



San Diego Fire-Rescue Department
EMS Division
SYSTEM UPDATE

ADVANCED AIRWAY POLICY REMINDERS

AUGUST 21, 2024



PRINT



DISCUSS

All Personnel:

The EMS QA/QI Division recently reviewed a case involving an alleged esophageal intubation. After review with the chain of command, in the interest of both patient safety and protecting our personnel we are issuing the following educational briefing. Thank you for your time and careful attention.

Requested Actions:

- 1) Print and carefully read the entire document with your crew
- 2) Ensure you are familiar with advanced airway management policy (including EMT responsibilities)
- 3) Read and understand the additional component of pulse-rhythm-airway checks done every two minutes during CPR
- 4) Contact the EMS Division with any need for clarification, other questions, or other feedback
- 5) Attest to your understanding of this educational briefing

Background:

Esophageal intubations are a potential complication of endotracheal intubation attempts.

Unrecognized esophageal intubations are frequently lethal. Accordingly, the Department has developed policies and protocols to ensure that any esophageal intubations are immediately recognized, and appropriate corrective action is rapidly performed.





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Policy:

SI 09, Section 01: Advanced Airway Management

Section V-A of this policy reminds personnel to follow San Diego County EMS Office Policy S-104, which among other instructions requires that the SDLEAD format be used to double-check advanced airway placement. This should be stated out loud so all personnel can ensure that the SDLEAD items have been verified.

Section V-B of this policy underscores the importance of using end-tidal carbon dioxide (EtCO₂) measurement as part of advanced airway management. Specific items of note include the **requirement** that if EtCO₂ drops to zero after advanced airway placement, the airway paramedic will **immediately** follow troubleshooting procedures, which **will not** last more than 60 seconds. Failure to return an EtCO₂ value after troubleshooting **will result in removal of the advanced airway**.

Section V-D of this policy requires that advanced airway placement verification be performed **each time the patient is moved, transferred, turned over to another agency, or when received from another agency**. If at any time the advanced airway **cannot be verified** (and troubleshooting, if performed, does not resolve the lack of verification) the **advanced airway will be removed and replaced with a BLS airway**. (Section V-C) Importantly, this section also clarifies that **it is the responsibility of all scene personnel to ensure continuous EtCO₂ is present**. This requirement is not limited to paramedics. It applies to all personnel.

Section V-G of this policy mandates that for any question of an incorrect advanced airway placement, including an allegation of an esophageal intubation, **ECDC should be immediately contacted to page DMS**. All involved units will be placed out of service until a debrief has been completed.

SI 09, Section 16: Medical Scene Authority

Section IV-E of this policy states that **all crew members** on scene will be **responsible for unresolved inappropriate patient care** in their presence, based on the level of their training. EMTs do share in this responsibility.





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New Procedures:

Currently, patients receiving CPR have a brief pause in their chest compressions every two minutes to analyze the underlying rhythm and check for a pulse. Effective immediately, the EtCO₂ reading **AND** waveform will also be evaluated during this brief pause. If the EtCO₂ reading is zero, **OR** if the EtCO₂ waveform is flat despite a breath having been given immediately prior to this evaluation, advanced airway troubleshooting procedures or removal of the advanced airway and institution of BLS airway measures **shall be performed** in accordance with the instructions in SI 09, Section 01.

Recommended sequence of events to facilitate this evaluation while minimizing time off the chest:

- 1) Charge the monitor to allow immediate defibrillation should VF or pulseless VT be observed during the rhythm analysis
- 2) Have personnel monitoring pulses prior to cessation of compressions
- 3) **(NEW)** Give a breath 1-2 seconds prior to stopping compressions
- 4) Stop compressions
- 5) Simultaneously evaluate for rhythm, pulses, and EtCO₂ reading/waveform
- 6) Shock if VF/pulseless VT observed
- 7) Restart chest compressions if patient is pulseless
- 8) **(NEW)** If EtCO₂ reading is zero or waveform is flat immediately after a breath has been given, institute advanced airway troubleshooting **OR** remove the advanced airway and institute BLS airway measures

In brief: charge-breathe-stop-check-restart

Not new procedures, just reminders:

- 1) EMT personnel should **immediately** notify the airway paramedic if they observe an EtCO₂ reading of zero, a flat waveform, or a sudden change in the EtCO₂ reading/waveform.
- 2) EMT personnel should immediately notify the airway paramedic if they observe an EtCO₂ reading of zero, a flat waveform, or a sudden change in the EtCO₂ reading/waveform. EMTs should also ensure that the LUCAS device is properly secured, with the wrists attached to the device using the wrist straps, the neck strap in place and secured, and a circle drawn around the compression puck to monitor for potential movement.





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Feedback:

If you have any comments, questions, or other observations regarding airway policy you would like to share with the EMS Division, please send them to sdfd_QAQI@sandiego.gov

Your understanding of the seriousness of this topic and attention to this important educational briefing is greatly appreciated.

