

Tracheal Intubation – Adult Protocol

October 2008



Preamble

Tracheal intubation is the definitive advanced life support technique for airway management. The purpose is to either secure the airway or to ensure adequate ventilation and oxygenation.

Requirements

1. Fully licensed Technician-Advanced Paramedic.
2. Certification in tracheal intubation – adult protocol by the Medical Director.

Indications

1. Unconscious patient with no gag reflex requiring airway protection and / or assisted ventilation.

Contraindications

1. Patient age less than 16 years.
2. Patient weight less than 35 kilograms.

Suggested Tracheal Tube Sizes and Depth

1. Adult male: 7 – 9 mm
2. Adult female: 6 – 8 mm

Typical depth tracheal tube placement in adults is 22-24 cm, as measured at the lips.

Procedure

1. Perform patient assessment and record vital signs, level of consciousness, and oxygen saturation.
2. Assess that patient meets criteria for this protocol.
3. Ensure there are no contraindications to use of this protocol.
4. Initiate basic life support treatment measures, including supplemental oxygen.
 - these take precedence over management using this protocol
5. Ensure cervical spine immobilization is in place, if indicated.
6. Preoxygenate and ventilate with 100% O₂ using bag-valve mask.
7. Remove any dentures or partial plates.
8. Second EMS personnel applies cricoid pressure.
9. Airway is visualized directly using laryngoscope, following accepted procedure.
 - do not rock or lever the laryngoscope on the patient's teeth
10. When vocal cords have been visualized, pass tracheal tube through the cords.
11. Inflate tracheal tube cuff.
12. Begin ventilation and confirm tube placement following accepted procedure.
 - confirmation of tube placement must include end-tidal CO₂ detection
13. Release cricoid pressure.
14. Secure tracheal tube. Do not cut tracheal tube.
15. Insert an oral airway or suitable alternative.
16. Initiate transport, unless other emergency condition requires immediate treatment.

Note: Each attempt at intubation should be limited to thirty (30) seconds, with adequate oxygenation and ventilation between attempts. A maximum of two (2) attempts at tracheal intubation is permitted.

Documentation Requirements

The following information must be documented on the patient care report form:

1. Patient's presenting signs and symptoms, including vital signs, level of consciousness and oxygen saturation.
2. Indications for protocol use.
3. Size and tube depth in centimeters (at the lips) of tracheal tube.
4. Number of intubation attempts.
5. Repeat assessment and vital signs, as indicated.
6. Changes from baseline, if any, that occur during treatment or transport.
7. Signature and license number of EMS personnel performing any transfer of function skills.

Certification Requirements

1. Attend in-depth classes and lectures on airway anatomy, physiology, advanced airway management, and tracheal intubation.
2. Be able to identify:
 - criteria for intubation
 - contraindications to intubation
 - complications of intubation
 - alternate, non-invasive methods of airway management
3. Complete a minimum of twenty (20) successful intubations on patients under direction of the medical director or physician designate.
4. Pass a written examination.
5. Pass practical scenarios incorporating potential complications related to tracheal intubation.
6. Certification is by the Medical Director.

Recertification Requirements

1. Review class and recertification is done every 12 months.
2. A minimum of twenty (20) successful intubation every twelve (12) months:
 - a minimum of ten (10) must be carried out on patients in the field or a suitable hospital setting
 - a maximum of ten (10) may be carried out in a simulated setting under the supervision of the medical director or physician designate. These may involve use of a mannequin or alternative, as approved by the medical director.
3. A record will be kept to document all cases where this protocol is used.

Decertification

1. Decertification is at the discretion of the Medical Director or the Provincial Medical Director, Emergency Medical Services, Manitoba Health & Healthy Living.

Quality Assurance Requirements

1. Appropriate quality assurance policies must be in place. The Medical Director or designate must review all instances where this protocol is used. As a minimum, the following must be assessed:
 - i) appropriateness of implementation
 - ii) adherence to protocol
 - iii) any deviation from the protocol
 - iv) corrective measures taken, if indicated
2. Yearly statistics for protocol use compiled and forwarded to Emergency Medical Services, Manitoba Health & Healthy Living.