Aerosolized Medications FAQ

Introduction:

The use of a nebulizer to deliver aerosolized medications is considered an aerosol-generating procedure.\(^1,^2\) Therefore, use of a nebulizer device in patients with COVID-19 infection currently on contact/droplet precautions requires healthcare providers to wear additional personal protective equipment (PPE) required for contact/airborne precautions (N95 respirator or PAPR, gown and gloves) and preferably placement in a negative pressure room for the duration of the nebulizer treatment.

Efforts to minimize aerosol-generating procedures and conserve PPE during the COVID-19 pandemic are important to ensure adequate supplies of these vital resources. Many facilities have asked if eliminating or severely limiting use of nebulized medications should be part of this process.

Providing ongoing treatment with respiratory medications is essential in treatment of patients with COVID-19. There will not be a single solution that will work for all facilities. The following key considerations should be discussed as a facility attempts to develop local policies and practices around nebulized medications during the COVID-19 pandemic.

Key Considerations:

**Should all nebulized medication use be eliminated during the COVID pandemic?**

Converting all respiratory medications facility-wide from nebulizers to an alternate format is neither practical nor responsible. This practice may contribute to potential shortages of alternative formulations of respiratory medications (metered dose inhalers (MDI) or Respinmat™).\(^3\) It is reasonable to minimize use of nebulized medications in any patients currently under contact/droplet or contact/airborne precautions. This means converting to metered dose or dry powder inhalers in these patients when available. The majority of patients who will be receiving inhaled agents do not have COVID-19 and can continue to safety receive nebulized medications.

**Can all medications be given via MDI or an equivalent device?**

No, some aerosolized medications can only be administered using a nebulizer device. These include many antibiotics used to treat and prevent infectious pulmonary disease and hypertonic saline. Nebulized use of these agents in a patient with presumed or suspected COVID-19 should be assessed on a case by case basis carefully weighing the risk versus benefit of treatment. PPE required for contact/ airborne precautions would be required and administration should ideally occur in a negative pressure room. Please note: additional PPE required for any aerosolized medication included in the NIOSH Hazardous Drug List should always be used regardless of the isolation status of the patient. Institutional policies and procedures for aerosolization of these agents should always be followed.


References: