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**MASSACHUSETTS
GENERAL HOSPITAL**

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INFECTION CONTROL GUIDELINES FOR AEROSOL-GENERATING PROCEDURES

Summary of May 28, 2020 changes:

- Updated the pre-AGP testing time from 48 hours to within 72 hours of the procedure

This guidance describes current recommendations during the COVID-19 pandemic for patients undergoing aerosol-generating procedures (AGP) or who providers anticipate will need an AGP including how to prioritize the use of Airborne Infection Isolation Rooms (AIIR, “negative pressure” rooms) versus standard rooms.

1. AGPs performed on patients with known or suspected COVID-19 (in EPIC: CoV-Risk, COVID-19, CoV-Presumed, or CoV-Exposed) must be performed following Enhanced Respiratory Isolation (ERI). Appropriate Personal Protective Equipment includes a gown, gloves, eye protection, and N95 respirator or powered air-purifying respirator (PAPR) if unable to be fit-tested.
 - a. **Outpatients**
 - i. Outpatients in whom AGPs are planned should be tested for COVID-19 within 72 hours prior to the procedure to establish their COVID-19 status.
 1. Standard Precautions are adequate for asymptomatic patients who test negative for COVID-19.
 2. If the COVID-19 test was not performed or results are still pending at the time of the AGP, the procedure should be done under ERI. Once the AGP is complete ERI can be discontinued in asymptomatic patients (see section on Procedure for AGPs, below).
 - b. **Inpatients**
 - i. All inpatients are tested on admission for COVID-19, or within 72 hours of a planned admission, and screened daily thereafter for symptoms. Patients who test negative and remain asymptomatic during admission do not require ERI for AGPs.
 - ii. If an admission COVID-19 test was not performed or the results are still pending at the time of the AGP, the procedure will be performed under ERI. Once the AGP is complete, ERI can be

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discontinued in asymptomatic patients (see section on Procedure for AGPs, below).

- iii. Inpatients who have completed their evaluation for COVID-19 and had their CoV-Risk infection status resolved do not require ERI for AGP.
- iv. Inpatients who have recovered from COVID-19 and had their infection status resolved do not require ERI for AGP.

Aerosol-Generating Procedures (AGP)

The list of AGPs will be assessed on a regular basis for inclusion or exclusion of procedures.

<ul style="list-style-type: none"> • Airway Surgeries (e.g., ENT, thoracic, transsphenoidal surgeries) • Intubation • Extubation • Chest Compressions • Nebulization • High flow oxygen, including nasal canula, at > 15L • Non-invasive positive pressure ventilation (e.g. CPAP, BIPAP) • Oscillatory ventilation • Bronchoscopy • Sputum induction 	<ul style="list-style-type: none"> • Open suctioning of tracheostomy or endotracheal tube • Tracheostomy change • Manual ventilation (e.g. manual bag-mask ventilation before intubation) • Disconnecting patient from ventilator • Upper endoscopy (including transesophageal echocardiogram) • Lower endoscopy • Venturi mask with cool aerosol humidification • Mechanical In-Exsufflator (MIE) • Ventilator circuit manipulation • Dental procedures
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<p>The following are not considered aerosol-generating:</p> <ul style="list-style-type: none"> • 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 • Cesarean delivery, post-partum hemorrhage, second stage of labor • Nasopharyngeal swab • Proning is not inherently aerosol-generating but aerosols are possible if the endotracheal tube becomes disconnected during the proning process

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Use of and Prioritization of AIIRs

Whenever possible, AGPs should be performed in an AIIR. When there is a shortage of AIIR rooms and there is a need for AGPs, AIIRs will be assigned based on the priority ranking in grid below. If uncertainty exists regarding prioritization of patients for AIIR, interdisciplinary discussion and consultation with Infection Control is encouraged.

1 st priority COVID 19 confirmed	2 nd priority CoV-Risk (PUI)	3 rd priority CoV-Exposed	4 th priority Other Resp Viral Infection
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Tuberculosis, varicella, and measles patients require an AIIR and are not included in this guidance. Consult with Infection Control regarding patient placement for these infections.

Note: It is not always possible to anticipate the need for an AGP; lifesaving care (e.g. intubation, chest compressions) should not be delayed in order to transfer a patient to an AIIR.

Use of a Standard Patient Room for AGPs for Patients on Enhanced Respiratory Isolation

If an AIIR is not available, AGPs may be performed in a standard patient room or exam room with the door closed. If a patient is in a positive pressure room and has not been tested for COVID-19 or if their test is pending, AGPs should be avoided except in emergency situations.

Procedure for AGPs For Patients on Enhanced Respiratory Isolation (Standard and AIIR rooms)

1. Conduct in a private room only. Semi-private rooms are permitted if it is occupied by only one patient or if both patients in the room have confirmed COVID-19.
 - a. Not all AGPs can be planned. If a patient needs an urgent or emergent AGP and cannot be placed in a private room or in a semi-private without a roommate, ensure that the other patient (roommate) is either moved out of the room for the AGP and for the period of airing afterwards (see below) or, if this is not possible, ensure that the roommate is masked with a surgical mask during the time period.
2. Limit staff in the room.
3. All staff in the room must wear PPE per ERI.
4. Door must remain closed per ERI.
5. After procedure, wipe down all high touch surfaces with a hospital-approved disinfectant.
6. Entry into a room after an AGP:
 - a. An N95 or PAPR is required for respiratory protection for up to 60 minutes after the procedure depending on the number of air changes per hour (ACH) in the room.

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- i. Rooms with 6 ACH = 60 minutes. Rooms with 12 ACH = 30 minutes.
 - ii. Standard patient rooms, exam rooms and some AIIR require 60 minutes.
 - iii. Operating Rooms, Procedures Rooms and some recently built AIIRs may have more air exchanges per hour thus permitting a shorter turn over time. Contact local infection control for a list of AIIR rooms and turnover times.
7. Gowns, gloves, and eye protection must be worn per ERI by staff remaining in the room.
8. If an AGP is performed and patient is moved from the room; staff that clean the room within the airing time after patient leaves must wear PPE per ERI while cleaning room. Room can be opened to general use after cleaning is completed and airing time has passed.

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