



Improving Safety and Effectiveness of Prehospital Airway Management



Why: Some patients have compromised airways as part of their medical emergencies. Poorly managed airways can lead to respiratory, cardiovascular, and neurological complications, patient deterioration and death. Prehospital airway management practices vary widely across the country leading to inconsistencies in care delivery and potentially compromising patient safety and outcomes.

What are we doing: The National EMS Quality Alliance (NEMSQA), is leading the second national **EMS Quality Improvement Partnership (EQulP)** collaborative to put the new NEMSQA airway measures to work. This project is the sequel to the Lights and Siren Collaborative and will utilize the Institute for Healthcare Improvement's Breakthrough Series collaborative model. The goal of the project is to support national improvement in the safety and effectiveness of invasive airway management by focusing on two goals: improving the use of waveform capnography to confirm and monitor all invasive airways and reducing the adverse events such as peri-intubation hypoxia and hypotension. Three NEMSQA airway measures will be used to support improvements:

- **Airway-18:** Successful invasive airway procedures (SGA & ETI) performed during an EMS response in which waveform capnography is used for tube placement confirmation and monitoring. (All participants)
- **Respiratory-02:** Patients with hypoxia who received oxygen is administered. (All participants)

Why is this important?

The better we treat and document...

The better we can gather quality data...

Which will help EMS and EMS providers evolve!

MEASURES

Measure: Respiratory-02 Oxygen Administration for Hypoxia (Adult and Peds)

Definition: Percentage of EMS responses originating from a 911 request for patients with hypoxia (oxygen saturations less than 90) during which oxygen is administered.

Key Components:

- ✓ 911 Calls
- ✓ Patients of any age
- ✓ Hypoxic Patients (Adult and Peds)
- ✓ Patients with initial pulse ox less than 90, initial pulse ox is documented
- ✓ Oxygen is administered and documented

What we need from the EMS Providers to ensure accurate measurement collection

- Apply pulse ox upon initial contact/patient assessment
- Document initial pulse ox reading in PCR
- Treat patient's hypoxia with oxygen
- Document how the patient's hypoxia was treated (how was the oxygen delivered?)
- Monitor and document improvements in pulse ox in PCR

Measure: Airway-18: Waveform Capnography Confirmation of Invasive Airway (Adult and Peds)

Definition: Successful invasive airway procedures performed during an EMS response originating from a 911 request in which waveform capnography is used for tube placement confirmation

Key Components:

- ✓ 911 Calls
- ✓ Patient of any age
- ✓ Advanced airway (I gel or ET Intubation) is performed and documented
- ✓ Waveform Capnography is used and documented
- ✓ Waveform Capnography after color metric use is included, if documented

What we need from the EMS Providers to ensure accurate measurement collection

- Ensure the patient airway is secured
- Successfully place I gel or ET Tube using Waveform Capnography, and *document in PCR*
- If I gel is placed prior to ALS arrival, confirm successful placement Waveform Capnography, and document in PCR