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# COVID-19 PPE Update: Surgical Interventions

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All perioperative patients are currently being clinically screened for symptoms of COVID-19 by a questionnaire. **Patients who are symptomatic will continue to be tested for COVID-19, along with any unvaccinated patients.** It is possible that asymptomatic infected or pre-symptomatic infected patients may present for surgery. Since it possible for asymptomatic individuals to shed COVID-19, based on updated guidelines from the American Society of Anesthesiologists (ASA) on personal protective equipment, the following recommendations have been made for patients without a recent (within prior 5 days / 120 hours) negative COVID-19 test **or documented vaccinated status.** For those patients who have undergone COVID-19 testing in the 5 days (120 hours) prior to surgery (PCR nasopharyngeal swab), guidelines from the Journal of the American College of Surgeons for PPE are recommended.

## **High-Risk Surgeries:**

- Any procedures on the airway, throat, mouth or sinuses (bronchoscopy, tracheostomy, glossectomy, laryngoscopy procedure, etc)
- Surgery under regional anesthetic with high likelihood of requiring General Anesthesia
- Active CPR
- Thoracic surgery/procedures
- Emergency trauma surgery involving head, neck, or thorax
- Emergency Cesarean section with intubation

When pre-operative COVID-19 testing (PCR) is **not completed on appropriate patients**, team members without a N95 mask **or** PAPR must leave OR and wait outside for 15 minutes after intubation (based on 20 air exchange/hr with 99% air clearing). After completion of intubation, other team members can return and wear standard PPE (standard gown and gloves. If exposure to respiratory secretions is anticipated, eye protection is required). For procedures where a 15-minute wait could seriously hinder care (i.e. emergency surgery), providers should follow the procedure for high-risk surgery (scenario 2). During extubation, all other providers who are not wearing a N95 mask **or** PAPR with surgical mask, should leave the room and wait outside for 15 minutes while the patient remains in the OR. OR doors should remain closed. Anesthesia providers should elect to avoid bag mask ventilation in favor of a rapid sequence intubation with endotracheal tube, when feasible.

If pre-operative COVID-19 testing is negative, then there is no need for surgical team members to leave the OR prior to intubation or during extubation. LMA use should be limited to confirmed COVID-19 negative patients.

See representative PPE grid below

Operating procedures			
Scenario	Anesthesia PPE	Surgical providers, nursing and scrub tech PPE	Notes
1 - COVID-19 PUI/Confirmed for ANY surgery (*consider DELAY)	N95 and face shield/goggles <b>or</b> PAPR with surgical mask, gown, and gloves	N95 and face shield/goggles <b>or</b> PAPR with surgical mask, gown, and gloves	Minimize number of OR staff and providers. Intubate and extubate in negative pressure room if able.
2 - Asymptomatic or unknown patient for <b>HIGH RISK</b> surgery, COVID-19 testing <b>NOT</b> available	N95 and face shield/goggles <b>or</b> PAPR with surgical mask, gown, and gloves	N95 and face shield/goggles <b>or</b> PAPR with surgical mask, gown, and gloves	Minimize number of OR staff and providers. There must be 15 min between surgical cases after extubation.
3 - Asymptomatic patient for <b>HIGH RISK</b> surgery, Negative COVID-19 test in past 5 days (120 hours)	N95 and face shield/goggles <b>or</b> PAPR with surgical mask, gown, and gloves	N95 and face shield/goggles <b>or</b> PAPR with surgical mask, gown, and gloves	
4 - Asymptomatic patient for <b>LOW RISK</b> surgery involving general anesthesia. COVID-19 testing <b>NOT</b> available.	N95 and face shield/goggles <b>or</b> PAPR with surgical mask, gown, and gloves	N95 and face shield/goggles <b>or</b> PAPR with surgical mask, gown, and gloves	OR must be cleared by all team members not wearing N95 (or PAPR) for 15 min after intubation and after extubation. There must be 15 min between surgical cases after extubation.
5 - Asymptomatic patient for <b>LOW RISK</b> surgery involving general anesthesia.	N95 and face shield/goggles <b>or</b> PAPR with surgical mask,	Standard PPE	

Negative COVID-19 test in past 5 days (120 hours).	gown, and gloves		
6 - Asymptomatic patient, with <b>LOW RISK</b> surgery <b>WITHOUT</b> general anesthesia, Negative COVID-19 test in past 5 days (120 hours).	Standard PPE	Standard PPE	

References:

- <https://www.asahq.org/about-asa/newsroom/news-releases/2020/03/update-the-use-of-personalprotective-equipment-by-anesthesia-professionals-during-the-covid-19-pandemic>
- Forrester JD, Nassar AK, Maggio PM, Hawn MT, Precautions for Operating Room Team Members during the COVID-19 Pandemic, Journal of the American College of Surgeons (2020), <https://doi.org/10.1016/j.jamcollsurg.2020.03.030>
- 15 min interval based on air changes/hour data in Spectrum Health OR rooms and CDC guidelines on airborne contaminant removal: [www.cdc.gov/infectioncontrol/guidelines/environmental/appendix/air.html](http://www.cdc.gov/infectioncontrol/guidelines/environmental/appendix/air.html)
- [https://www.michigan.gov/coronavirus/0,9753,7-406-98178\\_98455---,00.html](https://www.michigan.gov/coronavirus/0,9753,7-406-98178_98455---,00.html)

See below for Surgical Services diagram:

6.16.21  
 Owners: Surgical Services  
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**Surgical Patient  
 COVID test has been  
 collected (in the last  
 5 days/120 hours)?**

**Definitions:**  
 Standard Surgical PPE: surgical mask and eye protection  
 Severe Respiratory Precautions: N95 and face shield/goggles or PAPR with surgical mask, gown, and gloves  
 Severe Respiratory Precautions PPE for staff NOT fit tested: 3M 9205 with a full face shield gown and gloves

No

Has the patient had a previous documented COVID positive in the last 90 days?

Yes

<90 days  
 • Symptoms?  
 • No-Standard PPE after the initial 10 days (20 if the patient is immunocompromised/has been in the ICU)  
 • Yes-Provider and Anesthesia will determine if case can be delayed, if not, Severe Respiratory Precautions  
 >90 days  
 • Retest; follow guidelines below  
 See retest guidelines here: <https://www.spectrumhealth.org/-/media/spectrumhealth/documents/covid-for-providers/covid19-retesting-criteria.pdf?la=en&hash=BB8C5C691A8DFFE38E033801B77F5CA5C9D3DADC>

Yes

Is the result available?

Positive

Delay case unless it is an emergency, If the case cannot be canceled, follow Severe Respiratory Precautions

Negative

Is it an Aerosol Generating Procedure?

No

Standard Surgical PPE

Yes

N95/PAPR & face shield

No

Is the patient fully vaccinated?

No

**Hospitals:**  
 Delay case until the results are available. If the previous test result was outside of Spectrum Health, run a rapid test  
**ASC's:**  
 Provider and Anesthesia will determine if this case can be delayed or not (no rapid testing available)  
 If delay isn't possible, Severe Respiratory Precautions

Yes

Is the patient Symptomatic?

Yes

No

Standard Surgical PPE