Volumetric capnography

By knowing how CO2 behaves on its way from the bloodstream through the alveoli to the ambient air, you can obtain useful information about ventilation and perfusion. Monitoring the CO2 level during respiration (capnography) is noninvasive, easy to do, and relatively inexpensive.

Of the two distinct types of capnography - conventional, time-based and volumetric capnography - the latter has emerged as the preferred method for assessing the quality and quantity of ventilation. Volumetric capnography improves, simplifies and complements patient monitoring in relation to metabolism and the Ventilation/Perfusion ratio (V/Q), and provides information about the homogeneity or heterogeneity of the lungs. It has multiple clinical applications, including PEEP management, assessing the effectiveness of a recruitment maneuver, and detecting early signs of pulmonary emboli, COPD and ARDS.

All Hamilton Medical ventilators provide volumetric capnography, either as a standard or as an optional feature. The CO2 measurement is performed using a CAPNOSTAT§ 5 mainstream CO2 sensor at the patient’s airway opening. The sensor provides technologically advanced measurement of end-tidal carbon dioxide (PetCO2), respiratory rate, and a clear, accurate capnogram at all respiratory rates up to 150 breaths per minute.
In addition, Hamilton Medical ventilators offer an overview of all relevant CO2-related values in the monitoring window.

Download the e-book below to learn more about interpreting a volumetric capnogram and the benefits and clinical applications of volumetric capnography.

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