Operational Principles: These guidelines provide decision support for the perioperative management of patients requiring anesthesia and surgical services. They are fluid and reflect the changing prevalence in COVID-19 evaluated in the context of responsible use of PPE, our PPE availability, and reuse capability, and ensuring provider protection.

- All perioperative patients will be clinically screened for symptoms of COVID-19 (new cough, shortness of breath, fever in the last 7 days; known exposure to COVID-19 positive person).
- Patients will be categorized as asymptomatic, asymptomatic with exposure risk, or symptomatic
- Pre-symptomatic patients may shed SARS-CoV-2 from the nasopharynx and oropharynx
- Pre-symptomatic patients require appropriate considerations and PPE for Aerosol Generating Procedures (AGP) including intubation
- All patients undergoing procedures considered high risk or ultra-high-risk for aerosol generation (“high risk procedures” below) will undergo laboratory testing for COVID-19.
- It is recognized that emergency cases and some urgent cases may be time prohibited with respect to testing and appropriate PPE and work flow will be required
- The number of providers in any operating room will be minimized
- All COVID laboratory testing must be performed within 48-72 hours pre-procedure
Definitions:
Standard COVID PPE: team members must don full contact, droplet, and airborne PPE. At a minimum this includes N95 respirator with face shield / goggles plus gown and double gloves.

Augmented COVID PPE: team members must don full contact, droplet, and airborne PPE. This includes PAPR/CAPR plus gown and double gloves.

High-Risk Surgeries: These procedures require all team members to use of Standard COVID PPE
• All thoracic surgery requiring lung isolation or tracheal / pulmonary resection
• Flexible Bronchoscopy of lower airways through ETT – Diagnostic (DLT and blocker placement), BAL, brushing, biopsy, transbronchial biopsy or similar.
• GI Endoscopy, TEE*, ECT, cardioversion
  *For the subset of TEEs occurring in intubated patients, for which no other high risk AGP is being performed, if the clean sheath protocol is used, the TEE would be downgraded to a non-AGP procedure. For further questions, please contact the echocardiographer for further case discussion regarding this option
• Scheduled cesarean section or other planned regional anesthetic with high likelihood of requiring conversion GA (mask or intubation)

Ultra-High-Risk Surgeries: These procedures require all team members to use of Augmented COVID PPE
• Any procedures on the glottis, oropharynx, nasopharynx, mastoid, or sinuses
• Any ENT/OMFS procedures using cautery, laser, drill or saw use within airway/oral cavity
• Any procedures utilizing operative rigid laryngoscopy or rigid bronchoscopy
• Any procedures on the subglottic airway involving incision of the airway (tracheostomy), dilation of the airway, laser or electrocautery debridement of the airway

NOTE: PLACEMENT OF A NASOGASTRIC / OROGASTRIC / NASOENTERIC FEEDING TUBE ARE NOT AGP DUE TO SHORT TIME FRAME SMALL BORE PROCEDURE

NOTE: CONSCIOUS SEDATION SHOULD BE PERFORMED WITH A PROCEDURAL MASK ON THE PATIENT WITH OR WITHOUT SUPPLEMENTAL OXYGEN. THE SMALL RISK OF REQUIRING GA OR TRANSITIONING TO DEEP SEDATION DOES NOT NECESSITATE USE OF COVID PPE IN LOW RISK ASYMPTOMATIC PATIENTS. USE SOP FOR DROPLET PROTECTION.
**COVID-19 Procedure Guidelines**

Created: April 3, 2020

Scenarios in based upon COVID-19 flow chart and **absent** COVID Lab testing:

<table>
<thead>
<tr>
<th>Scenario</th>
<th>Anesthesia Provider PPE</th>
<th>Surgery/ Nursing/ Scrub PPE</th>
<th>Notes</th>
</tr>
</thead>
</table>
| 1  Asymptomatic                                                          | • N95 + face shield/goggles or PAPR/CAPR  
• Gown  
• Double gloves                                                                 | • SOP if not present for intubation otherwise same as anesthesia providers              | • Minimizes number of providers present  
• 15-minute wait time (following intubation) for entry                           
• 15-minute wait time for egress following extubation                        |
| Emergent Low risk procedure                                              |                                                                                       |                                                                                           |                                                                                        |
| OR                                                                       |                                                                                       |                                                                                           |                                                                                        |
| Asymptomatic with positive exposure                                      |                                                                                       |                                                                                           |                                                                                        |
| No symptoms after 14-day quarantine                                       |                                                                                       |                                                                                           |                                                                                        |
| Urgent Low Risk Procedure                                                 |                                                                                       |                                                                                           |                                                                                        |
| OR                                                                       |                                                                                       |                                                                                           |                                                                                        |
| 2  Asymptomatic, No exposure, Emergent High-risk procedure               | • N95 + Face shield/goggles or PAPR/CAPR  
• Gown  
• Double gloves  
• Augmented PPE indicated if ultra-high-risk procedure | • N95 + Face shield/goggles or PAPR/CAPR  
• Gown  
• Double gloves  
• Augmented PPE indicated if ultra-high-risk procedure | • PPE to be worn by all members throughout procedure  
• Minimizes number of providers present                                      |
| OR                                                                       |                                                                                       |                                                                                           |                                                                                        |
| 3  Asymptomatic                                                          | • N95 + Face shield/goggles or PAPR/CAPR  
• Gown  
• Double gloves  
• Augmented PPE indicated if ultra-high-risk procedure | • N95 + Face shield/goggles or PAPR/CAPR  
• Gown  
• Double gloves  
• Augmented PPE indicated if ultra-high-risk procedure | Present positive  
• PPE to be worn by all members throughout procedure  
• Minimizes number of providers present  
• 15-minute wait time for egress following extubation or leave intubated based on medical condition  
• COVID unit post op for R/O  
• Presume positive  
• PPE to be worn by all members throughout procedure  
• Minimizes number of providers present  
• 15-minute wait time for egress following extubation or leave intubated based on medical condition  
• COVID unit post op for R/O |
### COVID-19 Procedure Guidelines
**Created: April 3, 2020**

Scenarios in based upon COVID-19 flow chart where COVID Lab testing **required** before procedure:

<table>
<thead>
<tr>
<th>Scenario</th>
<th>Anesthesia Provider PPE</th>
<th>Surgery/ Nursing/ Scrub PPE</th>
<th>Notes</th>
</tr>
</thead>
</table>
| 4 Asymptomatic No exposure Urgent - High risk procedure COVID Negative | • GLO | • GLO | - Post op home or non-COVID unit  
- For concern regarding need for PPE for ENT / OMI's ultra high risk cases discuss with IC before scheduling |
| 5 Asymptomatic No exposure Urgent - High risk procedure COVID Positive | • N95 + Face shield/goggles or PAPR/CAPR  
• Gloves  
• Double gloves  
• Augmented PPE indicated if ultra-high-risk procedure | • N95 + Face shield/goggles or PAPR/CAPR  
• Gown  
• Double gloves  
• Augmented PPE indicated if ultra-high-risk procedure | • PPE to be worn by all members throughout procedure  
• Minimum number of providers present  
• 15-minute wait time for egress following extubation or leave intubated based on medical condition and proceed to COVID ICU  
• It able to go home discuss plan with IC prior to start of case |
| 6 Symptomatic Urgent procedure Outpatient COVID + RPP + or – | | | |
| NOTE: If COVID negative and RPP also negative contact IC before scheduling procedure | | | |
| 7 Symptomatic Urgent procedure Inpatient COVID + | | | |
Note: If patient is asymptomatic with a positive exposure undergoing quarantine and an urgent procedure is required in the midst of quarantine please obtain a COVID test. If negative follow scenario #4. If positive, follow scenario #6 for outpatient and scenario #7 for inpatient.

Note: Based on current air exchange rates in our operating rooms and procedure rooms.

- Positive pressure rooms in the operating rooms and cardiac cath lab interventional suites require 15 minutes post AGP for 99% clearance
- Positive pressure rooms in Interventional Radiology require 20 minutes post AGP for 99% clearance
- Neutral pressure rooms are GI procedure rooms and Cath lab procedure room require 20 minutes post AGP for 99% clearance
- Negative pressure rooms do not require entry or egress waiting post AGP

- NOTE: In the event a conflict arises that cannot be resolved by the surgical/anesthesiology medical directors of the operating room, a subcommittee – comprised of the Senior Associate Dean for Clinical Affairs, the Chair of Surgery and the Chair of Anesthesiology, appointed by the CMO for purposes of final adjudication – will hear all appeals. Their decision will be final.