

INTRODUCTION & AIM OF THE WORK

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Ventilation is the cyclical movement of ambient air into and out of the lungs, and distribution and mixing of that air within the lungs. Contraction and relaxation of the respiratory muscles and elastic recoil of the lungs accomplish this cycle (**Rehder et al ., 1997**) .

Noninvasive ventilation (NIV) is the delivery of ventilatory support using a mask or similar device without the need for an invasive artificial airway. NIV refers to noninvasive positive pressure ventilation and less commonly negative pressure ventilation, the weight of available evidence suggests that noninvasive positive techniques unload the respiratory muscles and avoid upper airway obstruction more effectively than negative techniques (**Baudouin et al ., 2002**) .

Such ventilation can often eliminate the need for laryngeal mask, translaryngeal intubation or tracheostomy which present risks of nosocomial pneumonia, laryngotracheal injury, and bacterial sinusitis, NIV also preserve normal swallowing, speech, and cough mechanisms (**Weavind and Wecknen ., 2003**) .

The feasibility and efficacy of NIV applied in daily clinical practice suggest that NIV should be considered as a first-line ventilatory treatment in various etiologies of respiratory failure and as a promising weaning technique and postextubation ventilatory support. However, NIV should certainly be performed by a motivated and sufficiently trained care team (**Girault et al., 2003**) .

Noninvasive ventilation may enhance comfort, convenience, and portability at no greater or even less cost than endotracheal intubation . Furthermore, noninvasive ventilation may be administered outside of the intensive care setting, as long as adequate nursing and respiratory therapy support can be provided, allowing caregivers to more rationally utilize acute-care beds, and it greatly simplifies care for patients with chronic respiratory failure in the home (Nava et al., 1997) .

This essay is submitted to describe and update the data about NIV and show how the future created for NIV . For fulfillment this subject , it will discuss the indication , types , modes , initiation , adverse effects , and contraindication of NIV , in addition to , the future of NIV .