Guidelines for NIV

Managing acute respiratory insufficiency and failure in the emergency department



Adjustments to Improve Oxygenation

Management of patients unable to adequately oxygenate requires adjustment of EPAP and/or FIO_2 . This can be achieved with adjustments to EPAP in increments of two (2 cmH₂O) to achieve the desired SaO₂. NOTE: An increase in EPAP without a simultaneous increase in IPAP will decrease positive pressure support. Tidal volume will usually decrease and cause an increase in PaCO₂. Therefore, to maintain the same ventilation IPAP should be increased at the same level EPAP is increased.

Backup Rate

Setting the rate on a Respironics Ventilator ensures that the patient will receive a breath if apneic episodes should occur. The delivery of a machine breath is based upon the time period determined by the set rate. EXAMPLE: A rate set at 10 BPM will have a six-second window of time before the machine will deliver a timed breath to the patient. However, if the patient initiates a spontaneous breath at least every six seconds, the ventilator will not deliver a machine breath.

Adjustment to Improve Ventilation

Patients experiencing ventilation difficulties and exhibiting signs such as dyspnea, rapid respiratory rate, excessive accessory muscle use and/or an increased $PaCO_2$ will often benefit from appropriate IPAP adjustments. To adjust for optimal ventilation, increase the IPAP level in increments of two (2 cmH₂O) to relieve symptoms of respiratory distress.

IMPORTANT: THESE GUIDELINES ARE INTENDED TO SERVE ONLY AS A REFERENCE. THEY SHALL BE USED ONLY IN CONJUNCTION WITH THE INSTRUCTIONS AND/OR PROTOCOL SET FORTH BY THE PHYSICIAN AND INSTITUTION IN WHICH THE ASSIST DEVICE IS BEING USED. THE GUIDELINES ARE NOT INTENDED TO SUPERSEDE ESTABLISHED MEDICAL PROTOCOLS.

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