Question: Can a Bipap/Bilevel machine be used on a trach patient suffering from severe respiratory insufficiency?

BiPAP stands for Bilevel positive airway pressure and is a non-invasive ventilatory assist machine. Non-invasive ventilation machines are those that assist breathing by pushing air into the lungs through a mask worn over the nose. This type of technology was developed in the 1980’s by Professor Colin Sullivan at Royal Prince Alfred Hospital in Sydney, Australia to help people with sleep apnea, a condition where the airway collapses during sleep causing periods of apnea repeatedly. By pushing air in, the machine keeps the airway “inflated” so it won’t collapse. This is called CPAP, Continuous Positive Airway Pressure.

In the 1990’s computer technology added a new dimension to NIV. Now the machine could push air in until a preset pressure was reached, then reduce the pressure to allow the person to exhale easily. Repeating this cycle made breathing more comfortable and suitable for people with certain disorders who could not exhale against the higher pressure. This type of machine is sold by Respirationics using the brand name BiPAP.

In the home care setting, we must be aware of what we can and cannot provide. According to my colleagues at Respironics and ResMed, Bipap in the home care setting should ONLY be used with a mask in a non-invasive manner. The method of Bipap to trach in the home is not FDA (Food & Drug Administration) approved because generally there are no alarms on the machines to warn of a pressure change or disconnect. As JCAHO and Exemplary Provider Accredited Organizations, we maintain our position of not providing any “off label” practices.

As Respiratory Therapist we love to jerry-rig things to get the job done...create an exhalation port using omni-flex tubing...I’m sure you can think of more things. But let’s be sure to stay within our scope of practice and do the best we can in determining what is actually best for the patient and do our research so that we can have informed answers for our physicians.

Thank you for your continued support!

Jeannette E. Terry, RRT
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