

Antonio M. Esquinas *Editor*

# Noninvasive Ventilation in High-Risk Infections and Mass Casualty Events

 Springer

*Editor*

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## Noninvasive Ventilation and Droplet Dispersion: Health Professional Protocols from a Nursing Perspective

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César Fonseca, Ana Ramos, Sílvia Lopes,  
Dora Santos, Sónia Silveira, and André Antunes

### Keywords

Noninvasive ventilation • Inhalation therapy • Droplet dispersion

### 33.1 Introduction

The therapeutic value of noninvasive ventilation (NIV) is well established. It represents a major advance in the possibilities of ventilatory support of patients with respiratory problems [1]. Over the last two decades the use of NIV has increased gradually in patients with acute respiratory distress based on relevant scientific research and clinical practice guidelines published by their scientific communities [2].

The use of inhalation therapy is normally associated with the patient's NIV, where success is associated. In these patients there must be a need for effective bronchodilation or they may be suffering from acute or chronic respiratory distress. Usually, inhalation therapy is associated with stabilizing patients with asthma, chronic obstructive pulmonary disease (COPD), or other respiratory diseases [3, 4].

Inhalation therapy has assumed a prominent place in controlling bronchial obstruction (Rubin 2012), particularly in people undergoing NIV, which allows more rapid onset of action and greater therapeutic efficacy with low doses [5]. Thus, selecting the correct inhalation technique requires involvement of the patient as well as the respective caregivers who assume the point of view of caregivers, a pivotal role in

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The past few decades have seen major impacts of different pandemics and mass casualty events on health resource use in terms of rising healthcare costs and increased mortality. In this context, the development of acute respiratory failure in patients requires the use of mechanical ventilation, either invasive or noninvasive. Recently, noninvasive ventilation (NIV) has proved to be a valuable strategy to reduce mortality rates in patients. This is the first book to describe the clinical indications of NIV in patients who have been hospitalized with high-risk infections as well as in the prehospital management of mass casualty incidents, including chemical or biological disasters and pandemics. Compiled by internationally respected experts, it offers comprehensive coverage of all aspects of noninvasive mechanical ventilation in public health emergencies, such as equipment needs and guidelines for health organizations. Considering recent events (SARS, H1N1 influenza pandemic), the book concludes with a critical review of current studies and future prospects for the use of NIV, offering a valuable resource for all practitioners managing mass casualty incidents and disasters

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