INCREASING CPAP ADHERENCE USING DATA DRIVEN STRATEGIES

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# Objectives

1. Understand the most common reasons that patients do not adhere to CPAP treatment.
2. Learn about recent studies that have determined strategies to increase adherence.
3. Learn how to utilize data presented in the studies to increase compliance.
CPAP ADHERENCE

- CPAP (Continuous Positive Airway Pressure) Adherence/Compliance
  - Four hours per night
  - 70% of nights during a consecutive 30 days
  - First three months of initial usage
  - 29 to 83 percent of patients are nonadherent
Patients generally make the decision to adhere to CPAP therapy early during the first week of therapy, usually by the second to fourth day.¹

Patients that change the CPAP mask out during the initial timeframe are seven times more likely to abandon CPAP therapy during the year following the switch.²

- Poor fit/discomfort 39%
- Mask leak 30%
- Outdated model 25%
- Nasal stuffiness 6%²
FACTORS

- Factors contributing to non-adherence to CPAP
  - Oronasal mask (full face mask)
  - Depression
  - Low effective pressure
  - Side Effects
MASK TYPE

- Type of mask used has an impact on adherence
SIDE EFFECTS

- Side effects higher when using oronasal (full face) mask
  - Dry mouth
  - Psychological perceived inconvenience
  - Ocular irritation
  - Choking sensation
  - Headaches
  - Acrophagia (excessive air swallowing)
  - Family tolerance
The only side effect that was higher using a nasal mask or nasal pillow
- Congestion
- Oronasal masks are associated with increased upper airway resistance (UAR)
- Posterior displacement of the tongue
- May lead to higher residual respiratory events than nasal masks
- Oronasal masks were associated with higher therapeutic pressure than nasal masks
- Oronasal masks cost two to three times more than nasal\textsuperscript{4}
STRATEGIES
Fit the CPAP mask correctly on the first try

- Seven fold increase in CPAP abandonment during the first year if the mask is changed out during the initial time frame
- Poor fit/discomfort
- Leaks
Choose the mask that is best for the patient

Weaver & Grunstein (2008)\textsuperscript{5} cite 78 references validating this

- Unattractive headgear
- Outdated look
- Leaks
- Complex straps
- Facial Imprinting
- Claustrophobia
CHOOSE THE APPROPRIATE MASK

- Nasal or Oronasal
- Alternative style masks
- Ask the right questions
  - Can you breathe through your nose?
  - If not, why not?
  - Observe the patient’s breathing
CHOOSE THE APPROPRIATE MASK

- You are the expert
  - Listen to the patient
  - Guide the patient
  - Show confidence
- Start with a nasal mask or nasal pillow if possible
CONGESTION

- **Clear up nasal congestion**
  - If a patient struggles to use a nasal mask because of congestion, try to clear it up
  - Clearing nasal congestion will promote better health and comfort during the day, also
    - Nasal saline
    - Nasal irrigation
    - Medication (antihistamine)
    - Steroid spray for nasal polyps
    - Nasal dilator strips
    - Surgery
Heated humidification

- Heated humidification is more effective than cold passover or no humidity at all
- Add a heated tube
- Alleviates reported nasal discomfort
- Lowers therapy abandonment
- Reduces the incidence of mouth leak
- Decreases nasal resistance and mucosal inflammation
- Improves patient compliance
- As effective as a nasal steroid and 74% of patients chose heated breathing tube
Nasal Airway Resistance

Usually reported as:
- Discomfort, pain, dryness of nose mouth or throat (including bloody nose)
- Congestion (blocked, stuffy, runny)
- Cold like symptoms

May also be reported as:
- Unconscious removal of CPAP mask at night
- Pressure related complaints
- Claustrophobia
- Pressure intolerance
- “I can’t breathe out”
Patient has congestion

On CPAP, the airway exits the mouth at a high pressure

High flow crosses the highly vascular nasal cavity

Increased blood flow to the capillaries

Nasal passage narrows more

Mouth leak increases

Repeats
OTHER CONSIDERATIONS

- The patient believing he or she can succeed at CPAP
- Bed partner supporting CPAP use
- Support from friends, family and support groups
- Education
TAKE HOME POINTS

What happens during the initial CPAP trial period is a strong predictor of adherence to therapy.

Changing out the mask in the initial time-frame increased risk of therapy abandonment.

Nasal masks and nasal pillows result in higher adherence.

Closely monitor patients using oronasal mask.

Humidification via a water chamber and heated tube can increase adherence.
References


QUESTIONS?
THANK YOU

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