COPD and noninvasive ventilation

Reducing hospital readmissions, improving quality of life

For more than three decades Philips Respironics has been developing meaningful innovations and providing service and support aimed at maximizing your clinical success. We continue that commitment in support of patients and providers in an effort to help reduce potential hospital readmissions for acute exacerbations of COPD.

Consider the following:

- In 2012, over one million COPD patients were admitted to US hospitals for acute exacerbation.[1]
- Hospital readmissions for COPD within 30 days occur in 23% of cases.[2]
- Many of these readmissions may be preventable.[2]
- The estimated cost of these readmissions to the US healthcare system is over $49 billion.[3]
- Hospitalizations are among the most expensive forms of healthcare, and inpatient stays increase the risk of acquiring healthcare-associated infections.[4]

There is strong evidence that supports noninvasive ventilation (NIV) as an effective therapy option for most COPD patients hospitalized with acute exacerbations.[5] NIV has shown to be the most effective treatment option for reducing CO_2 in hypercapnic COPD patients. When initiated early, this can help reduce hospital admission rates, length of stay, and the cost of healthcare while maintaining or improving quality of life.[5]

Several clinical studies on NIV for hypercapnic COPD show improved blood gases and lower hospitalization rates compared to patients not treated with NIV at home.[6, 7]

1. Perera et al. Acute exacerbations of COPD in the United States, inpatient burden and predictors of cost and mortality. COPD 2012;9:131-144.
2. Jencks et al. Rehospitalizations among Patients in the Medicare Fee-For-Service Program. N Engl J Med. 2009;360:1418-28.
3. Toy EL et al. The economic impact of exacerbations of chronic obstructive pulmonary disease and exacerbation definition. COPD. 2010;7(3):214-28.
4. PRHI Readmission Reduction Guide. A Manual for Preventing Hospitalizations. January 2011:4.
5. Ligtowler JV et al. Non-invasive positive pressure ventilation to treat respiratory failure resulting from exacerbations of COPD; Cochrane Systematic Review. BMJ. 2003. Jan 25:326(7382):185.
6. Duiverman ML, Wempe JB, et al. Two-year home-based nocturnal noninvasive ventilation added to rehabilitation in chronic obstructive pulmonary disease patients: a randomized controlled trial. Respir Res. 2011 Aug 23;12:112.
7. De Backer L, Vos W, et al. The effects of long-term noninvasive ventilation in hypercapnic COPD patients: a randomized controlled pilot study. Int J Chron Obstruct Pulmon Dis. 2011;6:615-24.

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NIV therapy solutions

BiPAP S/T

Basic ventilation with backup rate in a noninvasive ventilator that is compact, lightweight and simple to operate. BiPAP S/T incorporates proven BiPAP technology, Digital Auto-Trak sensitivity, adjustable rise time, integrated alarms, and Encore and DirectView patient management systems.

BiPAP AVAPS

Ideal for treating patients with COPD and other diseases that cause hypoventilation. AVAPS provides a targeted tidal volume for each breath and has been shown to reduce elevated CO_2 levels. It offers pressure support up to 30 cm H_2O and includes Encore and DirectView patient management systems.

Trilogy100

For more challenging clinical needs, Trilogy allows for pressure support up to 40 cm H_2O and includes AVAPS-AE and Adjustable AVAPS for added control. AVAPS-AE is a bi-level therapy mode that automatically adjusts Expiratory Positive Airway Pressure (EPAP), pressure support, and the backup breath rate. AVAPS-AE automatically adjusts EPAP to maintain a patent airway. It also monitors delivered tidal volume and adjusts pressure support accordingly to provide the average target tidal volume. AVAPS-AE has the ability to maintain a backup breath rate based on the patient's own spontaneous breathing rate.

Ordering information

Item	Part number
BiPAP S/T	DS1060S
BiPAP S/T, with humidifier	DS1060HS
BiPAP S/T, with Heated Tube humidifier	DS1060TS
BiPAP AVAPS	DS1160S
BiPAP AVAPS, with humidifier	DS1160HS
BiPAP AVAPS, with Heated Tube humidifier	DS1160TS
Trilogy100	1054260

Philips Respironics NIV advanced technologies provide comfort and synchrony for patients suffering with respiratory insufficiency, including COPD.

Digital Auto-Trak enables exceptional patient/ventilator synchrony by automatically adjusting variable trigger and cycle thresholds—all while recognizing and compensating for leak.

AVAPS (Average Volume Assured Pressure Support) automatically adapts to disease progression and changing patient needs while maintaining a target tidal volume, and has been shown to reduce elevated CO_2 levels.

AVAPS-AE offers additional automatic adjustment of EPAP (Expiratory Positive Airway Pressure) and a backup breath rate to meet the needs of the most challenging patients, including those needing longer expiratory times to reduce the effects of flow limitation and air trapping.

Allies in Better Sleep and Breathing

At Philips Respironics we're listening carefully to you and working toward solutions that contribute to healthy patients and healthy businesses.

Contact your Philips Respironics account representative for more information

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