COVID-19 Aerosol Generating Procedures (AGP)
Generating Procedures Table

For asymptomatic patients who have not completed vaccination series

NO pre-procedure testing for asymptomatic patients, immunocompetent individuals who are fully vaccinated against COVID- Documented Proof Validated
Immunocompromised persons should all be treated as not vaccinated, list below.

Fully vaccinated is defined as an immunocompetent person who is >14 days after completion of the vaccine series.

Use the table below to identify appropriate PPE and room closure procedures for various procedures.

Please note:

- This guideline was developed as a collaborative process including infectious diseases, infection preventionist, critical care and pulmonary medicine, ambulatory medicine, internal medicine, emergency medicine, anesthesiology, neonatology, OBGYN, quality, and nursing leadership related to all of these areas.
- Whenever possible, patients should continue to wear a mask.
- When already wearing an extended use N95 respirator do not change to a lower level of respiratory protection solely based on involvement with a lower risk procedure.
- A negative test is one that has been obtained within the prior 3 calendar days and the patient has no identifiable known close contact exposures in the interim.

Examples of immunocompromised patients where testing for otherwise asymptomatic fully immunized persons is still appropriate:
- Cancer on Chemotherapy, excluding hormonal therapy
- Bone marrow, solid organ, stem cell transplants or CAR-T therapy
- Lymphoma, not in remission
- Acute leukemia, multiple myeloma, Waldenstrom’s macroglobulinemia, or immunoglobulin deficiencies other than IgA
- Uncontrolled HIV (CD4<200)
- Other immune suppressing diseases
- Chronic steroids (>20mg/day or equivalent prednisone for ≥ 2 weeks)
- Immunosuppressant, immune modulating or chemotherapy agents e.g. TNF inhibitors, JK inhibitors, mycophenolate
- Other immune suppressing diseases

NB: Patients on inhalational steroids or pregnancy are not considered immunocompromised conditions
For COVID-19 Positive Patients or PUI/Unknown /Refusal for Testing:
• Airborne Infection Isolation Room (AIIR)* should be used when available. If not available use regular room, door closed, and room closure required after the AGP.
• PAPR required during AGP.
• Minimum of Fit Tested N95 plus eye protection if PAPR not available.
• Room closure required after procedure performed.**

For Asymptomatic Patients with COVID-19 Negative Test:
• N95 mask and eye protection recommended.
• AIIR not required.
• No Room closure.

Pre-procedure testing recommended for COVID status unknown patients.

High Hazard Procedures:
• Airway procedures (e.g. nasopharyngeal endoscopy, surgical airway, tracheostomy, tracheostomy tube changes)
• Any open tracheal suctioning (e.g. nasal, oral, stoma, endotracheal) which could generate a strong cough
• Bag mask ventilation in a controlled setting (e.g., Operating room/PACU)
• Bronchoscopy
• Chest Tube for Pneumothorax if intubated
• CPR (Cardiopulmonary resuscitation), including emergent bag mask ventilation
• Dental/oral procedures that are not listed as low risk
• Endotracheal intubation and extubation
• Esophageal procedures (e.g. Upper GI endoscopy, TEE) in a non-intubated patient
• Insertion or removal of supraglottic airway (e.g. LMA, Air-Q, King)
• Positive airway pressure therapy (e.g. BiPAP, CPAP)
• Sputum induction
• Transpleural procedures for patients on mechanical ventilation
• Admitted for anticipated delivery or high risk of requiring intubation
• Excision of head/neck tissue when patient is unable to wear a mask
• Procedures in the PFT Lab
• Spirometry with bronchodilator testing
• Treadmill stress testing
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<th>MEDIUM HAZARD</th>
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**For COVID-19 Positive Patients, PUI or Pending Test Results:**
- N95 plus eye protection.
- AIIR not required.
- Room closure required.

**For asymptomatic patients and either COVID-19 test Negative or not tested:**
- Regular surgical/procedure mask and eye protection required.
- No room closure.

**Pre-procedure testing NOT recommended:**
- Breath testing
- Chest Tube for Pneumothorax if not intubated
- Colonoscopy
- Dysphagia evaluation
- Esophageal procedures (e.g. upper GI endoscopy, TEE) in an intubated patient
- Exhaled nitric oxide testing
- Flutter valve device e.g. AEROBIKA*
- High flow nasal cannula >6 L/min (e.g. OptiFlow, VapoTherm, Nasal Pendant)
- High flow oxygen delivered >15 L/min (e.g. Simple mask, Non-rebreather, OxyMask, Venturi Mask, Cold mist)
- Insertion of a gastric tube (e.g. NG, OG) which could generate a strong cough
- Mechanical ventilator circuitry disconnections if the **ventilator is not on standby**
- Nebulizer treatment NOT delivered by breath actuated nebulizer in breath actuated mode e.g., AEROEclipse
- Practices which induce or include physiologic heavy breathing (e.g. induced exercise during PT/OT, pulmonary rehabilitation)
- Transpleural procedures for patients not on mechanical ventilation
LOW HAZARD

For COVID positive patients or PUI (or refusing testing):
• N95 and eye protection.
• No room closure.

For asymptomatic patients and COVID-19 test Negative (or not tested):
• Regular surgical/procedure mask and eye protection required.
• No room closure Pre-procedure testing NOT recommended
• Acupuncture, Skin Testing
• Circumcision/Vasectomy
• Closed circuit mechanical ventilation (includes patients’ own device) with a viral filter in place without circuit disconnection, or with brief (<1 min) disconnection with the ventilator in standby
• Closed in-line tracheal suctioning
• Cystoscopy / Nuclear Medicine VCUG
• Dental: Dental examinations and fluoride administration, panoramic radiographs, intraoral radiographs, cephalometric radiographs, Cone Beam radiographs and photographs
• Dermatology including laser skin therapy, photodynamic therapy, skin biopsy with and without cautery, wart removal – including anal
• EEG, EMG, NCV, Lumbar Puncture
• Immunosuppressed/Biologic therapy/Chemotherapy (Rheumatology, Oncology, GI, etc)
• Interventional Radiology: Angiogram, Fistulagram/Declot, Kyphoplasty, Vertebroplasty, Nephrostomy tube placement/removal, Cholangiogram, CT guided biopsy (liver, bone, lymph node)/SI Joint Injection, Abcessogram, Port Placement/PIVC Line/Port removal, EVLT/Venous Procedures, thyroid biopsy
• Intranasal medications including sedation and live attenuated influenza vaccine (Flu mist)
• Lower GI including Anoscopy, Barium Enema, Sigmoidoscopy
• Metered dose inhaler (MDI) or breath actuated nebulizer
• Nasopharyngeal or NMT or pharyngeal swab collection
• Neck or thyroid biopsy/needle aspiration procedures
• Nitrous Oxide
• OB/Gyn - for LEEP or CRYO (burning/freezing on cervix)
• Ophthalmology e.g. glaucoma test /ophthalmology examinations or procedures (glaucoma, stent removal, and cautery eye procedures), biometry
• Oral food challenges for allergy
• Oropharyngeal suctioning
• Oxygen therapy including Closed face mask (e.g. Simple mask, Non-rebreather, OxyMask, Venturi Mask, Cold mist), trach collar with oxygen flow rates of
• ≤15 L/min, nasal cannula < 6 L/min
• Peak flow meter testing
• Physiologic (non-induced) coughing
• Rehab: practices which do not induce or include physiologic heavy breathing (e.g. passive PT/OT) and speech therapy
• Tracheostomy succioning performed via closed circuit suction device for spontaneously breathing patients
• Ultrasound studies including echocardiogram (all ages), Ob sonogram, radiology procedures
*Airborne Infection Isolation Room (AIIR)* is also referred to as a negative air pressure isolation room. The pressure in these rooms are negative to the anteroom or hallway, not allowing airborne particles to exit the room. They also have higher air changes per hour. Check with Facilities Management to determine which are AIIR. Some facilities have installed HEPAs which vent to the outside or ceiling to create negative air pressure.

**Room closure post AGP requirement varies due to room size and air changes per hour among Facilities, however one hour is routinely acceptable. Check with your Facility’s requirements.**

References
https://www.cdc.gov/infectioncontrol/guidelines/environmental/appendix/air.html

Notification to be sent to:

- All Perioperative staff
- All acute and ambulatory providers & staff members
- Acute and ambulatory Operational Leads
- Infection Preventionists
- Nursing
- Hospital & Foundation Ambulatory Care Teams: Clinicians and staff
- Quality Leads
- Quality team members