Respiratory Arrest/Respiratory Failure

For patients requiring positive-pressure ventilation and/or hypoxia despite 100% oxygen

History
- Sudden onset of shortness of breath/coughing
- Past medical history
- Sudden loss of speech
- Syncope
- COPD/Asthma
- CHF
- Cardiac disease
- Lung disease

Signs and Symptoms
- Sudden onset of coughing, wheezing or gagging
- Stridor
- Inability to talk in complete sentences
- Panic
- Pointing to throat
- Syncope
- Cyanosis

Differential
- Foreign body aspiration
- Seizure
- Epiglottitis
- Syncope
- Hypoxia
- Asthma/COPD
- CHF exacerbation
- Anaphylaxis
- Massive pulmonary embolus

The maximum allowed attempts for an advanced airway placement is three (3) per patient.
If attempts fail, reassess and approach with a different technique.
Use King airway only when unable to intubate or ventilate the patient with BVM.

Is airway/breathing adequate?
Yes
If SpO₂ ≥ 92%
Exit to Routine Medical Care

No

Basic airway maneuvers
- Open airway with chin lift/jaw thrust
- Nasal or oral airway
- BVM

SpO₂ monitoring
Supplemental oxygen to maintain SpO₂ ≥ 92%
Spinal motion restriction if indicated

Airway patent?
Yes
BVM with supplemental oxygen to maintain SpO₂ ≥ 92%
Continuous EtCO₂ monitoring

No
Complete obstruction?
Yes
BVM with supplemental oxygen to maintain SpO₂ ≥ 92%
Continuous EtCO₂ monitoring

No

BVM effective?
Yes
Continue BVM

No
Reassess and adjust airway if necessary
Advanced airway with video laryngoscopy
Advanced airway with direct laryngoscopy

For cause known, exit to appropriate protocol
Notify receiving facility.
Consider Base Hospital for medical direction
San Mateo County Emergency Medical Services

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Pearls

- Effective use of a BVM is best achieved with two (2) providers. Use adult BVM until cardiac arrest.
- Continuous capnometry (EtCO$_2$) is mandatory with all intubations and BVM. Document results.
- If an effective airway is being maintained with a BVM and a basic airway adjunct with continuous pulse oximetry values of $\geq$ 90% or values expected based on pathophysiologic condition with otherwise reassuring vital sign (e.g., pulse oximetry of 85% with otherwise normal vital signs in a post-drowning patient), it is acceptable to continue with basic airway measures rather than placing an advanced airway.
- For the purposes of this protocol, a secure airway is achieved when the patient is receiving appropriate oxygenation and ventilation.
- An intubation attempt is defined as passing the laryngoscope blade or advanced airway past the teeth with the intent to intubate.
- An appropriate ventilatory rate is one that maintains an EtCO$_2$ of 35 to 45.
- The airway should be reassessed with each patient move. Document findings and EtCO$_2$ readings for each.
- Maintain spinal motion restriction for patients with suspected spinal injury.
- In deteriorating patients with head trauma, increase ventilation rate to maintain an EtCO$_2$ of 30-35.
- It is important to secure the advanced airway well and consider c-collar use (in the absence of trauma) to better maintain advanced airway placement. Manual stabilization of advanced airway should be used during all patient moves/transfers.