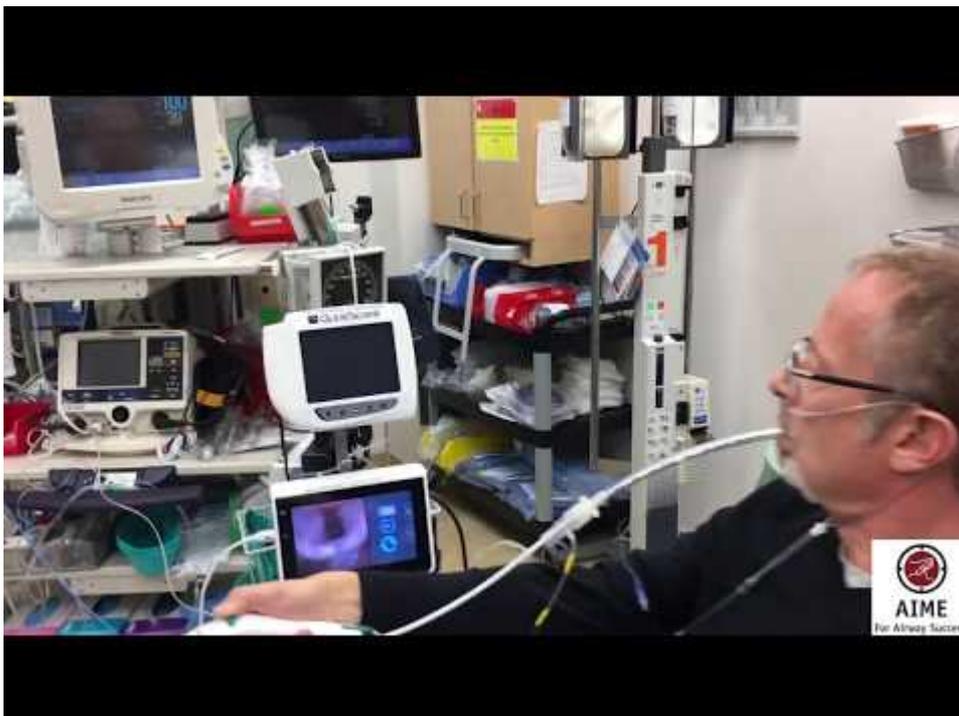


What does waveform capnography look like in an ETT that is in a supraglottic position

There was a recent case of a trauma with facial injuries that was intubated prehospital and transferred to the ED. On sign-over stated that they had reasonable visualization and good color change with a colorimetric CO2 detector. On arrival however the patient's sats were low. On the vent CO2 values were normal and it was communicated to the team that there were good objective and clinical measures of ETT being in position. Ultimately this was not the case. Many lessons were learned:

1. Think clinical context... a very difficult trauma airway was secured without an RSI. While this may have been the case the literature would suggest a high failure rate.
2. Look at the tube depth... is the ETT at an expected depth for the patient.
3. Don't forget mechanical/equipment causes of a low sat.
4. Quantitative CO2 values may be normal and color change will occur in an ETT that is supraglottic in position.
5. Even the waveform can appear as expected however it will more often be abnormal and erratic from the ETT moving in the supraglottic space. The waveform is more narrow often missing the flat Phase III alveolar plateau.
6. Further confirmation is required and best performed using a flexible endoscope. If in place, seeing the tracheal rings and carina are diagnostic. If the ETT is supraglottic then perfect...continue the short distance through the glottic inlet into the trachea with the endoscope and advance the ETT.
7. If not available a hyperacute angled video laryngoscope will often allow you to visualize either an empty glottis or an ETT between the cords.

I couldn't find literature or a any solicited feedback on what the waveform may look like so... I took a look:



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