A photograph of a middle-aged man with grey hair, wearing a light blue hospital gown, lying in a bed. He is wearing a nasal cannula and has his eyes closed, appearing to be resting or sleeping. The bed has a patterned grey and beige coverlet. In the background, a lamp is visible on the left side.

PHILIPS

COPD

A breakthrough in treating severe COPD

Severe COPD is a major cause of hospitalizations

Home use of noninvasive ventilation (NIV) plus oxygen versus oxygen alone has been shown to reduce hospitalization and readmissions for patients with persistent hypercapnia and severe COPD within 12 months¹

Limited therapy options and poor outcomes characterize challenges in treating patients with severe COPD and persistent hypercapnia

- COPD is a major cause of morbidity and mortality, and a cause of substantial increases in health care costs, mainly as a result of inpatient admissions²
- National data indicate that more than 20% of patients hospitalized because of COPD are re-hospitalized within 30 days^{3,4}
- Hospitals may be penalized for 30-day readmission of patients with COPD¹
- Few treatments have worked thus far to prevent hospital readmission and death in this patient population¹



Home use of noninvasive ventilation (NIV) **plus oxygen** versus oxygen alone reduces hospitalizations and hospital readmissions within 12 months¹

Home oxygen therapy and the addition of home NIV prolonged time to readmission or death within 12 months¹

According to a prospective study reported in the Journal of the American Medical Association (JAMA) home oxygen therapy plus home noninvasive ventilation improved outcomes in severe COPD.

- A 12-month clinical trial in which 116 COPD patients with persistent hypercapnia were randomized to home oxygen alone (n =59) or oxygen plus home NIV (n=57)
- NIV was delivered using equipment manufactured by Philips Respironics and ResMed with each center restricted to a single model

The 12-month risk of readmission or prolonged death

Home oxygen therapy alone group (n=59)

80.4%

Home oxygen therapy plus home noninvasive ventilation group (n=57)

63.4%

The absolute risk reduction was 17% with the addition of NIV

17%

The median follow-up times were 8.1 months (interquartile range, 2.3-12.6 months) for the home oxygen therapy alone group and 12.2 months (interquartile range, 8.9-12.9 months) for the home oxygen therapy plus home noninvasive ventilation (NIV) group.

Learn more about it



Read the JAMA article:

Go to JamaNetwork.com and search “NIV with Oxygen Therapy”

Watch a video presentation:

Go to rtmagazine.com and search “NIV and COPD Readmissions”

Or read the data write up and watch a video at Touch Respiratory:

Go to Touchrespiratory.com and search “HOT-HMV Interview”

Access medical education at CHEST® CME Resource Center: “HOT HMV: Improving Admission-Free Survival in Persistent Hypercapnic COPD”:

<http://journal.cme.chestnet.org/copd-hot-hmv>

Hospitals and payers can save millions in admission costs for severe COPD patients as part of a multifaceted care program using Trilogy with AVAPS-AE⁵

According to an economic model study published in Value in Health, hospitals and payers saved money when using advanced NIV in an interventional multifaceted care program⁵

- Hospitals have the opportunity to reduce COPD admission-related costs with advanced NIV
- With advanced NIV, payers have the opportunity to reduce costs associated with managing patients on the basis of reduced admissions
- This was an economic model study of clinical and cost data, obtained from a quality improvement program and published reports, developed to calculate savings associated with the use of advanced NIV averaged volume assured pressure support (AVAPS) with the auto expiratory positive airway pressure, Trilogy100, by Philips Respironics, Inc, compared against respiratory assist-device (RAD) with bi-level and no NIV.⁵

Savings with a multi-faceted program* using Trilogy with AVAPS-AE in severe COPD⁵

For hospitals

30-Day cumulative admission savings versus no NIV or RAD

\$402,981

(N=250 severe COPD patients)

For payer

3-Year cumulative savings vs no NIV

\$326 million

3-year cumulative savings vs RAD

\$1.04 billion

(N=100,00 severe COPD patients)

*The multifaceted clinical intervention program involved initiation of noninvasive positive pressure ventilation, respiratory therapist-led care, medication reconciliation, appropriate oxygen therapy initiation, and patient education compared with RAD and NIV or advanced NIV.

Learn more about it

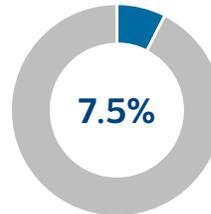
Read the abstract:

ValueInHealthJournal.com and search "Use of Home Noninvasive Ventilation for COPD"

Missed savings opportunity⁶

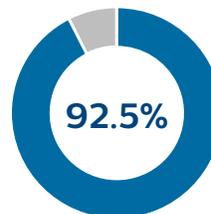
Despite reduction in COPD-related hospitalizations, NIV is underused⁶

- This retrospective analysis of administrative claims data published in the American Journal of Medicine with over one million patients who had been hospitalized for severe COPD found that **only 7.5% of patients with COPD received some form of positive airway pressure (PAP) therapy⁶**
- Data were from patients hospitalized with COPD, who received or did not receive PAP therapy in the form of continuous positive airway pressure (CPAP), or bi-level positive airway pressure (BiPAP), or noninvasive positive pressure ventilation in a home ventilator (NIV)
- Initiation of PAP therapy was associated with a reduction in hospitalization among patients with COPD



The gap in PAP⁶

92.5% of >1 Million COPD patients did not receive any form of PAP therapy, which is associated with the reduction in hospitalizations



Learn more about it

Read the abstract:

Go to amjmed.com and search "Positive Airway Pressure Therapies"



Are you using NIV with your severe COPD patients?

Data demonstrate value in changing patient care plans for severe COPD:

- Home noninvasive ventilation helps decrease readmissions and overall costs of caring for patients with severe COPD and persistent hypercapnia¹
- Multifaceted RT lead care programs prove to optimize patient outcomes and includes⁵
 - Noninvasive positive pressure ventilation with AVAPS-AE*
 - Respiratory therapist-led care
 - Medication reconciliation
 - Appropriate oxygen therapy initiation
 - Patient education
- Despite reduction in COPD-related hospitalizations, NIV is an underused strategy⁶

* Averaged volume assured pressure support (AVAPS) with the auto expiratory (AE) positive airway pressure (PAP) was delivered by Trilogy100, by Philips Respironics, Inc. An additional benefit of AVAPS-AE is that titration does not require hospitalization.

References

- ¹ Murphy PB, et al. Effect of Home Noninvasive Ventilation with Oxygen Therapy vs Oxygen Therapy Alone on Hospital Readmission or Death After an Acute COPD Exacerbation a Randomized Clinical Trial. JAMA. Published online May 21, 2017. doi:10.1001/jama.2017.4451.
- ² Global Initiative for Chronic Obstructive Lung Disease. Global Strategy for the Diagnosis, Management and Prevention of COPD. Global Initiative for Chronic Obstructive Lung Disease. Available from: [http:// goldcopd.org/](http://goldcopd.org/). [Accessed October 14, 2016].
- ³ Jennings JH, Thavarajah K, Mendez M, et al. Pre-discharge bundled or patients with acute exacerbations of chronic obstructive pulmonary disease to reduce re admissions and emergency department visits: a randomized controlled trial. Chest. 2015;147:1227–34.
- ⁴ Shah T, Churpek MM, Coca Perrailon M, et al. Understanding why patients with COPD get readmitted: a large national study to delineate the Medicare population for the readmissions penalty expansion. Chest. 2015;147:1219–26.
- ⁵ Coughlin S, Peyerl FW, Musnon SH, Ravindranath AJ, Lee-Ciong TL. Cost savings from reduced hospitalizations with use of home noninvasive ventilation for COPD. Value in Health. 2017; 20:379–387.
- ⁶ Vasquez MM, McClure LA, Sherrill DL, et al. Positive airway pressure therapies and hospitalization in chronic obstructive pulmonary disease. Am J Med. 2017;130: 809–818.

