

# REFERENCE MATERIAL

## NEBUTECH® HIGH-PERFORMANCE NEBULIZER WITH B/V FILTER

### Practical Strategies for a Safe and Effective Delivery of Aerosolized Medications to Patients with COVID-19

- Aerosol therapy has potential for fugitive emissions during therapy
- HEPA filters with nebulizers is the preferred option for aerosol drug delivery to COVID-19 patients

*Ari, A. (2020). Practical strategies for a safe and effective delivery of aerosolized medications to patients with COVID-19. Respiratory Medicine, 167, 105987. <https://doi.org/10.1016/j.rmed.2020.105987>*

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### Reducing Aerosol-Related Risk of Transmission in the Era of COVID-19: An Interim Guidance Endorsed by the International Society of Aerosols in Medicine

- Medical nebulizer treatments may increase the mass and dispersion of aerosol
- Placing a filter on the outlet of a nebulizer greatly reduces dispersion of all aerosols
- Medical nebulizers should be disposed of, rinsed, air dried, washed, or sterilized between treatments

*Fink, J. B., Ehrmann, S., Li, J., Dailey, P., McKiernan, P., Darquenne, C., Martin, A. R., Rothen-Rutishauser, B., Kuehl, P. J., Häussermann, S., MacLoughlin, R., Smaldone, G. C., Muellinger, B., Corcoran, T. E., & Dhand, R. (2020). Reducing Aerosol-Related Risk of Transmission in the Era of COVID-19: An Interim Guidance Endorsed by the International Society of Aerosols in Medicine. Journal of Aerosol Medicine and Pulmonary Drug Delivery, 1–5. <https://doi.org/10.1089/jamp.2020.1615>*

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## Investigation of the Quantity of Exhaled Aerosols Released into the Environment during Nebulisation

- Secondary inhalation of medical aerosols is a significant occupational hazard in both clinical and homecare settings
- Placing filters on nebulizers and expiratory ports of devices reduces fugitive emissions

McGrath, J. A., O'Sullivan, A., Bennett, G., O'Toole, C., Joyce, M., Byrne, M. A., & MacLoughlin, R. (2019). Investigation of the Quantity of Exhaled Aerosols Released into the Environment during Nebulisation. *Pharmaceutics*, 11(2), 75. <https://doi.org/10.3390/pharmaceutics11020075>

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## Respiratory Support for Adult Patients with COVID-19

- Aerosol dispersion distance for nebulizers is up to 80cm
- Placement of viral filter with a nebulizer is likely to reduce the risk of exposure to healthcare worker

Whittle JS, Pavlov I, Sacchetti AD, Atwood C, RosenbergMS. Respiratory support for adult patients with COVID-19. *JACEP Open* 2020;1:95–101. <https://doi.org/10.1002/emp2.12071>