveform capnography to identify tracheal and oesophageal intubation.
- Demonstrates knowledge and understanding of DAS guidelines for critically ill patients [2018].

Part 2 training - Critical Care-Based Training

During this period the ACCP should focus on undertaking Advanced Airway work within Critical Care. All work must be **directly supervised.** It is envisaged this will be integrated into the ACCP job plan and the ACCP will also continue to work within Critical Care during this time. All Critical Care Advanced Airway procedures should be recorded in a logbook. There is no minimum time for this period of training, but the ACCP needs to demonstrate competence in advanced airway management in the critically ill. This must include:

- Selection of appropriate drugs for RSI and safe use in a range of critically ill patients.
- At least 10 supervised intubations in a range of critically ill patients (ICU, ED or ward) in addition to those undertaken in Part 1 training.

If appropriate for the local Critical Care unit, this period may also be used to gain competence in managing the airway under supervision during percutaneous tracheostomy and / or bronchoscopy. Part two training will be complemented by simulation training focusing on common Critical Care Airway Emergencies.

During this time the ACCP will need to complete a minimum number of work-based assessments as outlined in the table below:

Workplace Based Assessment Tools	Number
Clinical Evaluation Exercise (CEX) Specific topics to cover should include: • ICU patient airway assessment • ICU prediction of difficulty • Drug selection in the critically ill and drug rationale • Prediction and planning for complications • Use and interpretation of capnography	8
Case Based Discussion (CBD) Specific topics to cover should include: • Intubation in the setting of coma • Intubation in the setting of Hypoxic respiratory failure • Intubation in the setting of hypovolaemia • Intubation in the setting of cardiovascular instability • How to assist in the management of the difficult airway in the critically ill	10 (the ACCP does not need to be the primary intubator for each case)

Direct Observation of Procedural Skills (DOPS) Specific topics to cover should include: • Direct Laryngoscopy • Video Laryngoscopy • In range of patient groups settings • Use of Macintosh and hyperangulated blades • Use of bougie or stylet • Additional topics may include: Maintaining the airway during insertion of a percutaneous tracheostomy	10
OSCE simulation assessments in a Critical Care setting	Failed intubation and Cannot Intubate Cannot Oxygenate scenarios in a Critical Care setting. Demonstrates the use of and interpretation of waveform capnography to identify tracheal and recognise oesophageal intubation. Demonstrates knowledge and understanding of DAS guidelines for critically ill patients [2018].

Critical Care-based training - simulation

The use of simulators may assist in the teaching and assessment of some aspects of this section e.g., failed intubation drill.

Learning outcomes

- Demonstrates safe practice behaviours including briefings, checklists and debriefs.
- Demonstrates use of pre procedure intubation check list including checking of all equipment required ensuring its safe functioning.
- Demonstrates safe induction of anaesthesia in a range of critically ill patients confidently through appropriate agent selection and delivery.
- Able to recognise and treat immediate complications of induction, including tracheal tube misplacement and adverse drug reactions.
- Demonstrate the use of and interpretation of waveform capnography to identify tracheal and oesophageal intubation.
- Demonstrate knowledge and understanding of DAS guidelines for critically ill patients [2018].
- Demonstrates safe RSI and establishment of ventilation in a range of critically ill patients. using direct laryngoscopy and video laryngoscopy.
- Shows awareness of the potential complications and how to identify and manage them.
- Demonstrates safe airway management during percutaneous tracheostomy (if appropriate to local Critical Care unit practice).

Completion of Training

After successful completion of all work-based assessments and OSCE simulations in part 1 and 2, successful completion of the advanced airway OSF requires formal final sign off by two ICU consultants using the proforma in Appendix 5. Following successful completion of the OSF and final sign off, the ACCP will be able to undertake Advanced Airway management within a defined scope of practice under local supervision.

The ACCP should aim to provide advanced airway support with the assistance of an experienced ICU team (this will be defined locally but may include a senior ICU nurse or Operating Department Practitioner (ODP)).

Appropriate risk and governance systems should be in place and agreed with the local trust/health board.

6. Ongoing competency assessment following module completion

- Maintain a logbook of all advanced airway interventions undertaken including details regarding any complications.
- Regular planned theatre sessions – suggested at least every 6 months.
- Review of advanced airway skills must be undertaken as part of annual appraisal including review of any related adverse incidents and ongoing experience and maintenance of competency.
- Undertake an annual simulation session to practice emergency airway drills, or evidence of actual situations in practice.
- Attend relevant courses and educational opportunities.
- Experience should be recorded in a logbook, including simulation exercises. A logbook should include details of number of elective theatre lists undertaken, numbers of procedures performed, sim sessions and workshops attended.
- Review of logbook and practice of the skill at PDR.

7. References

- Airway Management competencies of the Faculty of Intensive Care Medicine's ICM Curriculum 2019 Edition 5 version 2.4
- Curriculum for a CCT in Anaesthetics published by the Royal College of Anaesthetists (RCoA) 2020
- Wang H E, Yealy D M. Out-of-hospital endotracheal intubation: where are we? *Annals of Emergency Medicine* 200647532–541. (PubMed) (Google Scholar) recommended 20 intubations for paramedics to give 90% chance of success.

- Reed et al. Intubation training in emergency medicine: a review of one trainee's first 100 procedures. *Emergency Medicine Journal*. 2007 Sep; 24(9): 654–656. Suggested complication rate and ability to get good views occurs between 72-99 intubations complication rates (especially oesophageal intubation) reduces after 30.

These references can be used as additional resources to support your practice

8. Appendices

Appendix 1: Abbreviations

Abbreviation	Term
ACCP	Advanced Critical Care Practitioner
AoA	Association of Anaesthetists
ALS	Advanced Life Support
CBD	Case-Based Discussion
CEX	Clinical Evaluation Exercise
CICO	Cannot Intubate Cannot Oxygenate
CT	Computerised Tomography scan
CVS	Cardiovascular System
DAS	Difficult Airway Society
DOPS	Direct Observation of Procedural Skills
ED	Emergency Department
ET/ETT	Endotracheal/Endotracheal Tube
FICM	Faculty of Intensive Care Medicine
GMC	General Medical Council
HCPC	The Health and Care Professions Council
HEI	Higher Education Institution
ICU	Intensive Care Unit
LMA	Laryngeal Mask Airway
NMC	Nursing and Midwifery Council
ODP	Operating Department Practitioner
OSCE	Objective Structured Clinical Examination
OSF	Optional Skills Framework
PDR	Personal Development Record
RCoA	Royal College of Anaesthetists
SGA	Supraglottic Airway
VL	Video Laryngoscope

Appendix 2: Glossary of Terms

Abbreviation	Term
Clinical Supervisor	ICU Consultant supervising clinical practice on any ACCP ICU shift.
Training Supervisor	ICU Consultant responsible for overall module supervision.

Appendix 3: Assessment Proformas

Direct Observation of Procedural Skills (DOPS) Airway

Please complete this form in BLOCK CAPITALS and** BLACK **ink

ACCP's Surname		
ACCP's Forename(s)		
NMC number or equivalent		**NUMBER MUST BE COMPLETED**

Procedure		
Code Number		
Observed by		
GMC Number		**GMC NUMBER MUST BE COMPLETED**
Date		
Signature of observing doctor		

Assessment:

	Practice was satisfactory	Tick one	Assessor's signature
	Practice was unsatisfactory	Tick one	Assessor's signature

Expand on areas of good practice. You **MUST** expand on areas for improvement for each unsatisfactory score given.

Was oxygenation maintained:

Was the airway secured:

Examples of good practice were:

Areas of practice requiring improvement were:

Further learning and experience should focus on:

Clinical Evaluation Exercise (CEX) Advanced Airway

Please complete this form in BLOCK CAPITALS and BLACK ink

ACCP's Surname		
ACCP's Forename(s)		
NMC/HCPC Number		**NUMBER MUST BE COMPLETED**

Observed by		
GMC/NMC Number		**GMC /NMC NUMBER MUST BE COMPLETED**
Date		Profession/grade
Signature of observing clinician		

Assessment:

	Practice was satisfactory	Tick one	Assessor's signature
	Practice was unsatisfactory	Tick one	Assessor's signature

Expand on areas of good practice. You **MUST** expand on areas for improvement for each unsatisfactory score given.

Examples of good practice were:

Areas of practice requiring improvement were:

Further learning and experience should focus on:

If you have rated the performance unsatisfactory, you **MUST** indicate which elements were unsatisfactory

Case Based Discussion (CBD) Airway

Please complete this form in BLOCK CAPITALS and BLACK ink

ACCP's Surname		
ACCP's Forename(s)		
NMC /HCPC Number		**NUMBER MUST BE COMPLETED**

Code Number or Description of Case		
Observed by		
GMC Number		**GMC NUMBER MUST BE COMPLETED**
Date		
Signature of supervising doctor		

Clinical Setting:

ICU ☐ HDU ☐ ED ☐ Ward ☐ Transfer ☐ Other ☐

Assessment:

	Practice was satisfactory	Tick one	Assessor's signature
	Practice was unsatisfactory	Tick one	Assessor's signature

Expand on areas of good practice. You **MUST** expand on areas for improvement for each unsatisfactory score given.

Examples of good practice were:

Areas of practice requiring improvement were:

Further learning and experience should focus on:

Special focus of discussion:

Appendix 4: Curriculum

Part 1: Theatre-Based Curriculum

Knowledge		
	Assessment methods	GMP
Recalls the pharmacology and pharmacokinetics, including doses, interactions and significant side effects of drugs used during induction of anaesthesia. Describes the factors that contribute to drug errors in induction of anaesthesia and strategies to reduce them.	I,C,O	1
In respect of the induction of anaesthesia: • Describes the effect of pre-oxygenation and knows the correct technique for its use • Explains the techniques of intravenous induction and agent selection • Describes the pharmacology of common intravenous induction agents • Describes the physiological effects of intravenous induction • Describes how to recognise an intra-arterial injection of a harmful substance and its appropriate management	I,C,O	1,2
Describes anaphylactic reactions and explains the appropriate management including follow up and patient information. Discusses the additional hazards associated with induction of anaesthesia in unusual places (e.g. general ward, Emergency room) and in special circumstances. Identifies the special problems of induction associated with pre-existing cardiac, respiratory and musculoskeletal disease, obesity and those at risk of pulmonary regurgitation and aspiration.	I,C,O	I,2
Describes the principles of management of the airway including: Techniques to keep the airway open and the use of oral and nasopharyngeal airways and supraglottic airways	I,C,O	I,2
In respect to tracheal intubation: • Lists its indications • Lists the available types of tracheal tube and their applications • Explains how to choose the correct size and length of tracheal tube • Laryngoscopy • SGA (supraglottic airway) insertion • eFONA (emergency front of neck access) • MACOCHA (The MACOCHA score involves various simple assessment items: a Mallampati III or IV, a sleep apnoea syndrome, a decrease in		

cervical mobility, a mouth opening <3cm, a coma defined by a Glasgow score <8, severe hypoxemia, and if the practitioner is not anaesthetist). • Explains the advantages and disadvantages of various types of laryngoscopes and blades • Use of Macintosh blade +/- bougie use of hyperangulated blade and stylet • Video laryngoscope • Outlines how to confirm correct placement of a tracheal tube and knows how to identify the complications of intubation including endobronchial and oesophageal intubation • Discusses the methods available to manage difficult intubation and failed intubation • Describes recognition of cannot intubate cannot oxygenate • Describes performance of eFONA • 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 • Demonstrates the use of and interpretation of waveform capnography to identify tracheal and oesophageal intubation • Demonstrates knowledge and understanding of DAS guidelines for critically ill patients [2018].		

Skills		
	Assessment methods	GMP
Demonstrates appropriate checking of equipment prior to induction, including equipment for emergency use	D,O,S	1,2
Selects, checks, draws up, dilutes, labels and administers drugs safely	D,O,S	1,2
Demonstrates appropriate placement of monitoring, including ECG electrodes, NIBP cuff and capnography Uses monitors appropriately Demonstrates proficiency in the interpretation of monitoring	D,O,S	1,2
Demonstrates effective pre-oxygenation	D,O,S	1,2
In respect of intravenous induction: • Explains induction to the patient • Prepares drugs for the induction of anaesthesia	D,O,S	1,2

• Administers drugs at induction of anaesthesia • Manages the cardiovascular and respiratory changes associated with induction of general anaesthesia		
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 • Ventilates the lungs using a waters circuit / Mapleson's • Inserts and confirms placement of SGA • Successfully places oral tracheal tubes using direct laryngoscopy • Confirms correct tracheal tube placement • Uses bougies correctly • Correct use of stylets and video laryngoscopy • Secures and protects SGA/tracheal tubes during movement, positioning and transfer • Correctly conducts RSI • Correctly demonstrates the technique of cricoid pressure	D,O,S	1,2
Demonstrates correct use of oropharyngeal, laryngeal and tracheal suctioning	D,O,S	1,2
Demonstrates failed intubation drill according to DAS 2018 guidance	D,O,S	1,2
Manages rapid sequence induction in the high-risk situation	D,O,S	1,2

Part 2: Critical Care-Based Curriculum

Advanced Airway Management

These are the competencies required of ACCPs undertaking advanced airway management.

Objectives:		
• Able to predict difficulty with an ICU airway following assessment and obtain appropriate help. • Able to maintain an airway and provide definitive airway management as part of emergency resuscitation. • Able to provide definitive airway management in ICU for patients within the inclusion group. • Able to maintain airway following unplanned extubation during transfer. • Able to replace ETT on the ICU after accidental extubation. • Demonstrates the safe management of the 'cannot intubate cannot oxygenate' scenario.		
Competence	*Assessment Methods*	*GMP*
Knowledge		
Airway/respiratory tract blood supply and innervation.	I,C,O	1,2

Explains the methods commonly used for assessing the airway to predict difficulty with tracheal intubation. 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 supraglottic airways. Describes the indications and techniques of percutaneous tracheostomy formation.		
In respect of tracheal intubation in ICU: • Lists its indications. • Explains how to choose the correct size and length of tracheal tube in ICU. • 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 can't intubate can't oxygenation procedure. • Explains management of cardiac arrest secondary to hypoxia and hypotension. • Explains DAS guidelines in the critically ill. • Discusses the methods available to manage difficult intubation and failed intubation in ICU. • Explains how to identify ICU patients who are at increased risk of regurgitation and pulmonary aspiration and knows the measures that minimise the risk. • Understands the airway management in a patient with critical illness who is at risk of gastric reflux. • Explains the indications and use of cricoid pressure. • Categorises the signs of pulmonary aspiration and the methods for its emergency management in ICU.	I,C,O	1,2
With respect to oxygen therapy: • Lists its indications. • Knows the techniques for oxygen therapy and the performance characteristics of available devices within ICU including low and high flow nasal oxygen and apnoeic oxygenation. • Recalls/explains the causes and management of stridor. • Discusses the indications for RSI drug selection according to local protocols. • Demonstrates an in-depth knowledge of the indications, dosage, properties and pharmacokinetics of agents selected. • Able to explain rationale, benefits and potential risks of choice of induction agents. • Explains the differences in the critically ill.	I,C,O	1,2

• Able to explain a clear plan to mitigate cardiovascular compromise in the critically ill by choice and delivery of agents.		
Compares the methods by which ventilation can be maintained in a patient suffering a respiratory or cardiac arrest, using: • Mouth to mask • Waters circuit • Self-inflating bag • Mechanical ventilator	I,C,O	1,2
Lists advantages and disadvantages of different techniques for airway management during resuscitation, including but not limited to: • Oro and nasopharyngeal airways • Supraglottic airways including but not limited to: SGA, Proseal, LMA supreme, iGel • Tracheal intubation	I,C,O	1,2
Describes the management of the 'cannot intubate, cannot ventilate' scenario, as it applies to the critically ill patient.	I,C,O	1,2
Skills		
Can perform independently: • Comprehensive airway assessment. • Emergency airway management to ALS provider standard initiation and management of oxygen administration.	D,S,O	1,2
Demonstrates knowledge of: • How to recognise known or anticipated, physiologically logistically difficult airway difficult intubation • How to manage a failed intubation • How to manage oesophageal intubation • Bronchial intubation • Cannot intubate cannot oxygenate scenario • How to manage the airway during percutaneous tracheostomy formation	D,I,S,C,O	1,2
Demonstrates satisfactory proficiency in performing a relevant clinical examination and assessment of the airway and dentition in the critically ill patient.	D,I,S,C,O	1,2
In respect of airway management of the critically ill: • Head and neck positioning • Demonstrates optimal patient position for airway management, including head tilt, chin lift, jaw thrust • Demonstrates correct head positioning, direct laryngoscopy and successful oral intubation techniques and confirms correct tracheal tube placement	D,I,S,C,O	1,2

• Correct use of capnography • Demonstrates proper use of bougies • Use of Macintosh blade +/- bougie use of hyper angulated blade and stylet • Video laryngoscopy • Use of stylets for hyper angulated Video laryngoscopes. • Demonstrates correct securing and protection of SGA tubes during movement, positioning and transfer • Correctly conducts RSI sequence - appropriately selecting • Correctly demonstrates the technique of cricoid pressure • eFONA (emergency front of neck access) • Tracheostomy emergency management		
Behaviours		
Ensures appropriate personal language and behaviour during airway management.	D,I,S,C,O	1,2
Demonstrates that all decisions and actions must be in the best interests of the patient.	D,I,S,C,O	1,2

Appendix 5: Module completion sign-off proforma

This application form is for use by Advanced Critical Care Practitioners (ACCPs) with FICM membership who are employed in the role of ACCP and:

(a) Have satisfactorily completed Advanced Critical Care Practitioner training to equivalence of the FICM ACCP National Curriculum 2015.
(b) Have successfully completed all aspects of the FICM Optional Skills Framework for Advanced Airway Management for ACCPs.

The application form must be submitted electronically. Please complete in full using the electronic version of the document. Do not alter the format. **Submit the form to contact@ficm.ac.uk** the submission will be acknowledged by return email. Hard copies will **not** be accepted.

Please read the guidelines in this form carefully and note the supporting documentation required for your application to be considered. Where supporting documents are needed from a referee, please ensure that these are scanned versions of signed letters.

Part 1: Personal Details

1.1 Title

1.2 Last name

1.3 First name(s)

1.4 Full address (you must include postcode)

1.5 Telephone number (Home)

1.6. Telephone number (Work)

1.7 Telephone number (Mobile)

1.8 Gender

1.9 Date of birth (DD/MM/YYYY)

1.10 Email address

1.11 NMC / HCPC Registration Number

1.12 Expiry date

Name of applicant

Signature of applicant*

** Please either include an electronic signature or print this page out, sign it in hard copy and scan it for submission electronically.*

Date declaration signed (DD/MM/YYYY)

Part 2: Training Supervisor Certificate

This certificate must be completed and signed by the Training Supervisor of the applicant who supervised their period of training. This certificate is to confirm the applicant's training status.

I (Training Supervisor)	
of (work address)	
verify that (name of applicant)	

Has successfully completed the knowledge, skills and competencies for the OSF for Advanced Airway management for ACCPs. I acknowledge it is a probity issue for me to sign this certificate without having understood the standard identified in those competencies and/or for signing the certificate of an applicant who does not reach the standard. Please ensure each competency below is ticked; failure to do so will result in the form being returned.

Advanced Airway Skills Part One: Theatre-based training	☐
Advanced Airway Skills Part Two: Critical Care-based training	☐

Please provide details of Training Supervisor in case further information is required:

Email address (es):

Telephone number(s):

Signature*

* *Please either include an electronic signature or print this page out, sign it in hard copy and scan it for submission electronically.*

Part 3: Clinical Supervisor Certificate

This certificate must be completed and signed by a second Consultant Supervisor who has been involved in delivering the module to confirm the applicant has completed all relevant parts of the module.

I (Consultant Supervisor)	
of (work address)	
verify that (name of applicant)	

Has successfully completed the knowledge, skills and competencies for the OSF for Advanced Airway management for ACCPs. I acknowledge it is a probity issue for me to sign this certificate without having understood the standard identified in those competencies and/or for signing the certificate of an applicant who does not reach the standard. Please ensure each competency below is ticked; failure to do so will result in the form being returned.

Advanced Airway Skills Part One: Theatre-based training	☐
Advanced Airway Skills Part Two: Critical Care-based training	☐

Details of Clinical Supervisor in case further information is required:

Email address (es):

Telephone number(s):

Signature*

* *Please either include an electronic signature or print this page out, sign it in hard copy and scan it for submission electronically.*

Part 4: ACCP Programme Director/Lead Certificate

This certificate must be completed and signed by the ACCP Programme Director / Lead in the applicant's current trust/health board. This may be the same person as the Training Supervisor.

I (ACCP Lead)	
of (name of Region)	
at (work address)	

Confirm the completion of the Advanced Airways OSF by

(name of applicant)	

Signature*	Date (DD/MM/YYYY)		

* *Please either include an electronic signature or print this page out, sign it in hard copy and scan it for submission electronically.*

Appendix 6: Reflective Account proforma (Optional)

Reflective Account Form

Completing a reflective account of advanced airway management can be used as part of your revalidation cycle demonstrating that you are meeting the needs of the NMC Revalidation Process, HCPC Continuing Professional Development (CPD) Guide and Good Medical Practice.

Discussion topic	
Key lessons learnt	

Name of reviewer	
NMC/HCPC/GMC number	
Signature*	

* *Please either include an electronic signature or print this page out, sign it in hard copy and scan it for submission electronically.*

Appendix 7: Prior Learning sign-off proforma

Advanced Airway Management for Advanced Critical Care Practitioners Module Completion for those who have pre-existing Advanced Airway Practice

FICM acknowledge that many ACCPs have undertaken Advanced Airway practice as a core part of their role for many years. These ACCPs may wish/be eligible to complete the FICM ACCP Advanced Airway Optional Skills Framework Module (OSFs) 2021 via a "Prior Learning" route. This route will only be open to those ACCPs who have undertaken regular Advanced Airway practice prior to January 2022. It is recommended that training undertaken after this date uses the FICM Advanced Airway OSF

In order to complete the Advanced Airway Module via the "Prior Learning" route the ACCP will have to demonstrate:

- Maintenance of a logbook of all advanced airway interventions undertaken including details regarding any complications
- Regular planned theatre sessions, at least 6 monthly
- Review of advanced airway skills must be undertaken as part of annual appraisal including review of any related adverse incidents and ongoing experience and maintenance of competency
- The ACCP has undertaken an annual simulation session to practice emergency airway drills, or evidence of actual situations in practice
- Regularly attends relevant courses, update days and educational opportunities relating to Advanced Airway Management
- Has relevant airway experience recorded in a logbook, including simulation exercises. A logbook should include details of number of elective theatre lists undertaken, numbers of procedures performed, sim sessions and workshops attended.

Prior to sign off for Advanced Airway Module via the "Prior Learning" route, the ACCP should meet with their Clinical Supervisor and review their previous training in relation to the OSF document Advanced Airway Management for Advanced Critical Care Practitioners.

Module completion sign-off via 'Prior Learning' route proforma

This form is for use by Advanced Critical Care Practitioners (ACCPs) with FICM membership who are employed in the role of ACCP and:

(a) Have satisfactorily completed Advanced Critical Care Practitioner training to equivalence of the FICM ACCP National Curriculum 2015
(b) Have previously completed Advanced Airway training to an equivalence of all aspects of the FICM Optional Skills Framework for Advanced Airway Management for ACCPs prior to October 2021
(c) Continue to undertake all aspects of governance relating to Advanced Airway Practice to the standard outlined in the document *Supplementary Document: Advanced Airway Management for Advanced Critical Care Practitioners Module Completion for those who have pre-existing Advanced Airway Practice.*

The form must be submitted electronically. Please complete in full using the electronic version of the document. Do not alter the format. **Submit the form to contact@ficm.ac.uk** the submission will be acknowledged by return email. Hard copies will **not** be accepted. **Please read the guidelines in this form carefully** and note the supporting documentation required for your form to be accepted. Where supporting documents are needed from a referee, please ensure that these are scanned versions of signed letters.

Part 1: Personal Details

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1.7 Telephone number (Mobile)

1.8 Gender | 1.9 Date of birth (DD/MM/YYYY) | 1.10 Email address

1.11 NMC / HCPC Registration Number | 1.12 Expiry date

Name of applicant | Signature of applicant*

** Please either include an electronic signature or print this page out, sign it in hard copy and scan it for submission electronically.*

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I (Training Supervisor)	
of (work address)	
verify that (name of applicant)	

Has previously successfully completed the knowledge, skills, and competencies equivalent to the OSF for Advanced Airway management for ACCPs. I acknowledge it is a probity issue for me to sign this certificate without having understood the standard identified in those competencies and/or for signing the certificate of an applicant who does not reach the standard. Please ensure each competency below is ticked; failure to do so will result in the form being returned.

Historical training equivalent to Advanced Airway skills Part One: Theatre-based training	☐
Historical training equivalent to Advanced Airway skills Part Two: Critical Care-based training	☐
Maintenance of a logbook of all advanced airway interventions undertaken including details regarding any complications	☐
Attends regular planned theatre sessions, at least every 6 months	☐
Has had a review of advanced airway skills undertaken as part of annual appraisal including review of any related adverse incidents and ongoing experience and maintenance of competency	☐
Has undertaken an annual simulation session to practice emergency airway drills, or evidence of actual situations in practice	☐
Regularly attends relevant courses, update days and educational opportunities relating to Advanced Airway Management	☐
Has relevant airway experience recorded in a logbook, including simulation exercises. A logbook should include details of number of elective theatre lists undertaken, numbers of procedures performed, sim sessions and workshops attended.	☐

Please provide details of Training Supervisor in case further information is required:

Email address (es):	Telephone number(s):

Signature*	Date (DD/MM/YYYY)		

* *Please either include an electronic signature or print this page out, sign it in hard copy and scan it for submission electronically.*

Part 3: Clinical Supervisor Certificate

This certificate must be completed and signed by a second Consultant Supervisor who has been involved in delivering the module to confirm the applicant has completed all relevant parts of the module.

I (Consultant Supervisor)	
of (work address)	
verify that (name of applicant)	

Has successfully completed the knowledge, skills and competencies for the OSF for Advanced Airway management for ACCPs. I acknowledge it is a probity issue for me to sign this certificate without having understood the standard identified in those competencies and/or for signing the certificate of an applicant who does not reach the standard. Please ensure each competency below is ticked; failure to do so will result in the form being returned.

Historical training equivalent to Advanced Airway skills Part One: Theatre-based training	☐
Historical training equivalent to Advanced Airway skills Part Two: Critical Care-based training	☐
Maintenance of a logbook of all advanced airway interventions undertaken including details regarding any complications	☐
Attends regular planned theatre sessions, at least every 6 months	☐
Has had a review of advanced airway skills undertaken as part of annual appraisal including review of any related adverse incidents and ongoing experience and maintenance of competency	☐
Has undertaken an annual simulation session to practice emergency airway drills, or evidence of actual situations in practice	☐
Regularly attends relevant courses, update days and educational opportunities relating to Advanced Airway Management	☐
Has relevant airway experience recorded in a logbook, including simulation exercises. A logbook should include details of number of elective theatre lists undertaken, numbers of procedures performed, sim sessions and workshops attended.	☐

Details of Clinical Supervisor in case further information is required:

Email address (es):	Telephone number(s):

Signature*	Date (DD/MM/YYYY)		

* *Please either include an electronic signature or print this page out, sign it in hard copy and scan it for submission electronically.*

Part 4: ACCP Programme Director/Lead Certificate

This certificate must be completed and signed by the ACCP Programme Director / Lead in the applicant's current trust/health board. This may be the same person as the Training Supervisor.

I (ACCP Lead)

of (name of Region)

at (work address)

Confirm the completion of the Advanced Airways OSF by

(name of applicant)

Signature*

Date (DD/MM/YYYY)

* *Please either include electronic signatures or print the appropriate pages out, sign them in hard copy and scan it for submission electronically.*

The Faculty of
Intensive
Care Medicine

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