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Memorandum

TO: Health Care Providers

FROM: Elizabeth D. Kelley, MPH, MBA, Director
Bureau of Health Care Safety and Quality

SUBJECT: Update to Defining Aerosol Generating Procedures and Recommended PPE

DATE: July 31, 2020

The Massachusetts Department of Public Health (DPH) continues to work with state, federal and local partners on the outbreak of Coronavirus Disease 2019 (COVID-19), caused by the virus SARS-CoV-2, and we continue to appreciate the essential role you have in responding to this evolving situation.

The purpose of this memorandum is to outline aerosol generating procedures (AGPs) in order for health care personnel (HCP) to appropriately select and prioritize personal protective equipment (PPE) when providing care. This memorandum replaces the July 6, 2020 memorandum and may be further updated based upon additional information learned about COVID-19.

Aerosol Generating Procedures:

Some procedures performed on patients are more likely to generate higher concentrations of infectious respiratory aerosols than coughing, sneezing, talking, or breathing. These AGPs potentially put healthcare personnel and others at an increased risk for pathogen exposure and infection.

Medical procedures that are considered AGPs, or that create uncontrolled respiratory secretions, include but are not limited to:

- Open Suctioning of Airways
- Sputum Induction
- Cardiopulmonary Resuscitation

- Endotracheal Intubation and Extubation
- Tracheotomy (e.g. tracheostomy replacement)
- Non-Invasive Ventilation (e.g., Bipap, CPAP)
- Bronchoscopy
- Manual Ventilation
- Dental Procedures
- Autopsy, if oscillating bone saws are used¹
- Airway Procedures and Surgeries (e.g., ear nose and throat (ENT), thoracic, or transsphenoidal surgeries)
- Nebulizer administration^{2,3}
- High flow oxygen delivery³

Commonly performed medical procedures that are not considered AGPs include, but are not limited to:

- Nonrebreather, face mask, or face tent up to 15L
- Humidified trach mask up to 20L with in-line suction
- Routine trach care (e.g., replacing trach mask, changing trach dressing)
- In-line suctioning of endotracheal tube
- Routine Venturi mask without humidification
- Coughing
- Suctioning of oropharynx
- Incentive spirometry
- Cesarean delivery, post-partum hemorrhage, second stage of labor

Specimen Collection:

While nasopharyngeal and oropharyngeal swab specimen collection is not considered an AGP, CDC recommends that HCP collecting the specimen don N95 respirators or alternatives⁴.

Personal Protective Equipment Recommended for AGPs:

Due to ongoing COVID-19 transmission in the community in Massachusetts, DPH recommends that HCP performing or providing direct care during the AGP on a patient who has an unknown COVID-19 status⁵, wear full PPE, a N95 filtering facepiece respirator or higher, eye protection,

¹ <https://www.cdc.gov/coronavirus/2019-ncov/hcp/guidance-postmortem-specimens.html#biosafety>

² Aerosols generated by nebulizers are derived from medication in the nebulizer. It is uncertain whether potential associations between performing this common procedure and increased risk of infection might be due to aerosols generated by the procedure or due to increased contact between those administering the nebulized medication and infected patients.

³ Based on limited available data, it is uncertain whether aerosols generated from this procedure may be infectious and so, out of an abundance of caution, they should be treated as AGPs.

⁴ <https://www.cdc.gov/coronavirus/2019-ncov/lab/guidelines-clinical-specimens.html>

⁵ Individuals who have a COVID-19 PCR test no more than 72 hours/3 days prior to their procedure start that results as negative and remain asymptomatic, may be considered COVID-negative status. Individuals who have been

isolation gown and gloves. Full PPE should also be used when caring for an individual who is presumed or confirmed to be infected with COVID-19. Please refer to DPH's Comprehensive PPE Guidance for additional detail about PPE use: <https://www.mass.gov/doc/comprehensive-personal-protective-equipment/download>

After completing an AGP, the procedure space should remain inactive for the time required for airborne-contaminant removal prior to cleaning and then beginning care of the next patient. The amount of time required for air-contaminant removal is depending upon the number of air changes per hour and may be found on CDC's website:

<https://www.cdc.gov/infectioncontrol/guidelines/environmental/appendix/air.html#tableb1>

DPH strongly encourages all health care providers in Massachusetts to monitor the CMS and CDC website for up-to-date information and resources:

- CMS website: <https://www.cms.gov/About-CMS/Agency-Information/Emergency/EPRO/Current-Emergencies/Current-Emergencies-page>
- CDC website: <https://www.cdc.gov/coronavirus/2019-ncov/healthcare-facilities/index.html>

Additionally, please visit DPH's website that provides up-to-date information on COVID-19 in Massachusetts: <https://www.mass.gov/2019coronavirus>.

continuously admitted to the same facility and have not had a known exposure to COVID-19 should be retested as determined appropriate by the clinical provider and this may be longer than the 72 hour time frame.