References


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

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 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

**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”
- Learn more about it: Touch Respiratory: Go to Touchrespiratory.com and search “Use of Home Noninvasive Ventilation for COPD”

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

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

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 program:

- 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

**Learn more about it**

- Read the abstract: Go to amjmed.com and search “Use of Home Pressure Therapies”
- Go to Touchrespiratory.com and search “Positive Airway Pressure Therapies”
- Read the abstract: Go to JamaNetwork.com and search “Positive Airway Pressure for COPD”

**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 hypercapnia
- Multifaceted RT lead care programs prove to optimize patient outcomes and includes:
  - Noninvasive positive pressure ventilation with AVAPS-AE
  - Respiratory therapist-led care
  - Medication reconciliation
  - Appropriate oxygen therapy titration
  - Patient education
- Despite reduction in COPD-related hospitalizations, NIV is an underused strategy

**Missed savings opportunity**

Despite reduction in COPD-related hospitalizations, NIV is undervalued:

- 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) therapy
- Data were from patients hospitalized with COPD, who received or did not receive PAP therapy in the form of continuous positive airway pressure (C-PAP), or bi-level positive airway pressure (Bi-PAP), 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

**Learn more about it**

- Data were from patients hospitalized with COPD, who received or did not receive PAP therapy in the form of continuous positive airway pressure (C-PAP), or bi-level positive airway pressure (Bi-PAP), 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 PAP among 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 rtmagazine.com and search “NIV and COPD Readmissions”
- Go to Touchrespiratory.com and search “Positive Airway Pressures”
### Home Use of Noninvasive Ventilation (NIV) plus Oxygen versus Oxygen Alone Reduces Hospitalizations and Hospital Readmissions within 12 Months

According to a prospective study reported in the Journal of the American Medical Association (JAMA) home oxygen therapy plus 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).

**The 12-month risk of readmission or death**

<table>
<thead>
<tr>
<th>Group</th>
<th>Median Follow-up Time (Interquartile Range)</th>
<th>12-Month Risk of Readmission or Death</th>
</tr>
</thead>
<tbody>
<tr>
<td>Oxygen Alone</td>
<td>8.1 months (2.3-12.6 months)</td>
<td>80.4%</td>
</tr>
<tr>
<td>Oxygen plus Home NIV</td>
<td></td>
<td>63.4%</td>
</tr>
</tbody>
</table>

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: 8.5-12.9 months) for the home oxygen therapy plus noninvasive ventilation (NIV) group.

### Hospitals and Payers Can Save Millions in Admission Costs for Severe COPD Patients as Part of a Multifaceted Care Program using Trilogy with AVAPS-AE

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 program:

- 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.
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- Initiation of PAP therapy was associated with a reduction in hospitalizations among patients with COPD.
- The gap in PAP

#### Missed Savings Opportunity

Despite reduction in COPD-related hospitalizations, NIV is underused:

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- The gap in PAP

#### Savings with a Multi-Faceted Program

Savings with a multi-faceted program using Trilogy with AVAPS-AE in severe COPD:

- **For hospitals**
  - 30-Day cumulative admission savings vs no NIV or RAD
  - $402,981 (N=250 severe COPD patients)
  - 3-Year cumulative savings vs no NIV or RAD
  - $326 million (N=100,000 severe COPD patients)

- **For payer**
  - 3-Year cumulative savings vs no NIV or RAD
  - $1.04 billion (N=100,000 severe COPD patients)

*The multifaceted care 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 advanced NIV.

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### Are you using NIV with your severe COPD patients?

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  - Respiratory therapist-led care
  - Medication reconciliation
  - Appropriate oxygen therapy initiation
  - Patient education
- **Despite reduction in COPD-related hospitalizations, NIV is an underused strategy**

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- **Read the abstract:** Go to arnnied.com and search “Positive Airway Pressure Therapies”
- **Read the abstract:** Go to ValueInHealthJournal.com and search “Use of Home Noninvasive Ventilation for COPD”
- **Learn more about it:** Go to rtmagazine.com and search “NIV and COPD”
- **Learn more about it:** Go to Touchrespiratory.com and search “Use of Home Oxygen Therapy”
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References


3 Jennings JH, Thaaraaak 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.


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