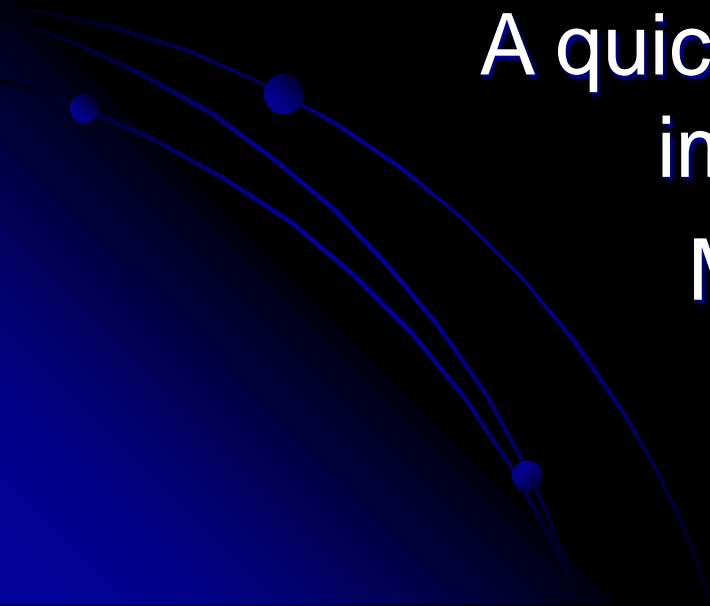


CPAP

A quick review before it is
implemented on
March 1, 2012



Purpose of CPAP

- To give the EMS providers another tool to treat patients that present with SOB due to:
 - COPD
 - Asthma
 - Pulmonary Edema
 - CO poisoning
 - CHF
 - Pneumonia

Step One

- Should always be a GOOD assessment
- Indications for CPAP:
 - Awake and able to follow commands
 - Over 12 years of age
 - Can maintain their own airway
- AND:
 - Respiratory rate of greater than 25
 - SPO2 of less than 94% at any time
 - Using accessory muscles during respirations

Contraindications for CPAP

- Do not consider CPAP if:
 - Patient is in respiratory arrest/apneic
 - Trauma patient
 - Tracheostomy
 - Actively vomiting or has upper GI bleeding
- But this is not the only things we should be looking at.....

Contraindications for CPAP

- Do not use CPAP if:
 - Patient has low cardiac output (90 systolic)
 - Altered mental status
 - Questionable ability for patient to maintain their own airway
 - Severe facial injuries (any trauma)
 - Uncontrolled vomiting
 - Hypotension (90 systolic)

Precautions

- Think a little harder about using CPAP if:
 - Has impaired mental status and is not able to follow your commands
 - Has had failed attempts at CPAP/Bagging in the past
 - History of gastric surgery
 - Complains of N or V
 - Has excessive secretion that require suctioning
 - Facial deformities that will not let mask seal

IF and only IF you have
confirmed that CPAP is a
good plan for your patient

**You may proceed with applying
CPAP**



CPAP: The equipment

- It has been strongly suggested that the CPAP equipment be available in a separate bag so that all equipment is available AND that there is always a FULL O2 tank available each time you apply CPAP

CPAP: The equipment

- The bag will consist of the following:
 - Full O2 tank with flow meeting that has a DISS port on it (screw on fitting for CPAP)
 - 1 medium sized mask and generator (including hose)
 - 1 T adapter (blue parts) to allow neb treatments with CPAP
 - 1 large mask to be used with the large patient when the med mask does not fit.

The Procedure

- Make sure that we have monitor
 - Pulse ox and ETCO2
 - Record rhythm strips before, during and after
- Take a set of vitals including breath sounds
- Explain the process to the patient
 - This may be the most difficult part of CPAP. Assuring the patient that a mask blowing large amounts of air at them will help them.

Prepare your equipment

- Make sure you have an adequate amount of O₂. (small tank will last 15-20 minutes)
- Assemble the CPAP equipment to the DISS port
- Open flow meter wide open (maximum)
 - The CPAP equipment will control the amount of oxygen used.
- Make sure you have air flowing thru the mask
- Assure the pressure is set at 5 cmH₂O

Apply to patient's face

- Apply to patient's face
 - It may be beneficial to have patient hold mask and place it tight against their own face.
- Once they are comfortable with the mask on their face, secure straps (be sure they SNAP into place)
- Check for leaks and make adjustments to the straps as needed.

Assess Patient!

- Vitals every 5 minutes
- Monitor
 - Strip
 - Pulse ox
 - ETCO2
- Look at your patient, are they better, worse or no different?

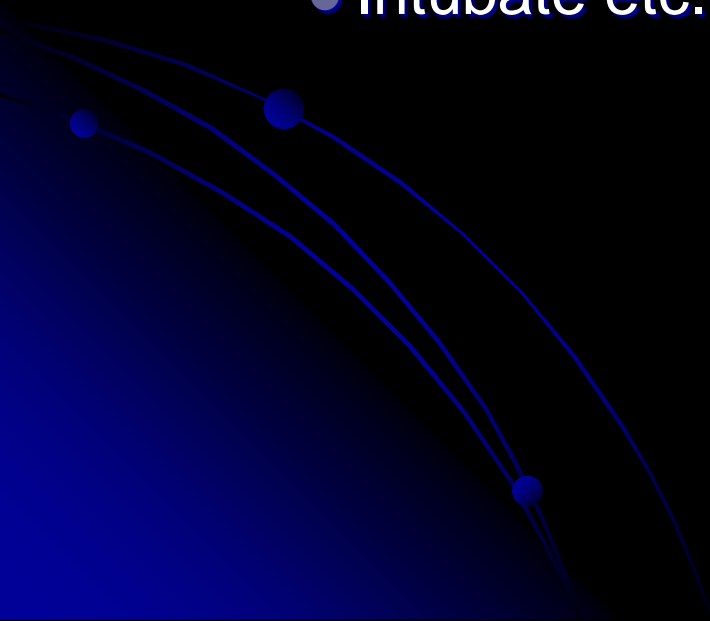
ALWAYS NOTIFY EMERGENCY DEPARTMENT

They need to prepare to continue
CPAP or BPAP in the ED

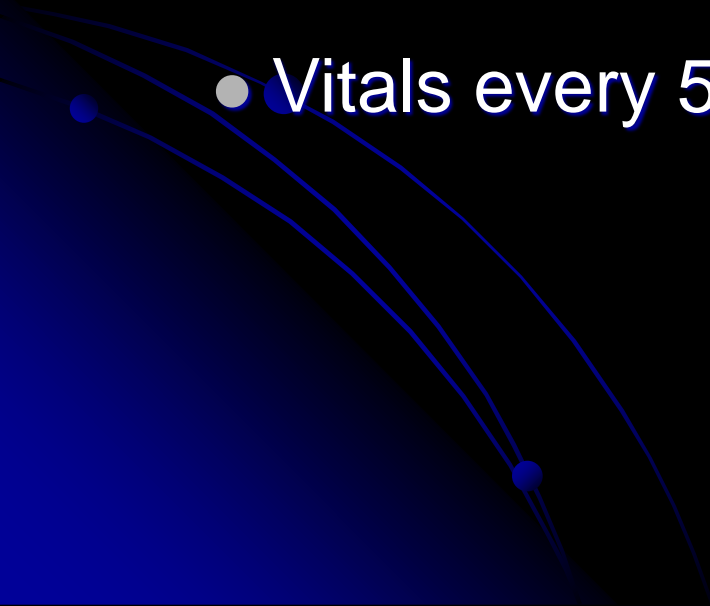


If the patient is worse

- If the patient has deteriorated
 - Remove CPAP
 - Treat the patient
 - BVM
 - Intubate etc.

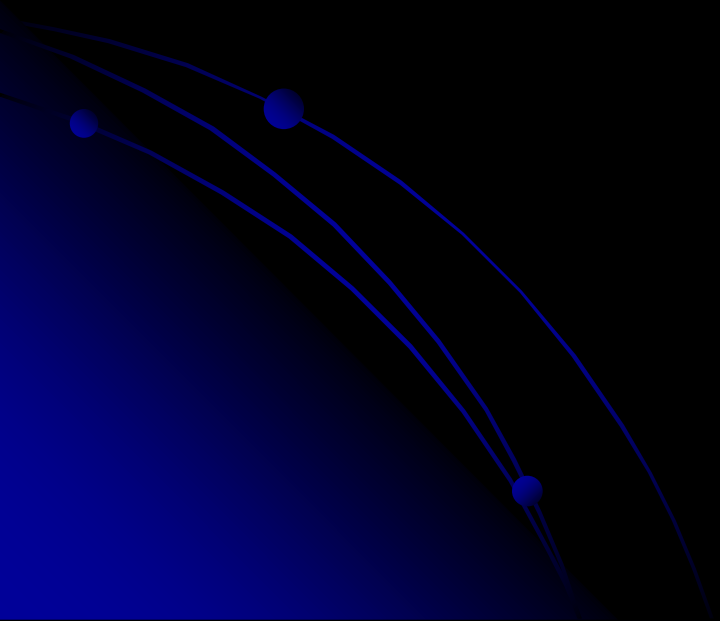


If there is no change

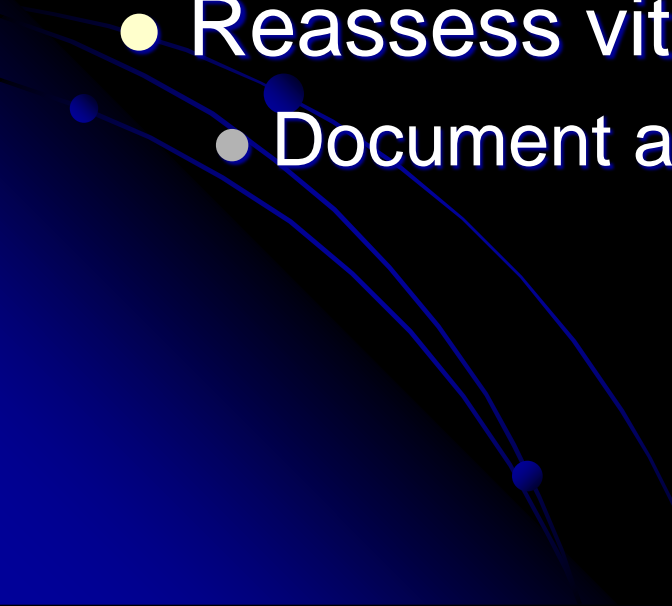
- If patient has stable vitals, consider increasing the pressure to 7.5 cmH₂O
 - Give CPAP 5 minutes before making a change unless the patient gets worse.
 - Vitals every 5 minutes
- 

If patient did improve but not a lot

- After 5 minutes and a complete assessment of the patient you may increase to 10 cmH₂O



If there was marked improvement

- Leave the pressure at 5 cmH₂O
 - This will be the most common occurrence
 - Reassess vitals and patient
 - Document all findings
- 

To Summarize

- If you put CPAP on and the patient gets worse, remove it and consider BVM or intubation if needed
- If you put CPAP on and the patient doesn't get better but doesn't get worse increase the pressure by 2.5 cmH₂O x 2
- If you put CPAP on and patient improves, leave pressure at 5 cmH₂O and monitor

Removal Procedure

- CPAP should not be removed unless:
 - Patient can't tolerate the mask
 - Experiences respiratory arrest
 - Begins to vomit
- IF CPAP is removed
 - You should always consider BVM
 - Or intubation
 - REMEMBER if you remove CPAP you should expect your patient to deteriorate rapidly.

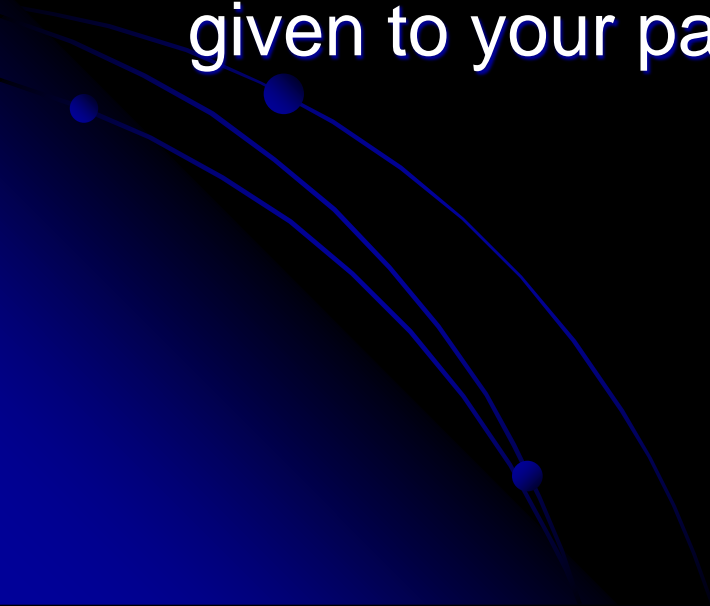
Special thoughts

- Do not remove CPAP until hospital therapy is ready to be placed
 - You will probably need to utilize the ED O2!
- Watch the patient for gastric distention
- Vitals must be taken every 5 minutes when CPAP is applied.

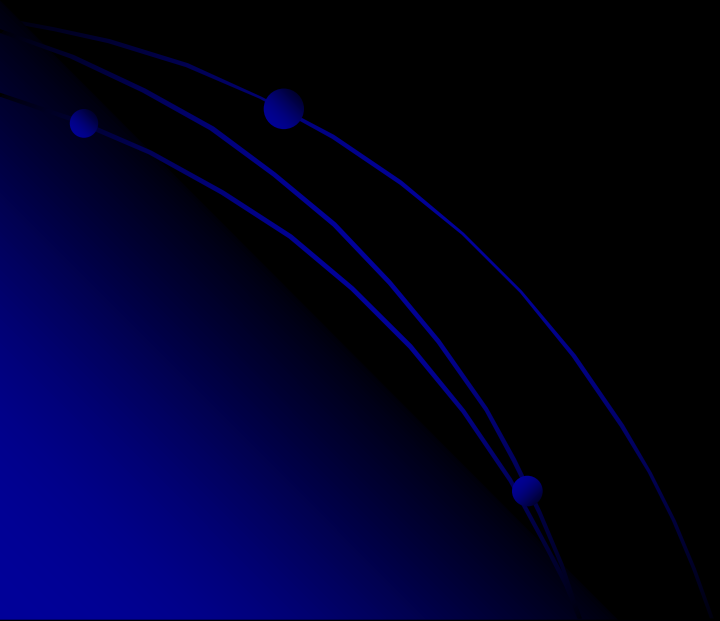
Honorable mention items

- CPAP will use 12.6 liters of oxygen when installed.
 - Keep this in mind
- CPAP should be continued from the ambulance to the ED bed. DON'T LOOSE WHAT YOU HAVE GAINED FOR THE PATIENT by thinking a couple of minutes won't matter!

Don't forget other treatments

- While CPAP will produce major improvements in your patients, don't forget the other treatments
 - Neb Treatments
 - Nitro and Morphine for pulmonary edema
 - CPAP does not eliminate any care that you have given to your patients in the past.
- 

**Complete the attached
Certificate and return to the
EMS office**



CPAP will improve the care for our respiratory patients

We just need to know when to use it.

Thank you for being part of a new and
exciting part of EMS