

### A Network of Networks for Noninvasive Mechanical Ventilation

**To the Editor:** With great interest, we have read the article "Health Care Support for Home Mechanical Ventilation: Networking Versus Centralization" recently published in your prestigious journal.<sup>1</sup> The author clearly supports the creation of nonhierarchical networks, where each element takes on several roles according to patient needs, rather than the model of referral centers for monitoring home mechanical ventilation programs. According to this model, the hospital nearest the patient would provide the care, but, in the event of special or complex cases, it would be advisable to seek professionals with more expertise. The balance between accessibility and expertise would be maintained without one dominating the other. Although we fully agree with the author, we would nonetheless like to mention certain considerations.

First, we would like to underline the close ties between home mechanical ventilation and noninvasive ventilation. Most patients using home mechanical ventilation are receiving a noninvasive form, while only a few receive ventilation via tracheostomy. Thus, to discuss home mechanical ventilation is essentially to discuss noninvasive modalities. The ability to provide home mechanical ventilation for patients with respiratory failure is just a small part of the broad spectrum that includes ventilation for patients with acute, subacute, and chronic diseases.

Escarrabill<sup>1</sup> refers to each center as if only a small group of individuals worked in providing this type of treatment. The history of noninvasive ventilation has been largely linked to patients with chronic disease. However, in recent years, we have seen the application of these techniques in patients with acute disease, a clinical setting that can truly pose complex problems that require us to quest for expertise rather than accessibility.

At present, the scope of in-hospital noninvasive ventilation involves many hospital areas and several specialties.<sup>2</sup> Commonly used in emergency departments, intensive care units, postoperative recovery departments, coronary care units, and on pulmonology and internal medicine wards, noninvasive ventilation provides a ventilatory alternative. It is also increasingly used as a support procedure for invasive maneuvers (bronchoscopy, interventional endoscopy) or for surgery in the preoperative period, during surgery itself, or the immediate postoperative period.<sup>3</sup>

There is level A evidence for noninvasive ventilation in patients with chronic respiratory insufficiency, exacerbated chronic obstructive pulmonary disease (COPD),<sup>4</sup> or acute pulmonary edema<sup>5</sup>; immunocompromised patients, solid organ transplant recipients, or hematological patients with respiratory complications. It is also used for the weaning of COPD patients from invasive ventilation.<sup>6</sup>

Many health care professionals can and should become familiar with noninvasive ventilation. The debate about accessibility versus expertise is also raised inside the hospital. Pulmonologists cannot be responsible for all in-hospital noninvasive ventilation. It is necessary to create an internally networked team of professionals from various departments and services led by a pulmonologist. This in-hospital network should be put in touch with other hospital teams to create a network of networks to make noninvasive ventilation accessible to all. For the skills that certain situations require, however, it will be advisable to manage special cases in an appropriate hospital. Some hospitals will be more experienced in using noninvasive ventilation for weaning, and others will be more familiar with patients with neuromuscular diseases. Still others will be expert in critical patients, and some will specialize in comprehensive programs for obese patients. The network of networks for noninvasive ventilation goes one step beyond a simple network for home mechanical ventilation.

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