COVID-19: minimising risk to healthcare workers during aerosol-producing respiratory therapy using an innovative constant flow canopy

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An innovative constant flow canopy enables noninvasive respiratory support with minimal risk of healthcare worker infection https://bit.ly/3eqgoVZ

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To the Editor:

Noninvasive ventilation (NIV), continuous positive airway pressure (CPAP) and high-flow nasal cannula (HFNC) can be used as the first line of treatment in coronavirus disease 2019 (COVID-19) patients with respiratory failure, postponing and maybe even avoiding the need for intubation and mechanical ventilation [1]. Recent systematic review and meta-analysis demonstrated that HFNC reduces the need for intubation compared with conventional oxygen, with no change in the death risk or length of stay in the intensive care unit [2, 3]. No direct evidence supports the use of NIV, due to a high failure rate [4]. However, when resources become limited, with no option of invasive ventilation, the use of NIV may be justified. The major caveat of using noninvasive respiratory support in the face of the COVID-19 pandemic is the generation of aerosols, composed of small virus-containing particles, which may remain suspended in the air, with increased risk for healthcare workers [5, 6]. The risk of aerosolisation depends on many variables, including duration of use, flow velocity, mask leakage and patient coughing and cooperation.