



MASSACHUSETTS
GENERAL HOSPITAL

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PARTNERS INFECTION CONTROL GUIDANCE ON RESPIRATORY PROTECTION AND USE OF AIRBORNE INFECTION ISOLATION ROOMS (AIIRs) DURING AEROSOL- GENERATING PROCEDURES DURING COVID-19 RESPONSE

This guidance replaces the Partners Infection Control List of Aerosol Generating Procedures and provides additional guidance on use of Airborne Infection Isolation Rooms.

This guidance describes current recommendations for respiratory protection (N95 respirator or PAPR) and the utilization of Airborne Infection Isolation Rooms (AIIR, “negative pressure” rooms) for patients undergoing aerosol-generating procedures (AGP) or who are anticipated to need AGP.

Aerosol-Generating Procedures (AGP):

- 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
- Open suctioning of tracheostomy
- Tracheostomy change
- Manual ventilation (e.g. manual bag-mask ventilation before intubation)
- Disconnecting patient from ventilator
- Upper endoscopy (including transesophageal echocardiogram)
- Lower endoscopy
- Chest physical therapy
- Venturi mask with cool aerosol humidification
- Mechanical In-Exsufflator (MIE)
- Ventilator circuit manipulation

Tran K, Cimon K, Severn M, Pessoa-Silva CL, Conly J. Aerosol generating procedures and risk of transmission of acute respiratory infections to healthcare workers: a systematic review. PLoS One. 2012;7(4):e35797.

Thompson KA, Pappachan JV, Bennett AM, Mittal H, Macken S, Dove BK, et al. Influenza aerosols in UK hospitals during the H1N1 (2009) pandemic--the risk of aerosol generation during medical procedures. PLoS One. 2013;8(2):e56278.

Use of N95 Respirators or PAPRs

An N95 or PAPR is required during all aerosol-generating procedure in patients with known or suspected respiratory illness (i.e., COVID-19, CoV-Risk, CoV-Exposed, other respiratory viruses), whether the procedure is performed in an airborne infection isolation room (AIIR) or not.

This policy or guidance was developed based on currently available published guidance, in the setting of available supplies and clinical situations at our institutions. Decisions are made collaboratively and are biased on ongoing risk-assessments of the evolving COVID-19 pandemic. This policy or guidance document represents the best recommendations as of April 4, 2020, will be reviewed regularly, and is subject to change as the situation evolves.

Nasopharyngeal swabs **are not** considered aerosol generating procedures; however, CDC and Partners guidance requires wearing an N95 respirator during swabbing and keeping the room door closed (negative pressure not required).

An N95 or PAPR is required in the following situations even if there is no known respiratory infection. See: *Partners Guidance of Peri-Procedural Respiratory Protection*

- Airway Surgeries (e.g., ENT, thoracic, transsphenoidal surgeries)
- Intubation and Extubation
- Chest Compressions

Note. The following **are not considered** aerosol-generating:

- 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)
- Routine Venturi mask without humidification
- Coughing
- Suctioning of oropharynx
- Proning is not inherently aerosol-generating but aerosols are possible if the endotracheal tube becomes disconnected during the proning process

Prioritization of AIIRs

AIIR's should be prioritized when there is a shortage of AIIR rooms. Prioritization of AIIRs is based on patient risk of COVID 19 infection. See grid below for priority levels. If uncertainty exists regarding prioritization of patients for AIIR, interdisciplinary discussion is encouraged.

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.

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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TB, varicella, and measles patients require an AIIR and are not included in this guidance.

References:

1. https://www.who.int/csr/disease/coronavirus_infections/prevention_control/en/
2. <https://www.sccm.org/getattachment/Disaster/SSC-COVID19-Critical-Care-Guidelines.pdf>
3. <https://www.cdc.gov/flu/professionals/infectioncontrol/healthcaresettings.htm>
4. <https://www.esge.com/assets/downloads/pdfs/general/ESGE ESGENA Position Statement gastroi ntestinal endoscopy COVID 19 pandemic.pdf>

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