Restoring a good night’s sleep

Products for diagnosing, treating, and monitoring sleep apnea
Sleep apnea solutions

A good night’s sleep is an essential part of healthy living, but for patients diagnosed with a sleep disorder, rest can be hard to come by. There are various types of sleep-disordered breathing, but the most common is Obstructive Sleep Apnea (OSA). This disorder impacts one of four adults in the United States.\(^1\)

Philips Respironics’ sleep apnea solutions can help your patients achieve the restful sleep they need. Not only are these solutions effective, they’re designed to be simple to use and easy to live with. No matter where the sleep apnea patient is in the care cycle, Philips Respironics has products that may be used to diagnose or treat sleep apnea, or to follow up on compliance progress.

Our commitment to sleep therapy started in 1985 with the first commercial CPAP machine. After more than 25 years of innovation, we continue to deliver on our promise to develop technology that helps improve the lives of patients with sleep apnea.

\(^1\)Young, T., et al., AJRCCM 2002; 165:1217-39
Diagnosis of sleep apnea

Various screening methods can be used to determine if a patient has sleep apnea. Once suspected of having sleep apnea, the patient will need to undergo a test to confirm the diagnosis. Philips Respironics provides both sleep screening and diagnostic systems.

**Screening systems**
Philips Respironics provides a variety of sleep screening products to help physicians quickly identify if sleep apnea may be impacting their patients’ health. Simple screening tests, including overnight screeners, can be used to determine if further testing is needed to confirm the diagnosis of sleep apnea. Positive diagnosis of sleep apnea needs to be done by polysomnogram in a sleep center or in the home.

**In-lab diagnostic systems**
Philips Respironics provides a full line of in-lab diagnostic sleep systems and quality sensors to help sleep professionals handle basic to advanced diagnostic studies in their sleep center.

**In-home diagnostic systems**
Portable, or in-home, diagnostic systems are also available for patients who may want to have their sleep study done outside of a typical sleep center.

The Alice sleep diagnostic and OmniLab Advanced systems are used in the sleep center to help clinicians diagnose sleep apnea and determine the appropriate therapeutic pressure.

The Alice PDX sleep diagnostic or Stardust (pictured) systems may be used to diagnose sleep apnea in an alternative setting.
Sleep apnea treatment

There are various therapy systems available to treat patients once they are positively identified with sleep apnea. Therapy for sleep apnea consists of positive airway pressure (PAP) being applied to the upper airway through a mask. Philips Respironics provides a range of PAP devices and masks, depending on therapeutic needs and patient preference.

Systems may include comfort features like ramp, which allows the patient to adjust to therapy over time, or C-Flex, Bi-Flex or A-Flex pressure relief technologies which can help to increase comfort.

PAP devices

Philips Respironics’ current device options include: CPAP, bi-level PAP, auto-adjusting PAP, and auto servo-ventilation systems.

• **CPAP systems** provide one level of pressure to the patient’s upper airway throughout the night. This pressure will provide the stability necessary to prevent upper airway collapse during sleep.

• **BiPAP bi-level systems** provide two levels of pressure to the patient throughout the night. A higher pressure (IPAP) is delivered on inhalation, while a lower pressure (EPAP) is delivered on exhalation.

• **Auto-adjusting systems** provide a variable pressure throughout the night based on patient needs and sleep stage. The device will adjust pressure based on airway size and airflow.

• **Auto servo-ventilation (SV) systems** provide the highest level of support for patients with the most complex sleep and breathing disorders. The device will adjust based on upper airway dynamics, patient respiratory effort, and flow to maintain both ventilation and upper airway stability throughout the entire night.
Patient interface

Once the proper PAP therapy option is identified, choosing a patient interface or mask is the next critical step. Studies have demonstrated that appropriate selection of the mask is a major factor in sleep therapy success.\textsuperscript{2,3} For patients with sleep apnea there are four key criteria that should be taken into account when selecting a mask: the patient’s medical condition, the patient’s facial morphology, patient psychosocial issues, and personal preference.

Philips Respironics provides a complete line of nasal, full-face, and minimal-contact masks that reflects our commitment to innovation and patient comfort.

\textsuperscript{2}Massie, CA, PhD., Hart, RW, MD, FCCP. Chest 2003; 123:1112-18

Mask options

Philips Respironics’ innovative sleep therapy masks are developed for comfort, durability, and effective, hassle-free use. With our wide range of choices, patients are sure to find the right masks for them and their preferred sleeping positions.

\textbf{Nasal mask}
Our nasal mask line is focused on fit and comfort and offers many choices.

\textbf{Full-face masks}
Those who breathe through their mouths will find several effective options in this group of masks.

\textbf{Minimal-contact masks}
These masks are designed for those who prefer alternative solutions but still demand comfort and effectiveness.
Compliance monitoring

Compliance monitoring of sleep therapy systems has become a critical component of patient care. Medicare patients are required to demonstrate therapy compliance with their devices during the first three months of care in order to keep their equipment. If the patient does not meet the required hours of use, the provider may need to remove the device from the patient’s home. All Philips Respironics sleep therapy devices collect data about patient usage and compliance data. This data can be uploaded into a patient management system for access by the care team.

Medicare requirements

Once PAP has been implemented, Medicare and commercial insurance providers may have specific requirements that must be met in order for patients to retain their PAP equipment. The Medicare requirements are as follows:

- The patient must meet with his or her prescribing physician 31 to 90 days after PAP is implemented to document efficacy of treatment
- The patient must use the equipment four hours per night for 30 consecutive days, 70% of the time

This information should not be considered to be either legal or reimbursement advice. Given the rapid and constant change in public and private reimbursement, Philips Respironics cannot guarantee the accuracy or timeliness of this information and urges you to seek your own counsel and experts for guidance related to reimbursement, including coverage, coding and payment.
Patient profiles

Fifty-four year-old Lisa cares for her aging parents, and is also a new grandmother. She has hypertension that is managed with medication, shows signs of depression, gets up frequently during the night to urinate, and often has a dry throat and mouth in the morning. She also has a recessed chin, and snores so loudly that it disrupts her family’s sleep. An in-home sleep study revealed she had an apnea-hypopnea index (AHI) of 35, indicating she has severe OSA.

For home use, Lisa was prescribed an auto CPAP device that automatically adjusts the pressure over time while staying between a prescribed pressure range. After three months of therapy, Lisa reports that she gets better sleep, has more energy, and her overall mood has improved.

Brian is a 66-year-old retired truck driver with diabetes, high blood pressure, a history of migraine headaches, and pollen allergies. He was also recently diagnosed with heart failure. His wife complained that he snored loudly and gasped for air while sleeping. He was forgetful, and very tired during the day. An in-lab diagnostic sleep study indicated that he had severe sleep apnea, with 40 apneas per hour, an AHI of 44, and a central apnea index of 25.

A titration study was completed, and Brian showed vast improvement on an auto servo-ventilation device and pillows mask, with a final AHI of four. After three months of home use, Brian has more energy, and he and his wife are sleeping better. His cardiologist has noted that Brian has an improved daytime blood pressure and ejection fraction as a result of treating his sleep apnea.