Waveform analysis: a critical step in ensuring effective cough therapy

Introducing CoughAssist T70 waveform analysis by RespirTech — a powerful patient management tool providing insight into a patient's response to therapy

RespirTech®

RespirTech's clinical team evaluates CoughAssist-generated waveforms and provide patient follow-up to help optimize therapy

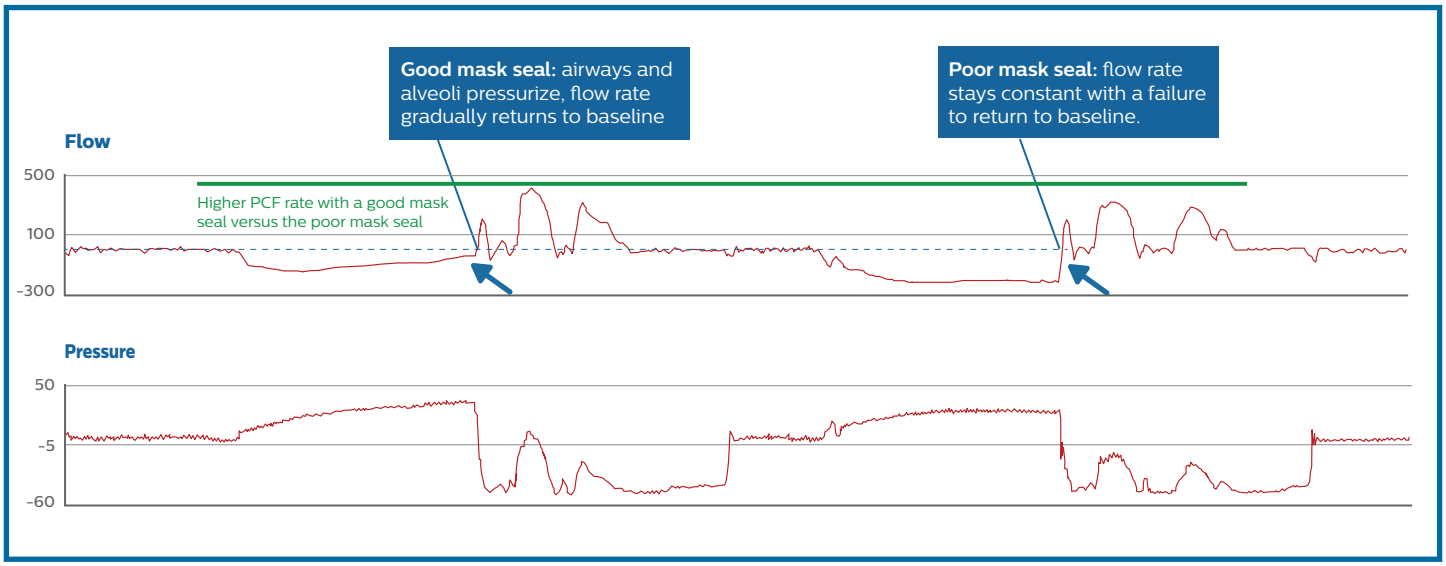
The Philips CoughAssist T70 series replaces or augments an ineffective cough by using positive pressure to create sufficient lung volume followed by negative pressure to raise expiratory flow rates to clear airway secretions. CoughAssist also records pressure and flow waveforms that can be collected and used to optimize settings.

As a powerful patient management tool, RespirTech can provide you with a detailed evaluation of the waveforms collected from the device that may reveal important information regarding a patient's response to cough therapy.

Detecting mask leak

Mask seal is essential in order to achieve effective results with CoughAssist. Mask leak negatively impacts lung volume and peak cough flow rates.

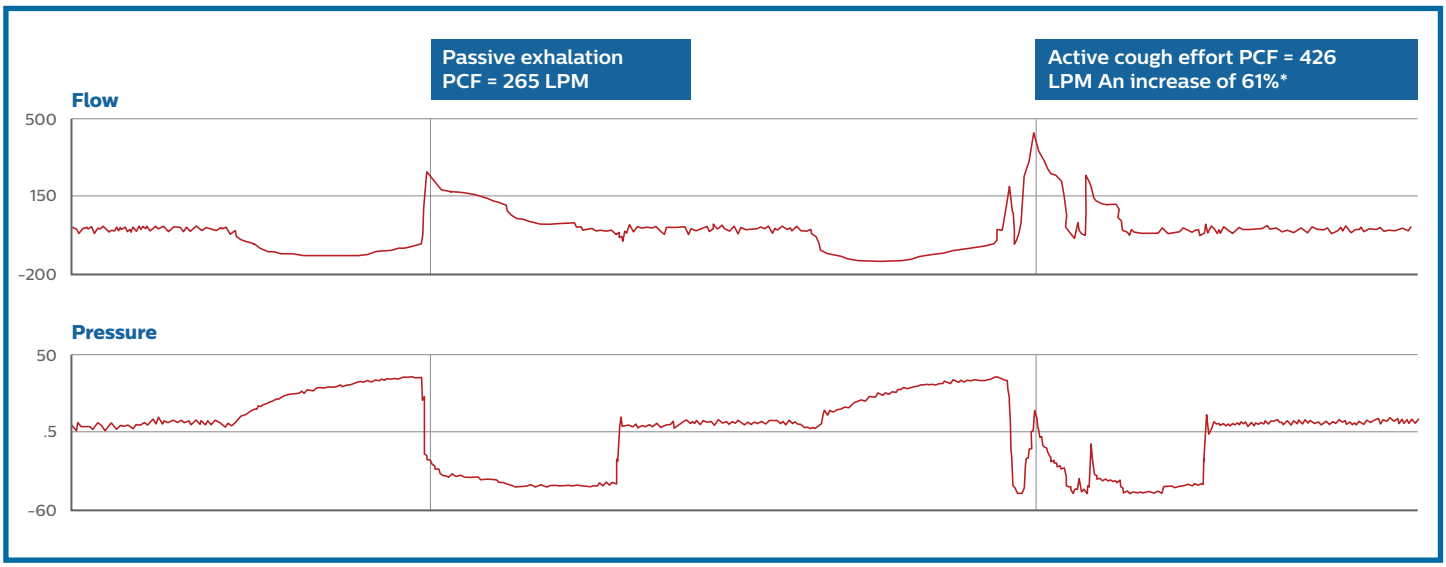
The composite waveform below demonstrates the difference between a good mask seal versus a poor mask seal and a large leak.



Composite waveform: *good mask seal versus poor mask seal with leak*

Evaluating cough assist technique

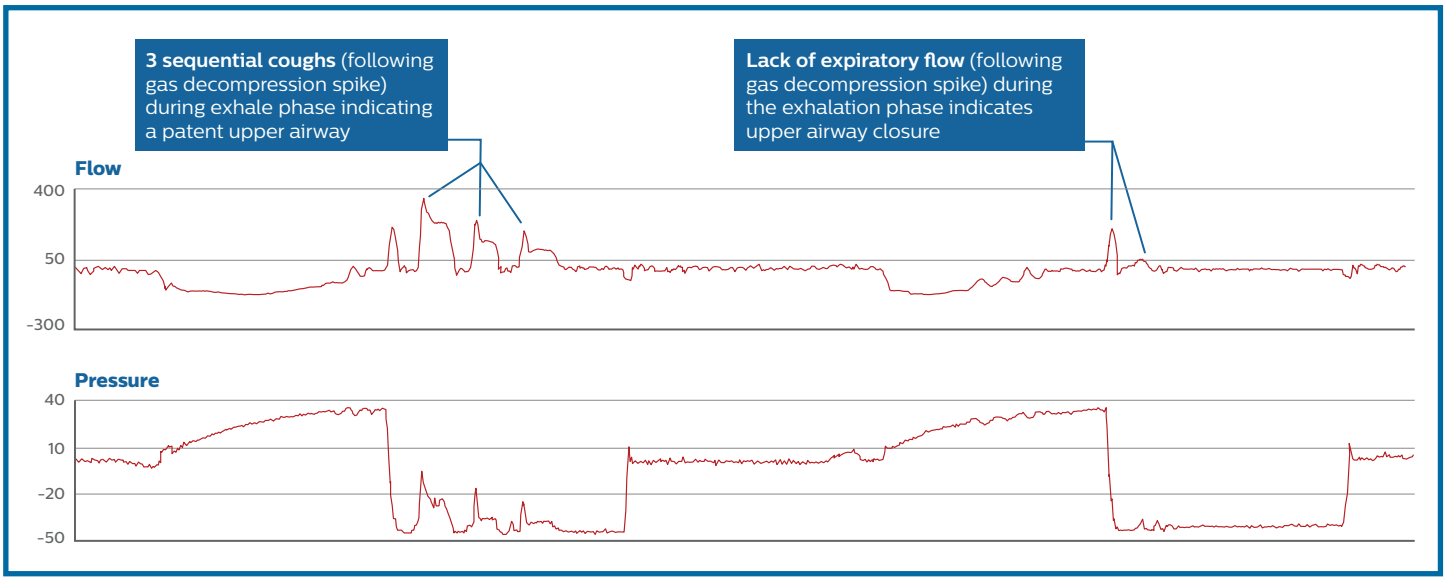
The optimum technique RespirTech recommends for its CoughAssist therapy includes a passive inhalation phase followed by an active HUFF or cough effort. When followed correctly, this technique yields higher peak cough flow rates compared to a passive exhalation effort for most patients. In addition, a passive inhalation effort is often key to facilitating appropriate inhalation times and device synchrony.



Composite waveform: *passive exhalation versus an active cough effort. *results may vary*

Evaluating upper airway patency

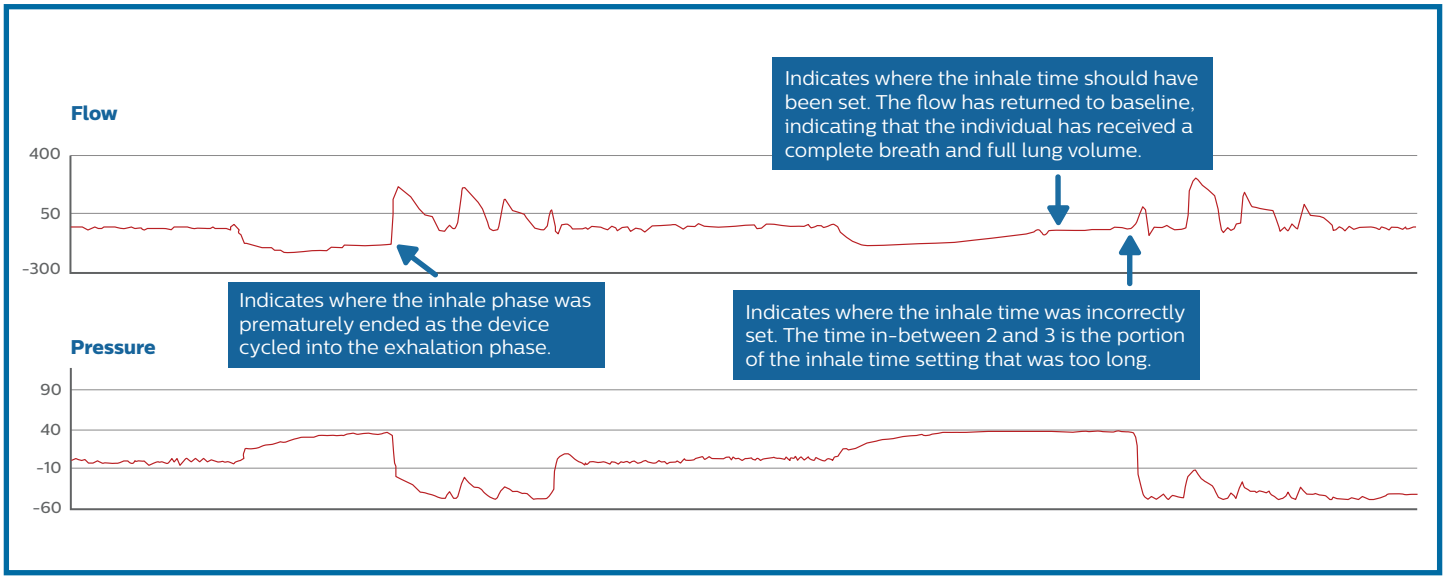
Patients with bulbar weakness are predisposed to upper airway closure during cough therapy. Lack of expiratory flow during CoughAssist exhalation phase is consistent with upper airway closure. RespirTech has proprietary titration protocols designed to mitigate this phenomenon when identified.



Composite waveform: *upper airway patency versus upper airway closure*

Assessment of inhale time setting

The inhale time setting should be set so that the patient has enough time to receive a complete breath. An inhale time that is too short ends before the patient has received their full lung volume. When the inhale time is set too long, the patient has already completed their breath as the device continues to deliver pressure to reach the target inhale time, making it uncomfortable.



Composite waveform: *assessment of inhale time: inhale time is too short in the first waveform and is set too long in the second waveform*

RespirTech's waveform analysis can ensure your patients receive effective CoughAssist therapy

After treatment begins, the RespirTech clinical team schedules regular calls to the patient to make sure CoughAssist settings are set correctly for maximum effectiveness.

RespirTech collects CoughAssist SD card from the patient and Respiratory Therapists download and evaluate waveforms for various therapy concerns.

RespirTech staff provides proactive outreach for additional therapy coaching and education as well as offer supplementary in-home training when needed.

The CoughAssist reports generated can be sent to the healthcare team to assist in guiding the respiratory care support strategy for a patient.

RespirTech®

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