



## **Place of artificial ventilation at home in patients with COPD**

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### **Introduction :**

The decompensation of chronic obstructive pulmonary disease (COPD) is a typically rapid and reversible worsening of respiratory status in patients with COPD.

It is secondary to additional pathologies, such as infectious pneumonia.

It is a public health problem [1]. Its management has evolved considerably in recent years with the advent of a new concept called respiratory rehabilitation ; rehabilitation is a set of means offered to patients with chronic respiratory disease to reduce disability and improve the quality of life.

The goal is to reduce symptoms, optimize physical and psychosocial conditions and reduce health costs. Treatment of chronic obstructive pulmonary disease at the terminal stage is the second indication of home ventilation, which is based on:

- oxygen therapy.
- artificial ventilation in the home in an intermittent or continuous mode using a respirator, by means of a mouthpiece, a nasal or facial mask, or a tracheotomy cannula.

### **Epidemiology:**

COPD is the 1st cause of severe chronic respiratory failure in France.

5th rank of chronic diseases for the number of years lost by early mortality before age 65

By 2020, it will become the third leading cause of death worldwide

Smoking is the main cause of this disease.

Variables et valeurs seuils utilisées pour le calcul de l'index BODE <sup>1</sup>				
Variables	Points de l'index BODE			
	0	1	2	3
<b>VEMS</b> (% de la théorique)	≥ 65	50 – 64	36 – 49	≤ 35
<b>Distance parcourue en 6 min</b> (m)	≥ 350	250 – 349	150 – 249	≤ 149
<b>Score de dyspnée MMRC</b>	0 – 1	2	3	4
<b>Indice de masse corporelle</b> (kg/m <sup>2</sup> )	> 21	≤ 21		



### III/Equipment and methodology:

We illustrate our communication by the case of a 54 years old patient admitted to the emergency department for treatment of decompensation of COPD following a lung infection.

Background: BPCO on oxygen at home, smoking, hypertensive.

At its admission the patient in respiratory distress (polypnea, saturation 70) hence its intubation ventilation, antibiotherapy empirical then adapts according to bacteriological results, nebulization by beta2 mimetics.

Chest CT: bilateral pulmonary fibrosis, right basal pneumonia

After treating his lung infection, it was difficult to wean the patient from the respirator  
Respiratory Rehabilitation (RR) is not yet sufficiently disseminated, although it has proven to be effective in reducing the risk of acute complications and improving the respiratory handicap and quality of life of patients.

Improving the survival of outhospital COPD patients requires effective respiratory rehabilitation and, where possible, home-based equipment.

Respiratory rehabilitation in the home seems to be effective in the BPCOs but requires more education and implementation in our region in order to better evaluate it.

After multidisciplinary consultation and several failures at withdrawal, the patient goes out with a home appliance.

the patient goes out with a ventilated tracheotomy cannula for 18 hours in spontaneous mode with breathing aid at 14 and a disconnection under 2 liters of O<sub>2</sub> the patient is ventilated for 18 hours in spontaneous ventilation with breathing aid at 14 and then disconnects under 2 liters of O<sub>2</sub> the change of the cannula is carried out at the level of the service the patient is equipped with a mobile vacuum cleaner

### **Conclusion:**

Home ventilation remains the best solution for BPCO at the terminal stage as it allows a better quality of life and a decrease in the cost of health

The availability of ventilation equipment must be made more aware and organized, and it would certainly be of great service to this type of patient.

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