

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>

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>

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>