

COVID-19 SYSTEM PEDS ELECTIVE PROCEDURE RECOMMENDATIONS

System Surgery / Procedure Workgroup



Objectives

- Develop consistent clinical screening for patients and family when scheduling for elective procedural cases given risk of staff exposure to COVID-19.
- Unify all sites of care in a single fashion so that risk can be mitigated on a system level.

Scope

- Surgery
- Interventional Radiology
- Endoscopic Procedures

General Considerations

- Postpone non-urgent procedures until the patient is determined to be non-infectious or not infected.
- If respiratory support is indicated, then planning ahead may avoid the need for rescue interventions (e.g., crash intubations), which have greater potential for infectious transmission due to mishaps during the use of barrier protections.
- In patient with acute respiratory failure, it may be prudent to proceed directly to endotracheal intubation, because non-invasive ventilation (e.g. CPAP or biPAP) may increase the risk of infectious transmission⁵.
- For suspected cases and where possible, perform procedures in an airborne infection isolation room rather than in an operating room. An airborne isolation room has a negative-pressure relative to the surrounding area. In contrast, a typical operating room is designed to provide positive-pressure relative to the surrounding area and incoming air is often flow-directed, filtered, and temperature and humidity controlled.
- Limit staff to minimize contamination risk and resources (CAPRs)
- If a procedure cannot be postponed or done at the bedside, then schedule the patient when a minimum number of healthcare workers and other patients are present in the surgical suite.
- Seek collaboration with local infection control expertise.

When Considering a Procedure for a Patient with Known or Suspected COVID-19 Infection

- Place patients in an Airborne Infection Isolation Room²
- Health care professionals entering the room should use **airborne and contact precautions, including eye protection.**
- Personal protective equipment³ (PPE) to be worn includes:
 - Either an N95 mask, for which one has been fit-tested, or a powered air-purifying respirator (PAPR)⁴;
 - A face shield or goggles;
 - A gown;
 - Gloves.
- Hand hygiene is essential before donning and after doffing PPE. Hand hygiene can be performed using alcohol-based hand rubs or hand washing with soap and water. Wash hands with soap and water if hands are visibly soiled.
- Use extreme caution when removing and disposing of PPE to minimize the risk of self-contamination. Strongly consider observing the correct procedures for donning and doffing PPE and then rehearsing these procedures prior to direct patient care.

Urgent or Emergent Surgery with Known or Suspected COVID-19 Infection

- Do not bring the patient to the holding or PACU areas. A designated OR or procedural space should be allocated and signs posted on the doors to minimize staff exposure.
- If general anesthesia is not required, the patient should continue to wear the surgical mask.
- If general anesthesia is used:
 - Place a HEPA filter between the Y-piece of the breathing circuit and the patient's mask, endotracheal tube or laryngeal mask airway.
 - Alternatively, for pediatric patients or other patients in whom the additional dead space or weight of the filter may be problematic, the HEPA filter should be placed on the expiratory end of the corrugated breathing circuit before expired gas enters the anesthesia machine.
 - The gas sampling tubing should also be protected by a HEPA filter, and gases exiting the gas analyzer should be scavenged and not allowed to return to the room air.

Urgent or Emergent Procedure with Known or Suspected COVID-19 Infection – Laryngoscopy & Intubation

- Double gloves will enable one to shed the outer gloves after intubation and minimize subsequent environmental contamination.
- Designate the most experienced anesthesia professional available to perform intubation, if possible.
- Limit those in the room for intubation or aerosolizing procedures during which CAPRs are needed.
- Once complete, surgery proceeds with OR staff using modified droplet precautions. Anesthesiologist to remain with CAPR in cases where concern for tube dislodgement.
- Avoid awake fiberoptic intubation unless specifically indicated. Droplets containing viral pathogens may become aerosolized during this procedure.
- Consider a rapid sequence induction (RSI) in order to avoid manual ventilation of patient's lungs and potential aerosolization. If manual ventilation is required, apply small tidal volumes.
- After removing protective equipment, avoid touching your hair or face and perform hand hygiene.

Urgent or Emergent Procedure with Known or Suspected COVID-19 Infection – Cont'd

- If available, use a closed suction system during airway suctioning. Closed suctioning systems may only be available in the critical care setting.
- Consider disposable covers (e.g., plastic sheets for surfaces, long ultrasound probe sheath covers) to reduce droplet and contact contamination of equipment and other environmental surfaces.
- The patient should be recovered in the operating room / procedural suite or transferred to an airborne infection isolation room.
- After the patient has left the operating room / procedural suite, leave as much time as possible before subsequent patient care (for the removal of airborne infectious contamination). The length of time depends on the number of air exchanges per hour in the specific room or space.
- After the case, clean and disinfect high-touch surfaces on the anesthesia machine and anesthesia work area with an EPA-approved hospital disinfectant.
- If devices such as point-of-care ultrasound are used:
 - A long sheath cover of the ultrasound unit and cable should be used to minimize contamination of the equipment.
 - Non-essential parts of the ultrasound cart may best be covered with drapes to minimize droplet exposure.

Transporting Patients

- Transport patients only for procedures and studies deemed essential for patient care.
- Consult local infection control expertise prior to transport.
- Patients who are not ventilated should wear a surgical mask.
- Intubated patients should be fitted with HEPA rated filters for expired breath/gasses.
- Health care professionals transporting the patient should not routinely wear gowns and gloves, unless direct contact with the patient or contaminated equipment is anticipated during transport. In this case, the person should wear the appropriate PPE per MHS PPE guidance, and, ideally, be accompanied by an additional member of the transport team who is not wearing a gown and gloves. The person without gloves and gown can interact with the environment. Prior to transport, the PPE clad person should perform hand hygiene and don a fresh gown and gloves to reduce potential contamination of environmental surfaces.

Pediatrics Elective Surgery / Procedure Sample URTI Screening Script Introduction

- Hello, this is * calling from Mary Bridge in Tacoma calling about PATIENT NAME/your child's surgery on DATE.
- Is this a parent or guardian?
- Do you have about 5-10 minutes, so we can ask you questions about your child's health?
 - Due to recent concerns regarding Corona Virus, we are asking questions to help us gather information that will help us keep kids, families, and our staff as safe as possible.
 - Children with the corona virus can have very mild symptoms. Even with mild symptoms, there can be a high risk that it could spread from a child to the medical team and then to high risk patients who are already in the hospital
 - At this time, we are dedicated to serving our families and protecting our community from the spread of the virus. .
 - This process is temporary until the risks of the corona virus to our community is resolved.
 - Thank you for your patience and understanding while we ask you the following questions.

Pediatrics Elective Surgery / Procedure

Sample URTI Screening Script part A

- **Question 1:** Does your child have fevers, cough, or runny nose?
 - IF NO, skip to **Question 2**
 - IF YES, how long has he/she had these symptoms?
 - If cough or fever with in the last 2 weeks: “Your child’s surgery will need to be cancelled.”
 - If only runny nose and symptoms less than 2 weeks: “Your child’s surgery will need to be cancelled.”
 - Does the parent state that the patient “always has a runny nose or it’s their allergies” **DO NOT ASK THIS HAVE PARENTS OFFER IT**
 - If symptoms improve with allergy medication- OK to proceed to Question 2
 - If symptoms have been STABLE for >2 months and not currently worse than baseline- OK to proceed to Question 2
 - Does the parent state the child is teething? **DO NOT ASK HAVE PARENT OFFER IT**
 - Is there a loose or new tooth coming in? OK to proceed to Question 2, if there is not, “Your child’s surgery will need to be cancelled.”
- **Question 2:** Is there a family member without symptoms that can bring patient to hospital? If YES, may proceed with surgery as scheduled but all sick family members are asked to stay at home. *Complete standard surgery scheduling script from this point on.*

Pediatrics Elective Surgery / Procedure

Sample URTI Screening Script part B

- If Surgery Needs to be Cancelled:
 - Unfortunately, your child's surgery will need to be cancelled and we apologize for any inconvenience this is causing.
 - Please call your surgeon's clinic after all of your child's symptoms or any family member's symptoms have been resolved for 1 week.
 - However, the surgery will need to be rescheduled after no one in the family has had symptoms for 2 weeks.
 - UNLESS your child is experiencing severe symptoms such as respiratory distress, inability to drink, we recommend staying home and providing supportive care.
 - If the above are present, please contact your pediatrician and they will make recommendations.
 - We are currently in a season where flu and respiratory illnesses are common.
- If you are concerned about your child's symptoms, consider a virtual visit where you can connect with a provider by phone and/or computer.
 - You can find a link for this at the Mary Bridge Web Site at marybridge.org.
 - If you click on the corona virus information link, it will take you to the page as well as a promo code waiving the usual fee.
- **Note:** If cancelling or rescheduling a case, please communicate with the attending surgeon to review the safety implications of doing so, per usual process. In uncertain cases, please escalate to the surgery chair and OR Medical Director as needed.

References

- **1.** On February 11, 2020 the World Health Organization announced that “COVID-19” is the official name for the disease associated with the current novel coronavirus outbreak. Co and Vi are derived from “coronavirus,” D stands for disease, and 19 is for 2019, the year the first cases were seen. The pathogen causing the disease is termed “Severe Acute Respiratory Syndrome Coronavirus 2,” abbreviated as SARS-CoV-2.
- **2.** An Airborne Infection Isolation Room (AIIR) has a negative-pressure relative to the surrounding area. A minimum of 6 air changes per hour (12 air changes per hour are recommended for new construction or renovation). Air from these rooms should be exhausted directly to the outside or be filtered through a high-efficiency particulate air (HEPA) filter before recirculation. Room doors should be kept closed except when entering or leaving the room, and entry and exit should be minimized. Facilities should monitor and document the proper negative-pressure function of these rooms. If an AIIR is not available, patients who require hospitalization should be transferred as soon as is feasible to a facility where an AIIR is available.
- **3.** Personal protective equipment (PPE) is specialized clothing (e.g., gowns, gloves) or equipment (e.g., face shields, masks) worn by a health care worker for protection against a hazard. Hazards may include physical, chemical, and biologic hazards; however, the PPE’s specified in these recommendations are designed to protect the wearer from infectious hazards transmitted by direct or indirect contact, droplets, and airborne particles.
- **4.** The Anesthesia Patient Safety Foundation (see link below) states that a PAPR may be warranted for airway procedures on these patients given prior cases of infection transmission of SARS-CoV when N95 masks were used.
- **Additional Resources**
 - The [APSF Perioperative Considerations for the 2019 Novel Coronavirus \(COVID-19\)](#)
 - The [SHEA Novel Coronavirus 2019 Resources](#).
 - The Centers for Disease Control and Prevention (CDC) “[Interim Infection Prevention and Control Recommendations for Patients with Confirmed Coronavirus Disease 2019 \(COVID-19\) or Persons Under Investigation for COVID-19 in Healthcare Settings.](#)”