Clinical evidence for iVAPS

iVAPS' efficacy and tolerability have been established in various patient populations, such as hypercapnic chronic obstructive pulmonary disease (COPD) and neuromuscular disease (NMD)

Adherence

Patients prefer iVAPS to standard pressure support ventilation,[1] which can lead to longer use of non-invasive ventilation (NIV).

iVAPS was found to help patients adhere to therapy 60 minutes longer per session than when treated with standard pressure support ventilation.[1]

Efficiency

The amount of time required to set up and optimize NIV is less with iVAPS,[2] allowing clinicians to be more efficient managing NIV patients.

Automatic titration of pressure support ventilation may hold promise for the setup of NIV in non-acute facilities in which teams are gaining experience in NIV, and also for home setups.[3]

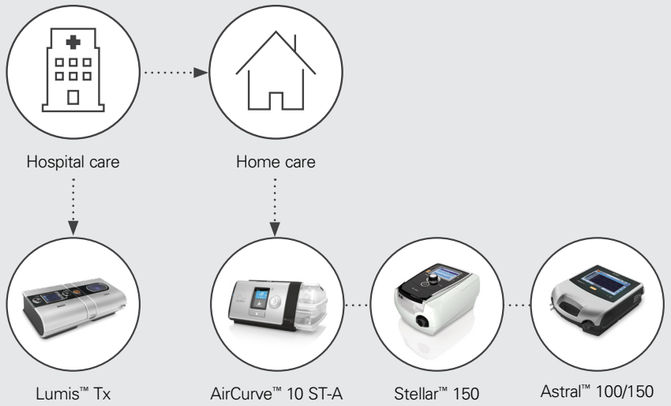
Efficacy

iVAPS improves blood gases (and other values) as effectively as standard pressure support modes.[4]

iVAPS also achieves a lower overall level of pressure support thanks to its automatic response.[1,2,4]

Devices with iVAPS

iVAPS technology is featured in these ResMed products – helping provide personalized, intelligent therapy across the continuum of respiratory care.



Refer to the product-specific user guides for complete labeling information as it relates to iVAPS technology as it may differ between products.

1 Kelly JL et al. Randomized trial of 'intelligent' autotitrating ventilation versus standard pressure support non-invasive ventilation: Impact on adherence and physiological outcomes. *Respirology* 2014;19(4):596–603.
2 Oscroft NS et al. Volume assured versus pressure preset non-invasive ventilation for compensated ventilatory failure in COPD. *Respir Med* 2014;108(10):1508–15.
3 Jaye J et al. Autotitrating versus standard noninvasive ventilation: A randomised crossover trial. *Eur Respir J* 2009;33:566–73.
4 Ekkernkamp E et al. Impact of intelligent volume-assured pressure support on sleep quality in stable hypercapnic chronic obstructive pulmonary disease patients: A randomized crossover study. *Respiration* 2014;88(4):270–6.

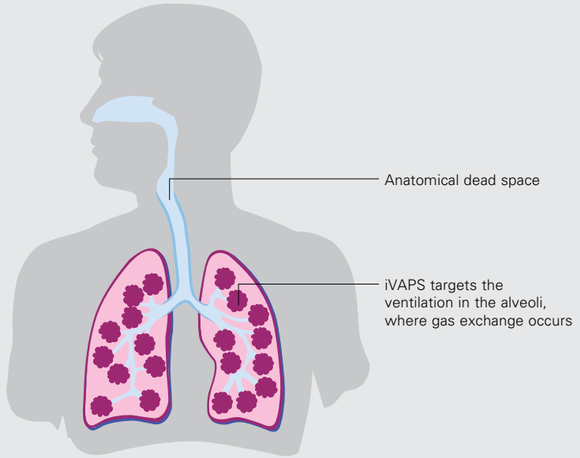
iVAPS: intelligent Volume-Assured Pressure Support

Personalizing therapy intelligently and automatically

ResMed.com/iVAPS

Delivering personalized therapy

iVAPS is ResMed's unique volume-assurance mode that intelligently and automatically tailors therapy to patients' individual breathing needs. It is designed to target each patient's alveolar ventilation, and auto-adjusts to maintain that target and improve blood gases. ResMed devices that feature iVAPS technology, along with an intelligent Backup rate (iBR), allow you to provide optimal care for those whose condition is likely to change during therapy, such as patients with neuromuscular disease (NMD), obesity hypoventilation syndrome (OHS) and chronic obstructive pulmonary disease (COPD).

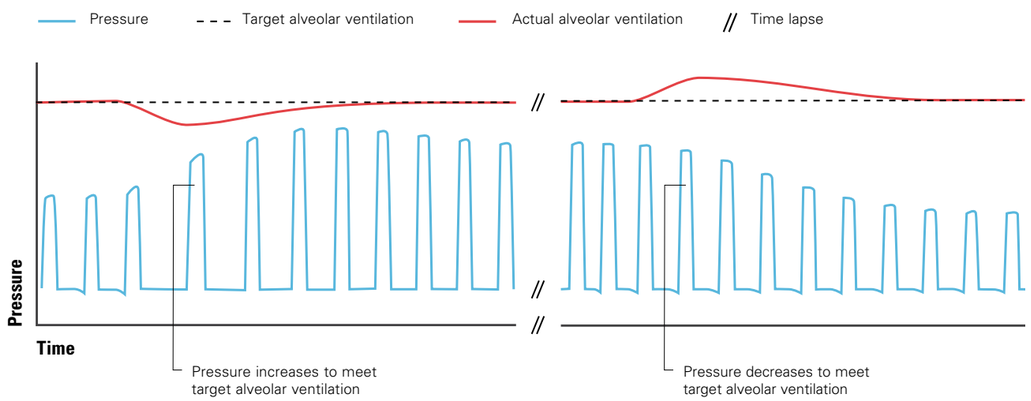


The importance of targeting alveolar ventilation

Some ventilation modes target tidal volume without taking into account the anatomical dead space in the patient's airways. iVAPS targets alveolar ventilation, which best represents the useful portion of ventilation that reaches the alveoli. Because iVAPS takes into account both tidal volume *and* respiratory rate, you can better control the effect of respiratory rate variation on ventilatory support.

iVAPS: Auto-adjusting pressure support

iVAPS automatically adapts to the patient's changing needs by constantly monitoring their *actual* ventilation and respiratory rate in relation to their *target* ventilation and respiratory rate.

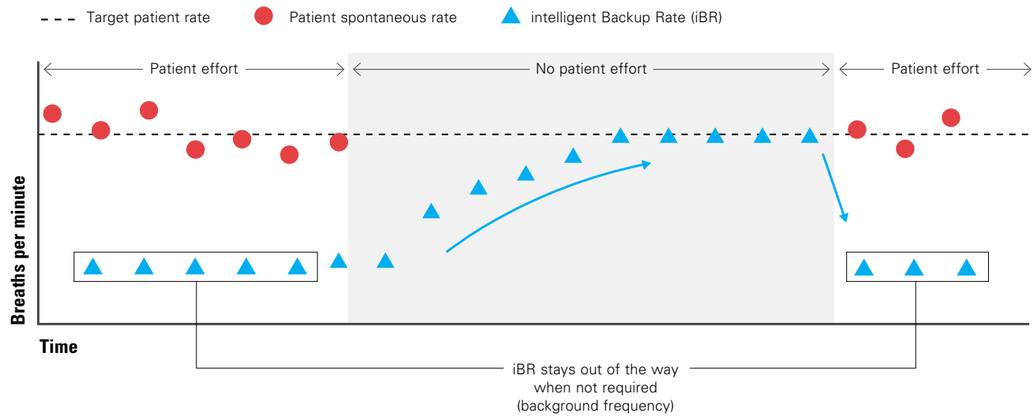


- iVAPS' response is rapid enough to maintain alveolar ventilation and stabilize blood gases, yet gentle enough to maintain patient comfort.
- The Vsync leak compensation feature promotes patient–ventilator synchrony and comfort even during significant leak.
- iVAPS is quick and easy to set up manually.

Refer to the product-specific user guides for complete labeling information as it relates to iVAPS technology as it may differ between products.

iBR: Backup breaths delivered when needed

iBR shifts between two limits – target patient rate and its background frequency – which is two-thirds of the target rate, giving patients maximum opportunity to spontaneously trigger the ventilator.



- Unlike traditional backup rates, iBR matches the target patient rate to the spontaneous rate, and uses that as the upper limit.
- If the patient fails to trigger the ventilator (or an apnea is detected), iBR adjusts from its background frequency to the target rate (typically within 4–5 breaths) to provide backup breaths to comfortably bring the patient back to target.
- A single spontaneous breath resets the iBR to its background frequency until needed.