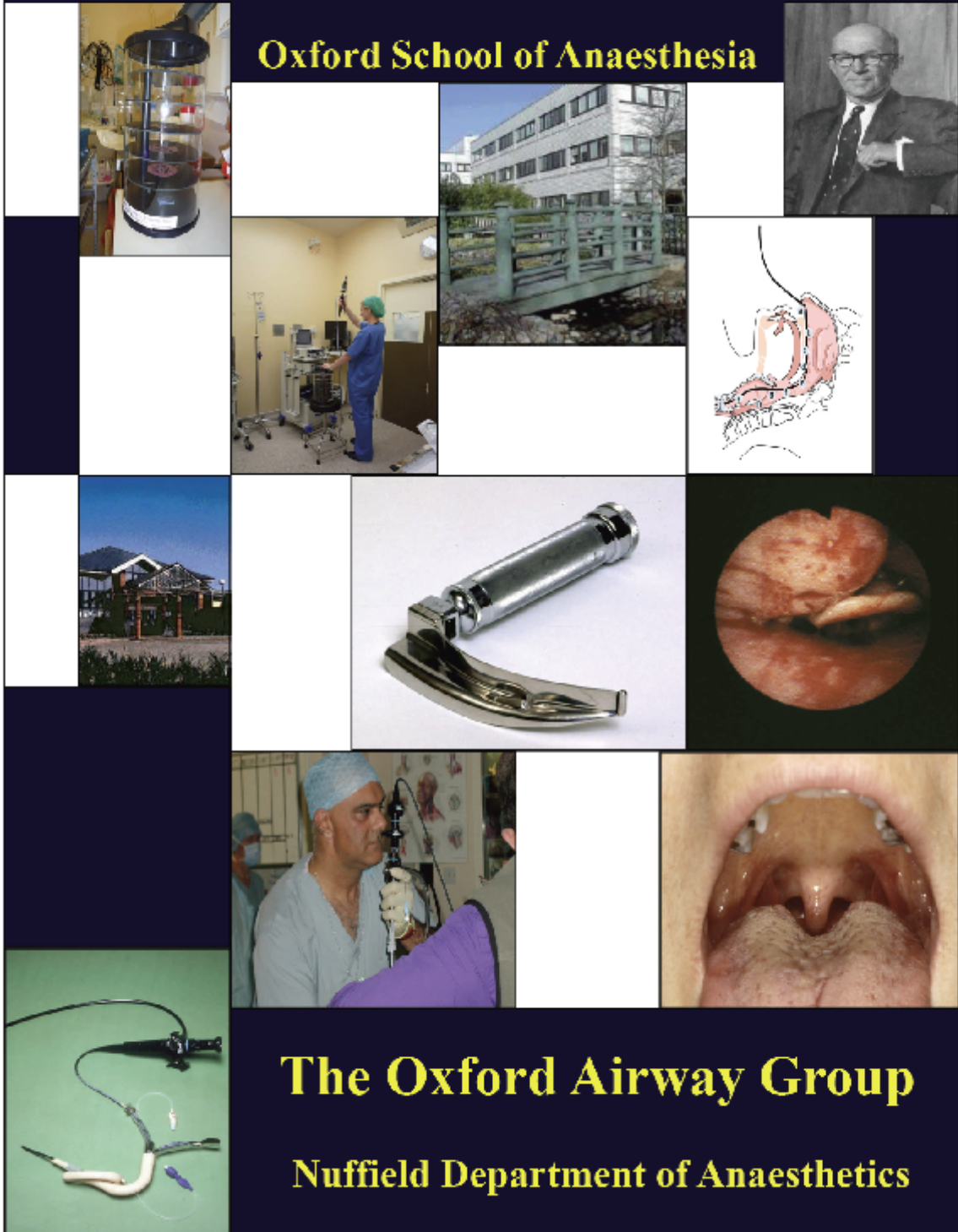


Specialist Training in Airway Management

Oxford School of Anaesthesia



The Oxford Airway Group

Nuffield Department of Anaesthetics

Oxford School of Anaesthesia

Training in Advanced Airway Management

Nuffield Department of Anaesthetics

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Introduction

Basic airway training is an integral part of the first two years of anaesthetic training and all anaesthetic trainees at ST3 level are expected to be competent in basic airway management techniques. Structured training in "advanced" airway management in Oxford is organised and delivered by the Oxford airway group. This group is formed of anaesthetic consultants with an interest in teaching, training, research and audit in the area of difficult airway management. A majority of consultants in the airway group have an interest in and clinical commitment to oral & maxillofacial anaesthesia. The airway training modules in Oxford are broadly designed to deliver training to three subgroups:

ST3/4 Training module consists of a classroom based teaching session, a preclinical manikin based workshop on advanced airway techniques and a dedicated airway training week.

ST 5/7 Higher Training in advanced airway management is for ST 5-7 5 trainees. Airway HTM was optional for trainees on the old curriculum, but is an essential unit of training for trainees on the new curriculum (August 2010). This is primarily a clinical module which is designed to provide trainees with clinical experience in a variety of advanced airway techniques and to allow trainees to gain experience and confidence in dealing with patients with difficult airways.

ST6/ Airway ATM The Advanced training module in difficult airway management (Airway ATM) is for ST6 trainees with interest in oral & maxillofacial anaesthesia and in teaching and training in advanced airway management. A commitment to audit, research and teaching in airway management is an essential to trainees interested in this post.

The Oxford Airway Group: Consultant Trainers

Dr Stuart Benham

Dr Imogen Davies

Dr Alex Marfin (Airway ATM supervisor)

Dr Jaideep Pandit (Research Advisor)

Dr Mansukh Popat

Dr Mridula Rai Airway (Airway HTM Supervisor & ST3 Airway Training Supervisor)

Dr Shaun Scott (Airway ATM supervisor)

Dr Sabeena Sharma

Dr Jenny Thompson

The oral and maxillofacial surgical lists provide excellent opportunities for airway training and occur at the JR2 (Theatre 7), West Wing (Theatre 9). At present most of the major Head & Neck tumour resections and the free flap reconstructions are done at the JR2 and the dental-alveolar day surgery/short stay procedures and adult and paediatric bony facial deformity correction at the West Wing. There will be changes to this arrangement in the coming year when the Maxillofacial and ENT Head & Neck cancer lists transfer to the Churchill.

Oral &Maxillofacial Consultants

The Oxford Airway group has always had very good relations with the Oral & Maxillofacial department which has always been very supportive of our trainees and our efforts to organize and deliver airway training.

Mr S Watt-Smith

Mr N Saaed

Mr S Bond

Mr A Currie

Ms D Dhariwal

Mr K Fasanmade

Ms J Wylie

Many of the ENT and Neurosurgical lists also provide good training opportunities in difficult airway management associated with cervical spine pathology, pharyngeal pouch surgery and panendoscopy for laryngeal pathology. Upper GI surgical lists also provide excellent opportunities to learn double lumen intubations and bronchial blockers and deal with the airway in the morbidly obese and the bariatric surgical population. These are outlined on Page 6 and trainees are urged to utilise these to maximise their exposure to difficult airway management in different patient populations and appreciate different approaches to dealing with difficult airway situations.

ST3/4 Airway Training Module

Nuffield Department of Anaesthetics

Objectives:

To develop a clear understanding of the issues involved in recognizing, planning and management of the Difficult Airway

Knowledge of the DAS guidelines and the ability to perform techniques outlined in the DAS guidelines.

To gain dexterity and skill with the fiberoptic scope

A clear understanding of principles that underpin a successful awake fiberoptic intubation including topical anaesthesia of the airway and conscious sedation

The ST3/4 module comprises of:

1. Advanced Airway Workshop Organiser: Dr Mridula Rai

The workshop should ideally be completed prior to the airway training week; however we do understand that this may not be possible for all trainees. The aim of the workshop is to allow all trainees to familiarise themselves with the different techniques outlined in the DAS guidelines. The workshop is held every 6-8 weeks at the OxSim (located ground floor of the anaesthetic bldg. JR2) centre and can accommodate groups of 4-6 trainees at a time. Small groups allow for ample time to practise fiberoptic techniques on manikins and improve dexterity with the fiberoptic scope, to perform fiberoptic assisted intubation through the LMA and the ILMA and practice transtracheal ventilation techniques.

Attendance is compulsory for obtaining the end of unit sign off.

The workshop provides an opportunity to complete many of the competencies outlined in the Oxford school of Anaesthesia competency book (Attached) Trainees will receive an e-mail with the dates for the workshops every February and August. Trainees are responsible for ensuring that they are free on the date they would like to attend the workshop. This can be arranged by contacting Mrs Pat Millard (anaesthetic secretary) or Dr Tom Parry (Please do so well in advance of the date).

2. Airway training Week

Airway Training week is now during the Neuro/ENT/Airway module. A trainee should be allocated to a total of 10 airway lists. This may occur over a week or a two week period depending on your call commitments during the allocated week. It is your responsibility to check the rota and ensure that you have been allocated to the lists designated as airway

training lists (Pg. 21) If you need to discuss the allocations either contact, Dr L Barbera – Martin (module allocation), rota organiser (Dr Tom Parry) or your airway training co-ordinator (Dr Mridula Rai).

The week is designed to give every trainee the opportunity to get hands on experience with advanced airway techniques such as asleep and awake fiberoptic intubations, ILMA, Aintree catheter and cricothyroid access and ventilation techniques. They will also have the opportunity to discuss the competencies outlined in the “Airway Management” section of the competency book. There is a list of papers and books under recommended reading and this can help to improve understanding of the issues involved in difficult airway management before you start your airway training week and allow you to maximise your experience.

This week is also a good opportunity to complete some of your work based assessments. Please note that a minimum of 1 DOPS and 1 A-CEX is required for successful completion of the airway module.

Every trainee will be required to keep a logbook for the airway week. A copy is enclosed in the file. Trainees are welcome to store data in any format, however are requested to also fill out the logbook enclosed in this folder. This allows us to assess if the airway training is being delivered successfully.

3. Classroom Based Teaching

Lectures on Difficult Airway management are held twice a year and if trainees have a particularly interesting case they wish to discuss please contact Dr Rai.

ST3/4 Intermediate: Completion of Airway Training

You need to make an appointment with your airway module co-ordinator (Dr Mridula Rai) during or just after completion of your airway training.

You will need the following to ensure a successful sign off

Log Book

Target number is about 10 Airway Cases (*A good mix of maxillofacial, ENT and oral/dental surgery cases e.g. Dental extractions/Bimaxillary osteotomy/ Facial reconstruction surgery/Free flap surgeries/ Panendoscopy/Dental abscesses/Facial fractures*)

- **Target of 1 major case** (*complex/major ENT, maxillo-facial and dental surgery including those requiring major free-flap reconstruction*)
- **Target numbers of procedures**

Asleep Fibreoptic Intubation	5
Awake Fibreoptic Intubation (Observed)	1

Competency Book (Oxford School of Anaesthesia)

General duties/Airway management section

Please note that the version enclosed in this manual and available from the NDA/Trainees website is the one to use and may differ from what your printed version. Please ensure that you have the correct version and the majority has been signed off. Some of these competencies can be signed off during the airway workshop.

Advanced Airway Workshop: Manikin based training in oral and nasal fiberoptic intubation, ILMA blind & Fiberoptic intubation, LMA guided intubation, Aintree catheter and Transtracheal access and ventilation.

Workplace-based assessments (WPBA)

- DOPS (Minimum) 1
- A-CEX (Minimum) 1
- CBD

Directly observed Procedural skills (DOPS)

- Does an elective oral or nasal fibre-optic intubation in the anaesthetised patient
- Does an elective oral or nasal awake fibre-optic intubation in the anaesthetised patient
- Does an ILMA assisted intubation (Blind or fiberoptic assisted)
- Does a supraglottic device assisted tracheal intubation

- Does a Cricothyroid cannulation
- Demonstrates use of a Manujet in a patient
- Sets up the fiberoptic scope for use in a patient

Anaesthetic clinical evaluation exercise (CEX)

- Pre-assessment of an anticipated difficult airway
- Explanation and consent for an awake fiberoptic intubation
- Undertakes anaesthesia for a dental extraction or a pan endoscopy
- Demonstrates use of a supraglottic device for oral/ENT surgery

Case Based Discussion (CBD)

- May be an elective or an emergency case or event related to airway management.
- Anaesthesia for dental abscess compromising the airway
- Management of a failed intubation
- Pre-assessment and/or planning of an anticipated Difficult Airway
- A case of Morbid Obesity
- Anaesthesia for a mandibular / orbital fracture

AIRWAY TRAINING LOGBOOK

Name of Trainee:

Week beginning:

Day	List	Anaesthetic Consultant/ Registrar	Procedures/Cases e.g. Asleep FOI x2, ILMAx1, Free flap case etc.
Monday			
Tuesday			
Wednesday			
Thursday			
Friday			

Higher Training Module in Airway Management

(Airway HTM)

Nuffield Department of Anaesthetics

This higher training module (HTM) is designed to provide the senior trainee with clinical experience in a variety of advanced airway management including asleep and awake fiberoptic intubations. The primary aim of this module is prior to completion of training and obtaining CCT, every trainee should be confident of handling a difficult airway situation and of performing an awake fiberoptic intubation.

This is now an essential unit of training and the competencies required for an end of unit completion are outlined in HTM competency document. The HTM is for a period of three months in the final ST7 year in Oxford and it is expected that a minimum of one day a week will be allocated to an airway teaching list. It is important for the trainees to be proactive to maximise their training opportunities and ensure that they achieve their training targets.

Trainees who manage to complete some or all of the outlined competencies in their ST5 year at the DGH are welcome to discuss their training requirements with the HTM Supervisor (Dr M Rai).

HTM Trainees are advised to ensure that they get a minimum of 1 day a week allocated to airway training during their airway HTM, which would equate to 10-12 airway lists in a three month period. The lists which are suitable for airway training are outlined on page 5 and to ensure a good mix of cases it is important to work across the sites, the West wing and the JR2.

Airway HTM: Completion of Training

You need to make an appointment with your airway module co-ordinator (Dr Mridula Rai) during or just after completion of your HTM.

You will need the following to ensure a successful sign off

- **Log Book**

Target number is about 20 Airway Cases (*A good mix of cases bimaxillary osteotomy/ Facial reconstruction surgery/Free flap surgeries/ Panendoscopy/Dental abscesses/Facial fractures*)

- **Target of 2 major cases** (*complex/major ENT, maxillo-facial and dental surgery including those requiring major free-flap reconstruction*)
- **Target numbers of procedures**

Asleep Fibreoptic Intubation	10
Awake Fibreoptic Intubation	4
ILMA	5

- **Competency Book (Oxford School of Anaesthesia)**

- General duties/Airway management section**

- Please note that the version enclosed in this manual and available from the NDA/Trainees website is the one to use and may differ from what your printed version. Please ensure that you have the correct version and the majority has been signed off.

- **Manikin /Simulation based Training (Desirable)**

- Use of Alternative laryngoscopes/ intubating devices: ILMA, C Trach , Airtraq, Bonfils, Video laryngoscopes) Transtracheal Ventilation techniques

- **Workplace-based assessment (WPBA)**

- DOPS 3
- A-CEX 1
- CBD 1
- ALMAT 1
- MSF

DOPS (Direct Observation of Procedural Skills)

- Uses an alternative airway device in patients (e.g. ILMA, CTrach, Video laryngoscope, Airtraq, Bonfils)
- Does an elective fibre-optic intubation in the anaesthetised patient
- Anaesthetizes the airway for awake fibre-optic intubation
- Performs elective fibre-optic intubation in the awake patient

- Demonstrates skill in the use of Conscious sedation for Awake fiberoptic Intubation
- Performs a fiberoptic intubation in emergency situation
- Performs a Jet ventilation for airway surgery
- Does a Cricothyroid cannulation in an elective /emergency situation
- Performs an elective Intubation via conduit LMA or I gel
- Demonstrates Use of Aintree catheter for intubation/extubation
- Emergency “airway crisis “drill in Simulation

A-CEX (Anaesthetic Clinical Evaluation Exercise)

- Undertakes a list of cases for surgery in the airway and where airway difficulty is anticipated.
- Undertakes anaesthesia for laser surgery in or near the airway
- Undertakes pre-assessment and discusses the available options for management of an anticipated difficult airway case
- Undertake anaesthesia for major ENT or maxillo-facial surgery such as laryngectomy or major resection for cancer.

CBD (Case Based Discussion) (In relation to a difficult airway case)

- Discuss the anaesthetic techniques and complications of major head and neck surgery

ALMAT (Anaesthetic List Management Tool)

- Assesses and anaesthetizes patient requiring awake fiberoptic intubation including all discussions with the patient and preparation of equipment and operating theatre
- Undertakes anaesthesia for a list of maxillofacial or ENT cases including complex operations (Panendoscopy/pharyngeal pouch surgery/facial reconstruction/mandibular +/-maxillary osteotomies/complex facial fracture reconstructions

Advanced Training Module in Difficult Airway Management (Airway ATM)

Nuffield Department of Anaesthetics

This advanced training module (ATM) is designed to provide the trainee with clinical experience in a variety of advanced airway management techniques including fiberoptic intubation. This clinical experience will be backed up by audit, research and risk management in this area. This Fellowship programme is for a period of six months but may be tailored to suit the need of an individual to accommodate periods of up to one year. The Advanced Training module is open to all trainees in the Oxford Deanery and is at the ST6 level. Appointment is by open competition and selection process is by interview.

On completion of the ATM, the trainee is expected to have acquired a level of knowledge and experience suited to management of difficult airway problems. The trainee is expected to have participated actively in audit, research and teaching and should have reached a level of competence suitable to take up a post of Consultant Anaesthetist with an interest in difficult airway management. The ATM will be expected to be actively involved in teaching of the ST 3 trainees and the Airway HTM.

PROGRAMME

It is anticipated that the trainee will be allowed a minimum of 1 day, preferably 2 days per week dedicated to this module. The time will be spent with one of a named group of Consultant Anaesthetists with an interest in difficult airway management(Page) Each ATM will be allocated n ATM supervisor, either Dr A Marfin or Dr S Scott who can be approached to discuss your training requirements and will sign off your completion of ATM document.

ON-CALL

The trainee will be a member of the ST6/7 on-call group.

TEACHING

The Fellow will be actively encouraged to participate in provision of training in different aspects of airway management, classroom and theatre based teaching for junior anaesthetic trainees (as well as those from other specialities, e.g. ENT, OMFS)and on local, regional and national airway workshops. Regular Medical Student teaching is also encouraged in the form of a 'Basic Airway' manikin tutorial. There are ample opportunities to develop an interest in Simulation at the newly established 'OxSim Centre', as well as training in simulation techniques, feedback etc.

AUDIT

There are several on-going audit projects which the trainee can become involved in. New ideas and Projects are always welcome.

RESEARCH

The Oxford Airway group has a good track record of conducting, presenting and publishing clinical research in airway related topics. The Airway Fellow will be expected to participate in data-collection for and write-up of current research projects and encouraged to set up new research projects of their own. Every help will be provided in submitting protocols to the Ethics Committees and setting up clinical studies in the theatre.

OTHER FELLOWSHIPS AND PROJECTS IN THE OXFORD REGION

Many of the District General Hospitals in the Oxford Region have anaesthetic consultants with an interest in difficult airway management and who may have projects and workshops that the fellow w

Royal Berkshire Hospital

Dr F Idress

Dr Atul Kapila

Dr Chandy Verghese

Heatherwood & Wexham Park hospital

Dr Jairaj Rangasami

Milton Keynes general hospital

Dr Hamid Manji

Horton General hospital

Dr Asima Bokhari

Dr Elise Richards

Every ATM will be expected to

- Demonstrate involvement in audit/ research/presentations
- Liaise with Dr Rangasami and update the ORAG website for the six month duration of the ATM (Journal articles etc.)
- Be involved in teaching at the ST3 Advanced airway management Workshops held every 6- 8 weeks at the OxSim centre
- Co-ordinate with the current ORAG Chairman to help organise the annual ORAG meeting

Airway ATM: Completion of Training

You need to make an appointment with your airway module co-ordinator (Dr A Marfin or Dr S Scott)

You will need the following to ensure a successful sign off

- **Log Book**

Target number is about 40 Airway Cases (*A good mix of cases Bimaxillary osteotomy/ Facial reconstruction surgery/Free flap surgeries/ Panendoscopy/Dental abscesses/Facial fractures*)

- **Target of 20major cases** (*complex/major ENT, maxillo-facial and dental surgery including those requiring major free-flap reconstruction*)
- **Target numbers of procedures**

Asleep Fibreoptic Intubation	25
Awake Fibreoptic Intubation	10
ILMA/Intubation via supraglottic	5
Alternative laryngoscope	5
Cricothyroidotomy/ Manual Jet ventilation/ HFJV	2

- **Competency Book (Oxford School of Anaesthesia)**

Please note that the version enclosed in this manual and available from the NDA/Trainees website is the one to use and may differ from what your printed version. Please ensure that you have the correct version and the majority has been signed off.

- **Projects**

Involvement in a research project (preparatory stage/ data collection/ write-up)
Completion of audit project

- **Publication**

At least one of:
Letter/ case report for journal publication
Review for journal/ CME/ ORAG publication

- **Teaching**

Instruction of junior trainees performing airway procedure
Simulation Provider Course
ST3 Airway workshops
Medical Student Airway Seminar
Lecture/ Tutorial/ Case report

- **Workplace-based assessment (WPBA)**

- DOPS 5
- A-CEX 5
- CBD 5
- ALMAT 5
- MSF 1 (midterm)

DOPS (Direct Observation of Procedural Skills)

- Uses an alternative airway device in patients (e.g. ILMA, CTrach, Video laryngoscope, Airtraq, Bonfils)
- Does an elective fibre-optic intubation in the anaesthetised patient
- Anaesthetizes the airway for awake fibre-optic intubation
- Performs elective fibre-optic intubation in the awake patient
- Demonstrates skill in the use of Conscious sedation for Awake fibreoptic Intubation
- Performs a fibreoptic intubation in emergency situation
- Performs a Jet ventilation for airway surgery
- Does a Cricothyroid cannulation in an elective /emergency situation
- Performs an elective Intubation via conduit LMA or I gel
- Demonstrates Use of Aintree catheter for intubation/extubation
- Emergency “airway crisis “drill in Simulation

A-CEX (Anaesthetic Clinical Evaluation Exercise)

- Undertakes a list of cases for surgery in the airway and where airway difficulty is anticipated.
- Undertakes anaesthesia for laser surgery in or near the airway
- Undertakes pre-assessment and discusses the available options for management of an anticipated difficult airway case
- Undertake anaesthesia for major ENT or maxillo-facial surgery such as laryngectomy or major resection for cancer.

CBD (Case Based Discussion) (In relation to a difficult airway case)

- Discuss the anaesthetic techniques and complications of major head and neck surgery

ALMAT (Anaesthetic List Management Tool)

- Assesses and anaesthetizes patient requiring awake fiberoptic intubation including all discussions with the patient and preparation of equipment and operating theatre
- Undertakes anaesthesia for a list of maxillofacial or ENT cases including complex operations (Panendoscopy/pharyngeal pouch surgery/facial reconstruction/mandibular +/-maxillary osteotomies/complex facial fracture reconstructions

Airway Courses

The courses listed below are organised by members of the Oxford region airway group and provide an opportunity for the ATM trainees to get involved in teaching and to help develop organisational skills.

Oxford Difficult Airway Workshop

Organisers: Dr M Rai & Dr A Marfin.

This is a national one day course for all grades of anaesthetists. It is now in its 11th year and is held once a year around April-May at the Holiday Inn in Oxford.

Training the Trainers

Organisers: Dr M Rai & Dr S Benham

This course is now in its fourth year and is aimed at consultants and senior trainees who wish to develop their difficult airway training skills. It is held at Royal College of Anaesthesia in the third week of February.

The Difficult Airway in Special Situations

Organisers: Dr M Popat, Dr M Rai & Dr R Iqbal

This is an AABGI one day seminar on the 5th of October 2011 at the Association of Anaesthetists.

Paediatric Difficult Airway Workshop

Organiser Dr D Mason

This course is now in its 6th year and is held at the millennium hall in in the 3rd week of June

Leicester Difficult Airway Day

Organisers: Drs M Mushambi & Dr P Ali

Held on the 3rd Thursday in June every year

Coventry Airway management Workshop

Organiser: Dr C Mendonca

In October

Wexham Park Airway

Organiser: Dr J Rangasami

Useful Contacts/Websites:

Oxford Regional Airway Group (ORAG)

www.orag.co.uk

The Oxford Region Airway Group was formally convened in September 2004, to provide a forum for anaesthetists in the Oxford Region to advance airway related training, audit and research. The group consists of consultants with a common interest in airway management, from Oxford, Kettering, High Wycombe and Stoke Mandeville, Northampton, Milton Keynes, Banbury, Reading and Slough .More recently we have has now expanded to include members from Leicester, Coventry and London. Educational meetings are held once a year and are a good forum for trainees to present audits and interesting airway cases.

Chairman: Dr Elise Richards (Banbury)

Chair elect: Dr S Scott (Oxford)

Difficult Airway society (DAS)

www.das.uk.com

Oxford School of Anaesthesia

www.oxfordanaesthesia.org.uk

Nuffield Department of Anaesthetics

www.nda.ox.ac.uk

Society for Airway Management (SAM)

www.samhq.com

Recommended Reading

Henderson J J, Popat MT, Latto IP, Pearce A C. Difficult Airway Society guidelines for management of the unanticipated difficult intubation. *Anaesthesia*. July 2004. 59(7) 675-694(20)

Practical Fiberoptic Intubation. Popat M. Book. 2001. Butterworth–Heinemann, 2001.

Difficult Airway Management. Book. Popat M Editor. Oxford University Press. 2009.

Rai M R, Parry T M, Dombrovskis A, Warner O J. Remifentanil target-controlled infusion vs. propofol target-controlled infusion for conscious sedation for awake fiberoptic intubation: a double-blinded randomized controlled trial. *British Journal of Anaesthesia* 2008, 100: 125-130.

Rai M R, Popat MT. Editorial. Evaluation of airway equipment: man or manikin? *Anaesthesia* 2011. 66(1):1–3.

Yentis S. M. Editorial. Predicting difficult intubation - worthwhile exercise or pointless ritual? *Anaesthesia*. 57(2):105-109, February 2002.

T Asai, K Shingu. Difficulty in advancing a tracheal tube over a fiberoptic bronchoscope: incidence, causes and solutions. *British Journal of Anaesthesia*. 2004. 92(6):870-81

4th National Audit Project

Major Complications of Airway Management in the UK (NAP4)

www.rcoa.ac.uk › Home › For Professionals › Professional Standards

ASA Closed Claims Project www.asaclosedclaims.org (Events: respiratory)

Caplan RA, Posner KL, Ward RJ, Cheney FW: Adverse respiratory events in anesthesia: A closed claims analysis. *Anesthesiology* 72:828-833, 1990

Cheney FW, Posner KL, Caplan RA: Adverse respiratory events infrequently leading to malpractice suits. *Anesthesiology* 75:932-939, 1991

Domino KB, Posner KL, Caplan RA, Cheney FW: Airway injury during anesthesia. A closed claims analysis. *Anesthesiology* 91:1703-1711, 1999

Peterson GN, Domino KB, Caplan RA, Posner KL, Lee LA, Cheney FW. Management of the Difficult Airway: A Closed Claims Analysis. *Anesthesiology*. 2005 Jul; 103(1):33-39.

Designated Airway Training Lists

DAY	SPECIALITY	SITE	ANAESTHETIC CONSULTANT	SURGICAL CONSULTANT
Monday	Maxillofacial	West Wing Th9	Dr S. Scott	Mr A Currie Facial deformity Paediatric
	Maxillofacial	JR2 Th7	Dr S Benham	Mr K Fasanmade Head & Neck tumour resection, Free flap reconstruction
Tuesday	Maxillofacial	West Wing Th9	Dr M Rai / Dr H Higham	Ms D Dhariwal Craniofacial Trauma Facial deformity Salivary Gland surgery
	ENT	West Wing Th5	Dr David Wilkinson	Mr G Cox Head & Neck tumour resection, Free flap reconstruction, Laryngeal surgery
Wednesday	Maxillofacial	JR2 Th7	Dr M Popat	Mr Watt-Smith Mr S Bond Head & Neck tumour resection, Free flap reconstruction
	Maxillofacial	West Wing Th9	Dr J Thomson	Mr N Saeed Paediatric craniofacial deformity TMJ and Salivary Gland surgery
Thursday	Oral/Dental(Day)surgery Alternate weeks	Churchill	Dr M Rai	Ms Dhariwal Dento- alveolar Surgery
Friday	Maxillofacial	JR2 Th7	Dr A Marfin	Mr Watt-Smith Mr S Bond Head & Neck tumour resection, Free flap reconstruction
	ENT	WestWingTH5	Dr M Rai	Mr Martinez-Devesa

Airway management (Intermediate Level)

Intermediate level competencies and learning outcomes are included in this section specifically relating to airway skills; most will also appear in the ENT, Maxillo-facial and dental unit of training. It is expected that trainees will complete this unit of training over the course of ST years 3 and 4 of training

Learning objectives:

- Build on the knowledge and skills gained in the Basic Level airway training
- Develop knowledge, skills and experience of safe airway management in more complex cases undergoing major elective and emergency surgery including fiberoptic intubation
- To be able to recognise the specific problems encountered with the airway

Core clinical learning outcomes:

- To be able to demonstrate the ability to perform elective fiberoptic intubation, either for an awake or an anaesthetised patient, with local supervision

Requirements for completion of module:

- Appropriate numbers of cases & case mix
- Appropriate numbers of WPBAs – minimum A-CEX x1, DOPS x1
- Achievement of core clinical learning outcomes
- Attendance of the Advanced Airway management workshop

Knowledge	Tick if confident/ discussed	Trainer initial	Date	WPBA type A, C
Lists the indications for an awake fiberoptic endotracheal intubation and describe the risks associated with the technique and the process of obtaining consent for this procedure				
Describes the various aspects that contribute to a successful awake fiberoptic intubation with emphasis on conscious sedation, topical anaesthesia and choice of tracheal tubes				
Discusses the value of pre-assessment of the airway and the management of an anticipated difficult intubation				
Outlines the complications associated with extubation and discuss the strategies to minimise these problems with emphasis on planning extubation.				

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Knowledge	Tick if confident/ discussed	Trainer initial	Date	WPBA type A, C
Discusses the identification and assessment of pathology in or around the airway, including <ul style="list-style-type: none"> • History and examination • Anaesthetic chart review • Interpretation of investigations such as lateral C-spine X-ray, cross sectional imaging of the upper airway (MRI/CT), flow volume loops Discussion with surgeons				
Lists the indications for tracheostomy and Outlines the anaesthetic principles for tracheostomy [Cross Ref; ENT]				
Describes the management of the obstructed/misplaced tracheostomy				
Describes the anaesthetic implications of Obstructive sleep apnoea and discusses the causes, pathophysiology and management and the surgical procedures used to treat it [Cross Ref; ENT]				
Discusses the management of an unanticipated difficult intubation, demonstrates an understanding of the DAS guidelines and Outlines appropriate follow up of an unexpected difficult intubation				
Discuss the risks and benefits of using various supraglottic airways for IPPV for shared airway surgery [Cross Ref; ENT]				
Discusses the management of a cannot intubate and ventilate scenario and describes the needle techniques for transtracheal access				
Describes the principles of jet ventilation [Cross Ref; ENT] and discusses the complications associated with jet ventilation with emphasis on measures to minimise the risk of barotrauma				
Recalls the principles underlying the use of helium [Cross Ref; ENT] and indications for use.				
Skills	Tick if confident/ discussed	Trainer initial	Date	WPBA type
Demonstrates elective Nasal fibreoptic intubation in an anaesthetised patient				
Demonstrates elective Oral fibreoptic intubation in an anaesthetised patient with airway adjuncts				
Demonstrates elective Oral fibreoptic intubation under anaesthesia in a anaesthetised patient without airway adjuncts				
Demonstrates intubation using an ILMA in a anaesthetised patient or a manikin				
Demonstrates fibreoptic assisted intubation using an ILMA in a anaesthetised patient or a manikin				
Demonstrates effective teaching of basic airway manoeuvres, direct laryngoscopy and endotracheal intubation to novice students [e.g. nurses, CT1 anaesthetic trainees, paramedics, medical students]				
Demonstrate the use of supraglottic airways for IPPV				

OXFORD SCHOOL OF ANAESTHESIA

Demonstrates the use a supraglottic device as a conduit to aid fiberoptic intubation in a anaesthetised patient or a manikin				
Demonstrate double lumen endobronchial tube placement and lung isolation, including the use of bronchial blockers and the use of clinical/endoscopic methods to confirm correct position [Cross Ref;cardiothoracic				
Demonstrates the correct use of an alternative laryngoscope in an anaesthetised patient				
Demonstrates correct technique for cricothyroid puncture and the use of jet ventilation in a patient or a manikin				

OXFORD SCHOOL OF ANAESTHESIA

Airway Management (Higher Training Module)

Anaesthesia for Maxillofacial, ENT and Difficult airway cases

Learning objectives:

- Become skilled at managing the more complex airways by building upon knowledge, skills and experience gained during intermediate training

Core clinical learning outcomes:

- Able to perform elective fiberoptic intubation in patients without serious intra-oral/laryngeal pathology, safely and proficiently, in awake and anaesthetised patients under distant supervision
- Able to manage patients with complex airway disorders, safely and proficiently, in all situations, under local supervision

Requirements for completion of module:

- Appropriate numbers of cases & case mix
- Appropriate numbers of WPBAs – minimum A-CEX x1, DOPS x2, CBD x1, ALMAT x1
- Achievement of core clinical learning outcomes

Knowledge/Skills	Tick if confident/ discussed	Trainer initial	Date	WPBA type
Novel airway techniques and devices such as the use of retrograde catheters, airway exchange catheters, C-Trach and Video laryngoscopes				
Fiberoptic intubation for elective cases including for those with airway pathology under distant supervision				
Fiberoptic intubation for emergency cases including for those with airway pathology under direct supervision				
Awake fiberoptic intubation including the decision making process, obtaining consent, methods of topicalisation and conscious sedation and choice of tubes and railroading techniques				
Evaluate a patient with a difficult or a shared airway surgery, plan an appropriate anaesthetic and deliver peri-operative anaesthetic care including communication with the surgical and anaesthetic team				
Demonstrates management of an operating list involving multiple patients for airway related surgery, including patients with predicted difficult airway, with appropriate airway management decision making				

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Supervise and teach less experienced trainees in aspects of advanced airway management				
High frequency jet ventilation with special attention to minimising the risk of complications involved with the technique				
Ability to use a variety of advanced airway management techniques e.g. use of blind or fiberoptic assisted intubation using an LMA, Aintree catheter or ILMA				

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Airway Management (Advanced Training Module)

Learning objectives:

Advanced training in airway management should be delivered in centres undertaking a wide variety of complex elective and emergency surgical cases presenting specific airway problems. It is expected that between six months to one year will need to be spent acquiring all the competencies/learning outcomes in this advanced unit of training

- Gain mastery in the delivery of safe and effective peri-operative airway and anaesthetic care to patients with complex airway problems involving all types of surgery and in doing so demonstrating the necessary multi-disciplinary leadership, communication and team-working skills necessary to ensure the care delivered benefits both the patient and the organisation
- Demonstrates mastery in the safe use of fiberoptic intubation in all situations
- Gain mastery in all aspects of airway management including in-depth knowledge and experience of novel airway devices; be familiar with recent developments in perioperative anaesthetic care to this area of practice, evaluate these developments and advise colleagues of useful changes in practice
- Gains the necessary maturity to guide the choice of audit cycles in developing practice

Core clinical learning outcomes:

To be capable of undertaking the perioperative airway and anaesthetic care for a wide variety of patients with complex airway problems independently; this implies an ability to:

- Perform fiberoptic intubation in all clinical situations where it is an essential part of safe airway care
- Show the decision making and organizational skills required of an anaesthetist to manage busy operating sessions that involve patients having major airway surgery and ensuring that the care delivered is safe and timely, benefiting both the patient and the organisation
- To assist colleagues in decisions about the suitability of surgery in difficult situations

Provide teaching to less experienced colleagues of all grades and become skilled at managing the more complex airways by building upon knowledge, skills and experience gained during intermediate training

Requirements for completion of module:

- Appropriate numbers of cases & case mix
- Appropriate numbers of WPBAs – minimum A-CEX x5, DOPS x5 , CBD x5, ALMAT x1, MSF 1
- Achievement of core clinical learning outcomes

Knowledge/Skills	Tick if confident/ discussed	Trainer initial	Date	WPBA type
Novel airway techniques and devices such as the use of retrograde catheters , airway exchange catheters , C- Trach and Video laryngoscopes				

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Fibreoptic intubation for elective cases including for those with airway pathology under distant supervision				
Fibreoptic intubation for emergency cases including for those with airway pathology under direct supervision				
Awake fibreoptic intubation including the decision making process, obtaining consent, methods of topicalisation and conscious sedation and choice of tubes and railroading techniques				
Evaluate a patient with a difficult or a shared airway surgery , plan an appropriate anaesthetic and deliver peri-operative anaesthetic care including communication with the surgical and anaesthetic team				
Demonstrates management of an operating list involving multiple patients for airway related surgery, including patients with predicted difficult airway, with appropriate airway management decision making				
Supervise and teach less experienced trainees in asleep and or awake fibreoptic intubation				
High frequency jet ventilation with special attention to minimising the risk of complications involved with the technique				
Ability to use a variety of advanced airway management techniques e.g. fibreoptic assisted intubation using an LMA, Aintree catheter or ILMA				
Mastery in performing nasal asleep fibreoptic intubation for elective and emergency cases including for those with major airway pathology				
Mastery in performing oral asleep fibreoptic intubation for elective and emergency cases including for those with major airway pathology				
Mastery in performing nasal awake fibreoptic intubation for elective and emergency cases including for those with major airway pathology				
Mastery in performing oral awake fibreoptic intubation for elective and emergency cases including for those with major airway pathology				
Expertise in the management of difficult paediatric airways that may present in any non-specialist hospital				
Shows in-depth knowledge about all issues related to the management of difficult airways, including the use of novel airway techniques				