

AEROSOL GENERATING PROCEDURE MANAGEMENT

AGP in Operating Rooms and Endoscopy for patients during COVID-19 outbreak



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INTRODUCTION

These guidelines address aerosol generating procedure (AGP) management in patients during COVID-19 outbreak. Appropriate PPE and safety requirements will be guided by the patient's pre-procedural testing status.

PPE In OR and Endoscopy				
COVID-19 CATEGORY	N95/PAPR during airway management	Post AGP Airborne Decontamination OR: 14 min Endo: 46 min	N95/PAPR During Case	Full COVID Protocol Runners, Full PPE OR Cleaning delay: 30 min Endo Cleaning delay: 69min
Known Covid-19 or PUI	USE N95/PAPR & FULL PPE THROUGHOUT CASE			YES
NEGATIVE TEST IN LAST 72 HRS	NO	NO	NO	NO
UNTESTED	YES	YES	ONLY IF AGP	NO

PUI-Patient Under Investigation AGP-Aerosol Generating Procedure PPE- Personal Protective Equipment

KNOWN COVID-19 or PATIENT UNDER INVESTIGATION:

For management of a patient under investigation (PUI) or a patient with a known COVID-19 diagnosis, please use the [protocol for bringing PUI and COVID-19](#) patients to surgery.

PATIENTS WITH A NEGATIVE COVID-19 TEST:

As part of scheduled procedural care, patients will have testing arranged by Pre-Anesthesia Testing (PAT) nurses. Patients will be tested three days before their procedure. Patients who have a negative COVID-19 test in the 72 hours prior to their procedure may be managed with standard precautions. This includes the use of a standard surgical mask and gloves. No airborne decontamination delay is necessary.

UNTESTED PATIENTS:

Patients who come for emergent or urgent care may not have preoperative COVID-19 testing completed. Procedural care should not be delayed when harm may result from the testing delay. The procedure should proceed with proper PPE. Care of untested patients requires additional precautions based on the type of procedure and the location of care as described below.

Remember basic principles:

1. Strict limitation of AGP to essential interventions only
2. Minimize healthcare worker's exposure
3. Maximize safety, conserve Personal Protective Equipment (PPE)
4. Times of greatest exposure are tracheal intubation, extubation, suctioning, coughing and positive pressure ventilation

Note that wait times in the Operating Rooms and Endoscopy will be different due to differences in air changes per hour (ACH).¹ All Intermountain operating rooms have a rating of at least 20 ACH. Endoscopy labs have a rating of 6 ACH (PCH has 15 ACH). If performing the AGP in another unit, refer to [PPE recommendations and instructions](#).

IN THE OPERATING ROOM

When surgical airway management is the only AGP

Intubation: The anesthesia provider and an assistant are the only caregivers in the room. If caregivers are wearing N95 mask and eye protection, they are safe to be in the room as well. Once the airway is secure, all persons who will be with standard procedural masks and eye protection must **wait 14 minutes** before entering the operating room where the intubation occurred. It is preferred to keep the door closed during this wait time. Please limit traffic in and out of the room during the **14-minute wait** time.

Extubation: The anesthesia provider and an assistant are the only caregivers in the room. If others are wearing N95 mask and eye protection, they are safe to be in the room as well. Once the patient has left the operating room, all persons wearing only a standard procedure mask only must wait **14 minutes** before entering the operating room where the intubation occurred. Please limit traffic in and out of the room during the **14-minute** wait time. Do not bring the next patient into the room prior to completion of the **14-minute** wait time.

PPE INFORMATION LINKS

[What PPE to wear to stay safe](#)

[PPE Instruction](#)

[How to safely reuse N95 masks, eyewear, and face shields](#)

- Cover N95 with reusable face shield to prevent soiling
- Store N95 in paper bag between use to minimize humidity
- Clean hands before/after donning or doffing N95
- Do not reuse if nasal bridge or straps are no longer effective
- Do not reuse if visibly soiled

IN THE OPERATING ROOM

When the procedure itself is an AGP

Intubation and Procedure: All caregivers in the operating room during the intubation and the procedure are to wear N95 mask and eye protection. If N95 masks are worn, those caregivers at the operative field or those at risk of splash must also wear a face shield. Please limit traffic in and out of the room to essential reasons only. If additional caregivers are required to enter the room (such as a radiology technician), they too must be with airborne precautions.

Extubation: The anesthesia provider and an assistant are the only persons in the room. If others are still wearing N95 mask and eye protection, they are safe to be in the room as well. Once the patient has left the operating room, all persons who will only be wearing a standard procedural mask must wait **14 minutes** before entering the operating room where the extubation occurred. Please limit traffic in and out of the room during the **14-minute wait** time. Do not bring the next patient into the room prior to completion of the **14-minute wait** time.

IN THE ENDOSCOPY ROOM

When the procedure itself is an AGP

Procedure: All persons in the endoscopy room during the procedure are to be with PAPR (preferred) or N95/face shield. Limit the number of caregivers in the room. Please limit traffic in and out of the room to essential reasons only. Once the procedure is complete and the patient has been removed from the room, all persons who will be wearing only standard procedure masks will need to **wait 46 minutes** before entering the room. Do not bring the next patient into the room prior to completion of the **46-minute wait** time.

NOTES ON ROOM TURNOVER:

- **COVID/PUI:** Wait for airborne decontamination times of 30 mins (in OR) and 69 mins (in Endo) before cleaning the procedural room. Refer to the [protocol for bringing PUI and COVID-19 patients to surgery](#) for full details.
- **NEGATIVE TEST IN LAST 72 HRS:** No delay is required before room turnover. No delay is required for the next patient to come to the room.
- **UNTESTED:** Clean room immediately but wait for airborne decontamination times of 14 mins (in OR) and 46 mins (in Endo) before making procedural bed, opening sterile supplies, or bringing the next patient to the room.

References:

1.

ACH	Time (mins) required for removal 99% efficiency	Time (mins) required for removal 99.9% efficiency
4	69	104
6	46	69
8	35	52
10	28	41
12	23	35
15	18	28
20	14	21