

## International expert opinion on the use of nebulization for pediatric asthma therapy during the COVID-19 pandemic.

*J Thorac Dis.* 2021;13(7):3934-3947.

**Background & Objectives:** Asthma treatment and management guidelines are being updated in response to the current coronavirus disease 2019 (COVID-19) pandemic. While the updated guidelines broadly agree in their recommendations of asthma medication, guidance on the use of nebulizers for the delivery of asthma medication is contradictory. Some, including those from Global Initiatives for Asthma (GINA), recommend avoiding the use of nebulizers in asthma treatment where possible. By contrast, recent guidelines from the National Institute for Health and Care Excellence (NICE), UK and the New and Emerging Respiratory Viral Threat Assessment Group (NERVTAG) advise that the use of nebulizers can be continued since the aerosol generated during nebulization comes from a non-patient source (the fluid in the nebulizer chamber) and therefore does not contain virus particles derived from the patient.

There is a need for clear guidance on the safe use of nebulization, both in the hospital and home setting, especially in pediatric asthma, as this patient population is most dependent on this mode of drug delivery.

**Methods:** : A literature review was conducted via PubMed searches using selected search terms to identify English language publications relevant to pediatric management of asthma using nebulizers during the COVID-19 pandemic. The results of the literature review was analysed by expert panel and was used to identify areas of consensus and areas that required further discussion.

# ACADEMIC P.E.A.R.L.S

Pediatric Evidence And Research Learning Snippet



**Nebulisation in children during Covid-19 pandemic  
Clarity over Confusion!!!!**

### Recommendations :

- Data on whether nebulized treatment represents an infection transmission risk for SARS-CoV-2 are limited. In light of the above, this recommendation advocates that nebulization should be continued during the COVID-19 pandemic but with appropriate safety precautions in the following patient populations: pre-school children, children who are currently receiving nebulization as part of their personal asthma plan, children who cannot operate an MDI plus spacer, in children with impaired asthma control when using the MDI plus spacer and those who present with severe exacerbations or are in respiratory distress (acute asthma/wheeze).
- In patients with suspected or confirmed COVID-19, it should be assumed that nebulization can transmit SARS-CoV-2 and therefore any personnel administering nebulization and any bystanders must use full PPE. It is imperative to individualize the risk-benefit assessment of nebulization. The risk posed by nebulization should be assessed by the treating physician who should perform a case-by-case risk assessment on an individual basis.
- HCPs should also consider individual needs, preferences and distinctive characteristics of local healthcare systems.

### EXPERT COMMENT

**“With the beginning of Covid-19 pandemic, nebulisation was not recommended as it posed high risk of transmission. But certain situations, demand need for nebulisation, like small infants, children with exacerbations who need oxygen therapy etc. Moreover some children are used to taking nebulisation rather than pMDI and sudden switch may increase risk of exacerbations. Nebulisation may pose some risk of transmission but it can be given under due precautions. We need to assess risk vs benefit of treatment & individualize every patient & also protect ourselves /others.”**

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With warm regards,

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### Reference

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