Introduction

Non-invasive ventilation refers to the delivery of mechanical ventilation with techniques that do not need an invasive endotracheal airway. It should not, therefore, be used when patients cannot protect their airway. It is not appropriate for all, and the selection of candidates is important. For patients with secretion accumulation or a weak cough reflex, adequate secretion management with manual or mechanical techniques might be advisable before non-invasive ventilation is declared failed or contraindicated **(Stefano Nava, Nicholas Hill 2009).**

Compared with invasive mechanical ventilation, this type of ventilation achieves the same physiological benefits of reduced work of breathing and improved gas exchange. Furthermore, it avoids the complications of intubation and the increased risks of ventilator-associated pneumonia and sinusitis, especially in patients who are immuno suppressed or with co morbidities. Non-invasive ventilation is used mainly for exacerbations of chronic obstructive pulmonary disease (COPD) and for cardiogenic pulmonary oedema. Use for hypoxic respiratory failure and facilitation of weaning is still infrequent and is mainly done in specialized centers **(Crimi et al 2008).**

In Europe, the rate of use of non-invasive ventilation in intensive care units is about 35% of ventilated patients and higher (roughly 60%) in respiratory intensive care units or emergency departments. In North America, this form of ventilation is begun most often in emergency departments, with most patients transferred to intensive care units or step-down units in hospitals that have such facilities. The low rate of use in some hospitals relates to little knowledge about or experience with the technique, insufficient technical equipment, and inadequate funding. Despite these limitations, this technique is increasingly

being used outside the traditional and respiratory intensive care units, including in emergency departments; post surgical recovery rooms; cardiology, neurology, and oncology wards; and palliative care units **(Kühnlein P et al.,2008).**