#### Proposals for the management of COPD patients in the context of the COVID-19 epidemic G Deslée, M Zysman, L Boyer, N Roche, PR Burgel for the COPD group Version dated 29/03/2020

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Knowledge about the specificities of chronic obstructive pulmonary disease (COPD) management in the context of the COVID-19 epidemic remains limited. The proposals below are based on expert opinions and are likely to change according to the evolution of knowledge.

#### 1) Background treatment of stable COPD

There is no argument for modifying inhaled background treatment in stable COPD patients, including inhaled corticosteroids when indicated (1).

There is no argument for modifying oxygen therapy and non-invasive ventilation modalities at home.

It is recommended to maintain physical activities, by preferring physical activity at home in the confinement context.

Barrier gestures should be scrupulously observed to limit the risk of COVID-19 infection.

# 2) Ventilatory support in the context of suspected or confirmed COVID-19 infection

The Ventilatory Support and Oxygen Therapy (GAVO2) Group has issued recommendations regarding home respiratory devices for patients with suspected or confirmed viral respiratory infection (2). The working group on aerosol therapy (GAT) has issued an information note regarding the use of nebulizers during the COVID-19 epidemic (3). These two recommendations may be applied to COPD.

# 3) Treatment of COVID-19 infection in a COPD patient

If necessary, nebulized beta2-agonists and anticholinergics may be used, but the staff needs to wear a FFP2 mask within 3 hours of nebulization given the risk of viral contamination. As early as possible, the use of non-nebulized inhaled forms should be preferred, possibly using an inhalation chamber for strictly individual use.

Oxygen therapy is used to maintain the SpO<sub>2</sub> above 90%.

Blood gases should be analyzed in case of acute respiratory failure in a COPD patient in order to assess hypercapnic acidosis. Hypercapnic acidosis (pH <7.35) should raise the question of adding non-invasive ventilation to oxygen therapy after discussion with the resuscitation team, without delaying any indication of invasive ventilation or high-flow nasal oxygen therapy in the intensive care unit.

If non-invasive ventilation is proposed, it should not be performed using a ventilator with a vented mask given the risk of viral contamination, but using a double circuit and a non-vented mask.

There is no argument for the systematic use of systemic corticosteroids in a COPD patient with COVID-19 infection, but systemic corticosteroids may be used if needed.

# 4) Treatment of a COPD exacerbation in the absence of COVID-19 infection

In the absence of COVID-19 infection, the management of a COPD exacerbation is similar to the usual management.

- 1- https://goldcopd.org/gold-covid-19-guidance/
- 2- http://splf.fr/groupes-de-travail/gat/

3- http://splf.fr/centre-de-documentation-covid-19/