Positive Airway Pressure Systems for Sleep Disordered Breathing

Lori Pickrell, RRT
Account Manager
Roberts Home Medical
Lpickrell@robertshomemedical.com
Objectives

Upon completion of the session, attendees will be able to:

- Define sleep disordered breathing and apnea
- Identify common risk factors and symptoms of sleep apnea
- Describe the efficacy of positive airway pressure (PAP) therapy
- Describe the importance of compliance with PAP therapy
- Describe the proper use and maintenance of a PAP device and all accessories
- Identify who to contact with questions and/or concerns
Forms of Sleep Disordered Breathing

- Obstructive Sleep Apnea (OSA) – *Most common*
- Central Sleep Apnea (CSA)
- Complex Sleep Apnea (CompSA)
- Cheyne-Stokes Respiration (CSR)
- Nocturnal Hypoventilation (NH)
Sleep Apnea

• People who have sleep apnea may stop breathing for 10 to 30 seconds at a time while they are sleeping. These short stops in breathing can happen up to 400 times every night.

• Apnea: Latin - "pnea" -- meaning "to breathe", “a” – meaning “no” or “not”

• A + pnea (apnea) = not breathing
Sleep Disordered Breathing in Adults

Symptoms:

• Loud snoring or snoring interrupted by periods of not breathing (apnea)
• Excessive daytime sleepiness; lack of concentration; anxiousness, irritability and depression; personality changes; lethargy
Sleep Disordered Breathing in Adults

Risk Factors:

• Obesity
• Narrowed airways (heredity, enlarged tonsils or adenoids)
• Chronic nasal congestion
• Hypertension
Sleep Disordered Breathing in Children

Symptoms:

• Habitual snoring
• Noisy breathing/increased work of breathing
• Pauses in breathing with noisy resumption of breathing
• Chronic mouth breathing
• Behavioral problems, such as hyperactivity and aggressiveness
• Restless sleep
Sleep Disordered Breathing in Children

Risk Factors:
- Adenotonsillar hypertrophy
- Craniofacial malformation
- Congenital syndromes (e.g. Down’s Syndrome, Marfan’s Syndrome)
- Obesity
Obstructive Sleep Apnea

Typical Scenario

1. Patient/family member reports symptoms to MD
2. MD evaluates patient for possible SDB
3. MD orders a sleep study – polysomnogram (PSG) or a split night study (PSG with titration)
4. Results are interpreted. If only a PSG was done, patient may then have a titration study
5. PAP device is ordered if patient has sleep apnea
Options

Devices:

• CPAP

• BiLevel PAP (BiPAP)

• Auto PAP

*With or without heated or non-heated humidifier*
Options

Masks:

• Nasal mask

• Nasal pillows

• Full face mask
ResMed Pixi Pediatric Mask
Compliance

• PAP needs to be used every time individual sleeps in order to be effective.
• Common issues – mask discomfort, airway dryness, nasal congestion
• Insurance coverage criteria – typically require use for at least 4 hours per day during 70% of the time (about 21 out of 30 days minimum)
• Measured by data card and/or modem
Maintenance

• PAP Device – NEVER move device with humidifier attached!!
  ➢ Dust off with dry cloth
  ➢ Replace filters: Disposable filter – every 2-4 weeks
    Reusable filter – every 6 months

• Mask
  ➢ Wash daily with mild soap, rinse well & air dry away from sunlight
  ➢ Replace every 3 months

• Headgear
  ➢ Wash weekly with mild soap, rinse well & air dry
  ➢ Replace every 6 months
Maintenance

• **Humidifier Chamber**
  - Wash daily with mild soap, rinse well & air dry
  - Replace every 6 months

• **Tubing**
  - Wash weekly with mild soap, rinse well & hang to air dry
  - Replace every 3 months
Who to Call for Help

• Questions/concerns about the patient’s condition:
  Call 911, physician, family, your agency, etc.

• Questions/concerns about the equipment:
  Call the medical equipment provider
Questions?
References

