# FLOW SAFE ® CPAP

MCHENRY WESTERN LAKE COUNTY EMS

# CPAP Device: Why change?

- OLD: **Oxy-PEEP**
- Does not allow
- Meds via nebulizer
- PEEP measurement
- Shortages/recalls
- Packaged in lg box
- Headstrap may be uncomfortable & challenging to use
- 3 settings

- New: **Flow-Safe**
- Easier to repeat NTG
- Nebulizer can be used
- Actual PEEP measured
- Leaks detected
- Smaller package
- Comfortable headstrap
- 1 setting

# Just a reminder…how it works

- CPAP works by “splinting” the lungs with a constant pressure of air
- This reduces work of breathing
- In CHF, forces excess fluid out of alveoli & interstitial space back into the vasculature
- Also decreases venous return to the heart thereby lessening its workload
- Bottom line: Takes patients close to needing intubation & rapidly reverses their condition avoiding complications & death


Flow-Safe™
Disposable CPAP System
LARGE ADULT
Rx
MercuryMedical
11300 - 49th Street North
Clearwater, FL USA 33762-4807
800-237-6418 or 727-573-0088
Fax: 727-573-6040
www.mercurymed.com
EC REP
0086
Scanlan Group B.V.
Postbus 75664
Schiphol-Triport 1118 ZS
The Netherlands
REF 10-57009
LOT 11249009
Additional Languages
(NO)
(PL)
(PT) Sistema de CPAP descartável (Adulto de compleição forte)
(ES) Sistema desechable de CPAP (Adulto grande)
(SV) engångssystem för CPAP (Stor vuxen)
#83-900-0329 1/2011 Rev. 2


Flow (LPM)
10
15
20
25
Disposable CPAP
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# CPAP

- No Change
  - SOP
  - Indications
  - Contraindications
- Change
  - Device
  - Procedural steps

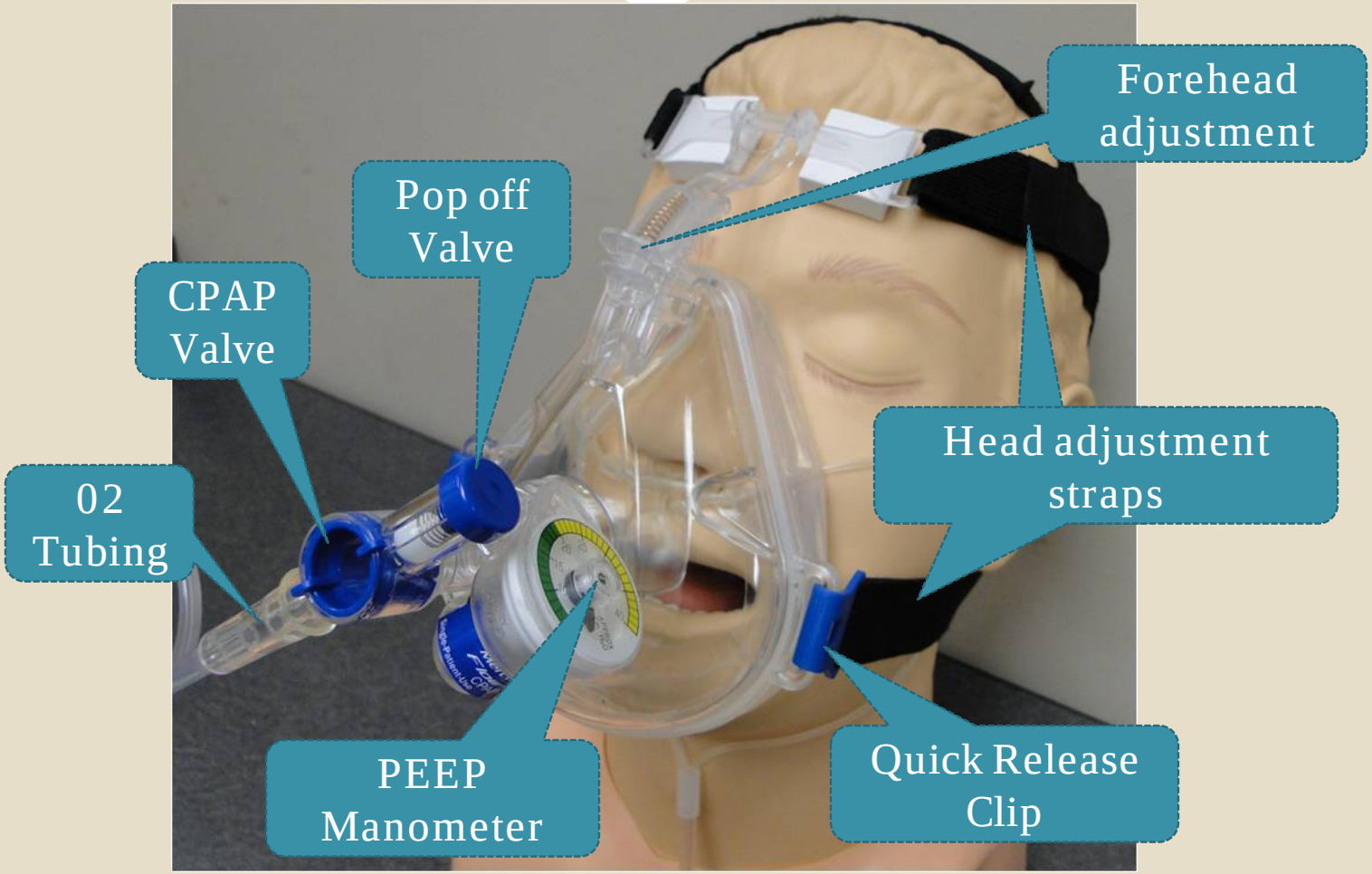
# CPAP

- **Indications**
  - Heart Failure - acute
  - Asthma/COPD - severe
  - Drowning - near
  - Flail chest (w/o pneumothorax)

- **Contraindications**
- Airway
  - Unable to obtain adequate seal
  - Facial anomalies/injury
- Breathing
  - Inadequate resp rate/effort
  - Pneumothorax
  - Penetrating chest trauma
- Circulation
  - SBP <90 mmHg / DBP <60
- Disability - Consciousness
  - Decreased LOC
  - Unable to follow commands
- GI
  - Aspiration risk
  - Gastric distention
  - Vomiting
- Pregnant

# THIS IS HOW CPAP FEELS TO THE PATIENT!!

# FLOW SAFE ® CPAP



# OXYGEN FLOW RATE = PEEP

- 15 L = approx 3-4 cm H2O PEEP
- 20 L = approx 6-7 cm H2O PEEP
- 25 L = approx 8.5-10 cm H2O PEEP

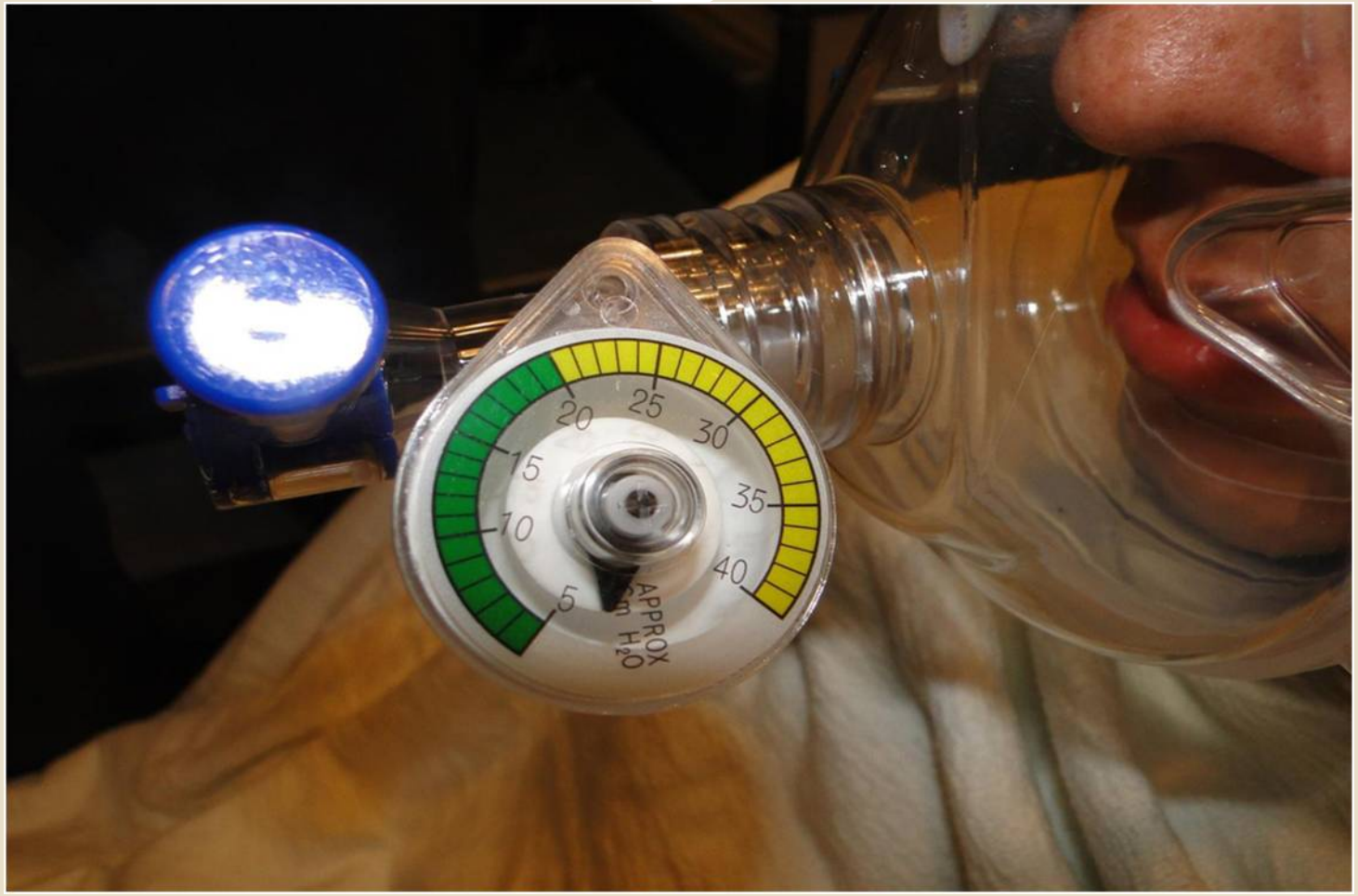
# TITRATE PEEP TO PATIENT'S WORK OF BREATHING

- OLD PROCEDURE
  - PEEP started at 10cm H2O
  - Not titrated to work of breathing
- NEW PROCEDURE
  - **START AT 15 L WHICH EQUALS 3-4 cm H2O PEEP**
  - Titrate up to patient response (decreased work of breathing)
  - Maximum PEEP 25 L or 8.5 - 10 cm H2O PEEP

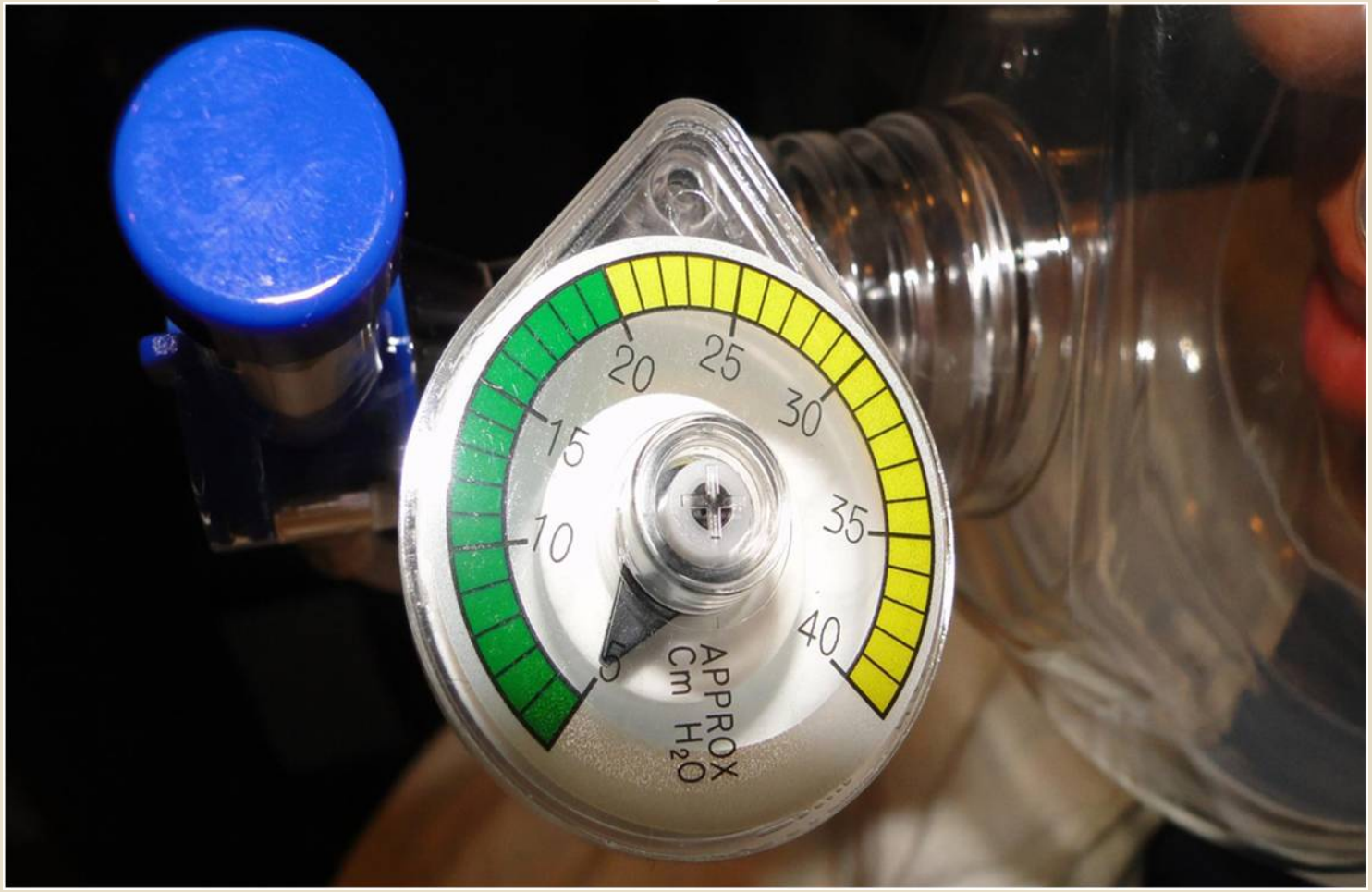
# Flow-Safe® CPAP --- PEEP

- Pressure manometer
  between CPAP valve & face mask
  measures actual PEEP being delivered
- Leak in system
  (e.g., lack of tight face-mask seal) will affect PEEP

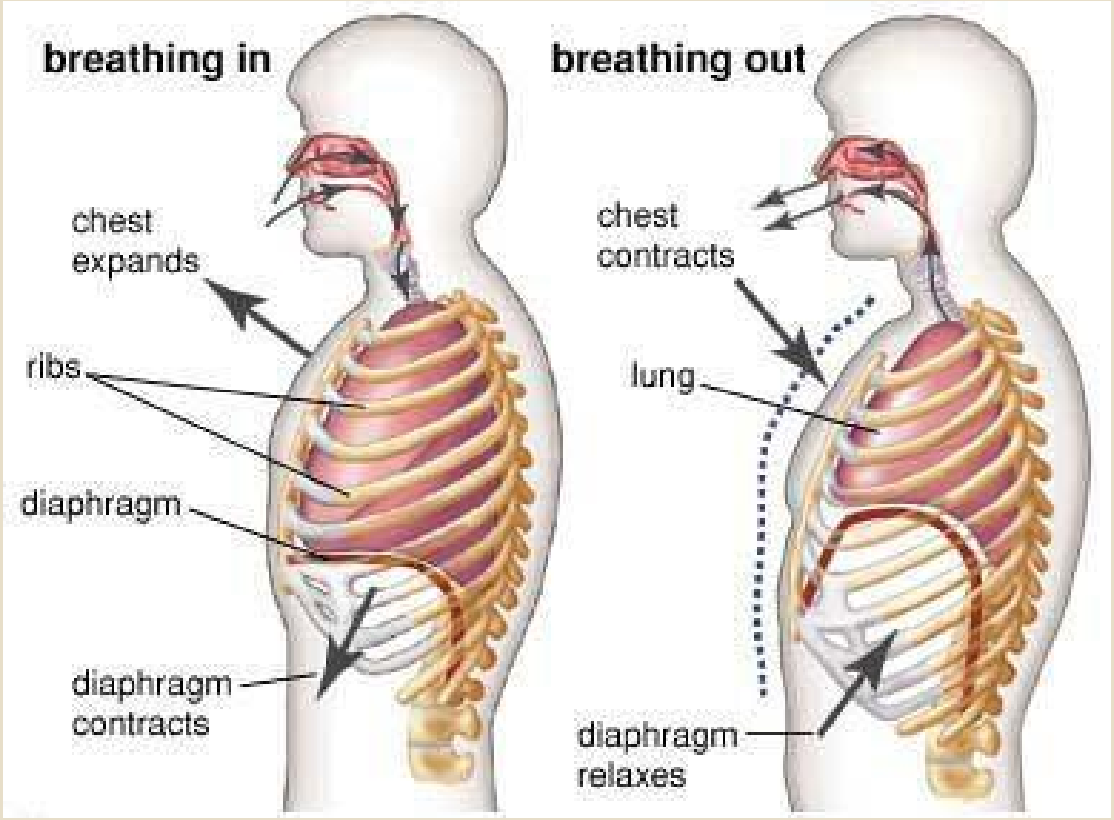
# What is the PEEP?



# What is the PEEP?



# Assess PEEP as patient exhales



# EXPLAIN PROCEDURE TO PATIENT

- **MAY REQUIRE EXTENSIVE COACHING……**
- **If they are anxious, a little Versed may help.**
- **See appropriate SOP**


# OPEN PACKAGE

- SECURELY CONNECT MASK TO VALVE/TUBING

# OPEN PACKAGE

- **Yellow label displays PEEP settings**

# 02 Flow

- Attach CPAP O2 tubing to regulator/flow-meter
- Begin O2 flow @ 15 L
- If needed, slowly increase O2 to desired O2 sat/PEEP (do not exceed 30 LPM)


# UNDO 1 OR 2 OF THE QUICK RELEASE CLIP(S)

# Hold, or have pt. hold mask snuggly to face… Good face-mask seal is critical

# Tighten head straps using Velcro tabs

# Adjust forehead pad flat on forehead

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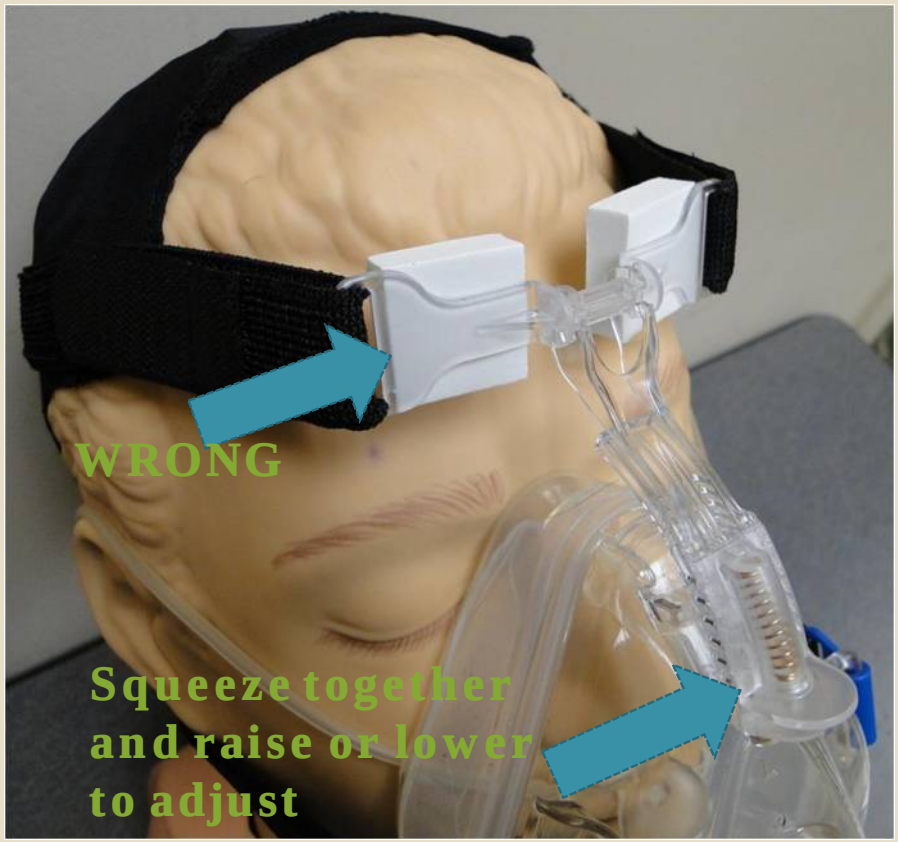


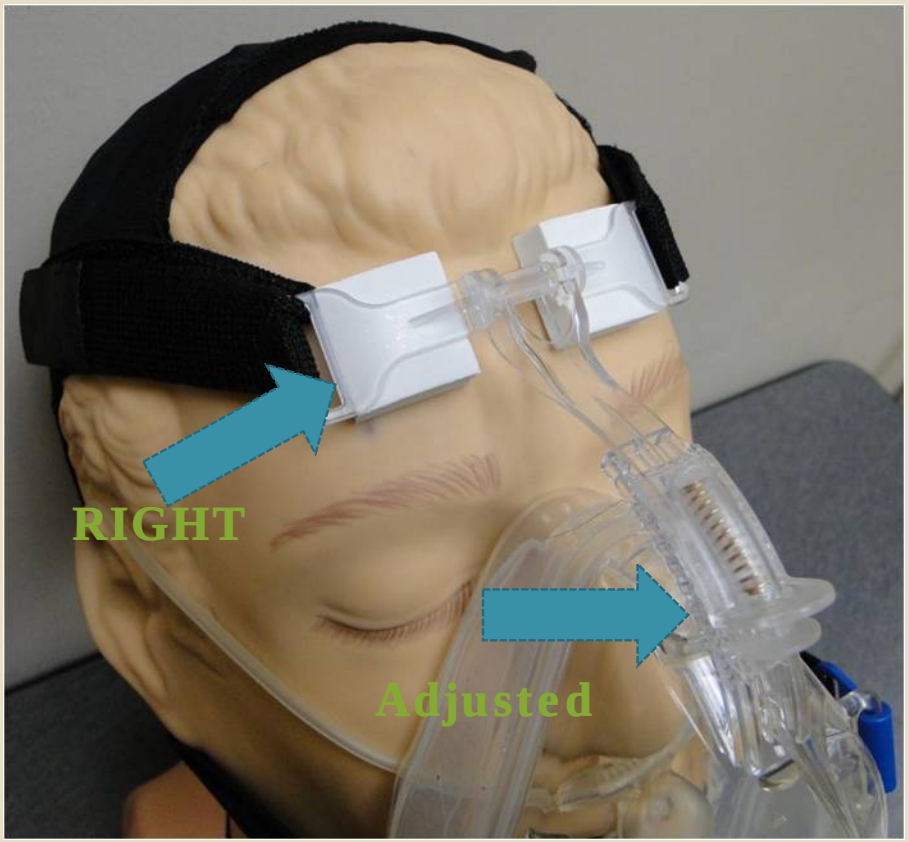

# USE QUICK RELEASE TO ADMINISTER NITRO PER SOP

**SOP: If systolic is 90 or above, give nitro every 5 minutes unlimited**

# IF YOU RECEIVE PERMISSION TO USE CPAP WITH SEVERE ASTHMA/COPD & PATIENT IS WHEEZING

The patient will need a neb treatment

CONNECT NEBULIZER BETWEEN CPAP VALVE & MASK

# Capnography can be used under CPAP

CPAP with MWLCEMS Neb

# Adaptors

- Some nebulizers may require an adaptor (same adapter used for in-line- nebs)
- You will need this for Good Shepherd nebulizers

# Flow-Safe® CPAP Device

- **PEEP depends on**

1. O2 flow rate
2. Face mask seal (leak)

- **Oxygen concentration**

depends on

1. O2 flow rate
2. Respiratory rate
3. Tidal volume

# How long tanks will last at different flow rates

Minutes of Oxygen by Cylinder Size
Based on full 2200 PSI Cylinders

| Flow/L/Min. | D Cylinder | E Cylinder | M Cylinder |
|---|---|---|---|
| 5 | 70 | 123 | 703 |
| 6 | 58 | 102 | 598 |
| 8 | 44 | 77 | 498 |
| 10 | 35 | 61 | 374 |
| 12 | 29 | 51 | 299 |
| 15 | 23 | 41 | 199 |
| 20 | 16 | 29 | 175 |
| 25 | 14 | 23 | 140 |

# CPAP Device Transition

- Attrition (use your old one, replace with a new one)
- Devices already on vehicles will not immediately be replaced
- Transition will occur w/ replacement devices
- When an old device used, it will be replaced w/ new device (as hospital stock allows)
- New devices available after 12-1-11

# Documentation

- Document the oxygen flow rate
- Document the PEEP reading on the manometer
- This can be done in your narrative
- Remember to use the manometer reading when patient exhales.

# Thanks!

***THANKS TO THE NWC EMS SYSTEM AND KATHY KNOP FOR SOME OF THE CONTENT OF THIS PRESENTATION***