



London Ambulance Service **NHS**  
NHS Trust

## Airway Management Policy and Procedure

## DOCUMENT PROFILE and CONTROL.

**Purpose of the document:** To provide clear and consistent guidance relating to airway management for all grades of clinical staff within the London Ambulance Service, incorporating scope of practice, training and monitoring standards.

**Sponsor Department:** Medical Directorate

**Author/Reviewer:** Consultant Paramedic **To be reviewed by** December 2020.

**Document Status:** Final

<b>Amendment History</b>			
Date	*Version	Author/Contributor	Amendment Details
18/06/18	1.2	IG Manager	Document Profile and Control update
15/12/17	1.1	IG Manager	Document Profile and Control update
06/12/17	0.4	IG Manager	Document Profile and Control update and minor corrections
12/09/17	0.3	Consultant Paramedic	Amendments following review by medical director relating to addition of further detail around training standards and record keeping
03/07/17	0.2	Consultant Paramedic	Minor – rewording of sections referring to ‘kit dump’ and addition of actions in the event of unrecognised oesophageal intubation.
22/05/17	0.1	Consultant Paramedic	New document

**\*Version Control Note:** All documents in development are indicated by minor versions i.e. 0.1; 0.2 etc. The first version of a document to be approved for release is given major version 1.0. Upon review the first version of a revised document is given the designation 1.1, the second 1.2 etc. until the revised version is approved, whereupon it becomes version 2.0. The system continues in numerical order each time a document is reviewed and approved.

<b>For Approval By:</b>	<b>Date Approved</b>	<b>Version</b>
PMAG	13/12/17	1.0
<b>Ratified by (If appropriate):</b>		
ELT	16/05/18	1.1

<b>Published on:</b>	<b>Date</b>	<b>By</b>	<b>Dept</b>
The Pulse (v 1.2)	19/06/18	Internal Comms team	Comms
LAS Website (v1.2)	19/06/18	Internal Comms team	Comms
<b>Announced on:</b>	<b>Date</b>	<b>By</b>	<b>Dept</b>
The RIB	19/06/18	IG Manager	Comms

<b>Equality Analysis completed on</b>	<b>By</b>
22/05/17	Jaqueline Lindridge
<b>Staffside reviewed on</b>	<b>By</b>

<b>Links to Related documents or references providing additional information</b>		
<b>Ref. No.</b>	<b>Title</b>	<b>Version</b>
<b>1</b>	Deakin C., Clarke T., Nolan J., Zideman D.A., Gwinnutt C., Moore F., Ward M., Keeble C., Blancke W (2008) 'A critical reassessment of ambulance service airway management in prehospital care: Joint Royal Colleges Ambulance Liaison Committee Airway Working Group <i>Emergency Medicine Journal</i> Vol. 27(3)	<b>1</b>
<b>2</b>	London Ambulance Service Medical Directorate Bulletin 8 <sup>th</sup> June 2010 'The future direction of airway management in the London Ambulance Service'	<b>1</b>
<b>3</b>	London Ambulance Service NHS Trust Airway Management Manual	<b>1</b>
<b>4</b>	Lockey, D.J, Crewsdon K., Davies G, Jenkins B., Klein J., Laird C., Mahoney P.F., Nolan J., Poutney A., Shinde S., Tighe S., Russell M.Q., Price J., Wright C. (2017) Association of Anaesthetists of Great Britain and Ireland: Safer pre-hospital anaesthesia 2017 <i>Anaesthesia</i> 2017, Vol. 72, pp379-390	<b>2</b>

Document Status: This is a controlled record as are the document(s) to which it relates. Whilst all or any part of it may be printed, the electronic version maintained in P&P-File remains the controlled master copy. Any printed copies are not controlled nor substantive.

## 1. Introduction

1.1 Airway management is a fundamental part of prehospital care and profoundly influences mortality and morbidity. Active management of the airway may be required in a number of circumstances, including patients with reduced level of consciousness and those in respiratory or cardiac arrest.

1.2 The level of airway support required may range from essential manoeuvres incorporating simple adjuncts (nasopharyngeal and oropharyngeal airways) to the need for supraglottic airway insertion, endotracheal intubation, or performance of needle or surgical cricothyroidotomy. In some cases advanced airway management may need to be facilitated or maintained via pharmacological interventions.

1.3 In 2008, the Joint Royal Colleges Ambulance Liaison Committee (JRCALC) critical reassessment of ambulance service airway management report<sup>1</sup> recommended that endotracheal intubation should not continue as a mandatory component of paramedic practice and supraglottic devices should form the mainstay of advanced airway management. It was further recommended that endotracheal intubation should be developed as a specialist skill for selected providers. In 2010, guidance on the future direction of airway management within the London Ambulance Service<sup>2</sup> announced cessation of routine training in endotracheal intubation for paramedics from 1<sup>st</sup> June 2010 onwards.

1.4 This document provides guidance relating to airway management for all grades of clinical staff within the London Ambulance Service, incorporating scope of practice, training and monitoring standards.

## 2. Scope

2.1 This policy provides guidance on airway management for all grades of operational clinical staff within the LAS including the following groups

- Non-emergency Transport Service (NETS) staff
- Those with First Person on Scene (FPOS) level training employed or contracted by the Trust, including First Responders and Incident Response Officers where this is the highest level of clinical training.
- Emergency Medical Technicians (EMT) and Emergency Ambulance Crew (EAC).
- All paramedics including Clinical Team Leader (CTL) and Advanced Paramedic Practitioner (APP) and Consultant Paramedic grades
- Medical Practitioners (Doctors) employed by the Trust

2.2 This policy excludes the following groups

- Firefighters and Police Officers operating as part of co-responder schemes. These will continue to be managed via existing Memoranda of Understanding (MOU).
- British Association for Immediate Care (BASICS) Doctors deployed by the Trust

- London's Air Ambulance (HEMS) teams
- Medical Emergency Response Intervention Team (MERIT) teams
- Private and Voluntary Aid Society (VAS) ambulance services, unless responding on behalf of the LAS on a contracted basis.

### **3. Objectives**

3.1 Provide clear and consistent guidance on airway management scope of practice for the staff groups detailed above

3.2 Define training and on-going monitoring requirements for each staff group

3.3 Define procedural requirements to ensure safe performance of specific airway management techniques.

3.4 Describe arrangements for accreditation of prior experience and learning for qualified staff joining the Trust from other organisations.

### **4. Responsibilities**

#### **4.1 Medical Director**

The Medical Director has delegated responsibility for approval of all aspects of scope of practice for clinical staff within the Trust, including airway management. The Medical Director will take the lead on determining the appropriate airway management scope of practice for each grade of clinical staff and also retains the authority to remove the ability to perform specific procedures from individual practitioners if required.

#### **4.2 Deputy Director of Education**

The Deputy Director of Education has responsibility for oversight of all educational materials and delivery of education and training in airway management throughout the Trust, including training records. This includes assessing airway management training needs for new members of staff and ensuring that clinical placements to facilitate development of airway management skills are fit for purpose.

#### **4.3 The Quality Oversight Group (QOG)**

The QOG oversees the arrangements within the Trust for managing clinical safety and quality, clinical governance, and clinical risk as well as reviewing evidence for clinical practice.

#### **4.4 Clinical Audit and Research Unit (CARU)**

The Clinical Audit and Research Unit provide evidence of the standard and quality of care provided for patients, including auditing the requirement for ETCO<sub>2</sub> monitoring during advanced airway manoeuvres.

#### 4.5 Quality Assurance Committee (QAC)

The QAC provides assurance to the Trust Board on clinical, corporate, information governance, and compliance matters.

#### 4.6 Clinical Credentialing Committee (CCC)

The CCC provides authorisation for changes in scope of practice for staff, including authorisation to perform endotracheal intubation on a case-by-case basis.

#### 4.6 Clinical Operational Staff

All grades of clinical staff are responsible for ensuring that airway management is undertaken in accordance with this policy.

### 5. Definitions

Essential Airway Management	The use of manual manoeuvres such as head-tilt-chin-lift or jaw thrust supplemented by simple airway adjuncts such as oro and nasopharyngeal airways
Oropharyngeal airway	Curved plastic device consisting of a lumen and bite block inserted into the mouth to displace the tongue and maintain a patent airway
Nasopharyngeal airway	Tube inserted via the nasal passages to maintain a patent airway
Advanced Airway Management	The use of supraglottic devices, endotracheal intubation or needle/ surgical cricothyroidotomy
Supraglottic airway	Tube with an elliptically shaped mask inserted via the oropharynx and seated in the perilaryngeal region to provide airway management and ventilation
Endotracheal tube	Tube that is inserted into the trachea for the primary purpose of establishing and maintaining a patent airway
Endotracheal intubation	Passage of an endotracheal tube into the trachea
Needle cricothyroidotomy	Puncture of the cricothyroid membrane and introduction of a cannula into the trachea to provide oxygenation
Surgical cricothyroidotomy (Surgical airway)	Creation of an incision through the cricothyroid membrane to facilitate introduction of an endotracheal tube to provide ventilation
Drug facilitated maintenance of an advanced airway	The administration of sedation and analgesia to facilitate tolerance of an advanced airway in an unconscious

	patient
Rapid Sequence Induction	The administration of anaesthesia incorporating sedation, analgesia and paralysis to facilitate endotracheal intubation and ventilation in patients with intact airway reflexes.
Bougie	Thin flexible instrument over which an endotracheal tube may be inserted into the trachea
End-Tidal Carbon Dioxide (EtCO <sub>2</sub> )	The partial pressure or maximal concentration of carbon dioxide (CO <sub>2</sub> ) at the end of an exhaled breath.
Waveform Capnograph	Device which may be attached to an advanced airway and provides a continuous waveform quantifying exhaled CO <sub>2</sub>

## 6. General Principles

6.1 Assessment of airway patency, and potential threats to patency, must form part of the initial examination of all patients

6.2 Where active airway management is required, a stepwise approach incorporating essential airway manoeuvres progressing to more advanced techniques where clinically indicated should be employed.

6.3 Staff must act within their scope of practice at all times and must not attempt to perform techniques for which they have not received Trust approved training.

6.4 Students on an approved training programme may assist with or undertake airway management skills commensurate with their level of training. This is at the discretion of their mentor or lead clinician, who shall at all times remain directly responsible for the care of the patient and must provide continuous supervision to the student throughout the procedure.

6.5 In cases where difficulties are encountered in achieving adequate airway management, early consideration should be given to accessing senior support, either by mobilising additional senior clinical resources to the scene or initiating early transportation to an appropriate hospital. Staff must not unduly prolong on-scene time where an unmanageable airway is identified.

## **7. Essential Airway Management**

7.1 All clinical staff will undergo training in essential airway management.

7.2 Essential airway management manoeuvres must be undertaken in all patients requiring airway intervention including the use of simple airway adjuncts where appropriate prior to escalating to advanced airway management techniques.

## **8. Advanced Airway Management – Supraglottic Devices**

8.1 All paramedics will undergo training in the use of supraglottic devices in adults, children and infants.

8.2 EMT and EAC staff who have undergone Trust-approved training may utilise supraglottic airways exclusively in adult patients.

8.2 Prior to use of a supraglottic airway, the necessary equipment should be prepared in a 'kit dump' format to facilitate safe and efficient insertion of the device as per guidance contained within the LAS airway manual<sup>3</sup>.

8.3 Immediately prior to insertion, the operator must instrument the airway using an appropriately sized laryngoscope to perform a visual check for any obstruction. Any obstruction must be removed prior to insertion of a supraglottic device.

8.4 End Tidal CO<sub>2</sub> incorporating waveform capnography must be applied immediately post insertion of an SGA and maintained throughout the time that the LAS clinician is responsible for the patient. A paper copy of the capnograph should be printed immediately post SGA insertion and at the point of handover or recognition of life extinct as appropriate. Each waveform capnograph must be labelled with the date, call event number (CAD) and patient name where available.

8.5 Insertion of an orogastric tube via a supraglottic device is restricted to paramedics who have undergone appropriate training.

## **9. Advanced Airway Management – Endotracheal Intubation**

9.1 All paramedics and EMT/EAC staff will receive training to enable them to assist with the procedure of endotracheal intubation.

9.2 Paramedics who obtained professional registration after the 1<sup>st</sup> June 2010 are not permitted to perform endotracheal intubation. This applies regardless of whether a paramedic has continued to practice endotracheal intubation in another ambulance service or other clinical setting prior to recruitment to the LAS.



9.3 Paramedics previously trained in endotracheal intubation prior to 1<sup>st</sup> June 2010 may continue to practice the technique subject to fulfilment of requirements detailed in this policy and those stipulated by the relevant professional and regulatory bodies.

9.4 Staff not previously authorised to perform endotracheal intubation who are recruited to Clinical Team Leader and Advanced Paramedic Practitioner (Critical Care) roles will undergo Trust approved training to undertake endotracheal intubation and will be authorised to perform the procedure upon completion of the approved development programme.

9.5 Staff working in other specific roles where there is a demonstrable requirement for endotracheal intubation may be authorised to perform the procedure on a case-by-case basis by the Trust Medical Director.

9.6 Prior to an endotracheal intubation attempt, the necessary equipment should be prepared in a 'kit dump' format to facilitate safe and efficient tracheal intubation.

9.7 The intubator should be assisted by a second clinician who is familiar with the technique and able to act in the capacity of 'skilled assistant' as defined in national guidance<sup>4</sup>.

9.8 A bougie must be used to facilitate endotracheal intubation, except in cases where this would impede the attempt (e.g. excessive flexibility due to heat).

9.9 End tidal CO<sub>2</sub> incorporating waveform capnography must be applied immediately post intubation and maintained throughout the time that the LAS clinician is responsible for the patient. A paper copy of the capnograph trace should be printed immediately post intubation and at the point of handover or recognition of life extinct as appropriate.

9.10 The absence of a clear box-shaped waveform capnograph trace post intubation must prompt immediate reassessment of the airway with rapid extubation and ventilation via essential airway manoeuvres if required.

9.11 Any actual or potential unrecognised oesophageal intubation must be immediately reported as an incident via the Trust incident reporting system (Datix) and an investigation commenced. Any member of staff suspected of performing unrecognised oesophageal intubation will have the skill of endotracheal intubation formally rescinded by the Medical Director pending investigation results.

## **10. Training in Endotracheal Intubation**

10.1 Staff recruited to roles where there is a requirement for training in endotracheal intubation as detailed in section 9.4 will undergo a Trust approved development programme. Progression through the training programme will be documented via the Trust approved airway management training record.

10.2 Initial training in the technique of endotracheal intubation will be provided via the Trust Department of Clinical Education and Development. This training will incorporate relevant anatomy and physiology and theory relating to the technique of

endotracheal intubation, alongside practical mannequin based simulations incorporating a range of airway scenarios requiring the use of both essential and advanced techniques.

10.3 Following completion of the initial phase of training, staff will be required to demonstrate competence in the procedure of endotracheal intubation through successful completion of a summative mannequin-based assessment. Summative assessments may be conducted by clinical tutors, advanced paramedic practitioners (critical care), and designated clinical staff within the Trust medical directorate.

10.4 Completion of the training outlined in sections 10.2 and 10.3 will enable staff to undertake a supervised clinical placement within a suitable hospital department in order to gain experience in performing endotracheal intubation and other airway management techniques in live patients.

10.5 Staff undertaking the hospital component of the training programme must ensure that the proposed clinical placement is ratified by the Department of Clinical Education and Development and that the necessary approvals are in place prior to commencement. As a minimum an honorary contract with the Trust facilitating the placement will usually be required.

10.6 During the hospital component of training, it is expected that staff will be exposed to a range of essential and advanced airway management techniques including but not limited to endotracheal intubation. The supervising clinician should be satisfied that the member of staff is capable of employing appropriate airway management techniques for the presenting clinical scenario in a stepwise fashion.

10.7 Staff are required to perform and document a minimum of 20 successful endotracheal intubations on live patients during the clinical placement.

10.8 On successful completion of the clinical phase of training, staff will undergo final summative airway management assessments incorporating mannequin based scenarios.

10.9 Competencies for all phases of the training programme must be documented in the Trust approved airway management training record.

10.10 The completed airway management training record will undergo final review via the Trust Clinical Credentialing Committee. Final sign-off to enable the member of staff to autonomously practice endotracheal intubation within the Trust may only be provided by the Clinical Credentialing Committee.

## **11. Drug facilitated maintenance of an advanced airway**

11.1 The use of pharmacological agents including sedatives and/or analgesics to facilitate tolerance of an advanced airway is restricted to Advanced Paramedic Practitioners (Critical Care), Consultant Paramedics with appropriate competencies, and suitably trained and experienced Doctors employed by the Trust.

11.2 Staff not qualified as independent prescribers will only be authorised to use agents approved by the Trust Medical Director under Patient Group Directions (PGD).

11.3 Authorisation to perform drug facilitated maintenance of an advanced airway does not confer the ability to utilise sedation to facilitate placement of an advanced airway.

## **12. Needle and Surgical Cricothyroidotomy**

12.1 All paramedics will receive training in, and be authorised to perform the procedure of needle cricothyroidotomy in adults and children.

12.2 The procedure of surgical cricothyroidotomy is restricted exclusively to Advanced Paramedic Practitioners (Critical Care) and Doctors employed by the Trust. Other senior Trust clinicians may be authorised to perform this procedure on a case-by-case basis at the discretion of the Trust Medical Director.

12.3 The sole indication for cricothyroidotomy is the true 'cannot intubate, cannot oxygenate' airway scenario where all other techniques have proven inadequate and resuscitative efforts are appropriate.

## **13. Rapid Sequence Induction (RSI)**

13.1 Rapid Sequence Induction (RSI) of anaesthesia is restricted to appropriately trained Doctors employed by the Trust who are able to demonstrate initial training, on-going exposure and clinical governance arrangements commensurate with those detailed in the Association of Anaesthetists of Great Britain and Ireland (AAGBI) Safer Prehospital Anaesthesia Guidelines<sup>4</sup>.

13.2 The decision to perform RSI should be based on a sound risk-benefit analysis taking into account scene safety, environmental factors, availability of equipment and the presence of adequate numbers of skilled personnel.

13.3 The practitioner undertaking RSI must be supported by a skilled assistant familiar with the procedure and associated failed airway drills.

## **14. Accreditation of Prior Learning (APL)**

14.1 All qualified staff recruited externally to operational clinical roles will have training needs in relation to airway management addressed by Clinical Tutors as part of their clinical induction.

14.2 Paramedic staff who registered after 1<sup>st</sup> June 2010 will not be permitted to perform the skill of endotracheal intubation, regardless of previous training and exposure unless recruited to a post where this forms part of the scope of practice as outlined in section 9.4.

14.3 Externally recruited paramedic staff who registered prior to 1<sup>st</sup> June 2010 may apply for authorisation to continue to practice the skill of endotracheal intubation.

The decision to authorise an individual practitioner to continue to perform endotracheal intubation within the Trust will be based upon assessment of documented education, experience and exposure to the technique. This must include submission of an appropriate airway log of at least 12 months duration and evidence of practical and theoretical training in the procedure. Authorisation will be provided via the Clinical Credentialing Committee.

## **15. On-going Monitoring**

15.1 All grades of clinical staff should maintain an up-to-date airway management skills log using the designated LAS form

15.2 The Clinical Audit and Research Unit (CARU) will continue to monitor compliance with the requirement to submit printed capnograph traces in cases of cardiac arrest where an advanced airway is placed.

15.3 Cases of non-compliance with this requirement will be notified to the relevant area Quality, Governance and Assurance Manager (QGAM) for follow up. The QGAM is responsible for ensuring that appropriate feedback is provided to staff in relation to this, and that action plans are developed and monitored where necessary.

15.4 Authorisation for individual practitioners to perform specific airway management techniques may be revoked at any time by the Medical Director.

<b>IMPLEMENTATION PLAN</b>				
<b>Intended Audience</b>	For all LAS staff			
<b>Dissemination</b>	Formal education during clinical training and CPD courses. RIB and availability to all staff via the Pulse			
<b>Communications</b>	Implementation of procedure to be announced in the RIB and a link provided to the document			
<b>Training</b>	Training is already provided to staff by the Clinical Education and Standards Department through both new-entrant courses and the Core Skills Refresher (CSR) programme			
<b>Monitoring:</b>				
<b>Aspect to be monitored</b>	<b>Frequency of monitoring AND Tool used</b>	<b>Individual/ team responsible for carrying out monitoring AND Committee/ group where results are reported</b>	<b>Committee/ group responsible for monitoring outcomes/ recommendations</b>	<b>How learning will take place</b>
Application of the standards defined in the policy.	Clinical Performance Indicator Checks (CPI)	Clinical Team Leaders (CTL) & Clinical Safety and Standards Committee	Clinical Safety and Standards Committee	CISO feedback via CTL
Adherence to the requirement for ET <sub>CO</sub> <sub>2</sub> recording	Clinical Performance Indicator Checks (CPI)	Clinical Audit and Research Unit (CARU)	Clinical Safety and Standards Committee	CTL feedback and QGAM monitoring