Reducing COPD exacerbations and readmissions with non-invasive ventilation

In 2012, more than one million COPD patients experienced an acute exacerbation that resulted in hospitalization. At $11,195 per average admission, the estimated cost to the U.S. healthcare system is more than $49 billion dollars annually. Furthermore, approximately 22% of these patients are readmitted within 30 days of discharge. Each hospitalization places a tremendous burden on COPD patients and their families.

In order to address these costs, Medicare has added COPD to the list of diagnoses targeted for reductions in readmissions with a penalty of 3%. Hospitals, insurance providers, care providers and patients are looking for better solutions for the long-term care of COPD patients.
Why NIV for COPD?

If COPD sufferers are admitted to the hospital due to an acute exacerbation, they are often placed on non-invasive ventilation (NIV). However, once they are discharged, they continue with their standard therapy of pharmacology and/or oxygen. Oxygen therapy addresses hypoxemia caused by impaired gas exchange in the lung tissue (type 1 respiratory failure); however, unlike NIV, it does not address hypercapnia caused by ventilatory failure (type 2 respiratory failure). By adding NIV to your standard care regimen, you may be able to effectively treat both types of respiratory failure in your COPD patients.

Research shows that the use of NIV at home:

- Reduces mortality in patients with COPD by 76%\textsuperscript{4}
- Reduces admissions and minimizes costs for hospitals\textsuperscript{5}
- Reduces recurrence of acute hypercapnic respiratory failure following an initial event by 60.2% in the first 30 days following the event when compared to CPAP (38.5%)\textsuperscript{6}
- May lead to an improved quality of life\textsuperscript{7, 8}

Despite clinical evidence that NIV may improve health outcomes associated with COPD, NIV is still not often considered for chronic care.

Data monitoring for successful patient follow-up

Due to the likelihood of rehospitalization following an acute exacerbation, it’s important for care providers to monitor and provide follow-up care for COPD patients post-discharge. In fact, research shows that monitoring the breathing rate of hypercapnic COPD patients in home allows early identification of COPD exacerbations.\textsuperscript{9}

With AirView™, ResMed’s cloud-based data management system, you can view critical ventilation data and key metrics such as respiratory rate and minute ventilation to determine if patients are in distress or at an increased risk for an acute exacerbation – particularly in the critical 30 days post-hospital discharge.
ResMed’s NIV therapy solutions
Our home NIV solutions are focused on helping reduce acute exacerbations of COPD and hospital readmissions. With our sophisticated range of comfortable, effective therapy and tools, we can guide you in the long-term management and ventilation care of your COPD patients.

**AirCurve™ 10 ST-A**
Our premium homecare device is optimized to treat COPD using the latest volume-assured pressure support technology, iVAPS.™ This technology responds to respiratory rate, targets alveolar ventilation and automatically adjusts pressure support as needed to accommodate the patient’s needs, even as their disease progresses.

**Astral™ 100/150**
For more advanced clinical needs, our Astral life support ventilator offers a broad range of therapy modes and features to optimize the treatment of your COPD patients. With unique synchrony features that maximize expiratory time and integrated FiO₂ monitoring in Astral 150 that lets you fine-tune oxygen delivery, Astral offers the quality of life benefits that are so important to chronically ill COPD patients.

**AirView**
AirView, our cloud-based data management system, is available for both Astral and AirCurve 10 ST-A devices. AirView can help both physicians and home medical equipment providers (HMEs) by providing daily access to key patient data, enabling efficient collaboration and coordinated patient care.

- Access key ventilation parameters, such as usage, AHI, tidal volume, minute ventilation and respiratory rate
- Allows for early patient intervention before a potential problem or hospitalization occurs
- Provides consistent care for COPD patients by standardizing routine home monitoring

With our sophisticated NIV technologies, you can be confident that your patients are receiving comfortable, effective and synchronized treatment from their ResMed device.

**Improved O₂ delivery and ventilation monitoring**
Integrated FiO₂ monitoring in Astral 150 allows you to prescribe concentrations (e.g. FiO₂) of oxygen, which are more precise than liter flows (e.g. LPM), in addition to the option of integrated oximetry for objective patient monitoring.

**iVAPS:** Unlike other ventilation modes that only target tidal volume, iVAPS targets a unique minute ventilation algorithm, which accounts for anatomical dead space, to ventilate patients more effectively.

**TiControl™:** For patients who experience challenges in exhaling, a shortened Ti Max (maximum time spent in inspiration) will allow for longer exhalation time and may provide better comfort and less likelihood of air trapping or intrinsic PEEP.

**Trigger/cycle sensitivity:** Adjustable trigger and cycle sensitivities allow further customization at the beginning and end of each inspiration, which further improves patient-device synchronization.
Just like you, our goal is to help COPD patients enjoy a better quality of life. Visit ResMed.com/NIVforCOPD to learn how implementing a home NIV program can help you manage your patients’ treatment so they can get the most out of each day.