Bi-level Therapy: Understanding Nocturnal Hypoventilation & Improving Patient Outcomes
Objectives

- Discuss nocturnal ventilation characteristics that may indicate underlying conditions
- Understand benefits & qualifications of bi-level therapy
- Recognize main treatment settings
- Review the benefits of therapy monitoring
Importance of Sleep

Sleep is important to health because it allows for metabolic restoration of the brain and body. The following occur during sleep:

- **Growth hormone secretion**
- **Alterations in breathing (slow & shallow)**

When a person does not get the right amount of sleep, it affects their health in some of the following ways:

- **Lack of concentration & judgment**
- **Increased irritability & mood problems**
- **Higher risk for anxiety & depression**

Sleep-Disordered Breathing (SDB)
Types of SDB

- Obstructive sleep apnea (OSA)
- Central sleep apnea (CSA)
- Complex sleep apnea (CompSA)
- Nocturnal hypoventilation
Sleep Apnea Risk Factors

- Male gender
- Post-menopausal female
- Hypertension
- Family history of sleep problems
- Anatomic abnormalities of the upper
- Obesity
- Alcohol or sedative use
- Endocrine and metabolic disorders

Lin CM et al. Sleep Med Rev 2008
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OSA Indicators/Symptoms

- Excessive daytime sleepiness
- Loud or frequent snoring
- Irregular breathing during sleep
- Morning headaches
- Heart failure
- Difficulty concentrating or memory loss
- Hypertension
- Obesity (BMI > 30)
Pulmonary Ventilation
What Is Ventilation?

The 2 basic functions of the Respiratory System are:
1. Ventilation (movement of air into and out of the lungs)
2. Respiration (gas exchange at the alveoli)

The volume of gas in the lungs at any instant depends mainly on:

1. Activity of muscles of inspiration and expiration
2. The mechanics of the lungs and chest wall
3. Ventilation central control
Ventilation Central Control

Brain (medulla)
- Respiratory Control Center tells body to breathe

Nervous System
- Sends messages between brain and lungs
- Measures blood gas levels and PH

Lungs
- Transport $O_2$ into the body and $CO_2$ out of the body

Muscles of Respiration
- Expand & retract the lungs to take in and push out air

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- Decreased respiratory drive with a small fall in ventilation and rise in carbon dioxide (CO2)
- Small reductions in tidal volume are compensated by an increase in breath rate
- Alterations in respiratory system mechanics
  - Increased upper airway resistance
  - Altered chest wall mechanics
- Depressed arousal responses to chemical stimuli
Alveolar hypoventilation is defined as insufficient ventilation leading to **hypercapnia**, (PaCO$_2$ ≥45mmHg). It may be an acute or chronic and is caused by several mechanisms.

- Alveolar hypoventilation may be **acute** or **chronic** and may be caused by several disorders.

- Night time and Daytime Hypoventilation

- Respiratory insufficiency patients have an additional 10–15% drop in ventilation at sleep onset (SO)
  - Further reduction in REM sleep (10–20%), due to falling tidal volumes not counteracted by increased respiratory rate
When Does Hypoventilation Occur?

- Activity of respiratory muscles is impaired
  - Respiratory muscle weakness
  - Obesity

- Mechanics of chest wall and lungs are compromised
  - Chest wall stiffness
  - Lung disease
  - Upper airway dysfunction
  - Obesity

- Impaired ventilatory control
  - Neurological conditions
  - Central Sleep Apnea Syndromes

Learn more about nocturnal ventilation in different conditions

COPD

Neuromuscular Disease (NMD)
Hypoventilation

- Premature cycling to expiration
- Decreased inspiratory time
- Small tidal volumes
- Decreased gas exchange
- Increased missed triggers
- Increased work of breathing
Hypoventilation in COPD Patients
Hypoventilation & COPD

- Hypoventilation is not uncommon in patients with severe COPD, therefore it is a marker of disease severity.

- Hypoventilation in COPD involves multiple mechanisms, including:
  - Decreased responsiveness to hypoxia and hypercapnia
  - Increased Ventilation-Perfusion mismatch leading to increased dead space
  - Decreased diaphragmatic function due to fatigue and hyperinflation

- Alveolar hypoventilation in COPD usually does not occur unless the forced expiratory volume in 1 second (FEV$_1$) is less than 1L or 35% of the predicted value.
Effects of Nocturnal Ventilation in COPD

- Typical sleep-related desaturations
  - Due to nocturnal hypoventilation or central apneas
  - Not associated with obstructive apneas

- Greater decrease in alveolar ventilation leading to poor gas exchange and hypoventilation (patients with impaired lung function)

- Worsening daytime blood gases
Overlap Syndrome
Overlap Syndrome

- Consists of both:
  - Upper airway obstruction (OSA) during sleep
  - Nocturnal hypoventilation (COPD)
  - Approximately 10% of sleep apnea patients may have some degree of COPD*

- May demonstrate prolonged hypoxemia during sleep
- \( \text{SpO}_2 \) often does not recover between episodes of repetitive apnea
- If left untreated, morbidity and mortality much higher than for either disease process alone

* Douglas NJ. Sleep Disorders 1998
Hypoventilation in Neuromuscular Disease (NMD) Patients
Brain (medulla) - Respiratory Control Center tells body to breathe

Nervous System
- sends messages between brain and lungs
- measures blood gas levels and pH

Muscles of Respiration
- expand & retract the lungs to take in and push out air

Muscular Dystrophy
- causes muscle weakness

Lungs
- transport O2 into the body and CO2 out of the body

ALS is a disease of the nerve cells

Hypoventilation & NMD

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Because of muscle weakness, the body cannot assist with the expansion of the lungs and contraction of the diaphragm.

- Lung volumes are decreased
- Respiratory rates are increased to compensate for decreased lung volume
Patient presents with both nocturnal hypoventilation and central apneas
- Especially during REM sleep

Significant diaphragmatic impairment or severe global respiratory muscle weakness
- Accessory muscles ‘recruited’ during NREM
- Muscles may not be recruited during REM sleep, resulting in falls in SpO₂ and/or sleep fragmentation
Benefits of Bilevel Therapy
Bilevel Therapy

Bilevel positive airway pressure, commonly referred to by the trademarked names BiPAP, is a form of NIV (Non invasive Ventilation) that uses a time-cycled or flow-cycled change between two different applied levels of positive airway pressure (IPAP and EPAP)*

How Does Bilevel Work?

• Prevents nocturnal hypoventilation and hypoxia
  o Cardiovascular consequences

• Improves ventilation (gas exchange)
  o Reduces nocturnal CO$_2$ levels
  o Increases nocturnal O$_2$ levels
  o Improves daytime blood gases

• Stabilizes upper airway

• Rests respiratory muscles

• Decreases daytime sleepiness by correcting sleep architecture
  o Reduces arousals due to SDB and associated sleep fragmentation

*. Antonescu-Turcu A & Parthasarathy S. Respir Care 2010

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Patient Benefits of Bilevel

1. Hospitalizations¹
2. Activities of daily living²
3. Improves quality of life³

2. Windisch W et al. Chest 2005

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Consider Using Bilevel When...

- Patient is not tolerating **high pressure** settings\(^1\)
- Events persist at 15 cm H\(_2\)O\(^2\)
- Patient complains of **not being able to exhale** despite expiratory pressure relief (EPR\(^{\text{TM}}\)) feature\(^1\)
- Patient has history of **ventilatory insufficiency** such as chronic obstructive pulmonary disease (COPD), restrictive lung disease, or obesity hypoventilation syndrome (OHS)\(^1\)
- Must be a 4 cm H\(_2\)O difference between IPAP and EPAP to be considered bilevel therapy\(^2\)

Bilevel Modes of Therapy

- **Spontaneous (S)**
  - IPAP and EPAP

- **Spontaneous Timed (S/T)**
  - IPAP and EPAP
  - Backup Rate

- **PAC**
  - Spontaneous Timed (S/T)
    - IPAP and EPAP
    - Backup Rate / Ti

- **VAuto**
  - VAuto with Fixed Pressure Support (PS)
    - Max IPAP and Min EPAP
    - PS

- **ASV/ASVAuto**
  - Adaptive Servo-ventilation targeting recent minute ventilation
    - Min and Max PS
    - EPAP / Auto EPAP

- **iVAPS**
  - Intelligent Volume Assured Pressure Support
    - Min and Max PS
    - EPAP
Qualification Criteria
Qualification Criteria

Medicare Policy for Treatment of OSA
(CMS Revision Effective Date: 7/1/2016)

**CPAP Qualifications (E0601)**

- Patient must meet **all** the following criteria to qualify for an E0601 device (CPAP)
- Patient has had a **face-to-face clinical evaluation** by treating physician prior to sleep test. See back for additional information.
- Patient has had a **Medicare-covered sleep test** that meets either of the following criteria:
  - AHI/RDI\(^2\) is \(> 15\) events per hour with a minimum of \(30\) events; or,
  - AHI/RDI is \(5 \leq \text{events per hour} \leq 14\) events per hour with a minimum of \(10\) events and documentation of excessive daytime sleepiness, impaired cognition, mood disorders, insomnia, hypertension, ischemic heart disease or history of stroke. See back for additional information.
- Diagnosed with obstructive sleep apnea (OSA) (ICD-9 code 372.23 or ICD-10 code G47.33)
- **Patient and/or caregiver has received instruction** from the supplier of the CPAP device and accessories in the proper use and care of the equipment.

**Bilevel Qualifications (E0470)**

- Patient must meet **all** the following criteria to qualify for an E0470 device (bilevel without a backup rate)
- **Patient is qualified for E0601 (CPAP)**
- **Treating physician documented that both of the following issues were addressed** prior to changing a patient from an E0601 to an E0470 device due to ineffective therapy:
  - An appropriate interface has been properly fitted and the beneficiary is using it without difficulty. The properly fitted interface will be used with the E0470 device; and
  - The current pressure setting of the E0601 prevents the beneficiary from tolerating the therapy, and lower pressure settings of the E0601 were tried but failed to:
    - Adequately control the symptoms of OSA; or
    - Improve sleep quality; or
    - Reduce the AHI/RDI to acceptable levels.

- **Has CPAP been used < 3 months?**
  - (i.e. CPAP was tried and found ineffective during the initial 3-month home trial)
  - If “No,” a new initial face-to-face clinical evaluation is required, but not a new sleep test. A new 3-month trial would begin for use of the bilevel. See back for additional information.
  - If “Yes,” the patient is qualified for an E0470 device (bilevel without a backup rate, such as the AirCurve™ 10 VAuto). See back for additional information.

**Documentation for Continued Coverage**
(For continuing to bill months 4–13)

- Between the 31st and 91st day, treating physician has a face-to-face clinical re-evaluation with patient documenting that symptoms of OSA improved.
- Objective evidence of adherence to use of the positive airway pressure (PAP) device reviewed by treating physician. (Adherence is defined as use of PAP \(> 4\) hours per night on 70% of nights during a consecutive 30-day period anytime during the first 3 months of initial usage.)
Qualification Criteria

Bilevel Conversion Pathways

**Months 1–2**
(from initial CPAP setup, days 1–60)
- Document criteria for ineffective CPAP therapy
- Rx for E0470
- Clinical re-evaluation and documentation of adherence on the bilevel between 31st – 91st day from CPAP initiation

**Months 2–3**
(from initial CPAP setup, days 61–90)
- Document criteria for ineffective CPAP therapy
- Rx for E0470
- Clinical re-evaluation and documentation of adherence on the bilevel by 120th day from CPAP initiation

**After 3 Months**
(from initial CPAP setup, post-90 days)
- Document criteria for ineffective CPAP therapy
- Rx for E0470
- New face-to-face clinical evaluation
- Clinical re-evaluation and documentation of adherence on the bilevel between 31st – 91st day from bilevel initiation

1. **Face-to-face clinical evaluation** may include sleep history and symptoms of OSA, Epworth Sleepiness Scale and physical exam documenting body mass index, neck circumference and a focused cardiopulmonary and upper airway evaluation. Some of these elements, in addition to other details, must be documented in patient charts. Each element would not have to be addressed in every evaluation.

2. **Medicare-covered sleep tests** include Type I, Type II, Type III and Type IV (must monitor and record a minimum of three [3] channels). All sleep tests must be interpreted by a physician who holds either: current certification in sleep medicine by the American Board of Sleep Medicine (ABSM); or, current subspecialty certification in sleep medicine by a member board of the American Board of Medical Specialties (ABMS); or, completed residency or fellowship training by an ABMS member board and has completed all the requirements for subspecialty certification in sleep medicine except the examination itself and only until the time of reporting of the first examination for which the physician is eligible, or, active staff membership of a sleep center or laboratory accredited by the American Academy of Sleep Medicine (AASM), Accreditation Commission for Health Care (ACHC) or The Joint Commission (JJC, formerly the Joint Commission on Accreditation of Healthcare Organizations – JCAHO).

3. **AHI** is defined as the average number of episodes of apnea and hypopnea per hour of sleep. **RDI** is defined as the average number of apneas plus hypopneas per hour of recording.

4. **If the patient fails the 12-week trial:** Beneficiaries may qualify for a positive airway pressure device with both:
   - Face-to-face clinical re-evaluation by treating physician to determine etiology of failure to respond to positive airway pressure therapy; and
   - Repeat sleep test in a facility-based setting (Type 1 study).

This information is provided as of the date listed and all coding and reimbursement information is subject to change without notice. It is the provider's responsibility to verify coding and coverage with payors directly. For a full description of the policy go to [www.cms.hhs.gov](http://www.cms.hhs.gov). To contact the ResMed reimbursement hotline, dial 1-800-lect option 4.
Respiratory Assist Device (RAD) Qualifying Guidelines

I. Restrictive Thoracic Disorders

Documentation of neuromuscular disease or severe thoracic cage abnormality in the patient’s medical record

Perform one of the following:
- ABGs (done while awake and on prescribed FiO₂): PaCO₂ ≥ 45 mm Hg or
- Sleep oximetry: Oxygen saturation ≤ 88% for ≥ 5 minutes, minimum 2 hours of recording time (on patient’s prescribed FiO₂) or
- For neuromuscular disease only: Either FVC < 50% of predicted or MIP < 60 cm H₂O

COPD does not contribute significantly to pulmonary limitation

(E0470) or (E0471)
Based on the treating physician’s judgment

II. COPD

ABGs (done while awake and on prescribed FiO₂): PaCO₂ ≥ 52 mm Hg

Sleep oximetry: Oxygen saturation ≤ 88% for ≥ a cumulative 5 minutes, minimum 2 hours nocturnal recording time (on 2 L/min O₂ or patient’s prescribed FiO₂, whichever is higher)

OSA and CPAP treatment has been considered and ruled out (formal sleep testing is not required if medical record demonstrates sleep apnea is not preeminent cause of awake hypoxemia or nocturnal arterial oxygen desaturation)

(E0470)

For COPD patients to qualify for a RAD with backup rate (E0471):

**Situation 1** After period of initial use of an E0470; ABG (done while awake and on prescribed FiO₂) shows PaCO₂ worsens ≥ 7 mm Hg compared to original ABG result; facility-based PSG demonstrates oxygen saturation ≤ 88% for ≥ a cumulative 5 minutes, minimum 2 hours nocturnal recording time while on an E0470 and not caused by obstructive upper airway events (ie, AIH < 5).

**Situation 2** No sooner than 61 days after initial issue of E0470; ABG (done while awake and on prescribed FiO₂) shows PaCO₂ ≥ 52 mm Hg; Sleep oximetry on an E0470 demonstrates oxygen saturation ≤ 88% for ≥ a cumulative 5 minutes, minimum 2 hours nocturnal recording time (on 2 L/min O₂ or patients prescribed FiO₂, whichever is higher).

Respiratory Assist Device (RAD) Documentation Requirements for Continued Coverage Beyond First 3 Months

Patients on an E0470 or E0471 device must be reevaluated no sooner than 61 days after initiating therapy.

Required Documentation
- Progress of relevant symptoms
- Signed and dated statement by treating physician declaring patient using average 4 hours per 24-hour period and patient benefiting from use

ResMed E0470 and E0471 Devices

E0470—Bilevel without a backup rate:
- AirCurve™ 10 VAuto
- AirCurve™ 10 S
- VPAP™ COPD

E0471—Bilevel with a backup rate:
- AirCurve 10 ST
- AirCurve 10 ASV
- VPAP ST-A
- Stellar™

* For invasive use, code E0472
III. Central Sleep Apnea or Complex Sleep Apnea

Complete facility-based attended PSG documents the following

Diagnosis of central sleep apnea or complex sleep apnea (see definition below)

Improvement of sleep-associated hypoventilation with the use of an E0470 or E0471 device on settings that will be prescribed for initial use at home (on patient’s prescribed FiO2).

(E0470) or (E0471) Based on the treating physician’s judgment

IV. Hypoventilation

ABGs (done while awake and on prescribed FiO2)
PaCO2 ≥ 45 mm Hg

Spirometry
FEV1/FVC ≥ 70%
Refer to SEVERE COPD category for information about device coverage for patients with FEV1/FVC <70%

 Covered E0470 is being used

Spirometry
FEV1/FVC ≥ 70%
Refer to SEVERE COPD category for information about device coverage for patients with FEV1/FVC <70%

• ABGs (done during sleep or immediately upon awakening on prescribed FiO2 show) PaCO2 worsened ≥ 7 mm Hg compared to original ABG or

• PSG or HST demonstrates oxygen saturation ≤ 88% for ≥ 5 minutes, minimum 2 hours nocturnal recording time not caused by obstructive upper airway events (ie, AHI < 5)

(E0470)

Complex sleep apnea (CompSA) is a form of central apnea identified by all of the following:
1. PSG demonstrates the persistence or emergence of central apneas or central hypopneas upon exposure to CPAP or an E0470 device when titrated to the point where obstructive events have been effectively treated (AHI < 5 per hour); and
2. After resolution of the obstructive events, the sum total of central apneas plus central hypopneas is > 50% of the total apneas plus hypopneas; and
3. After resolution of the obstructive events, CAHI** ≥ 5 per hour


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ResMed reimbursement hotline, dial and select option 4.

A diagnosis of central sleep apnea (CSA) requires all of the following:
1. An apnea–hypopnea index ≥ 5; and
2. Sum total of central apneas plus central hypopneas > 50% of the total apneas and hypopneas; and
3. CAHI* ≥ 5 per hour; and
4. Presence of either sleepiness, difficulty initiating or maintaining sleep, frequent awakenings, or non restorative sleep, awakening short of breath, snoring, or witnessed apneas; and
5. No evidence of daytime or nocturnal hypoventilation

Complex sleep apnea (CompSA) is a form of central apnea identified by all of the following:
1. PSG demonstrates the persistence or emergence of central apneas or central hypopneas upon exposure to CPAP or an E0470 device when titrated to the point where obstructive events have been effectively treated (AHI < 5 per hour); and
2. After resolution of the obstructive events, the sum total of central apneas plus central hypopneas is > 50% of the total apneas plus hypopneas; and
3. After resolution of the obstructive events, CAHI** ≥ 5 per hour

Note: Not all types of HST are appropriate for the evaluation of CSA or CompSA as necessary parameters are not monitored.
*For CSA diagnosis, central apnea-central hypopnea index (CAHI) is defined as the average number of episodes of central apnea and central hypopnea per hour of sleep without the use of a PAP device.
**For CompSA, the CAHI is determined during the use of a PAP device after obstructive events have disappeared.

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Bilevel Settings
EPAP, IPAP and PS

**EPAP**
- Overcome obstructive apneas and hypopneas
- Improve oxygenation

**IPAP**
- Achieve adequate tidal volume
- Get the respiratory rate (RR) below 25 bpm
- Decrease the work of breathing
- Reduce PaCO$_2$
- IPAP = EPAP + PS

**Pressure Support (PS)**
- PS = IPAP - EPAP
- The greater the PS the greater the ventilatory support
- Care must be taken not to over-ventilate

The chart shows the relationship between IPAP, EPAP, and Pressure Support (PS). The pressure at IPAP is applied continuously to prevent upper airway collapse, while EPAP is applied to maintain upper airway patency. Pressure Support (PS) is the difference between IPAP and EPAP and adds additional support as needed.
Synchrony Features and Benefits
Synchrony Challenges

NIV patients often remain ineffectively treated:

• 40% of NIV patients experience asynchrony in 10% or more of their breaths

• Patients can experience
  o Discomfort
  o Ineffective ventilation
  o Treatment refusal

Epstein SK. Respir Care 2011
1. Transition to Inspiration: Trigger Sensitivity Settings

You would change to **MORE** sensitive (High):

If the patient is having difficulty triggering the therapy (i.e., breaths are not being sensed, due to:

- Upper airway obstruction
- AutoPEEP
- Weak respiratory muscles
- Increased circuit resistance

You would change to **LESS** sensitive (Low):

If the device is too sensitive to the patient, causing “auto-triggering. Auto-triggering or noticeable extra triggering may be due to cardiac oscillations.
2. During Pressurization: Rise Time

- Patients with a high inspiratory effort require fastest transition from EPAP to IPAP (e.g., COPD).
- Patients that are startled by too much air may like a slower transition (e.g., neuromuscular disorders / obesity-hypoventilation).
3. During Inspiration: Ti Controls

For NMD patients, setting a prolonged Ti Min (minimum time the patient have to spend in inspiration) will ensure adequate breath time and prevent premature cycling.

Shortened TiMax (limits inspiratory time) prevents air trapping and hyperinflation.

Crucial to ensure effective synchronization.
4. At transition to expiration
   • Premature cycle
   • Delayed cycle

May need to be adjusted to be **MORE** sensitive…

Earlier spontaneous cycling may be helpful in some patients with severe acute exacerbation of COPD who **require exhalation to occur sooner**

May need to be made **LESS** sensitive…

In patients with restrictive disorders. A frequent complaint in these patients is early cycling (they haven’t finished inspiring and the machine ended inspiration) giving a feels that **exhalation needs to occur later**.
Recommended Initial Therapy Settings
Normal Lungs

There are some patients with normal lung function that may still require ventilation support. Patients with a spinal cord injury can often fall in this group. They may have a restrictive effect, but their lungs are still able to function normally. Despite this they may require ventilation assistance.

When not using EasyBreathe, the starting settings below are recommended for patients with normal lung mechanics*.

<table>
<thead>
<tr>
<th>Recommended Settings</th>
<th>Normal Lung Mechanics</th>
</tr>
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<tbody>
<tr>
<td>IPAP [cm H₂O]</td>
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<tr>
<td>EPAP [cm H₂O]</td>
<td>5</td>
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<tr>
<td>Ti Max [sec]</td>
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<tr>
<td>Ti Min [sec]</td>
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<td>Rise time [ms]</td>
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<td>Trigger sensitivity</td>
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<tr>
<td>Cycle sensitivity</td>
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<tr>
<td>PS [cm H₂O]</td>
<td>6</td>
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</tbody>
</table>

* Sleep Lab Titration Guide. ResMed 2017
Obstructive Lung Disease (COPD, Emphysema)

Patients with obstructive lung disease have chronic airflow limitation. These patients have particular difficulty exhaling air. This can lead to air trapping and hyperinflation. Because these patients require longer exhalation, asynchrony can exist when using standard bilevel settings.

The recommended settings for a ResMed bilevel device provide a good baseline for to initiate therapy on an obstructive patient. The settings use a faster rise time to ensure that the lungs are filled quickly, and a high cycle sensitivity to provide an earlier cycle to exhalation. The rapid inhalation and prolonged exhalation will help to prevent auto-PEEP and preserve synchrony.

<table>
<thead>
<tr>
<th>Recommended Settings</th>
<th>Obstructive Lung Disease</th>
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<tbody>
<tr>
<td>IPAP [cm H₂O]</td>
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<tr>
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<tr>
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<td>PS [cm H₂O]</td>
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</table>
Restrictive Lung Disease (Neuromuscular Disease, chest wall abnormality)

Patients with restrictive lung diseases have a difficult time maintaining the inhalation phase long enough to ensure adequate tidal volume and gas exchange. This can be caused by a physical restriction of the lungs or by neuromuscular weakness.

The suggested settings use a **low cycle sensitivity** and **longer Ti Min**. This creates a longer inhalation time to help increase tidal volume and gas exchange.

<table>
<thead>
<tr>
<th>Recommended Settings</th>
<th>Restrictive Lung Disease</th>
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</thead>
<tbody>
<tr>
<td>IPAP [cm H₂O]</td>
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Benefits of Therapy Monitoring
Early remote monitoring helps identify patients who are not on Bilevel therapy and are struggling with the therapy as well as any potential issues. It lets you intervene so that patients are comfortable and receiving the therapy they need.
Making Data Available to Providers and Patients

Data for **Physicians/Clinicians** and **Providers**

- View detailed data, make remote settings changes, troubleshoot remotely with Remote Assist

Automated coaching and support for **Patients**

- Patient access to individualized coaching, education, and therapy data
## Wireless patients

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Action Groups is monitoring all of your patients at once.
Patients are automatically sorted into groups as they achieve initial compliance or whose data indicated they may need additional help.
Once you’ve marked patients as “reviewed,” they’re removed from the group, so you can concentrate on others.
World’s Largest Study on Sleep Apnea and Digital Connected Care

New! myAir clinical evidence published!

- Observational study that included more than 128,000 people!

Malhotra A et al. CHEST 2017
Questions?