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ACUTE ISCHEMIC STROKE AND OTHER NEUROINTERVENTIONAL RADIOLOGY PROCEDURE GUIDANCE FOR ADULT PATIENTS

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Underlying assumption: All acute ischemic stroke patients are presumed COVID-19 positive, unless documented negative.

In Table Below, Acute Ischemic Stroke Cases all fall under Scenarios 1a, 1b, or 1c.
In Table Below, bronchoscopy or potentially direct sclerotherapy of upper airway fall under Scenario 2.
In Table Below, non-stroke cerebral and spinal angiogram and embolization cases fall under Scenarios 3 or 4.

Scenario	Anesthesia PPE	Radiology Personnel	Room Management and Cleaning
1a. COVID-19 Positive/PUI procedure under **Monitored Anesthesia Care (MAC)**	• Resuable N95 + face shield/goggles or PAPR, • Gown • Double Gloves	• Reusable N95 + face shield /goggles or PAPR • Gown • Double Gloves	• Minimize number of providers present • Surgical mask over the nasal cannula on patient • Room downtime 1 hour after patient departure, then room high-cleaned
1b. COVID-19 Positive/PUI procedure under **General Anesthesia (GA), intubation /extubation take place in imaging suite**	• Resuable N95 + face shield/goggles or PAPR • Gown • Double Gloves	• Reusable N95 + face shield/goggles or PAPR • Gown • Double Gloves	• Non-anesthesia personnel should leave room for intubation/extubation • Minimize number of providers present • Providers may enter room wearing PPE after intubation (no time delay given the sensitivity of time) • Room downtime 1 hour after patient departure, then room high-cleaned
1c. COVID-19 Positive/PUI procedure under **General Anesthesia (GA), intubation/extubation in ED/ICU/M345, patient transported with ETT *in situ***	• Reusable N95 + face shield/goggles or PAPR • Gown • Double Gloves	• Reusable N95 + face shield/goggles or PAPR • Gown • Double Gloves	• Minimize number of providers present • Providers may enter room wearing PPE after patient arrival (no time delay given the sensitivity of time) • Room downtime 1 hour after patient departure, then room high-cleaned

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2. Asymptomatic patient for HIGH RISK procedure	• Reusable N95 + face shield/goggles or PAPR • Gown • Double Gloves	• Reusable N95 + face shield/goggles or PAPR • Gown • Double Gloves	• Minimize number of providers present • Precautions as in 1a if patient under MAC or sedation; precautions as in 1b or 1c if intubated • Room downtime 1 hour after patient departure, then room high-cleaned
3. Asymptomatic patient for LOW RISK procedure with general anesthesia	• Reusable N95 + face shield/goggles or PAPR • Gown • Double Gloves	• Standard PPE (surgical mask, goggles/face shield, gown, gloves) if NOT present for intubation	• Non-anesthesia providers leave angio suite for intubation/extubation and 30 minutes to follow. • If 30 minute pause is not possible, follow scenario 2
4. Asymptomatic patient for LOW RISK procedure without general anesthesia	• Standard PPE (surgical mask, goggles/face shield, gown, gloves)	• Standard PPE (surgical mask, goggles/face shield, gown, gloves)	• If risk of conversion to GA is likely, then follow Scenario 3 from the start

Preoperative decision regarding intubation:

- Decision on the anesthesia type, MAC vs GA, will be assessed and decided collectively by the care team attendings of Neurovascular, Anesthesia, and NIR.
- To avoid emergent conversion to GA, low threshold for intubation of patients. It may apply to patients with low GCS, poor cooperativity, dominant hemisphere occlusions, or posterior circulation occlusions, or significant symptomatic respiratory difficulty of coughing or dyspnea.

Intraoperative Setup and Staffing (to minimize passage between angio suite and control room):

- Place expected supplies in angio suite prior to patient arrival. Stroke cart in control room or S room.
- Doors between angio suite and control room to remain closed as much as possible during the procedure.
- 1 NIR nurse in control room and 1 NIR technologist in angio suite. If staffing allows, 1 backup RN or technologist will be stationed in the control room to obtain supplies/equipment and assist people with donning and doffing PPE
- Attending anesthesiologist with CRNA/resident (angio suite). Attending NIR radiologist with fellow (angio suite). Neurovascular attending/fellow (control room).
- Relief for breaks should be provided only as necessary to decrease the number of people in and out of the room.
- For COVID+, PUI, or unknown status, control room personnel follow same respiratory PPE as those in angio suite (i.e., N95)

- Donning and doffing: ideally do it before patient arrives in angio suite or do it outside angio suite. To get into sterile operating garb (surgical gown, surgical gloves), do it in the angio suite at least 6 feet from patient. If person needs to leave angio suite, doff surgical gown/gloves in angio suite and wash hands. Remove N95 only after leaving control room/angio suite area.

Postoperative airway management and transport:

- Post-procedure debrief: Attendings from anesthesia, NIR, and neurology will have a discussion regarding potential for extubation post-procedurally. This will also be discussed with ICU attending at that time.
- For COVID+ and PUI as well as patients with respiratory distress that would typically require ventilation (or CPAP or BIPAP), patients should not be extubated in the angiography suite, but should be taken to an isolation ICU room or other negative pressure room for planned extubation with airborne and contact precautions.
- For unknown status (or proven COVID NEGATIVE), patients can be extubated in the angiography suite.
- If patient has been extubated in angio suite, a surgical mask will be placed on them for transport.
- If the patient will be immediately transported to an ICU, staff keep respiratory protection in place and don a new isolation gown and gloves. One additional staff runner to summon elevators, open doors, etc.