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## LETTER TO THE EDITOR

## Current practices of non-invasive respiratory therapies in COVID-19 patients in Portugal – A survey based in the abstracts of the 36th Congress of the Portuguese Society of Pulmonology



Non-invasive respiratory therapies (NIRT) have become paramount interventions in the management of COVID-19 induced acute respiratory failure.<sup>1</sup> Recent data from the world's largest database<sup>2</sup> suggests that 20% of patients with COVID-19 were admitted at some point of their illness into an intensive care unit (ICU) or high dependency unit (HDU). Non-invasive ventilation is applied in 15% of cases while High-flow nasal cannula in 14%.

The Portuguese Society of Pulmonology published back in 26th March recommendations on the use of NIRT in COVID-19.<sup>3</sup> However it is not known how NIRT are currently being applied in Portugal.

The 36th Congress of the Portuguese Society of Pulmonology took place 12–14th November 2020. Analyzing the published abstracts,<sup>4</sup> we retrieved 9 describing the experience of treating patients with COVID-19 related acute respiratory failure who were admitted to 7 public hospitals between March and August 2020. Total number of patients studied was 1594 from 1 Hospital in the North of Portugal, 2 in the centre and 4 in Lisbon region. Mean age was 69 years and only three series reported mean PaO<sub>2</sub>:FiO<sub>2</sub> ratios.

All except one Hospital (from the centre of Portugal) reported NIRT usage. Mean NIRT use was 16.3% (minimum 5% in an infectious disease department to 48.4% in a Pulmonology Department). Only 3 Hospitals reported ventilation modes; with two favoring CPAP (usage of 53.9% and 87.8% of NIRT) and one favoring Bi-Level (usage of 97.4% of NIRT). Only two reports (one from a Hospital in the Northern region and one from Lisbon) described the pressure levels used. Two hospitals (from Lisbon region) reported use of High Flow Nasal cannula (in 3% and 4% of all the admitted patients). Only 3 Hospitals reported success rates of NIRT, with a mean of 59% (from only 23% in the hospital that used Bi-Level mode to 78% in the hospital that preferentially used CPAP).

In only one Hospital was the Pulmonology Department the frontline service to support patients with COVID-19 and acute respiratory failure. This had the highest NIRT success rate.

These results suggest that current practices involving NIRT in COVID-19 in Portugal are really heterogeneous, with limited descriptions of the interventions and outcomes.

There should be a National Audit to monitor use of NIRT in the real world and the Pulmonology specialty should be the driver, pushing for an increased number of Respiratory Intermediate care Units with the right protocols and equipoise.

### Conflicts of interest

The author has no conflicts of interest to declare.

### References

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