**Recommendations for Managing Aerosol Generating Procedures (AGPs) During COVID-19 Pandemic**

This guidance describes current recommendation 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 the Airborne Infection Isolation Rooms (AIIR, “negative pressure” rooms) versus standard rooms.

Aerosol-generating procedures (AGP) are defined as “procedures that mobilize respiratory secretions beyond coughing.” AGPs pose a higher risk of transmission of organisms spread through the droplet route.

**\*Tuberculosis, varicella, and measles patients require a continuously-monitored AIIR and are not included in this document.**

| **Category** | **Procedures** | **COVID/PUI/Quarantine/Unknown Recommendation** | **COVID Negative/Not Suspected** **(including asymptomatic pending admission result) Recommendation** |
| --- | --- | --- | --- |
| **High Risk****AGPs** | * Bronchoscopy (avoid if possible)
* Cardiopulmonary resuscitation (CPR)
* Endotracheal intubation and extubation
* High flow oxygen device
* Open suctioning of airways (excludes in-line suctioning)
* Sputum Induction

Dental procedures * Ultrasonic and sonic scalers
* Air polishing
* Air-water syringe
* Tooth preparation with air abrasion (contamination with abrasive particles)
 | **Environment\*:** * AIIR (Negative Pressure room) or

Portable HEPA filter* HEPA filtered Laminar air flow environment (ie, OR)
* Room door must remain closed during the procedure and for the appropriate air exchanges following the procedure.

***(\*See AIIR prioritization below)*****PPE during procedure or while equipment in use**:* N95
* Face shield
* Gown
* Gloves

**NOTES**:* O2 via HFNC is an AGP. The flow rate is typically above 20L.
* O2 by nasal cannula is not aerosol generating. Nasal cannula are not designed to go above 15 L.
* Out of abundance of caution place face mask on patient while NC or NRB in place. Face mask should not be placed if patient is in restraints or in any way not capable of removing face mask independently
* Due to lack of data and availability of other options, recommend avoid use of oxy-mask and venti-mask.
 | **Environment:** * Negative pressure room or portable HEPA filter is preferred but is not required.
* Private room with walls and a door is recommended
* If patient is located in a semi-private room, the curtain will be drawn
* If in private room, door must remain closed during procedure and for the appropriate air exchanges following the procedure

**PPE for staff within 6 feet of procedure**:* N95
* Face shield
* Gown
* Gloves
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| **Lower Risk AGPs** | * Balloon Sinuplasty
* Biopsies or excisions inside the nostrils, on or around the nose
* Botox around nose
* Chest vest therapy
* Dental Procedures not listed above
* Electrical cardioversion
* Enteric tube placements
* ET tube adjustment with cuff deflated
* Excision Tongue Tie
* Flex Laryngoscopy
* FNA/Core Biopsy
* Foreign Body Removal (Nose/Mouth)
* Incision Drainage Abscess (Pertonsillar, Oral)
* Laceration Repair (Mouth)
* Lasers around the nose it is possible to get viral particles aerosolized (currently not used right now)
* LEEP
* Lower Endoscopy
* Manual chest physiotherapy
* Manual ventilation
* Nasal Cautery
* Nasal Polyp Removal
* Nebulizer Treatment
* Non-invasive ventilation (BiPAP or CPAP). Use closed circuit system with Bacterial/viral filter on exhalation port is preferred when available)
* Peak flow measurements
* Pulmonary function tests (PFTs)
* Swallow study/evaluation performed using FEES
* Trach collar with aerosolized air
* Trans-esophageal echocardiography
* Turbinate Reduction
* Upper Endoscopy/EGD
* Uvulectomy
* Vocal Fold Injections
* Wound Debridement (Mouth/Nose)
 | **Environment:** * Negative pressure room or portable HEPA is preferred but not required
* Private room with walls and a door is required
* Room door must remain closed during procedure and for the appropriate air exchanges following the procedure

**PPE during procedure (all staff in the room):*** N95
* Face shield
* Gown
* Gloves

**Environment:** * Negative pressure room or portable HEPA filter is preferred but not required
* Room with walls and a door is required
* Room door must remain closed during procedure and for the appropriate air exchanges following the procedure

**PPE during procedure (all staff in the room):*** N95
* Face shield
* Gown
* Gloves
 | **Environment:** * Negative pressure room or portable HEPA filter is preferred but not required
* Private room with walls and a door is recommended.
* If patient is located in a semi-private room, the curtain will be drawn

**PPE during procedure (all staff in the room):*** Face mask
* Face shield
* Gown per standard precautions
* Gloves

**Environment:** * Negative pressure room or portable HEPA filter is preferred but not required
* Private room with walls and a door is recommended.
* If patient is located in a semi-private room, the curtain will be drawn

**PPE during procedure (all staff in the room)**:* Face mask
* Face shield
* Gown per standard precautions
* Gloves
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Notes:

1. This guidance identifies procedures that pose clear risk for COVID-19 transmission via aerosolization of respiratory secretions, based on CDC and WHO guidelines. Other professional societies may identify other procedures that, in their opinion, pose risk of transmission. In the case of crisis or contingency supply conditions, N95s will be prioritized for the procedures identified above.
2. In the event of low PPE supplies and crisis interventions are necessary, prioritization for N95s and other PPE will be given to COVID-19 positive/PUI/Quarantine/Unknown patients .
3. Cohorted patients (+) COVID patients may have AGPs performed in their shared room. Other cohorted patients requiring AGPs will need to have procedure done in private room

 **Prioritization of AIIRs:**

Whenever possible, COVID positive, PUI, and COVID quarantine patients should have definitive AGPs 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 the grid below:

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| --- |
| 1. COVID positive or PUI with Higher Risk AGP
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| 1. COVID positive or PUI with Lower Risk AGP
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| 1. COVID exposure (quarantine precautions) with Higher Risk AGP
 |
| 1. COVID exposure (quarantine precautions) with Lower Risk AGP
 |

Cohorting COVID positive patients will also be utilized as part of COVID population management.

When demand for Category 1 outstrips supply of AIIR rooms, there will be no further prioritization. If necessary an ad hoc committee of IP, Pulmonology, and ID will convene to make further determinations for room allocation.

Additional precautions during AGPs:

* 1. After procedure, wipe down all high touch surfaces with a hospital-approved disinfectant
	2. Entry into a room for COVID positive, PUI, and quarantine patients following an AGP: An N95 or PAPR is required until the appropriate air exchanges have been completed as indicated in the TB policy <https://intranet.rochesterregional.org/sites/Policies/RRHS/Policies/IP16.pdf>.
	3. An aerosolized procedure sign is placed on the door to indicate when staff may enter the room.

**References:**

CDC guidance: Clincial Questions about COVID-19 Questions and Answers. <https://www.cdc.gov/coronavirus/2019-ncov/hcp/faq.html>. Aug 4 2020.

CDC Guidance for Dental Settings. <https://www.cdc.gov/coronavirus/2019-ncov/hcp/dental-settings.html>. Aug 4 2020.

WHO.Modes of transmission of virus causing COVID-19:implications for IPC precaution recommendations. <https://www.who.int/news-room/commentaries/detail/modes-of-transmission-of-virus-causing-covid-19-implications-for-ipc-precaution-recommendations>. July 9 2020.

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