

**ADDENDUM Q**  
**IR Procedures as Related to COVID-19**

Created: April 8, 2020

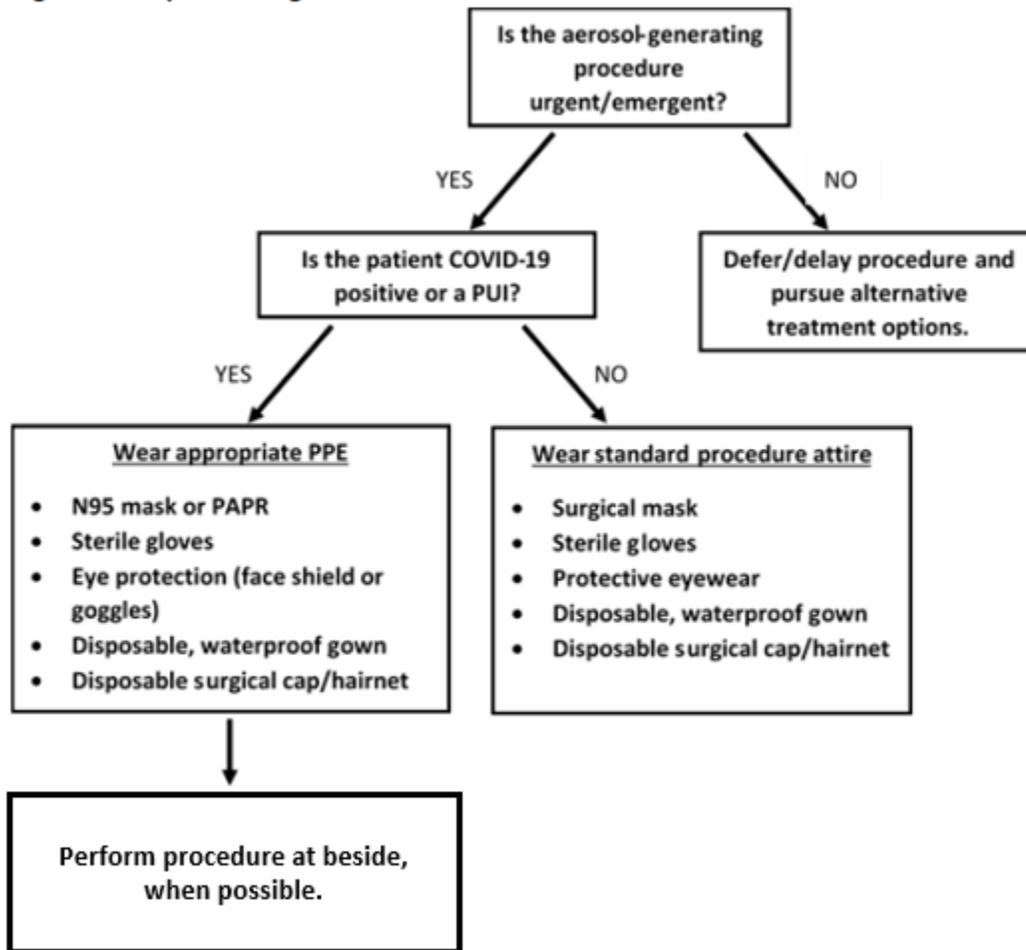
---

Due to limitations of testing capacity, inability to create negative airflow rooms within Interventional Radiology, and personal protective equipment (PPE), protocolization is necessary to balance critical resources with patient care and safety of all involved.

**Guidance for Procedural Selection:**

The algorithm below is from the **Society of Interventional Radiology (SIR)** and aligns well with the Nebraska Medicine algorithm that can be found here: <https://www.nebraskamed.com/providers/covid19> as most of the aerosol-generating procedures (AGPs) would be low risk in the Nebraska Medicine algorithm and result in standard procedure attire if not COVID19 positive or a symptomatic person under investigation (PUI). In both of these algorithms, the urgency of the procedure and whether or not the patient has respiratory symptoms are critical first assessment steps and should align with operational guidance on determining what procedures meet the criteria for urgent/emergent at Nebraska Medicine (<https://now.nebraskamed.com/wp-content/uploads/2020/03/COVID-19-Operational-Principles-for-Procedures.pdf>). The algorithms align with PPE for COVID19 confirmed or symptomatic PUIs. For those who are not COVID19 positive or PUIs, then IR procedures would follow the asymptomatic low risk procedure arm of the Nebraska Medicine protocol which would mean proceeding with standard procedural attire as SIR also recommends.

Figure 1. Proposed triage mechanism for resource allocation for AGPs



<https://www.sirweb.org/practice-resources/covid-19-resources/covid-19-clinical-notification-3-26-20/>

**Performing IR procedures on COVID positive & PUI Patients in IR:**

Patient and IR Staff should be wearing appropriate PPE (Patient – surgical mask; IR Staff should don N95 masks, face shields/goggles, gown and gloves. Lead should be worn under the gown (if appropriate based on the case). N95 and face shield can remain in place under PPE extended use guidance, but gown and gloves should be removed between rooms if multiple cases to be performed (<https://www.nebraskamed.com/for-providers/covid19>).

**Procedure Specific Guidance Regarding Aerosol Generating Procedures (AGPs).**

Most Interventional Radiology procedures do not meet the Nebraska Medicine defined criteria for being a high risk aerosol generation procedure. A full listing of those determined to be high risk can be found within the Nebraska Medicine procedural guidance linked above.

However, many of these procedures (and some others, including lung biopsy, thoracentesis, etc.) may induce coughing and generate local aerosols. (<https://www.sirweb.org/practice-resources/covid-19-resources/covid-19-clinical-notification-3-26-20/>). For those procedures which could potentially induce a cough in a non-COVID, Non-PUI, IR staff remain in standard procedure attire and a surgical mask should remain over the patient's mouth and nose for as much of the procedure as possible (for example, keeping the mask over the mouth while placing a nasogastric tube). It is already the practice in Interventional Radiology to have all patients with masks donned before, during and after procedures. The surgical mask serves as a physical barrier to limit droplet/aerosol production by the patient.

#### **Procedures involving the Gastrointestinal Tract:**

Procedures involving the Gastrointestinal Tract, including Nasogastric/Orogastric tube placement, Percutaneous Gastrostomy, Gastrojejunostomy, Cecostomy, Cholecystostomy and biliary tube **placements and exchanges** are not considered to be high risk of Aerosol Generation at Nebraska Medicine. Although virus has been detected in the GI tract, the virus is not able to be cultured to suggest it remains viable for infectivity, thus reducing the risk of these procedures significantly.

#### **Procedure Room Guidance:**

COVID PUI or Positive patients in **adjoining rooms** in Interventional Radiology or CT is allowed as there is no venting of air from one room to another. A HEPA filter on exiting air has been requested as an additional level of reassurance.

In COVID PUI or COVID positive cases that do not include an AGP, there does not need to be 15 minute wait between procedures. However, door opening should be minimized. For example, if performing a CT procedure, the staff should stay in the room with radiation protection for the duration of the case. This may necessitate extra IR Staff/Trainee (one in room, one in control room) as well as CT technologist in procedure room and in control room. The sedation RN should stay in procedure room. Portable lead shield should be utilized as well as individual lead aprons.

If significant AGP occurs (mask removed, code, intubation or other acute concern) in a COVID19 positive patient or a PUI, then 15 minutes of egress time should occur prior to exiting the room, if both safe and feasible.