



Positive Airway Pressure (PAP) Adherence and Follow-Up Care - Updated July 2012

Excessive daytime sleepiness is the most common symptom of obstructive sleep apnea syndrome (OSAS) due to sleep fragmentation caused by repeated episodes of airway obstruction. PAP has been proven the most effective noninvasive therapy for OSAS. Research demonstrates alertness recovery after one day and further alertness recovery after 14 days of continuous PAP (CPAP) usage (1, 2). Many published studies, however, indicate PAP adherence rates as low as 40% to 50% (3, 4). Adherence to PAP can be improved with a variety of early interventions, education, and intensive support including long-term follow-up care. These interventions improve outcomes that result in an improved quality of life, reduction in complications, and increased motivation for the patient and family to continue with the prescribed therapy (5).

The length and frequency of PAP usage defining adherence varies among clinicians interpreting these data. The mean daily use of PAP as measured in hours per day ranges from 2.5 hours to > 4.5 hours with > 4.5 hours per day being the most widely documented.

The Centers for Medicare and Medicaid Services (CMS) define PAP adherence as use of PAP \geq 4 hours per night on 70% of nights during a consecutive thirty (30) day period anytime during the first three (3) months of initial usage. Clinical face-to-face follow-up by the treating physician must occur between day 31 and day 91 of PAP usage to determine improved patient outcome and adherence to PAP therapy (6).

One research study gathered data from the built-in monitors on CPAP units that track compliance. Findings indicate that patients who had been educated on treatment interventions as well as the disease state of obstructive sleep apnea showed increased adherence to PAP over patients who were not provided education and support. This outcome continued over a period of years with intermittent group support sessions.

Chervin suggested that while the interventions may need to be repeated periodically, the initial intervention “reliably predicts treatment compliance at 3 or 6 months” and urges “proactive intervention” to improve patient compliance to therapy (7).

Establishing a standard of practice for PAP therapy and education is essential for enhancing therapeutic adherence. Patient education begins before the patient arrives in the sleep center and includes cooperation from a variety of ancillary services. A complete adherence program should include patient follow-up and additional education during the following processes:

PHYSICIAN OFFICE

- The primary-care physician directly referring a patient to the sleep center will provide the patient written material or brochures describing what to expect on the night of the sleep study including information regarding a potential diagnosis.
- A sleep physician seeing the patient in consultation will provide the patient written material or brochures describing what to expect on the night of the sleep study including information regarding a potential diagnosis.

This may include:

- Patient-education video
- Pre-sleep study instruction
- Tour of sleep center, clinic, or durable medical equipment (DME) facility

DIAGNOSTIC SLEEP STUDY

Prior to lights out, the sleep technician will:

- Show a patient-education video (if not already viewed)
- Discuss OSAS diagnosis and treatment
- Perform interface fitting and PAP trial
- Address patient questions or concerns

POST DIAGNOSIS

- Patient selects choice of DME provider and comfortable interface
- Patient receives post-diagnosis education and discharge instructions
 - How PAP equipment is set up
 - When PAP equipment will be set up
 - Patient receives DME phone number and sleep center phone number and is encouraged to call if questions arise

DME SERVICES

The sleep center should ensure that DME services are provided for the patient that include:

- Optimal customer service
- Quality patient education
- Availability of a variety of interfaces and PAP devices
- Compliance tracking

ACCLIMATING TO PAP

Can be maximized by:

- Use of desensitization techniques
- Pre-study introduction and adjustment to PAP
 - Using distraction measures such as television or radio
 - Giving patient control over the interface with ability to touch or reposition as needed
- Adding pressure-relief technology
- Offering interface options
- Increasing ambient humidity with cool passover or heated humidity
- Offering positive feedback to patient and family member
- Expressing empathy and understanding
- Use of reassurance and praise to increase patient effort during PAP acclimation
- Being an intuitive listener

ADHERENCE FOLLOW-UP

Phone calls:

- First call recommended at 24 to 48 hours post PAP initiation (most critical)
- Follow-up calls at 1 week, 2 weeks, 6 weeks, 6 months, yearly

Discussion with the patient should include:

- Usage, interface problems, pressure concerns, cleaning, nasal symptoms, continued snoring or excessive daytime sleepiness (EDS), bed partner concerns or questions
- Encourage the patient to attend a support group such as A.W.A.K.E.[™] or a comparable program when available

PATIENT VISITS

- Download PAP equipment to document adherence, interface leak, continued presence of apnea
- Always review download data with positive affirmation
- Discuss with the patient and family the proper usage of PAP, interface problems, pressure concerns, cleaning, nasal symptoms, continued snoring or EDS, bed partner concerns or questions
- Encourage attendance at a support group such as A.W.A.K.E.[™]
- Teach and reinforce good sleep hygiene
- Offer tips to increase compliance and extend sleep
- Teach and practice desensitization techniques
- Have patient complete an Epworth Sleepiness Scale (ESS)
- Encourage family/bed partner participation
- Review cleaning of PAP unit and accessories
- Offer tips for falling asleep with PAP and extending sleep with PAP
- Offer an open PAP clinic for walk-in compliance checks
- Discuss weight gain/loss and alcohol use while using PAP
- Discuss equipment / supply replacement

LONG-TERM FOLLOW-UP

- Recommend annual return office visit to sleep physician
- Recommend open PAP clinic for walk-in compliance checks
- Remind patient to always bring equipment to appointments for downloads, interface fittings and adjustments
- Invite patient to attend A.W.A.K.E.[™] or other support groups
- Encourage self-education through Internet chat rooms
- Document (dictated or written) all patient contact in the permanent medical record

STARTING A COMPLIANCE PROGRAM

Implementing a program of this magnitude takes a dedicated team. A few techniques are suggested to assist you to begin an adherence program within the sleep center.

- Utilize a system to schedule and reschedule patient appointments
- Use a dedicated credentialed technologist as the Sleep Center Facilitator who is responsible for implementing and performing compliance and follow-up protocols
- Day/night staff can perform some functions of the program during their daily routine
- Set up a DME follow-up program as part of the sleep center or with local DME companies to provide PAP devices and work with patients

Success with PAP therapy often requires a team effort that includes the patient, the physician, sleep technologist, sleep center facilitator and/or sleep educator. Comprehensive education, patient communication, feedback, application of desensitization strategies, and long-term follow-up will improve outcomes and result in improved quality of life for the sleep-disordered breathing patient.

**Disclaimer: The information contained in this guideline is subject to change based on AASM Standards for Accreditation, and federal and state regulations.*