

Benefits of XFlow and XSum

A Medcare proprietary software algorithm has been developed to derive airflow from the XactTrace RIP signals.

XactTrace

XactTrace is a Respiratory Inductive Plethysmograph (RIP) signal delivering highly sensitive and stable tracings of thoracic and abdominal movements. When placed around the patient's chest and abdomen, XactTrace belts measure changes in the cross-sectional area of the torso occurring with each breath.

XFlow

XFlow is a semi-quantitative measure of inspiratory and expiratory flow derived from XactTrace measurements of abdominal and thoracic movement.

XFlow values of airflow are comparable to linearized airflow signals generated by nasal pressure transducers ¹.

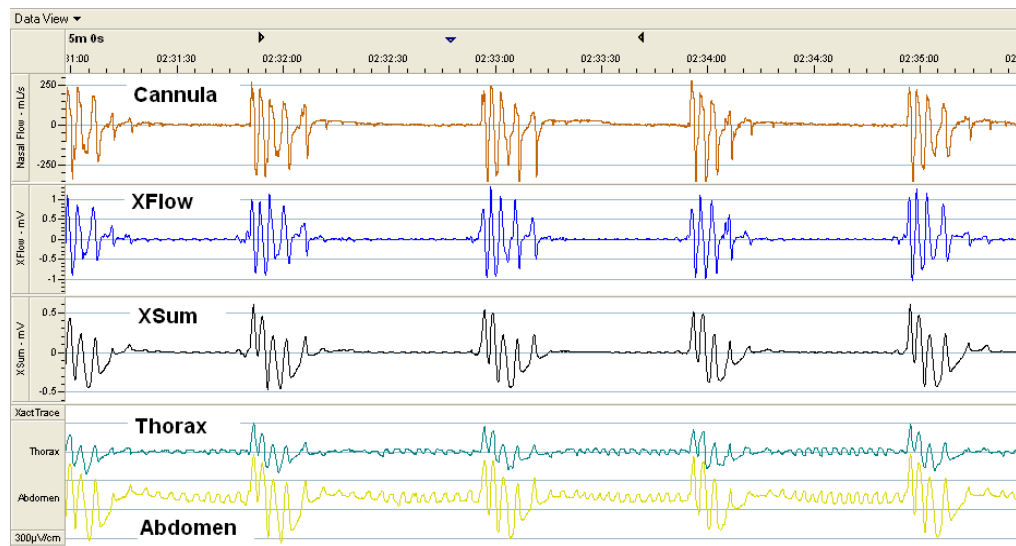
XFlow values of airflow are also comparable to airflow signals produced by a pneumotachograph.

XSum

XSum is the summation of XactTrace values of abdominal and thoracic movement signals measured by XactTrace sensors. XSum provides semi-quantitative measures of lung volume.

Peak to peak measures represent the tidal volume for a single breath.

¹ Medcare Advert Sheet: Benefits of Linearized Flow



This screen capture was taken from the recording provided by a patient with severe sleep apnea. In this example, representing five minutes of recording time, the top channel represents nasal pressure, the second and third channels are XFlow and XSum, the fourth and fifth channels are thoracic and abdominal movements. Periods of paradoxical breathing are evident throughout this example. XFlow and XSum derived values of airflow and lung volume are consistent with XactTrace Respiratory Inductive Plethysmograph values of thoracic and abdominal movements.

Availability

XFlow and XSum are derived from the thoracic and abdominal signal acquired from the XactTrace RIP bands. These signals are available in Medcare software applications compatible with RIP, such as Somnologica Studio, Somnologica for Embletta and Compass. A software upgrade may be required for older software revisions.