

# Airway Training Workshops: United Kingdom Survey

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## Abstract

In the last few years, there have been many publications doubting the quality and availability of airway management training in the United Kingdom (UK). Airway Training Workshops (ATWs) are among the many educational tools devised to ensure good quality airway management training. We conducted this survey to determine the availability and setup of the ATW in UK, and to enquire from respondents whether guidance and regulations from the Royal College of Anaesthetists (RCA) or the Difficult Airway Society (DAS) are required. A structured questionnaire was sent by post to the college tutors of all the 273 anaesthetic departments in the UK. All data was collated on to a Microsoft Excel spreadsheet and then subsequently analysed. 219 replies were received giving a response rate of 80%. This survey found that the ATWs in the UK follow no standardised national learning objectives, are limited in number and diverse in content and set up. In agreement with the majority of respondents, we suggest that regulatory bodies and societies like the RCA and the DAS could provide guidance on the learning objectives and set up of airway training workshops.

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## INTRODUCTION

Several editorials and review articles have voiced concerns about the availability of airway training in the United Kingdom (UK)<sup>1,2,3,4,5</sup>. Among other solutions, these authors have suggested the usefulness of Airway Training Workshops (ATWs) in order to maintain and improve airway skills amongst anaesthetists<sup>1,2,3,4</sup>. Workshops in general are there to offer an environment where participants have every opportunity to participate, learn, and produce. No national data is available about these ATWs. We conducted this national survey to determine the availability, setup and content of the ATWs in the United Kingdom (UK), and to enquire from respondents whether they feel guidance and regulation from the Royal College of Anaesthetists (RCA) and/or the Difficult Airway Society (DAS) are required.

## METHOD

A structured questionnaire (appendix) was sent by post to the college tutors of all the 273 anaesthetic departments in the UK. Contact details of these were provided by the RCA. Our questionnaire was initially piloted to enhance its validity and reliability. For the purpose of the survey, an ATW was defined as "Airway training provided for Anaesthetists in a classroom-based (off-patient) environment". We asked that

questionnaires be completed by the consultant most involved in organising airway training in the department. Six weeks later, a reminder letter was sent to those departments that had failed to reply. No ethic committee approval was sought as patients were not included in our survey. Respondents were assured that confidentiality would be respected and that the data would be presented in a way that the source would not be identified. All data was collated on to a Microsoft Excel spreadsheet (Microsoft Corp, Seattle, WA, USA) and then subsequently analysed.

## RESULTS

Of the 273 questionnaires posted, 219 replies were received giving a response rate of 80%. There were 99 ATWs organised by 92 departments (42%). Data are presented for these 99 ATW. 74% of these were solely organised for the benefit of anaesthetists working locally in the department. The majority, 81%, lasted only one day or less. The frequency and the venue where the ATW is conducted are shown in tables 1 and 2 respectively.

### Figure 1

Table 1: Frequency of ATW

Frequency	4 weeks	2 months	3 months	6 months	1 year	other
ATW (N=99)	5	6	11	42	26	9

**Figure 2**

Table 2: Site of the ATW (N=99)

Anaesthetic department	30
Theatre	24
Hospital teaching area	29
Simulation centre	10
Out of hospital	6

Most workshops concentrated on teaching advanced airway skills (table 3).

**Figure 3**

Table 3: Airway skills taught in the ATW

Advanced Airway skills	ATW (N:99)	Basic Airway skills	ATW (N:99)
Fibreoptic intubation techniques	80	Face mask ventilation	19
Difficult airway society guidelines	66	LMA insertion	22
Intubating LMA (ILMA)	63	Direct laryngoscopy optimisation	32
Cricothyrotomy	52	Use of bougie	34
FOI through ILMA/ LMA	44		
Proseal LMA	29		

21 (21%) were dedicated only to fibreoptic intubation (FOI) techniques. The training models used consisted of mannequins of differing types (79%), hole in box models (42%), simulators (29%), fellow participants (10%) and cadavers (8%). While 72% of the workshops were free of charge, commercial courses charged fees between £50 and £400. The workshops were advertised within the local department in 70%, the region in 23%, on the DAS website in 12% and in an anaesthetic journal in 8%.

59 respondents (64%) agreed or strongly agreed that guidance should be available from the DAS and/or RCA, while 25 (27%) were undecided. Only 24 (26%) respondents agreed or strongly agreed that regulation should be available from the DAS and/or RCA, while 38 (41%) were undecided.

**DISCUSSION**

The programme of training leading to a Certificate of Completion Training (CCT) in anaesthesia, published by the RCA identifies airway management as an essential skill that has to be acquired during the different stages of anaesthetic training <sup>6</sup>. While there is no distinction between ‘basic’ and ‘advanced’ airway training, the syllabus suggests that senior trainees should be exposed to specialties which deal with difficult airway such as Maxillo-facial surgery, the management of burns and ENT surgery <sup>6</sup>. In the last few years, there have been many publications doubting the

quality and availability of airway management training in the UK <sup>12345</sup>. Many reasons have been cited for these deficiencies and are summarized as:

1. A reduction in training opportunities following the Calman report in 1993 <sup>7</sup>, the European Working Time Directive in 2004 <sup>8</sup> and the increasing use of peripheral and regional anaesthesia <sup>1</sup>
2. A possible increase in the number of incidents related to poor management of the airway <sup>9</sup>
3. The airway management field has been flooded with new devices and techniques. While this is considered to be good news, this has generated confusion among anaesthetists in relation to what are considered fundamental airway skills <sup>10</sup> and to which pieces of airway equipment have good evidence of performance.

Up until recently, most authors who raised their concerns about airway management tended to concentrate on the lack of opportunities for tracheal intubation <sup>12345</sup>. Airway management has, however, been continuously evolving in the form of the introduction of new drugs, techniques, and devices <sup>1112131415</sup>. Since the Laryngeal Mask Airway (LMA) was first used in 1988 <sup>16</sup>, many other supraglottic devices, such as the Proseal LMA, have been added into clinical practice. Although, Macintosh laryngoscopy remains the standard technique for endotracheal intubation, many techniques based on the concept of fibreoptic visualisation have surfaced in recent years. Devices such as the Intubating LMA, Airtraq®, LMA CTrach™ are gaining popularity and many are described in the American and British Difficult Airway algorithms <sup>1718</sup>. Therefore, anesthetists arguably have an obligation to be well trained and to maintain their skills on these devices and techniques.

Among the many possible solutions, ATWs or classroom-based ‘off patient’ teaching, have been suggested in order to maintain and improve airway skills <sup>1234</sup>. The ATWs provide an opportunity for delegates to learn and practice skills in an ‘off patient’ environment. Dexterity skills required to master some of the equipment can be learnt on models and mannequins before these are used on patients thus improving safety. One would want participants leaving the workshop feeling energised and eager to try out their new learning “on the job” <sup>19</sup>.

Learning by experience alone, without the benefit of structured training and education, is a slow and “hit and

miss” process. Without the structure of workshop and formal training programmes, it is more difficult to ensure that experience alone is providing all the important training needed. Classroom teaching is a poor substitute to learning by experience, but, when combined with learning on the job, the learning process should be enhanced. ATWs do this by guiding the learning through a safe and controlled environment, and by providing immediate feedback to participants <sup>19</sup>.

In our survey, only 92 anaesthetic departments (42%) organised airway-training workshops on a regular basis. This number is probably insufficient to cover all practising anaesthetists. It is however encouraging that about three quarters of these are for training anaesthetists locally as recommended by Cook <sup>3</sup>. We also note shortfalls related to the organisation of these ATWs. There were significant differences in content, set up of skills taught, and the training models used in workstations. Most of them lasted less than a day. 21 ATW (21%) were dedicated only to fiberoptic intubation techniques. Simulators have been recently introduced in training junior and senior anaesthetists <sup>20</sup>. They offer valuable experience especially for rare emergencies like the unanticipated difficult airway intubation. They could be useful in regularly practising the DAS guidelines. In our survey, simulators were used in only 29 ATWs.

The diversity in ATW organisation raises some other concerns. In the new National Health Service, quality management has gone through an impressive development <sup>21</sup>. Total quality management (TQM) requires that organisations make themselves transparent, i.e. demonstrate that they are doing the right things and are doing them in the right way <sup>2122</sup>. Currently, the RCA, the DAS and the Association of Anaesthetists of Great Britain and Ireland do not offer any guidance or regulation of these workshops. We only found one workshop dedicated in training the trainers in relation to airway management <sup>23242526</sup>. Our survey suggests that respondents would prefer guidance from these bodies. It is interesting that only a quarter of the respondents would agree to regulation of ATWs by these bodies. This discrepancy could be due to the way in which we asked the questions. On the other hand 28% of ATW were “commercial” and charged between £50 and £400. Given that the purse strings governing study leave budgets continue to tighten in most hospitals <sup>27</sup>, many trainees and consultants will choose not to seek further airway training, if none is available within their departments.

In summary, ATWs in the UK appear to be limited in number, diverse in content and setup, and lacking “standardised” national learning objectives. Recent changes in training structure and study leave budgeting seem likely to compromise the availability of airway training for UK anaesthetists. The data that specifically demonstrates that airway training in the UK is inadequate does not exist and, until it does, the case for improving the status quo remains rather weak. We do feel, however, that there is a case for UK Anaesthetic regulatory bodies such as the RCA or the DAS to examine ways of maintaining and improving airway skills training. One part of this must involve ATWs and perhaps there is a need to develop recommendations for the learning objectives of such workshops. The majority of ATW organisers in our survey (62%) want guidance from DAS and/or RCA.

## **APPENDIX: QUESTIONNAIRE SENT TO COLLEGE TUTORS**

Unique Identifier No:

PLEASE TICK ALL APPROPRIATE ANSWERS. SOME QUESTIONS MAY HAVE MORE THAN ONE APPROPRIATE ANSWER.

### **1. DOES YOUR DEPARTMENT OR HOSPITAL ORGANISE AN ATW**

Yes  
No

Please return the form even if your hospital/ department does not provide an ATW. Otherwise answer the following questions if you ticked yes to question 1

### **2. WHERE DOES THE ATW TAKE PLACE?**

Anaesthetic department Theatre Hospital teaching area  
Simulation centre Out of hospital Other site (please specify):

### **3. HOW OFTEN DOES ATW TAKE PLACE?**

- a. Once every 4 weeks
- b. Once every 2 months
- c. Once every 3 months
- d. Once every 6 months
- e. Once every 12 months
- g. Other (please specify):

### **4. WHAT IS THE DURATION OF ATW?**

- 1 day or less, please state:
- 2 days
- 3 days

Other:

**5. HOW MANY TRAINERS TEACH ON THE ATW?**

- 1- 5
- 6-10
- >10

**6. WHERE DO THE TRAINERS COME FROM?**

- All from the local department
- Majority from the local department
- Some from the region
- Some from outside the region

**7. HOW MANY DELEGATES PARTICIPATE IN EACH ATW**

- 1-5
- 6-10
- 11-15
- 16- 20
- >20

**8. WHAT IS THE PROPORTION OF “LOCAL” VERSUS “VISITING” DELEGATES?**

- 100% are anaesthetists from local department
- Largely are anaesthetists from local department
- Roughly 50:50 split
- Largely are visitors
- 100% visitors

**9. WHAT IS THE GRADE OF DELEGATES?**

- All are consultants and SAS doctors
- All are trainees: b1. Junior trainees (SHO, SpR1, SpR2)
- b2. Senior trainees (SpR3, SpR4, SpR5)
- b3. No distinction in trainee grade
- More trainees than consultants ( and SAS doctors)
- More consultants ( and SAS doctors) than trainees
- Proportions of grades varies

**10. WHAT ARE THE MAIN TECHNIQUES TAUGHT IN THE WORKSHOP?**

- a. Face mask ventilation -g. FOI through ILMA/ LMA b. LMA insertion -h. Double lumen tube c. Direct laryngoscopy optimisation -k. Cricothyrotomy d. Use of bougie -l. Proseal LMA e. Fibreoptic intubation (FOI) - m. Use of Aintree catheter f. Intubating LMA (ILMA) - n. Difficult airway society guidelines p. Other (please specify):

**11. WHAT IS THE PROPORTION OF THEORY (LECTURES) VERSUS PRACTICAL (HANDS ON)?**

- 100% theory
- Largely theory
- Roughly 50:50 split
- Largely practical
- 100% practical

**12. WHICH TRAINING MODELS ARE USED IN WORKSTATION?**

- Mannequin, state type please: Animal cadavers Simulator, state type please: Hole in box model ( e.g.: oxford box)
- Fellow participants Others (please specify)

**13. HOW MUCH DO YOU CHARGE PER DELEGATE?**

- a. No charge b. £.... / per delegate c. Other (please specify):

**14. HOW DO YOU ADVERTISE THE WORKSHOP?**

- Within the department
- Within the region
- Anaesthetic journals
- Website ( please specify):
- Other (please specify)

**15. DO YOU THINK THE ROYAL COLLEGE OF ANAESTHETISTS AND/OR THE DIFFICULT AIRWAY SOCIETY SHOULD HAVE A ROLE IN OFFERING?**

- Guidance of UK ATWs; a. I strongly agree b. I agree I am not decided I disagree I strongly disagree
- Regulation of UK ATWs a. I strongly agree b. I agree c. I am not decided d. I disagree e. I strongly disagree

Please feel free to add any comments:

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