



ACUTE CARE COVID-19
MANUAL FOR INFECTION
CONTROL



CATHOLIC HEALTH

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Infection control topics outlined in the document should be adhered to as they reflect infection control policies and procedures for Catholic Health. It is possible that the strategies outlined in this document will be replaced as our understanding of COVID-19 evolves. Clinical care recommendations made in this document should be interpreted as guidance based on available evidence and should not supersede clinical judgement.

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1. Clinical Presentation and Transmission of COVID-19

COVID-19 is an acute respiratory illness characterized most commonly by fever and a dry non-productive cough. The virus responsible for COVID-19 disease is named SARS-CoV-2.

COVID-19 commonly presents with a dry cough, shortness of breath and fever. The severity of infection ranges asymptomatic to mild illness to life threatening respiratory failure. Currently, those at greatest risk of acquiring infection are persons who have had prolonged, unprotected close contact with an individual with COVID-19 and those who live in or have recently been to areas with sustained transmission.

Other symptoms that are known to occur with COVID-19, but with less frequency, include myalgia, chills, sore throat, headaches, severe fatigue, anosmia, dysgeusia and diarrhea. Some individuals may present with minimal symptoms. In cases of severe illness, Progression from mild respiratory symptoms to significant dyspnea may take 8-11 days. Atypical presentations of illness, such as fever without other symptoms, may occur in immune compromised patients. Similarly, some individuals may not present with fever, only respiratory symptoms such as dyspnea. This may occur more commonly in the elderly. Up to 40% of cases may be asymptomatic or minimally symptomatic.

The most infectious period is thought to start about two days prior to symptom onset and then continue for ten days in most cases of symptomatic illness. Infectiousness may persist longer in very severe illness or profound immunocompromise. SARS-CoV-2 RNA may be detectable in the upper or lower respiratory tract for weeks after illness onset, similar to other respiratory viruses, however this has not been associated with infectiousness in viral culture studies or epidemiological contact tracing studies, to date.

Most people that go on to become ill with COVID-19 after an exposure develop symptoms within 3-8 days after exposure, however symptom onset may take as long as 11-14 days from exposure in some instances.

2. Strategies to Minimize Transmission Risk and Personal Protective Equipment (PPE)

Modes of Transmission.

COVID-19 is transmitted through contaminated respiratory secretions. Transmission may occur when these secretions come into contact with the mouth, nose or eyes. Transmission through can occur in three ways:

Droplet Transmission: Occurs when infectious droplets expelled during a cough or sneeze come into contact with the respiratory mucosa or eyes of healthy individuals. These droplets are larger in size and only remain in the air for a brief period before settling on surfaces. Droplets do not travel more than six feet. A standard procedure (surgical mask) covering the nose and mouth along with eye protection is sufficient to disrupt droplet transmission.

Aerosol (Airborne) Transmission: Occurs when respiratory secretions are mechanically disrupted to produce a fine mist of particles that may remain suspended in the air for a prolonged period of time. For COVID-19, this is strongly associated with aerosol generating procedures such as intubation, extubation, open suctioning, CPR, BIPAP and CPAP. It is not clear if nebulizer treatments can contribute to this (the aerosol generated from nebulizers comes from the machine, not the mouth). The contribution of aerosol transmission to COVID-19 transmission outside of aerosol generating procedures is less clear, but it does likely occur in some situations. Cases of probable aerosol transmission have been linked with scenarios where infected people (no mask or face covering) were in proximity to others while singing, and speaking forcefully/loudly while in areas without substantial ventilation. Aerosol transmission events are probably more likely to occur when the exposed individual has a poor immune system or when exposure occurs over a prolonged duration in a poorly ventilated space. Use of source control (infected individuals utilizing face coverings) is associated with a dramatic reduction in transmission via this route. An N95 respirator protects healthcare workers from airborne transmission. The common N95 respirator used at Catholic Health requires fit testing.

Clinical associates likely to care for COVID-19 patients should know their proper respirator size based on prior fit testing. If you are unsure, contact Associate Health.

Fomite (contact) Transmission: In the case of COVID-19, infectious material from surfaces can only infect a person if it comes into contact with their mouth, eyes or nares. Fomite transmission occurs when infectious droplets that settled in the environment are subsequently touched by an individual and transferred to the eyes, nose or mouth through touching one's face. This is currently thought to be the least common mode of transmission. However, simple maneuvers including hand hygiene and avoiding touching one's face are extremely effective in reducing transmission through this mechanism. In ideal laboratory conditions, SARS-CoV-2 viral material may be detected for several days on some surfaces, however, this does not necessarily take into account the degradation of viral particles and their ability to be viable contagion. Nonetheless, the presence of viral contamination on surfaces underscores why hand hygiene and avoidance of touching one's face is a recurrent recommendation from Infectious Disease experts. Similarly, use of a gown and gloves is recommended to prevent fomite (contact) transmission along with hand hygiene and cleaning of reusable medical equipment after patient interactions.

General Strategies for Reducing COVID-19 Transmission in Healthcare Settings

All caregivers must follow these general strategies, regardless of receipt of COVID-19 vaccination or a personal history of COVID-19.

Universal Masking

During times of sustained community transmission, all healthcare providers should follow preventative practices to reduce the likelihood of transmitting and acquiring COVID-19. Infection with SARS-CoV-2 may not lead to overt or substantial symptoms in many people, especially younger adults. Because of this, all healthcare workers must wear a surgical/procedure mask when interacting with other individuals (including coworkers) that are not suspected or confirmed COVID-19. (Recommended PPE for suspected and confirmed COVID-19 cases is covered in the next section.)

Procedure masks offer modest protection for healthcare workers from infected individuals. It has also been postulated that masking reduces the concentration of viral particles transmitted during an exposure, thereby potentially leading to milder disease.

However, the major benefit of masking is to prevent viral particles from escaping into the air from the infected individual wearing the mask. Therefore, it is critical that ALL individuals wear a mask to protect their fellow workers and patients.

- Procedure masks should be worn over the entire mouth and nose.
- Masks should not be pulled below the nose or chin.
- Masks should be worn whenever an individual is in the same room as another person.
- Masks should be replaced if they become wet or soiled during the day.
- Disposable Masks should not be used for more than one day.
- Individuals working in patient care areas must use masks supplied by Catholic Health. Cloth face coverings may not be used in patient care areas.
- Patients should be provided with a mask or face covering to wear whenever they are in proximity to others (during transport, during interactions in their room, etc.).
- When interacting with a patient, healthcare workers should ask patients to don their mask unless the patient cannot do so due to a medical contraindication.

Eye Protection

Because SARS-CoV-2 may enter the body through eye contact with respiratory droplets, the addition of eye protection (in the form of goggles or a face shield) to masking offers additional protective benefit when one is interacting with individuals. Healthcare workers should don a set of goggles or a face shield whenever they are in the vicinity (within 6 feet) of an unmasked individual in the healthcare facility.

- Disposable face shields and goggles
 - Should be disposed of after the end of shift unless part of a recycling program.
 - Hand hygiene should be performed before and after putting the shield/goggle on and taking it off
 - Should never be shared unless cleaned through a recycling program
 - Should be disposed of if they become visibly dirty or contaminated
- Reusable face shield and goggles
 - Hand hygiene should be performed before and after putting the shield/goggle on and taking it off
 - Should never be shared without proper cleaning
 - Should be cleaned at the end of use per manufacturer's instructions, or using the protocol outlined in the appendix of this document: "PPE Reuse"

Social Distancing

Healthcare workers must adhere to the principle of social distancing during interactions with coworkers, patients and visitors. Maintaining a distance of six feet or more is ideal, whenever possible. In particular, people should avoid congregating in close proximity in hallways, nursing stations and work rooms. If distance cannot be easily maintained, 100% compliance with mask use among the entire group is critical. Healthcare workers must sit *at least* six feet from other individuals when eating or if not wearing a mask for another reason. Individuals should avoid eating or drinking in the vicinity of others in any area that cannot allow for a minimum six foot separation from others.

PPE Requirements for the care of Suspected and Confirmed COVID-19 Patients.

Only PPE approved by Catholic Health should be worn while working. Caregivers who are not providing direct care to COVID-19 patients or PUI's are required to wear a procedure mask while working at the facility. These are provided at screening stations upon entry. To facilitate maximum protection, all patients should be prompted to wear a face covering during face to face care and transport whenever possible, regardless of diagnosis. During times of moderate and high community transmission, the addition of universal eye protection (goggles or face shield) is necessary when caring for non-COVID-19 patients as an added protective measure from exposures to any unmasked asymptomatic/unsuspected COVID-19 patients.

For acute care facilities, COVID-19 care is delivered under two infection control models:

- *Routine Infection Control Model:* under this model of COVID-19 care, patient rooms housing COVID-19 patients are considered contaminated areas where PPE is needed. Areas outside the patient room are considered “clean” and do not require PPE beyond universal masking and eye protection. Areas within the facility that are not designated restricted isolation units utilize this model.
- *Restricted Isolation Unit Model (Red Zones):* under this model of care, entire restricted (red zone) units are separated off from other areas of the facility. PPE is required for entry into these units and remains on while caring for multiple patients.
 - Of note, this model does not preclude the use of hand hygiene between patients. **Gloves must be changed between patients** in red zones to prevent transmission of other relevant pathogens (e.g. MRSA, C. difficile).
 - Similarly, if a COVID-19 patient requires contact isolation for MRSA, C. difficile or another multidrug resistant pathogen, a second gown should be donned prior to room entry and doffed upon room exit.

<u>PPE for Suspected (Symptomatic) and Confirmed Covid-19</u>	
Caregiver	Patient
1. Gown 2. Gloves 3. Eye Protection 4. Respirator (N95)	Procedure mask when others in room and during transport
<u>PPE for Asymptomatic Unknown Covid-19 Status Patients¹</u>	
Caregiver: Routine Care	Patient
Procedure Mask (always follow Standard Precautions) Eye Protection, especially if the patient cannot wear a mask	Procedure mask when others in room and during transport

Caregiver: Aerosol Generating Procedures²	Patient
<ol style="list-style-type: none"> 1. Gown 2. Gloves 3. Eye Protection 4. Respirator (N95) 	N/A

1. Asymptomatic individuals that undergo Covid-19 testing for the purpose of screening (not due to clinical suspicion of Covid-19) are considered low risk for transmission unless undergoing aerosol generating procedures. Because coughing or sneezing may be induced with NP swabbing, it is recommended to use Covid-19 PPE when performing this procedure.
2. Aerosol Generating Procedures, or procedures that create uncontrolled respiratory secretions, include: open suctioning of airway, induced sputum procedures, cardiopulmonary resuscitation, endotracheal intubation and extubation, non-invasive ventilation (e.g., BiPAP, CPAP), bronchoscopy, manual ventilation. Based on limited available data, it is uncertain whether aerosols generated from some procedures may be infectious, such as: nebulizer administration, high flow O2 delivery (>6L)

Restricted Isolation Unit PPE	
<p>Restricted (red) Zone COVID-19 Cohort Units</p> <ul style="list-style-type: none"> • <i>Restricted Zone defined by use of full PPE outside of patient rooms in a “hot” unit with dedicated doffing and donning zones at unit entry/exit point</i> • <i>Restricted Unit signage present at unit entry points</i> 	<p><u>Staff Entering Room:</u> Contact: Gown and Glove <u>PLUS</u> N95 AND Eye Protection</p> <p><u>Patient:</u> Procedure mask when staff in room and during transport (if possible)</p>
<p><i>Semi-restricted (yellow) zone (St. Joseph’s only when facility is used as a dedicated COVID-19 Treatment Center)</i></p> <ul style="list-style-type: none"> • <i>Applies only to Staff that are <u>not</u> providing patient care and DO NOT enter or exit restricted (red) zone but move within semi-restricted zone</i> 	<p>Gloves, Eye protection and Procedure mask</p>

Self-Care for PPE Users

Caregivers may wear PPE for prolonged periods of time. It is important to take measures before donning PPE to ensure a safe and comfortable work environment.

Before donning PPE:

- Ensure you are well hydrated
- Use Restroom
- Wear comfortable work clothing (scrubs)
- Place all non-essential items such as jewelry, wallets, keys, watches and contents of pockets in a safe secure location
- Take scheduled medications.
- Review any other personal hygiene or communication needs you may need to address prior to entering an isolation area.
- Avoid facial cosmetics if the facility is participating in N95 reprocessing

Cellular Phones:

- Avoid using a personal cell phone if not needed to accomplish care activities.
- Certain providers that are required to use a cell phone may place the phone in a sealed zip lock bag for use in the unit.
 - The device should never be placed near the head to communicate in speaker mode only!
 - The phone must be wiped down with disinfectant in the doffing area after leaving the unit.
 - The phone may never be placed in one's scrub pockets while in the restricted unit.

While in PPE:

- Avoid touching your face
- If in a restricted (red zone) unit, change gloves after each patient encounter
- Do not carry stethoscopes around your neck
- Communicate with colleagues regarding anticipated needs to leave the isolation area, such as bathroom breaks, food breaks, etc.

After Donning PPE:

- Wash hands
- Hydrate well
- Use restrooms
- Shower when you get home
- Pat yourself on the back! You're helping your community in a time of crisis.

PPE Conservation strategies during High Community Transmission Periods

Minimizing Unnecessary Room Entry

1. **Visitors:** Visitors are restricted from the facility during pandemic events except in unusual and extenuating circumstances and only after approval from Infection Control, the VP-Patient Care Services or designee, and the site VP-Medical Affairs and (see: “Visitors” section). Patient care services staff are responsible for monitoring and advising on the safe use of PPE for visitors granted entry into isolation areas.
2. **Bundle Care Activities:** Bundle activities of care to avoid multiple room entries. Prior to room entry, consider all other necessary in-room actions planned and utilize the room entry event to accomplish multiple tasks. Plan to bundle multiple tasks whenever possible before room entry. Utilize team members outside of patient care spaces to obtain and to deliver forgotten or needed patient care items.
3. **Phlebotomy:** Nursing should perform routine phlebotomy whenever possible if utilizing a standard infection control model (no red zones). Specimen collection should be bundled with other care activities to minimize multiple room entries. “Lab add on” orders should be utilized whenever possible to reduce unneeded phlebotomy. Nursing may change provider orders to “Lab add on” when prior available specimens allow after confirming no need for a new specimen with the provider. For red zones, phlebotomists may enter using full PPE to perform rounds.
4. **Diagnostic Testing:** Laboratory studies (e.g. CBC, chemistries) should be ordered **only** when a strong clinical indication is present to do so. “Lab add on” orders should be utilized whenever possible to reduce unneeded phlebotomy. “Routine” scheduled blood work should not be ordered in advance for any patient under isolation unless there is a clear medical need.

Portable imaging modalities should be utilized whenever possible to minimize HCW exposures in the facility. Avoid repeat imaging studies unless new clinical change dictates necessity. “Routine” chest imaging ordered in advance without a clear clinical indication should not occur.

5. **Medication Administration:**
 - a. Avoid multiple dose per day medications when able. Prescribe only necessary medications and use longer half-life agents whenever possible. Medications (including nebulizers) that require multiple doses per day may be interchanged with a longer acting agent and/or dose frequency adjusted by the pharmacy when such changes are expected to offer similar therapeutic benefit.
 - b. For non-red zone areas, place IV pumps outside of patient rooms if space and equipment allow. Pharmacy and Nursing may collaborate to keep IV pumps

outside of rooms to facilitate medication changes without room entry if space, equipment and the clinical status of the patient allow.

6. **Avoid Aerosol Generating Procedures (AGP's):**

- a. It is not certain if nebulizer therapies actually transmit significant airway secretions via the aerosol route. Respiratory therapy staff should engage providers ordering nebulizers to review necessity and discontinue if inappropriate.
- b. When nebulizer treatments are needed, utilize PRN dosing and schedule as infrequently as needed. Pharmacy may interchange to PRN and extend dosing frequency as deemed necessary for appropriate care.
- c. The addition of a viral filter to the exhalation port on the nebulizer device is encouraged, if supply available.
- d. Allow patients to use home maintenance inhalers in lieu of nebulizers when clinical equivalence allows. Pharmacy may allow patient's home inhalers when appropriate.

7. **Consultations:** During substantial PPE shortages consultants may avoid entering isolation units and isolation rooms unless there is a strong clinical indication to do so. Consultants may use the primary provider exam and history to inform decision making. Exam and history documentation should note use of primary provider notes and reason for use (suspect or confirmed COVID-19 case or other pandemic pathogen). Additional patient history should be obtained whenever possible through telecommunication to patient, family and other caregivers to avoid unneeded exposures.

PPE Conservation during times of Critical Shortages

1. **Avoid PPE Misuse:** PPE utilized without an indication poses a risk to all associates. PPE may not be worn outside of appropriate indications in the clinical/room cleaning setting or as instructed by associate health or by public health order.
2. **Extended use of N-95 respirators:** In times of supply shortages, N95 respirators may be used continuously between patients (regardless of their infection diagnosis) for up to 8 continuous hours. HCW's must refrain from touching the respirator unless necessary for adjustment. A standard surgical masked should be placed over the N95 to protect the outside from contamination. This outer mask should be discarded and replaced each time one exits an isolation area. **Hand hygiene MUST be performed before and after touching the respirator** during extended use to avoid self-contamination and contamination of the healthcare environment.
3. **Re-use of N-95 respirators:** When there is a shortage of respirator equipment (N95 respirators), re-use of these items is appropriate to continue patient care activities while also protecting healthcare workers. Safe single-person reuse of N95 masks is possible and CDC guidelines exist with recommendations to guide this process. See Attachment A for specific procedure for N95 re-use.
4. **Defer Annual Fit Testing:** During times of critical shortages of N95 respirators, annual

fit testing may be deferred for individuals with prior fit testing that have not developed and major changes to facial anatomy that could change expected respirator sizing from prior fit tests.

5. **Re-use of eye protection:** When there is a shortage of eye protection re-use of these items is appropriate to continue patient care activities while also protecting healthcare workers. See Appendix A. for specific procedure on eye protection re-use.
6. **Extended Use Procedure Masks:** During critical shortages, Extended use of procedure masks is the practice of wearing the same facemask for repeated close contact encounters with several different patients (non-COVID-19), without removing the facemask between patient encounters.
 - a. The facemask should be removed and discarded if soiled, damaged, or hard to breathe through.
 - b. HCW must take care not to touch their facemask. If they touch or adjust their facemask they must immediately perform hand hygiene.
 - c. HCW should leave the patient care area if they need to remove the facemask.
 - d. Face masks placed over N95 masks during COVID-19 care activities should be discarded immediately after leaving the isolation area
7. **Patient Cohorting:** Patients with **confirmed** COVID-19 may share rooms (or wards). Caregivers may wear the same PPE while caring for patients within a room containing cohorted patients but must perform hand hygiene and change gloves between patients.
8. **Restricted Isolation Units:** In times of high infection case volumes and critical supply shortages, entire units may be designated as restricted isolation zones (“red zones”) whereby PPE may be worn continuously within the unit. PPE must be donned prior to entry into restricted isolation units and doffed upon exit. The entire restricted isolation unit is considered contaminated space. Patients without confirmed infection should not be placed in restricted isolation units.

3. COVID-19 Testing

Testing for Covid-19 can be performed for diagnostic or screening purposes.

Diagnostic testing should be performed when patients present with symptoms or signs concerning for Covid-19. The decision to perform diagnostic testing should prompt PUI status with accompanying use of full PPE for Covid-19 pending the test result since symptomatic patients are more likely to transmit infected respiratory droplets through coughing or sneezing. Of note: a single specimen may be collected for Influenza/RSV *and* COVID-19 testing. For emergency department and inpatient care, testing for Influenza is required by the NYDOH when testing for COVID-19 in symptomatic patients and those reporting an exposure.

Screening tests may be performed on patients *without* overt signs or symptoms of Covid-19. Screening for asymptomatic disease is performed for infection control purposes such as pre-procedure screening when an anticipated aerosol generating procedure is planned or admission to a high-risk setting, such as a long-term care facility. Screening all asymptomatic hospital admissions may also be utilized during times of high community prevalence. Because staff wear eye protection and masks and patients utilize universal source control (masking) per CDC guidance, additional PPE is not advised pending screening tests in

asymptomatic patients awaiting screens unless new symptoms of Covid-19 arise or they test positive.

The table below outlines different testing scenarios based on screening versus diagnostic needs.

TABLE 1. ACUTE CARE RECOMMENDED TESTING FOR COVID-19

EMERGENCY DEPARTMENT		
Scenario	Covid-19 Test Required (rationale)	PPE Required pending test
Covid-19 Symptoms Present ¹	Yes (High risk PUI: Diagnostic)	Full PPE required pending test. Do not cohort with a Covid Confirmed patient unless patient tests positive.
Asymptomatic: High Community Rates of Infection	Yes (Screen)	Mask patient. Staff wear eye protection and masks. Expand to full PPE if positive.
Documented Covid-19 positive in past 90 days	No, do not test (reinfection very rare within 90 days, follow isolation protocols based on time from original diagnosis)	Full PPE only required if patient still in isolation window from original diagnosis (see page 37, "Removal From Isolation")
<u>Emergency</u> Surgery or Designated Procedure (see table 2 for designated procedures)* *assuming no test in past 5 days	Yes (emergent procedure with aerosolization potential)	Staff wear eye protection and masks. Mask patient when transporting or within 6 feet of others. Expand to full PPE if positive.
Labor & Delivery (no prior screen within 7 days and no prior positive within 90 days)	Yes (possible emergent procedure with aerosolization potential)	Staff wear eye protection and masks. Mask patient when transporting or within 6 feet of others. Expand to full PPE if positive.
ED Diversions (Asymptomatic) to Skilled Nursing Facilities	Yes (Low risk: Screen; urgent timing issue for placement)	Staff wear eye protection and masks. Mask patient when transporting or within 6 feet of others. Expand to full PPE if positive.
Symptomatic ¹ ED Discharges	Yes (Non-urgent lab)	N/A
INPATIENT CARE		
Scenario	Covid-19 Test Required (rationale)	PPE Required pending test
Direct Admission: Covid-19 Symptoms Present ¹	Yes (High risk: Diagnostic)	Full PPE required pending test. Do not cohort with a Covid Confirmed patient unless patient tests positive.
Asymptomatic: High Community Rates of Infection	Yes (Screen)	Mask patient. Staff wear eye protection and masks. Expand to full PPE if positive.
Direct Surgical Admission, non-emergent case (No Covid-19 Symptoms ¹ or Risk Factors ^{2,3})	Yes, if no prior pre-procedure Screening³ (Low risk: Screen, non-emergent procedure)	Staff wear eye protection and masks. Mask patient when transporting or within 6 feet of others. Expand to full PPE if positive.
Inpatient (any) new Covid-19 Symptoms ^{1,3}	Yes³ (High risk PUI: Diagnostic)	Full PPE required pending test. Do not cohort with a Covid Confirmed patient unless patient tests positive.
Discharge Screen to Long Term Care/Subacute /Assisted Living	Yes, if none performed in past 3 days	Staff wear eye protection and masks. Mask patient when

	(Low risk: Screen)	transporting or within 6 feet of others. Expand to full PPE if positive.
“Remove from Covid-19 Isolation” (prior known positive)	No, do not test	Removal from isolation is based on time from symptom onset and illness severity, repeat testing not advised . See page 37.

1. **COVID-19 Symptoms**—>fever, cough, chest pain, Hypoxia, SOB, diarrhea, headache, chills, myalgia, loss of taste or smell
2. **COVID-19 Risk Factors:** Known exposure to Covid-19 positive individual in past 14 days OR Resident of Nursing Home/Subacute Rehab/Assisted Living/Group Home etc. with outbreak
3. **Repeat Testing** on previously Covid-19 negative patients is not advised unless new symptoms and >72h from prior negative test. No more than 2 tests per 7 days without infection control approval

TABLE 2. OUTPATIENT PROCEDURES & STUDIES REQUIRING OUTPATIENT COVID-19 LAB SCREENING*

CARDIOLOGY	Covid-19 Screening Test Required?
Interventional Cardiology Procedures	Yes
Stress Tests	No (if patient cannot wear a mask, staff should wear N95 while in room)
Echocardiogram-Transthoracic	No
Echocardiogram-Transesophageal	Yes
Electrophysiology Procedures	Yes
Electrophysiology-Non-invasive tests	No
GASTROENTEROLOGY	Covid-19 Screening Test Required?
Endoscopy (upper or lower)	Yes
LABORATORY & BLOOD BANK	Covid-19 Screening Test Required?
Lab Specimen Collection	No
Blood Product Donations	No
Transfusions	No
NUCLEAR IMAGING	Covid-19 Screening Test Required?
All studies	No
PHARMACY/INFUSIONS	Covid-19 Screening Test Required?
Infusions	No
Transfusions	No
PULMONARY TESTS	Covid-19 Screening Test Required?
Bronchoscopy	Yes
PFT's	Yes
Sleep Study-No plans for CPAP/BIPAP	No
BIPAP/CPAP Studies	Yes
RADIOLOGY	Covid-19 Screening Test Required?
Diagnostic Radiology	No
Interventional Radiology (excluding infusions or drainage from pre-existing devices performed in IR)	Yes (unless urgent/testing cannot wait)
SURGICAL SPECIALTIES	Covid-19 Screening Test Required?
Bedside/ local Procedures (Any Specialty)	No→ unless manipulating airway
ENT Procedures	Yes
Cardiac Surgery-OR Procedures	Yes
General Surgery-OR Procedures	Yes
Neurosurgery-OR Procedures	Yes
OB/GYN-OR Procedures	Yes
OB/GYN -Labor and Delivery	Yes

Orthopedic – OR Procedures	Yes
Plastic Surgery-OR Procedures	Yes
Podiatry-OR Procedures	Yes
Thoracic Surgery-OR Procedures	Yes
Urology Procedures-OR Procedures	Yes
Vascular Surgery-OR Procedures	Yes
Vascular Surgery -Angiography	Yes

**Outpatient pre-procedure screening should be performed within 5 days of scheduled procedure/study. Screening tests are NOT recommended in patients with known COVID-19 infection within past 90 days. Inpatients with negative testing on admission that later require a testing designated procedure or test do not require repeat testing unless new clinical suspicion of Covid-19 arises. Testing previously Covid-19 negative inpatients is not necessary unless new symptoms. No more than 2 tests per 7 days without infection control approval.*

PPE requirements for specimen collection

Maintain proper infection control and use recommended personal protective equipment (PPE), which includes an N95 or higher-level respirator (or facemask if a respirator is not available), eye protection, gloves, and a gown, when collecting specimens.

- For healthcare providers who are observing patient self-collection of nasal (anterior nares) samples, but are not directly involved in collection and not working within 6 feet of the patient: Follow standard precautions→Gloves, eye protection and procedure mask are recommended. Note that healthcare personnel are recommended to wear a form of source control (surgical/procedure mask) at all times while in the healthcare facility.

Type of Test and Specimen Collection

The diagnosis of acute COVID-19 is confirmed with a positive RT-PCR for SARS-CoV-2 from a nasopharyngeal swab or nasal swab (depending on the test performed). In some instances a saliva sample may be collected, however this requires a specialized collection media kit and a specialized testing platform. Other samples, such as pharyngeal swabs or endotracheal aspirates, can be used if no other possible collection method is possible. A call to the lab or infection control is advised if such circumstances occur.

Nasopharyngeal sample collection is made in manner similar to Influenza RT PCR testing, whereby an NP sampling swab is inserted deep into the nares with the intent to make contact with the nasopharyngeal junction (enough to make the patient feel uncomfortable in most instances) and turned for several seconds before removal and placement in viral transport media included with the specimen collection kit.



Nasal swabs are collected by inserting a minitip swab with a flexible shaft (wire or plastic) through the nostril parallel to the palate (not upwards) until resistance is encountered or the distance is equivalent

to that from the ear to the nostril of the patient, indicating contact with the nasopharynx. Swab should reach depth equal to distance from nostrils to outer opening of the ear. Gently rub and roll the swab. Leave swab in place for several seconds to absorb secretions. Slowly remove swab while rotating it. Specimens can be collected from both sides using the same swab, but it is not necessary to collect specimens from both sides if the minitip is saturated with fluid from the first collection. If a deviated septum or blockage create difficulty in obtaining the specimen from one nostril, use the same swab to obtain the specimen from the other nostril.

Repeat Testing

Repeat testing for COVID-19 is not recommended in individuals with a previous positive PCR test within the past 90 days unless is part of a mandatory regulatory requirement or under the direction of an infectious disease physician.

In select situations, repeat testing for Covid-19 may be appropriate:

1. If there is concern for new onset Covid-19 infection since a prior negative test during the present visit, then it is recommended to follow the repeat Covid-19 testing policy outlined here:
 - The laboratory will restrict inpatient Covid-19 PCR tests not to exceed more than one test within a 72 hour period and no more than 2 tests per 7 day interval. Tests ordered outside these parameters will be canceled by the laboratory. In the rare event of new unexpected symptoms concerning for Covid-19 outside of these parameters, a call to infection control should be made to review the case.
2. When a Provider maintains a high index of suspicion for Covid-19 despite an initial negative test based on the following guidance. If repeat Covid-19 PCR testing is desired, it is recommended to wait at least 72 hours from the original test date. This recommendation is based on evidence that conversion from negative to positive status in patients with Covid-19 most commonly occurs after 3 days from the original test. If there is high suspicion of viral pneumonia, and prior upper tract swabs were positive, endotracheal aspirates or BAL may be considered for testing.
3. Rarely, repeat testing may be considered in individuals with a previous positive result in the preceding 90 days when a patient has made a full recovery but develops new COVID-19 symptoms or in cases of profound immune compromise. In such instances, consultation with infectious diseases is recommended before testing.

Antibody Testing

SARS-CoV-2 IgG neutralizing antibodies are reported to become detectable approximately 7-14 days into symptomatic infection with Covid-19. These antibodies are also found in vaccinated individuals. Presently, anti-SARS-CoV-2 antibody testing is not recommended as a diagnostic tool for active Covid-19. Immunologic studies to date suggest that neutralizing antibodies persist for at least six months in many individuals following infection. However, these levels do decline and approximately 7-10% of previously infected individuals do not have detectable antibodies in the month following acute infection. Preliminary data suggest that most previously infected individual develop memory B and T-cells that can ramp up an immune response after rechallenge at least eight months from illness. Data from other coronaviruses suggest neutralizing antibodies persist for at least 2 years in persons infected with SARS-CoV-1, at least 3 years with MERS and 2-3 years with common cold variety coronaviruses (OC43, 229E). Positive antibody test results in asymptomatic patients do not require isolation. If

convalescent plasma or monoclonal antibody therapy is being considered, a negative antibody test before infusion portends a greater potential benefit from therapy.

Test Result Notification and Reporting

Positive COVID-19 PCR test results are reported as critical values and considered a notifiable disease for the Department of Health. It is the responsibility of the attending physician (or designee) to notify the patient, even if previously discharged, regarding the testing results and appropriate precautions to be taken to prevent the spread of the disease. The “COVID- 19” discharge instruction sheet found on the CH intranet should be used to guide these instructions. Self-isolation may be discontinued after 10 days if the individual’s symptoms have improved and is afebrile at least 24 hours off antipyretics. A longer isolation period of 20 days is advised in circumstances when the patient is severely immunocompromised or was persistently hypoxic due to COVID-19 (see page 37). Erie County residents should be provided with instructions on removal from self-isolation by referring them to the Erie County department of health Covid-19 website at: www.erie.gov/covid19

4. Infection Control Guidance for Care Activities

General Considerations for Non-COVID-19 patients

Maximize Distances (Social Distancing): Efforts to maximize space between individuals in the facility should be made whenever feasible. Specifically, waiting areas and other areas of the facility where multiple patients and/or staff may intermingle should be arranged to maximize space between patients’ heads, ideally 6 feet. When such spacing is not possible, partitions may be utilized.

Universal Source Control: Outside of COVID-19 specific PPE scenarios, staff and patients should utilize universal source control (masking) whenever possible. Patients should be educated on proper use of masks. Procedure masks should never sit under the nose or chin. Because many patients cannot adhere to masking, staff should don eye protection in addition to a procedure mask when performing routine care in the facility (non-PUI, non-COVID-19).

Infection Control guidance for COVID-19/PUI care may vary depending on the location of care. For acute care facilities, COVID-19 care is delivered under two infection control models:

- *Routine Infection Control Model:* under this model, patient rooms are considered contaminated areas where PPE is needed. Areas outside of the patient room are considered “clean” and do not require PPE.
- *Restricted (red zone) Isolation Model:* under this model of care, entire restricted (red zone) units are separated off from other areas of the facility. Full COVID-19 PPE is required for entry in these units.

Patient Room Considerations & Aerosol Generating Procedures

Closed Doors: COVID-19 patient rooms require doors to be closed unless in located in a Red Zone. Doors should be closed during any aerosol generating procedures in a red zone.

Airborne Isolation (negative pressure) Rooms: Airborne Isolation Rooms (AIIR's) are preferred when patients are expected to undergo aerosol generating procedure (AGP) if they are not in a designated Isolation unit. Individual rooms in Red Zone isolation units do not require negative pressure because all personnel are using full PPE both inside and outside the room. The room door should be closed if an AGP is underway in a red zone, however. A non-restricted unit may choose to keep an airborne isolation room reserved for specific high risk AGP's such as intubation or extubation, if space allows. If AGP's occur in a non-airborne isolation room, staff should be minimized and surfaces in the room should be wiped down after the procedure is performed. All persons in a room or restricted isolation unit where AGP's occur should wear an N95 respirator per PPE protocols outlined elsewhere in this guide.

Staff entering a non-AIIR room where an AGP has occurred should wear an N95 mask until enough air exchanges have occurred post AGP to allow for 99.9% turnover of the air. For Operating rooms and other procedure rooms this occurs in about 20-30 minutes. For standard patient rooms, this may take up to one hour. Surfaces should be wiped down with an EPA approved disinfectant after a patient has left a room where an AGP has occurred.

Cohorting: Patients with confirmed COVID-19 may be cohorted with other COVID-19 patients unless another infection control concern is identified. COVID-19 patients who are co-infected with any of the following organisms may NOT be cohorted: C. difficile, CRE, C. auris, MDR-Acinetobacter, MDR-Pseudomonas, MDR-Stenotrophomonas, and wounds or sputum with MRSA,ESBL, VRE (COVID-19 patients with isolates of MRSA, VRE or ESBL identified from non-wound/non-sputum sources such as urine, may be cohorted with others if space is limited).

Patients with known COVID-19 **may not** be cohorted with patients that do not have confirmed COVID-19, regardless of suspicion.

Laboratory Specimens

Specimen collection should be bundled with other care activities to minimize room entry events at all times for patients with confirmed Covid-19.

Facility	Specimen Transport Procedure
<ul style="list-style-type: none"> • Mercy Hospital • Sisters of Charity-Main St • Kenmore Mercy • Mount St. Mary's 	<ul style="list-style-type: none"> • Follow Standard Laboratory Specimen Transport Procedures

<p>COVID-19 Treatment Facility</p> <ul style="list-style-type: none"> St. Joseph’s COVID-19 Treatment Center (during times when designated as a COVID-19 only treatment facility) 	<ul style="list-style-type: none"> Specimens should be bagged per usual procedure Bag containing the specimen should be handed to a “runner” in yellow zone. “Runner” in semi-restricted (yellow) zone should wipe bag with a disinfectant wipe and place specimen in a container for transport to lab in unrestricted (green) zone. Container holding specimens for transport should be wiped inside and out with disinfectant wipe after completion of specimen delivery
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Patient Transport of PUI’s or Confirmed COVID-19 Patients

<p><i>Mercy, Sisters of Charity-Main Street, Kenmore Mercy, Mount St. Mary’s</i></p>	
<p>Any of the Following:</p> <ul style="list-style-type: none"> Stable Not on Vent NO plans for intubation, BIPAP or CPAP, open suctioning² or other aerosol generating procedures 	<p>The patient should wear a standard procedure (surgical) mask that is covering the nose and mouth. The staff assigned to care for the patient should move the patient.</p> <p>PPE should always be worn in the room and while in direct contact with the patient, i.e. moving the patient to a wheelchair. Once the patient has been transferred to the CLEAN wheelchair or stretcher (and prior to exiting the room), staff should remove their gown and gloves and protection and perform hand hygiene.</p> <p>During transport, the transporter should wear eye protection and an N95 mask and a fresh set of gloves.</p>
<p>On Ventilator or Critically Ill</p>	<p>Staff should don a <i>fresh</i> gown and gloves before transport. Staff should wear an N95 and eye protection during transport.</p> <p>During transport, hospital approved disinfectant wipes should be brought along to perform appropriate cleaning of surfaces outside the isolation room that are touched by the provider or patient (such as elevator buttons and door handles) as needed during transport.</p>
<p>BIPAP, CPAP, High Flow Nasal Canula</p>	<p>See above PLUS</p> <p>Tent a clean sheet over the patient’s head during transport</p>
<p><u>Transport in a dedicated COVID-19 Treatment Facility</u> <i>(St. Joseph’s COVID-19 Treatment Center, when closed to non-COVID-19 admissions)</i></p>	

Restricted (red) Zone and Semi-restricted (yellow) zone	<p>Restricted Zone Staff should don fresh gloves before transport. Restricted Zone Staff should continue to wear full PPE during transport in the semi-restricted (yellow) zone.</p> <p>During transport, the “Runner” should wear gloves and a standard surgical mask. The Runner should walk in advance of the transport team to open doors, call up elevators and ensure no hall contamination events occur from unintentional contacts with surfaces. Hospital approved disinfectant wipes should be brought along by the runner to perform appropriate cleaning of surfaces outside the isolation room if touched by providers or patient (such as elevator buttons and door handles) as needed during transport.</p>
BIPAP, CPAP, High Flow Nasal Canula	<p>See above PLUS</p> <p>Tent a clean sheet over the patient’s head during transport</p>

Radiology

Whenever possible, portable imaging modalities should be employed. When non-portable modalities are necessary, such as CT, the following procedure should be followed.

- The patient should wear a standard procedure (surgical) mask, if possible.
- PPE including gown gloves should always be worn when moving the patient from transport device to radiology table.
- Radiology staff should not wear gowns or gloves while in the control room
- At study completion, staff wearing PPE should transfer patient back to transport device and doff PPE.
- The radiology table and all surfaces potentially contaminated during the study should be cleaned per usual protocol after any study with an approved disinfectant prior to any other studies.
- The radiology suite *does not* require a prolonged shut down after a COVID-19 patient has used it **unless** aerosol generating procedures (AGP’s) were actively performed while in the room. If AGP’s were performed, the room should not be used until 60 minutes have elapsed, thereby allowing enough air exchanges to occur to safely re-enter without a respirator.
 - o AGP’s include: Intubation & Extubation, Open Suctioning, Sputum Induction, Bronchoscopy, BIPAP/CPAP, CPR

Physical and Occupational Therapy

PT and OT activities should be limited to areas where full PPE may be worn. PT and OT providers must use PPE when providing care for COVID-19 patients at all times. PT and OT equipment must be thoroughly cleaned with approved disinfectant after each use.

Environmental Services

Routine cleaning of high touch surfaces is critical to reducing the likelihood of spreading contagion within the healthcare facility. During high incidence settings of COVID-19 cases in the community, environmental service staff should be instructed to clean common high touch

surfaces throughout the facility including door handles, counters, computer terminals, elevators and elevator controls, break areas and areas where people consume food on a frequent scheduled basis.

Nursing is responsible for notifying EVS staff for cleaning and refuse disposal as needed in COVID-19 rooms. This helps to minimize unnecessary EVS worker exposures and PPE waste. When prompted to clean an occupied room with a suspected or confirmed case of COVID-19, the appropriate PPE necessary for care of that patient should be utilized by the EVS worker as well.

<u>Terminal Cleaning Unrestricted Units (Routine Infection Control Model)</u>	
<i>Assumes rooms are empty at time of terminal clean</i>	
Situation	PPE
Regular Room <u>outside</u> Restricted Units, no AGP's ¹ in room in past hour	Gown and Gloves (in addition to standard universal mask)* <i>* eye shield can be added if splashes anticipated related to cleaning</i>
Airborne isolation room or recent AGP ¹ in regular room within past hour	<u>Option 1:</u> Wait one hour post discharge. --> gown and gloves (in addition to standard universal mask)* <u>Option 2:</u> If cleaning less than 1 hour from discharge: N95, gown, gloves* <i>*eye shield can be added if splashes anticipated related to cleaning</i>
Operating Room	<u>Option 1:</u> Wait 30 minutes post case, gown and gloves (in addition to standard universal mask)* <u>Option 2:</u> Clean less than 30 minutes from end of case: N95, gown, gloves* <i>*eye shield can be added if splashes anticipated related to cleaning</i>

1. AGP: Aerosol Generating Procedure

<u>Terminal Cleaning Restricted (red zone) Isolation Units.</u>	
Restricted (red) Zone Rooms	Gown, Gloves, N95, Eye Protection

Cleaning Steps

1. Wash hands thoroughly. Don appropriate PPE.

2. Empty trash and restock supplies.
3. Remove curtain, bag for cleaning. High Dust all areas above shoulder height.
4. Disinfect: start with walls, wash all with a flat mop that has Oxivir on it. Do surfaces, horizontal, etc. Make sure to wipe all surfaces that a patient has contact with.
5. Disinfect the patient's restroom and/or sink area.
6. Go over all high touch surfaces with bleach. See list of high touch surfaces.
7. Replace curtain (if present) making sure it's hung properly.
8. Inspect room.
9. Remove PPE as per instructions, being careful to wash hands as required per PPE policy

Cleaning Supplies:

- Diversey Oxivir, Disinfectant mixed in hand bucket
- Avert Bleach Wipes (high touch surfaces)
- Rags as needed
- Trash Bags
- Paper Towels, Toilet Paper
- Replacement Curtain

5. Perioperative Care

Perioperative care during the Covid-19 pandemic is outlined in the following Catholic Health Policies through M-files: CSC0402, CSC0401, CSC0400, CSC0403, MS-021, CHS-MM-013

During the current COVID pandemic, a standardized approach to providing care for COVID positive patients undergoing procedures is required to provide a safe environment for the patient, provider and associate. The guidelines for providing this care will be done in accordance with all state and federal regulations along with oversight from the infection control department. This policy should be utilized in conjunction with all other applicable perioperative and procedure policies.

I. Scheduling

A. Procedures will be cancelled if a patient is COVID positive as follows:

1. As a general rule, Tier 3 procedures (emergent) will not be cancelled in the event that a patient is confirmed COVID-19 positive. However, this decision is ultimately left to the attending provider based on their assessment of each patient's needs and the risk/benefits of proceeding vs. delaying a case.
2. Tier 2 procedures may not need to be cancelled in the event that a patient is confirmed COVID- 19 positive. This decision will be determined by the attending provider, in consultation with the department chairperson, based on their assessment of each patient's needs and the risk/benefits of proceeding vs. delaying a case.
3. Tier 1 procedures should not be completed if a patient is confirmed COVID-positive. Cases in these categories can be rescheduled once a patient's positive COVID status has resolved.

II. Pre-patient Arrival

1. Ensure that all members of the surgical, nursing and anesthesia teams share awareness that a patient with COVID is booked for a procedure.
2. A pre-procedure huddle should occur between all members of the surgical team to ensure that all requirements have been met and the necessary preparations are in place before transporting a patient.
 1. Anesthesia personnel will lead the discussion regarding any planned aerosol generating procedures
- C. Confirm the use of the identified COVID OR (hereinafter, "OR") that is utilizing a HEPA filter on the exhaust.
4. All entry points to the OR must have clear signage on the doors to avoid inadvertent entry by staff not wearing appropriate PPE.
5. Plan ahead to minimize repeated entry to the OR throughout a case.

III. Intra-Operative

1. The number of personnel present in the room for intubation and/or extubation should be limited to those necessary for the procedure.
2. Providers, associates and vendors will wear PPE outlined in the table below.
3. The number of personnel present for the case should be limited to those necessary for the case.
4. Vendors (sales representatives): refer to the *Vendor Access Policy* CHS-MM-013
5. Relief for breaks should be provided only as necessary to decrease the number of people in and out of the room and to preserve PPE.
6. The OR identified for the utilization of COVID positive patients must be utilized.
7. If general anesthesia is not required, the patient will continue to wear the surgical mask throughout the procedure.

PPE Requirements for Peri-Operative Phases of COVID Positive or PUI Patients <i>urgent, emergent surgery</i>	
Scenario	PPE Requirements
<p><u>Pre-Operative Phase – ASU</u></p> <ul style="list-style-type: none"> Utilize identified COVID positive patient room. Spatially distance patient if a private room is not available. Emphasis on Hand Hygiene. 	<p><u>Personnel:</u> Contact: Gown and Glove PLUS N95 and Eye Protection.</p> <p><u>Patient:</u> Surgical Mask</p>
<p><u>Intra-Operative Phase</u></p> <ul style="list-style-type: none"> Limit door openings during procedure. Limit staff in room during Intubation and Extubation. – utilize negative pressure if available. Emphasis on Hand Hygiene. Utilize identified COVID positive Operating Room. 	<p><u>Personnel:</u></p> <ul style="list-style-type: none"> Anesthesia: Contact: Gown and Glove PLUS N95 with cover and Eye Protection Periop Staff/Surgeon: Contact: Gown and Glove – Surgical PPE PLUS N95 with cover and Eye Protection <p><u>Patient:</u> No Requirements</p>
<p><u>Post-Operative Phase 1 & 2</u></p> <ul style="list-style-type: none"> Utilize identified COVID positive patient room. Spatially distance patient if a private room is not available. Emphasis on Hand Hygiene. 	<p><u>Personnel:</u> Contact: Gown and Glove PLUS N95 and Eye Protection</p> <p><u>Patient:</u> Surgical Mask *When able to Tolerate*</p>

For cases with NEGATIVE pre-operative Covid-19 tests, the following PPE should be used:

<u>PPE Requirements for Peri-Operative Phases of COVID Negative Patients</u> <i>Elective, urgent, emergent surgery</i>	
Scenario	PPE Requirements
<u>Pre-Operative Phase – ASU</u> <ul style="list-style-type: none"> • Utilize social distancing when appropriate. • Spatially distance patients. • Emphasis on Hand Hygiene. 	<u>Personnel:</u> Surgical Mask and Universal Precautions. <u>Patient:</u> Surgical Mask
<u>Intra-Operative Phase</u> <ul style="list-style-type: none"> • Limit door openings during procedure. • Limit staff in room during Intubation and Extubation. • Emphasis on Hand Hygiene. 	<u>Personnel:</u> <ul style="list-style-type: none"> • Any Associate / Provider in room during: <ul style="list-style-type: none"> ○ Surgical PPE, N95 for Intubation/ Extubation recommended • Periop Staff: <ul style="list-style-type: none"> ○ Surgical PPE, ○ N95 not recommended except for the following cases: ENT, Thoracic, Tracheostomy, and Bronchoscopy, Upper and lower endoscopy <u>Patient:</u> No Requirements
<u>Post-Operative Phase 1 & 2</u> <ul style="list-style-type: none"> • Utilize social distancing when appropriate. • Spatially distance patients. • Emphasis on Hand Hygiene. 	<u>Personnel:</u> Surgical Mask and Universal Precautions <u>Patient:</u> Surgical Mask *When able to Tolerate*

IV. Post-operative

1. Doff gowns and gloves in the operating room and discard into regular trash receptacle, then perform hand hygiene. Exit the OR with respiratory protection (face shields, N95 respirators) in place. N95 Respirators should be removed outside of the operating room but not be worn outside the OR Semi restricted area. Utilize a “buddy system” for observation of Doffing PPE to ensure no self-contamination during removal.
2. Exit into the outside corridor.
3. If the patient will be immediately transported to an ICU, keep respiratory protection in place and don clean gown and gloves for transport. Utilize a clean transport person as an escort to the ICU. They will push any buttons and clean any surfaces that are contaminated during transport.
4. At the end of the case, the empty case cart will be brought into the OR room. The scrub person will place dirty instruments in the case cart and spray instrumentation with approved enzymatic cleaner. The case cart will be wiped down prior to it being sent to the sterile processing department (SPD) and labeled with a Biohazard sticker. If case cart system is not utilized, cover instruments with clean cover labeled with Biohazard sticker.

5. Patient should be recovered in a negative isolation room (PACU) or directly back to inpatient isolation room in the ICU if the patient came from or is scheduled to go to the ICU. If PACU room is unavailable, then the patient will recover in the OR and be transferred back directly to the appropriate inpatient isolation room.
6. After the patient has left the OR, leave the room closed for 30 minutes (achieves greater than 99.9% air clearance). Alert all personnel utilizing signage. The OR suite can then undergo routine cleaning with an EPA-approved hospital disinfectant after 30-minute downtime.

Anesthesia for COVID-19 Positive Cases

1. Early planning of intubation should occur whenever possible in order to control exposure and manage the setting to the fullest degree possible.
2. For OR procedures in order to reduce aerosol production outside of the isolation room, consideration of intubation of the patient in their ICU or ward isolation room and then direct transport to the OR should be considered with the decision based on personnel and equipment availability and potential for difficult airway.
3. Emergent intubations or procedures can only proceed with correctly placed PPE in situ. Full airborne PPE precautions are to be adhered to regardless of the emergency or acute deterioration in patient status. Placement and removal should be performed under the supervision of appropriately trained observer.
4. For anesthesia care, the primary anesthesia provider should be prepared to spend considerable time in the PPE device before being relieved; therefore, they should be adequately hydrated, have visited the restroom, and generally be prepared for a physically demanding episode of care.
5. Full PPE for anesthesia or airway management consists of a disposable protective gown, gloves, eye protection, and the use of N95 with face shield, and full head and neck covering. Anesthesiologist may use an "Ortho hood" or other more extensive PPE if extensive secretions/spray anticipated, however this is not typically necessary.
6. Full PPE should be worn by OR staff.
7. Patients should be brought to the OR from the floor or ICU by the anesthesia attending, nurse and surgeon. Patients presenting emergently from the ED will be transported by the ED nurse, RT and surgeon, allowing anesthesia personnel to rapidly setup and receive in the OR. If the patient is on a ventilator, the ICU ventilator (with HEPA filter) must NOT be disconnected and should be brought to the OR with the patient. Minimize equipment and supplies within the room to essential items only. Monitoring, IV access, instruments, medications, ventilator and suction should be checked prior to the patient entering the room. Only disposable stethoscopes should be used.
8. After transfer of the patient to the OR table, stretcher/bed should remain in the room if possible or if necessary, can be thoroughly decontaminated by team member and removed to hallway for further immediate cleaning.
9. Videoscopic and direct laryngoscopy are both acceptable options, but use of the glidescope is preferred due to the relative ease of visualizing the glottic opening, higher rate of success on the first attempt thereby reducing exposure to aerosolized fluid, and the utilization of disposable blades. Alternate blade sizes should be kept readily accessible outside the room to be passed in if needed. Disposable LMAs may be considered a rescue strategy in the setting of a difficult airway. A difficult intubation cart with a disposable fiberoptic scope must be readily available as another airway management option, but

considering that fiberoptic bronchoscopy, especially in an awake patient, can generate a tremendous amounts of aerosolized airway fluid, fiberoptic intubation must be used only when specifically indicated.

10. All breathing circuits should have a high quality HME filter placed at the patient mask and subsequent endotracheal tube and a viral filter inserted at the junction between the expiratory breathing circuit limb and the anesthesia machine. If available, the circuit should have inline suction so that suctioning can be performed without disconnecting. Avoid circuit disconnects whenever possible and when necessary, keep the filter between the patient and the environment at all times.
11. Ensure the patient is hemodynamically stable. If not, resuscitate with IVF and/or pressors before induction to avoid catastrophic hypotension.
12. Preoxygenate with 100% oxygen for 5 minutes using an anesthetic circuit. High flow face mask oxygen but not high flow nasal cannula oxygen is an acceptable alternative outside the OR. Oxygen administered via Ambubag may be less effective.
13. Perform rapid sequence induction (with cricoid pressure if a full stomach is suspected). Bag mask ventilation should be avoided unless absolutely essential because it will result in aerosolization of secretions. If applied, bag mask ventilation should be of minimal duration, using small tidal volumes, low pressure and applied by an experienced provider. The decision for the use of oral airways or any other airway manipulation should balance the potential for improving airway patency with the potential for inducing coughing. Awake fiberoptic intubations and mask inductions are discouraged because of the high potential for aerosol generation.
14. Following intubation, inflate the cuff and ensure there is no leak. Tube position must be confirmed by laryngoscopy (cuff below cords), distance from teeth and end-tidal capnography (color change outside the OR). Use of a stethoscope may not be possible if utilizing additional splash protection strategies such as "ortho hood". Institute mechanical ventilation and stabilize the patient. The airway manager must avoid touching the anesthesia machine with contaminated gloves and therefore rely on the assistant to squeeze the reservoir bag and to adjust the ventilator settings. Once successful intubation is confirmed, the laryngoscopist may doff the outer gloves and other potentially contaminated PPE, including ortho hood (if worn). Alcohol-based hand sanitizer should be placed at the anesthesia workstation and hand hygiene performed after changing gloves, contact with contaminated areas or with the patient, and before touching the anesthesia machine, the Pyxis machine, or other "clean" items.
15. All non-disposable airway equipment must be handled as a biohazard and processed accordingly for decontamination.
16. Emergently required equipment and medications should be passed into the operating room door, only by personnel wearing PPE including N95 and face shield.
17. After completion of the procedure, ICU patients should be transported intubated back to the ICU and extubated there, if appropriate. Floor patients can be extubated in OR and recovered there with all other personnel except the anesthesia team out of the room. Place a towel over the patient's face prior to extubation to block any fluid spray that may be generated as the endotracheal tube is removed. Dispose of the tube and contaminated materials into a waste container as quickly and efficiently as possible.
18. For transport, an oxygen mask, if needed, should then be closely applied to the patient and then a surgical mask placed over that. Do not transport the patient out of the OR to their isolation room until coughing or the need for suctioning appears to have subsided and the

patient can be safely returned to and cared for in their ward isolation room. Patients must be transported by the same team to the ICU or isolation room. The PACU should NOT be used.

19. The anesthesiologist should remain in full PPE until transfer is completed - then remove PPE under the direct observation of an appropriate monitor in the doffing area, as per protocol.
20. After the patient has left the procedure room, close the room to all personnel until there has been 99.9% air turnover – assume 35 minutes for ORs with no room traffic. The entire OR should be disinfected after any case involving a contagious patient. The room may be used 1-hour after patient discharge and terminal cleaning has been completed.
21. Regional anesthetic techniques are preferred over general anesthetics if feasible.
22. Patients undergoing monitored anesthesia care (MAC anesthesia) should wear a standard surgical mask with a nasal cannula underneath to cover aerosols generated by coughing.

6. Maternal-Child Care

OB/GYN Department Screening Questionnaire

We are asking you these questions so that we can best care for you and your baby?

Screening Questions for Pregnant Patients		Yes	No
1. Do you have FEVER, COUGH, SORE THROAT , or SHORTNESS OF BREATH? <u>OR</u> Patient Temperature ≥ 100.0			
2. Did you have a FEVER or FELT FEVERISH , or had a COUGH, SORE THROAT , or SHORTNESS OF BREATH or tested positive for COVID-19 within the last 2 weeks?			
3. Have you had CLOSE CONTACT with someone who tested positive for COVID-19 or is SICK with a COUGH, SORE THROAT , or SHORTNESS OF BREATH in the last 2 weeks?			
4. Have you traveled anywhere outside the Buffalo area in the last 2 weeks? Where?			
Answer	Risk Category	Patient	Staff
Yes to 1	Person Under Investigation (until test results back)	Mask, Swab for rapid COVID-19 and Influenza*.	PPE + N95 Mask in labor or any AGP or based on results
No to 1, Yes to 2	<p>Provider to determine risk:</p> <ul style="list-style-type: none"> • 3 factors below are <u>MET</u>: Recovered Patient <ul style="list-style-type: none"> • >72 hours since <i>recovery</i> defined as resolution of fever without the use of fever-reducing medications and • Improvement in respiratory symptoms (e.g., cough, shortness of breath); and • > 7 days passed since initial presentation. • If the 3 factors above are <u>NOT MET</u>: Person Under Investigation (until test results back) 	<p>Mask, +/- Swab for COVID-19 and Influenza*.</p> <p>Mask, Swab for COVID-19 and Influenza*.</p>	<p>Procedure Mask or based on results</p> <p>PPE + N95 Mask in labor or any AGP or based on results</p>
No to 1 and 2, Yes to 3 or 4	Asymptomatic Patient – Monitor for symptoms	Mask, monitor for symptoms for 14 days	Procedure Mask
No to 1-4	Asymptomatic Patient	Standard Precautions	Standard Precautions

* Only for patients who are admitted.

OB COVID-19 PPE Guidelines (9-29-2020)

Patient Category	Symptoms	Patient Precautions	Support Person Precautions	Staff Precautions
COVID-19 NEGATIVE (within previous 72 hours)	ASYMPTOMATIC <u>AND</u> AFEBRILE	Mask	Mask	<ul style="list-style-type: none"> Standard Precautions¹
COVID-19 NEGATIVE (within previous 5 days)	SYMPTOMATIC <u>and/or</u> FEBRILE	Mask	Mask	<ul style="list-style-type: none"> Precautions based on Infection Control recommendations and clinical judgment²
COVID-19 POSITIVE ³	ANY	Mask	Mask	<ul style="list-style-type: none"> Isolation precautions throughout labor (gown, gloves, eye protection), N95 mask (<u>use/re-use N95 mask per guidelines</u>) Single room with door closed Postpartum precautions based on Routine Infection Control Model Baby Isolation per pediatrician recommendations
COVID-19 UNKNOWN	ASYMPTOMATIC <u>AND</u> AFEBRILE <i>and</i> No to Risk Factors	Mask	Mask	<ul style="list-style-type: none"> Standard precautions or per staff discretion until results are back.^{3b, 3c}
COVID-19 UNKNOWN	SYMPTOMATIC <u>and/or</u> FEBRILE <i>OR</i> Yes to Risk Factors	Mask	Mask	<ul style="list-style-type: none"> Isolation precautions (gown, gloves, eye protection), +/-N95 mask (<u>use/re-use N95 mask per guidelines</u>) until results are back.
Patient Refuses COVID-19 Test	ASYMPTOMATIC <u>AND</u> AFEBRILE <i>and</i> No to Risk Factors	Mask	Mask	<ul style="list-style-type: none"> Isolation precautions throughout labor (gown, gloves, eye protection), N95 mask (<u>use/re-use N95 mask per guidelines</u>) Single room with door closed Baby Isolation per pediatrician, NICU visitation is not allowed.
Patient Refuses COVID-19 Test	SYMPTOMATIC <u>and/or</u> FEBRILE <i>OR</i> Yes to Risk Factors	Mask	Mask	<ul style="list-style-type: none"> Isolation precautions throughout labor (gown, gloves, eye protection), N95 mask (<u>use/re-use N95 mask per guidelines</u>) Single room with door closed Postpartum precautions based on Routine Infection Control Model Baby Isolation per pediatrician, NICU visitation is not allowed.
SUPPORT PERSON: ASYMPTOMATIC <u>AND</u> AFEBRILE and No to Risk Factors			Mask, symptoms monitored every 12 hours	
SUPPORT PERSON: ASYMPTOMATIC <u>AND</u> AFEBRILE PLUS Yes to Risk Factors			Provider decision based on Risk Factors, consult Infection Control if needed.	
SUPPORT PERSON: SYMPTOMATIC <u>and/or</u> FEBRILE OR + COVID-19 Test			Not in Hospital	

Notes:

1. PCR Testing for COVID-19 is helpful, but false negative tests do occur, staff may choose to use a N95 mask during the second stage of labor and at delivery if desired.
2. PCR Testing for COVID-19 is helpful in reducing risk of exposure, but false negative tests do occur. So if a patient is symptomatic and has a history consistent with COVID-19, please make a clinical judgment if this patient may have a false negative test. PPE use should be guided by this decision.
3. Considerations for COVID-19 POSITIVE PATIENTS:
 - a. Consider early epidural, avoid emergent cesarean sections by communicating early, minimize OR Personnel.
 - b. In OR, because of the significant risk of Aerosol Generation even with regional anesthesia, all associates and providers in the room MUST use a N95 mask. Support persons should wear a standard mask, not an N95, as they are not fit tested. If Intubation is needed, **Minimize** OR personnel during extubation.
 - c. During the second stage of labor (pushing) and at delivery, because of the risk Aerosol Generation, ALL Associates and Providers, including Nursery/NICU personnel MUST wear an N95 mask while in the room. Support persons should wear a standard mask, not an N95, as they are not fit tested.

Newborn Care (Suspected and Confirmed COVID-19 Mothers)

Definitions—Mothers/Infants:

1. **Covid-19 POSITIVE:** patient has a confirmed positive test for Covid-19
2. **Covid-19 PUI:** patient is suspected of having Covid-19 because of symptomatology that is consistent with the illness, but confirmatory test result is not available (CDC symptoms: <https://www.cdc.gov/coronavirus/2019-ncov/symptoms-testing/symptoms.html>)

Additional Definition—Infants:

Covid-19 PUI: In addition to the definitions above, an infant is considered a PUI if their mother meets the criteria for 1 or 2 above.

What do we do with the infant in this situation?

- If mom was a Covid-19 PUI and her test comes back **negative**, infant is no longer a PUI
- If mom was a Covid-19 PUI and her test comes back **positive**, infant should have a test sent after 24 hours of life to determine status going forward

Interventions and general NICU care:

1. General care
 - a. **Feeding:**
 - i. Infants may receive maternal breastmilk. It can be fed to infant by staff or asymptomatic designated family member. Breast pumps and components should be thoroughly cleaned in between pumping sessions using standard policies. (clean pump with antiseptic wipes, clean pump attachments with hot soapy water)
 - ii. Once cleared by Provider or Infection Control, mothers who were previously PUI or COVID-19 Positive can directly breastfeed their infant while observing appropriate precautions—hand and torso washing prior to feeding, clean linens/gown, wearing a mask—when infant is clinically appropriate to BF
 - b. **Intensive Care** Interventions will be used per standard of care and following current policies and guidelines
2. Parent/Support Person visitation guidelines
 - a. Parents who are COVID-19 positive will be able to come to the NICU to help care for their infants when they are no longer considered infectious. According to current CDC guidelines, an immunocompetent person may be considered non-infectious if (a) afebrile for 24 hours without use of antipyretics (b) at least 10 days have passed since symptoms first appeared (or, in the case of asymptomatic women identified only by obstetric screening tests, at least 10 days have passed since the positive test), and (c) symptoms have improved. For persons severely or critically ill with COVID-19, and for severely immunocompromised individuals, the length of time since symptoms first appeared can be extended to 20 days.

3. Discharge

- a. Considerations when infant is medically appropriate for discharge
 - i. Infants determined to be infected, but with no symptoms of COVID-19, may be discharged home with appropriate precautions and plans for outpatient follow up on a case-by-case basis
 - ii. Infants whose infection status was determined to be negative will be optimally discharged home when otherwise medically appropriate, to a designated healthy caregiver who is not under observation for COVID-19 risk. If such a caregiver is not available, manage on a case-by-case basis.
 - iii. If infant is discharged to a home with symptomatic or positive family members, they should be instructed to wear a mask when in close contact with the infant and practice hand washing with all interactions

References

- AAP website FAQs: Management of infants born to mothers with suspected or confirmed COVID 19:
<https://services.aap.org/en/pages/2019-novel-coronavirus-covid-19-infections/clinical-guidance/faqs-management-of-infants-born-to-covid-19-mothers/>
- Erie County's Department of Health COVID-19 website:
<http://www2.erie.gov/health/coronavirus>
- CDC's COVID-19 website:
<https://www.cdc.gov/coronavirus/2019-ncov/hcp/caring-for-newborns.html>
- NYSDOH COVID-19 Website:
<https://www.health.ny.gov/diseases/communicable/coronavirus/>
- WHO COVID-19 Website:
<https://www.who.int/emergencies/diseases/novel-coronavirus-2019>
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All Newborns

- It is recommended that newborns should be separated at birth from mothers with COVID-19. Families may choose to have their infant room in with the mother, but should be educated on the potential risk to the newborn of developing COVID-19.
- If the mother chooses to room-in with her infant rather than be separated, the infant should remain at least 6 feet from mother at all times, with breast milk feeding per the above recommendations.
- Placing the infant in an isolette or using a physical barrier such as a curtain between the mother and infant, may afford greater infant protection.
- If the mother also requests skin-to-skin contact with her infant, including direct breastfeeding, she should comply with strict preventive precautions, including the use of mask and meticulous breast and hand hygiene.
- There should be formal documentation of maternal decisions regarding the recommendations for separation
- A designated, limited set of caregivers will be assigned to the infant
- Infant should be bathed as soon as is reasonably possible after birth

- Newborns can be tested for perinatal viral acquisition as follows per American Academy of Pediatrics guidelines:
 - molecular assay testing can be done on 2 consecutive sets of nasopharyngeal samples, collected at least 24 hours apart
 - testing can begin at ~24 hours of age, to avoid detection of transient viral colonization and to facilitate detection of viral replication
 - Newborns should be bathed prior to testing to prevent false positives from mother's fluids
 - newborn will be designated as uninfected if all tests are negative

Delivery Room Management of newborn

- Initial stabilization/resuscitation of the newborn will take place as per facility's usual care
- Newborn resuscitation should not be compromised to facilitate maternal/infant separation
- If the facility has a newborn resuscitation room separate from the mother's delivery room, this should be utilized
- Because of the uncertain nature of newborn resuscitation (that is, suctioning and/or tracheal intubation may be required), N95 with gown, gloves and eye protection should be used.

Admission of the Newborn

- Infants who are well-appearing at birth and who would otherwise be admitted to the facility's well newborn area should be cared for in a designated area separate from other newborns. The facility should assess their local structures to determine where such infants should receive care.
- Staff will use Enhanced Droplet Precautions for these newborns (gown/glove/eye protection/surgical mask)
- Infants who require NICU care due to illness or gestational age at birth should be admitted to a single patient isolation room within the NICU
- If the infant requires technical CPAP, HFNC as CPAP, or any form of mechanical ventilation, Airborne Precautions must be used, until infection status is determined as outlined above.

Visitation Maternal-Child

- **Labor and delivery Units:** All inpatient sick visitor screening criteria apply. A mother may have one visitor (not subject to change) during a maternity stay. No other visitors will be allowed; this includes children under the age of 18.
- **NICUs:** All inpatient sick visitor screening criteria apply. The baby's mother and one support person (not subject to change) will be allowed to visit. No other visitors will be allowed; this includes children under 18.
- Mothers who have COVID-19 should not visit their infants in NICUs until **all** of the following conditions are met:
 - resolution of fever without the use of antipyretics for at least 72 hours **and** improvement (but not full resolution) in respiratory symptoms, and
 - negative results of a COVID-19 test from at least two consecutive specimens collected 24 or more hours apart.

Non-maternal parents who are PUIs should not visit infants requiring ongoing hospital care until they are determined to be uninfected by molecular testing and/or clinical criteria. Non-maternal parents who develop symptoms of disease and are confirmed to have COVID-19 also must meet the requirements above before visiting infants in the NICU.

Current mother/baby exceptions are also subject to change and additional restriction, should it become necessary to further protect the safety of our new mothers and children.

If the newborn is uninfected but requires prolonged hospital care for any reason, the mother will not be allowed to visit the infant until she meets the CDC recommendations for suspending precautions: 1) Resolution of fever, without use of antipyretic medication X 72 hours, AND symptom free AND at least 7 days from illness onset

7. Transfers to St. Joseph's COVID-19 Treatment Center

All transfers require communication to the transport team and the receiving facility alerting to COVID-19 status or suspected COVID-19 status to allow for necessary infection control procedures.

Transfer Criteria

Inclusion Criteria: (all must be present)

1. Laboratory evidence of acute infection with COVID-19 (positive RT-PCR from respiratory specimen)
2. Expected length of stay >24 hours
3. Expected survival >24 hours
4. Medically stable for transfer
5. MOLST/HCP expected to be in medical record prior to transfer

Exclusion Criteria:

1. Patient requires an urgent/emergent procedure or study unavailable at the Pandemic Treatment Center (e.g. cardiac catheterization, ECMO, hypothermia protocol)
2. Age <18 years
3. Pregnant
4. Need for treatments unavailable at the center (e.g. peritoneal dialysis)
5. Patient refusal for transfer
6. Suicide Precautions

Transfer Process for St. Joseph's COVID-19 Treatment Center

1. All requests for transfer will begin with referring facility contacting the CH Transfer Center
2. The Transfer Center will facilitate a conference call with either the Medical Director of the Pandemic Treatment Center for Stepdown/M/S or the Medical Director for site Critical Care.
3. The Medical Director will triage and accept/decline all admission requests.

Transport within Catholic Health to COVID-19 Treatment Center

- AMR will be called for transport of COVID 19 patients Per Medical Transport Service Agreement with AMR
- Every effort will be made to limit equipment and IV resources to limit the utilization of paramedic vs. basic EMS personnel
- When CH staff are available, a respiratory therapist may transport patients requiring mechanical ventilation with the CH ventilator

8. Discharge

Patients with suspected or confirmed COVID-19 may be discharged to home even while symptomatic as long as they are clinically safe for discharge *and* the discharge does not pose extraordinary risk to the public health.

All symptomatic patients with suspected or confirmed COVID-19 must be provided instruction on practices of isolation and infection control to prevent the spread of contagion. Full patient discharge instructions are available on the CHS intranet COVID-19 page.

Discharges to Longterm Care and Assisted Living

If a patient is discharged to a long-term care or assisted living facility, AND Transmission- Based Precautions *are still required*, they should go to a facility with an ability to adhere to infection prevention and control recommendations for the care of COVID-19 patients. Preferably, the patient would be placed in a location designated to care for COVID-19 residents.

If Transmission-Based Precautions *have been discontinued*, but the patient has persistent symptoms from COVID-19 (e.g., persistent cough), they should be placed in a single room, be restricted to their room, and wear a facemask during care activities until all symptoms are completely resolved or until 20 days after illness onset, whichever is longer.

If Transmission-Based Precautions *have been discontinued* and the patient's symptoms have resolved, they do not require further restrictions, based upon their history of COVID- 19.

9. Discontinuing COVID-19 Transmission Based Precautions (Isolation)

SARS-CoV-2 RNA can be found in respiratory specimens collected from individuals with a history of COVID-19 for many weeks despite lack of symptoms. In the past, it was unclear if this finding represented evidence of ongoing contagiousness. Current scientific evidence has demonstrated that patients with persisting positive COVID-19 tests within 90 days of diagnosis are not contagious after sufficient time from the initial diagnosis has passed, unless the patient is profoundly immune compromised. In light of these findings, the CDC has updated clinical guidance on testing and isolation for patients with a prior COVID-19 diagnosis.

- Recovered/Asymptomatic patients with a prior history of documented COVID-19 *should not* undergo repeat testing within 90 days of their last positive test *unless* it is performed for a regulatory purpose (DOH or executive order) or advised by an infectious disease specialist.
 - Women undergoing childbirth with a positive COVID-19 respiratory swab (PCR) in the preceding 90 days do not require additional screening tests.
 - Patients undergoing surgical procedures with a prior COVID-19 positive test within 90 days do not require repeat testing before the procedure.
 - Patients requiring discharge to a SNF may require testing per a DOH mandate
 - Associates working in longterm care facilities may require weekly testing per DOH requirements, regardless of prior diagnosis history.

Isolation may be discontinued after a diagnosis of COVID-19 under the following circumstances:

- Patients with [mild to moderate illness](#)¹ who are not severely immunocompromised²:
 - At least 10 days have passed *since symptoms first appeared and*
 - At least 24 hours have passed *since last fever without the use of fever-reducing medications and*
 - Symptoms (e.g., cough, shortness of breath) have improved

Note: For patients who are **not severely immunocompromised** and who were **asymptomatic** throughout their infection, Isolation Precautions may be discontinued when at least 10 days have passed since the date of their first positive viral diagnostic test.

- Patients with [severe to critical illness](#)¹ or who are severely immunocompromised²:
 - At least 20 days have passed *since symptoms first appeared and*

- At least 24 hours have passed *since last* fever without the use of fever-reducing medications **and**
- Symptoms (e.g., cough, shortness of breath) have improved

Note: For **severely immunocompromised**² patients who were **asymptomatic** throughout their infection, Isolation Precautions may be discontinued when at least 20 days have passed since the date of their first positive viral diagnostic test.

1. **Mild Illness:** Individuals who have any of the various signs and symptoms of COVID-19 (e.g., fever, cough, sore throat, malaise, headache, muscle pain) without shortness of breath, dyspnea, or abnormal chest imaging. **Moderate Illness:** Individuals who have evidence of lower respiratory disease by clinical assessment or imaging, but minimal signs of respiratory distress/hypoxia (no evidence of persistent hypoxia, no substantial or prolonged need for supplemental oxygen therapy). **Severe Illness:** Individuals who have new and sustained need for supplemental oxygen to maintain oxygen saturation >93%, or lung infiltrates >50%. **Critical Illness:** Individuals who have respiratory failure, septic shock, and/or multiple organ dysfunction.
2. **Severe Immunocompromise:** being on chemotherapy for cancer, untreated HIV infection with CD4 T lymphocyte count < 200, combined primary immunodeficiency disorder, receipt of prednisone >20mg/day for more than 14 days, on transplant immune suppression medications, active hematologic malignancies regardless of chemotherapy. If such patients have significant persisting symptoms (e.g fever) beyond 20 days, an infectious disease consultation is recommended before discontinuing isolation.

<https://www.cdc.gov/coronavirus/2019-ncov/hcp/duration-isolation.html>

23. Post-Mortem Considerations

PPE should be utilized when transferring a body for transport to prevent contact transmission from the body. Disinfect the outside of the bag with an approved hospital disinfectant. Once staff have exited the isolation area, and the body bag is closed and disinfected; they may doff PPE and wear new disposable gloves when handling the body bag at transport.

24. Visitors

Due to the pandemic nature of the current COVID-19 epidemic, patient visitation is heavily restricted for PUI's and confirmed COVID-19 patients.

- In extremely rare and extenuating circumstances involving imminent end-of-life or serious change in a patient's status, temporary and conditional visitation may be granted. **Any visitation exceptions involving imminent end-of-life or serious** change in condition must be approved by Infection Control, the facility's VP of Patient Care Services and the Vice President of Medical Affairs (VPMA) or their designee.
- Please note that our ability to grant visitation exceptions in rare circumstances is subject to change depending on the severity of the current public health crisis and the ever-changing guidance being released by state and federal authorities.
- Any visitors permitted under any exceptions referenced within this policy will have to submit to a health screening including a temporal (forehead) scan to check their body temperature. Visitors with temperatures elevated above 100 degrees Fahrenheit will not be permitted to enter any acute facility.
- Visitors experiencing shortness of breath, fever, cough or other potential COVID-19 symptoms will not be permitted to enter any acute facility; this is without exception.
- Visitors who have been in contact with someone who is actively infected with COVID-19, or have had contact with a person under

investigation for COVID-19 (PUI) will not be permitted entry to any acute facility; this is without exception.

- No visitors who are frail, elderly or at-risk (i.e. immune compromised or serious chronic illness) are permitted to enter any acute facility.
- Any visitors permitted under the exceptions listed within this policy will be required to wear appropriate PPE such as masks, gowns and gloves while visiting. Failure to agree to wear appropriate PPE will not be permitted. Any removal of mandated PPE during a visit may result in immediate ejection from the facility and revocation of future visitation.

- Visitors will be asked to stay in the patient's room throughout the visit. When leaving, visitors will remove PPE as instructed, perform hand hygiene and exit the facility as directed.
- During the temporary visitation restrictions, families should be instructed to call the facility switchboard when making inquiries on the status of a loved one. Operators will be available 7 days a week, 24 hours a day, to direct inquiries to the appropriate clinical representative.
- Families will be required to designate one (1) point of contact – the “designated patient contact” – for all inquiries made to the facility switchboard. In circumstances where a designated patient contact has been requested and communicated, the facility shall not accept calls from other individuals regarding that particular patient's status. The contact will be established at the time of admission.
- Patient representatives, such as Health Care Agents or Surrogates, do not have any additional visitation privileges and remain subject to the temporary visitation restrictions.
- Any visitors permitted under the exceptions outlined in this policy must be limited to immediate family members, powers of attorney, guardians or patient representatives.
- Notwithstanding the current temporary visitation restrictions and/or any visitors permitted under the above-listed exceptions, each individual acute facility retains the ultimate authority to limit or withdraw visitation privileges if the presence of non- patients infringes on the rights of others, compromises the safety of patients or associates, or is medically or therapeutically contraindicated.

B. Mother/Baby Patients

1. On labor and delivery units, a mother may have one visitor (not subject to change) during a maternity stay. No other visitors will be allowed; this includes children under the age of 18.
2. In our NICUs, the baby's mother and one support person (not subject to change) will be allowed to visit. No other visitors will be allowed; this includes children under 18.
3. Current mother/baby exceptions are also subject to change and additional restriction, should it become necessary to further protect the safety of our new mothers and children.

4. All inpatient visitor screening criteria apply.

C. Inpatient Non-Elective/Emergent Surgery Patients

1. One visitor for post-surgery discussion and accompany to inpatient room, then immediately leave. Visitor may return (with permission scheduled in advance) for assistance at the time of discharge.
2. All inpatient visitor screening criteria apply.

D. Emergency Room Patients

1. One visitor is permitted to stay with the patient. Whether or not to permit a visitor to remain with a patient is based on the clinical team's judgment.
2. During clinical assessment, if the patient becomes a person under investigation (PUI) or COVID-19 testing is being considered, the visitor's name and contact number will be taken. The visitor will then be instructed to leave the facility and wait in their vehicle with all future communications with that visitor becoming telephonic.
3. Patient is discharged: Visitor may stay with the patient, staff may encourage waiting in the vehicle if appropriate.
4. Patient is admitted: Visitor may accompany patient to inpatient room, then immediately leave.
5. All inpatient visitor screening criteria apply.

E. Patients with Special Needs

1. Any patient that requires special needs, which can include those with a disability, developmentally disabled individuals with a variety of personal, educational and vocational tasks, etc., may be accompanied by one visitor – to be determined by the clinical care team and pursuant to the general conditions listed within this policy.
2. All inpatient screening criteria apply.

F. Patient to Patient Visitation

1. In the event that an end-of-life COVID-19 patient has a family member already admitted as a patient to the same facility who has also been diagnosed with COVID- 19 or is considered a person under investigation (PUI), visitation may be permitted, subject to the approval by the end-of-life patient's clinical care team, Infection Control and the facility's VP of Patient Care Services or their designee.

12. Associate Health

Close Contact (High Risk) Exposures to Individuals with COVID-19

An *exposure* is defined as: being within 6 feet (2 meters) of a COVID-19 case for a prolonged period of time *without* PPE; close contact can occur while caring for, living with, visiting, or sharing a healthcare waiting area or room with a COVID-19 case.

In general, the CDC recommends testing and self-quarantine after certain close contact exposures as outlined in the table below. However, these guidelines may change based on local epidemiology and health departments rulings.

Exposure	PPE Used	Patient Masked?	Work Restriction
Prolonged Close Contact ¹	None	No	Exclude from work 10 days from last Exposure ²
Prolonged Close Contact ¹	None	Yes	Exclude from work 10 days from last Exposure ²
Prolonged Close Contact ¹	Mask	Yes	None, monitor for symptoms
Prolonged Close Contact ¹	Mask	No	Exclude from work 10 days from last Exposure ²
Prolonged Close Contact ¹	Mask and Eye Protection	No	None, monitor for symptoms
Aerosol Generating Procedure-any duration	Gown, gloves, N95, Eye protection ("Full PPE")	N/A	None, not an exposure
Aerosol Generating Procedure-any duration	Anything besides "full" PPE	N/A	Exclude from work 10 days from last Exposure ²
Brief Contact, no Aerosol procedures	Yes or No	Yes or No	None, symptom monitoring

1.Data are insufficient to precisely define the duration of time that constitutes a prolonged exposure. Until more is known about transmission risks, it is reasonable to consider an exposure of 15 minutes or more as prolonged. However, **any duration** should be considered prolonged if the exposure occurred during performance of an [aerosol generating procedure](#).

2. Based on timing of discovery of the exposure and nature of the exposure, Associate health may test the exposed individual within 48 hours of the 7th day of quarantine. If this test is negative and the individual is asymptomatic, the individual may be cleared to return to work on day 7 but must continue to do daily symptom monitoring.

<https://www.cdc.gov/coronavirus/2019-ncov/hcp/guidance-risk-assessment-hcp.html> <https://www.cdc.gov/coronavirus/2019-ncov/more/scientific-brief-options-to-reduce-quarantine.html>

1

Exposure-based criteria for COVID-19 testing:

If a caregiver has experienced a COVID exposure, with an exposure being defined as being within approximately 6 feet (2 meters) of a COVID-19 case for a prolonged period of time (> 10 minutes) without appropriate PPE. A close contact can occur while caring for, living with, visiting someone, as well as sharing a healthcare waiting area or a room with a COVID-19 case.

Scheduling and Testing Process:

Caregivers meeting the defined eligibility requirement that would like to be tested must call (716.447.6418) or email (AssocHealthCovid19@chsbuffalo.org) the Associate Health COVID-19 Call Center to request to be tested for COVID-19.

An Associate Health COVID-19 Call Center resource will determine if the Caregiver meets the defined eligibility parameters for testing, based upon the information provided by the Caregiver.

If Caregiver is deemed eligible for COVID-19 PCR testing, an Associate Health COVID-19 Call Center resource will provide the Caregiver with a CH Lab Services script and the Caregiver will be referred to the closest CH Emergency Department for testing based upon the defined days and time frames available for testing at that site.

It is important to note that all testing requests must be by referral and approved by the Associate Health COVID-19 Call Center; no walk-ins will be accepted.

Testing Parameters:

- It remains the Caregiver's personal decision whether or not they get tested, even if they are displaying COVID-19 related symptoms.
- The Associate Health COVID-19 Call Center will only notify a Caregiver's manager of a positive test if he/she worked while they were ill.
- This is done in order to identify exposed co-workers who will need to self-monitor themselves for symptoms.

Communication Protocols for Associate Testing Results:

- Based upon the Caregiver COVID-19 PCR testing report received from the CH Central Lab, an Associate Health COVID-19 Call Center resource will contact the caregiver to relay their results and review the return-to-work parameters applicable to their respective test results.

Return to Work Parameters Applicable to COVID-19 Testing:

Symptomatic or Asymptomatic Caregiver with a Community Exposure to a known COVID-19 individual:

- If the caregiver is able to perform their work remotely, they should self-quarantine for ten (10) days, fourteen (14) days for long term care (LTC) staff, from the date of their exposure to a known positive COVID-19 individual.
 - The caregiver should not eat or drink near other individuals until the end of their quarantine period.
- If the caregiver cannot work remotely and even if deemed as essential staff, they may not continue to work, Based upon the specifics of their exposure, it will be determined if the caregiver should self-quarantine for ten (10) days or for a period of seven (7) days. If seven (7) days, the caregiver will be tested within 48 hours of their seventh (7th) day, and if asymptomatic and the PCR test is negative, they may return to work.
- All LTC staff must quarantine for fourteen (14) days from the time of their exposure to a known positive COVID-19 individual.
- In addition, all LTC staff that test positive for COVID-19 must achieve a negative COVID-19 test result before being able to return to work.
- The caregiver must provide a formal DOH Quarantine order as proof of their community exposure.
- **It remains critical that caregivers follow COVID-19 protocols when at home and/or when out in the community.**
- The caregiver does not have to be cleared by Associate Health prior to returning to work unless they are returning from an approved leave (NYS Workers' Compensation/Disability), have developed new COVID-19 symptoms or test positive for COVID-19 during their quarantine period.

Work Related Exposure: If the caregiver is following all required CH COVID-19 protocols, it is not probable that a COVID-19 work related exposure would occur. Therefore, it is **critical that all caregivers follow the appropriate COVID-19 protocols:**

- **Adherence to social distancing parameters (more than 6 feet) when at work, including time spend in a breakroom or in the cafeteria.**
- **Caregivers must wear a mask at all times, including breakroom and meals, as well as other spaces where they will encounter other caregivers. Masks may be removed when eating or drinking in designated areas, such as breakrooms and cafeterias, but caregivers may not sit in close proximity (less than 6 feet) to other individuals without a mask at any time.**
- **It is imperative to assume that all patients may be COVID-19 positive and thus it is required that all caregivers wear a mask and face shield / eye protection when interacting with every patient, regardless of their position with Catholic Health.**

Failure to follow the above protocols may result in corrective action up to and including termination. The COVID-19 protocols are required even if the caregiver has been COVID-19 vaccinated.

If the caregiver fails to follow the above protocols and experiences a work related exposure, it should be determined if:

- The caregiver is able to perform their work remotely. If feasible, they still need to self-quarantine for ten (10) days, fourteen (14) days for long term care (LTC) caregiver, from the date of their exposure to a known positive COVID-19 individual, regardless of COVID-19 testing results.
 - The caregiver should not eat or drink near other individuals until the end of their quarantine period.
- If the caregiver cannot work remotely and even if deemed as essential staff, they may not continue to work, Based upon the specifics of their exposure, it will be determined if the caregiver should self-quarantine for ten (10) days or for a period of seven (7) days. If seven (7) days, the caregiver will be tested within 48 hours of their seventh (7th) day, and if asymptomatic and the PCR test is negative, they may return to work.
- All LTC staff must quarantine for fourteen (14) days from the time of their exposure to a known positive COVID-19 individual
- In addition, all LTC staff that test positive for COVID-19 must achieve a negative COVID-19 test result before being able to return to work.
- The caregiver does not have to be cleared by Associate Health prior to returning to work unless if they are returning from an approved leave (NYS Workers' Compensation/Disability), has developed new COVID-19 symptoms, or tests positive for COVID-19 during their quarantine period.

Return from Travel:

Return travel from outside of New York State (NYS) will require all asymptomatic caregivers to be COVID-19 tested within 24 hours of arrival back into NYS and prior to returning to work, The caregiver must also be re—tested on the fourth day after their return.

Symptomatic or Asymptomatic Caregiver with a Positive COVID-19 PCR Test Result:

Caregivers with a diagnosis of COVID -19 must self-isolate at home for ten (10) days from the date of testing. Caregivers with a diagnosis of COVID-19 may not return to work until cleared by Associate Health. In general, Caregivers will be considered for return to work when the following criteria are met-

Return to work criteria:

- At least ten (10) days have passed from original positive COVID-19 PCR test result AND
 - Covid-19 symptoms have substantially improved AND
 - At least 24 hours have passed since last fever without antipyretic medications.
- If the caregiver has recovered, but was hospitalized due to severe COVID-19, or is severe immune compromised, an isolation period duration of twenty (20) days from the original positive test date is recommended before returning to work.
- LTC Associates who test positive for COVID-19 are not eligible to return to work for a minimum of fourteen (14) days from their first positive test date, in addition to showing improvement in symptoms as noted above.

Caregiver's Decision Not to Test:

- If a Caregiver has met the eligibility for Caregiver COVID-19 PCR testing (recently had a fever, new cough, or shortness of breath, severe muscle ache, loss of taste & smell), but chooses NOT to get tested for COVID-19, the Caregiver must remain under home isolation as a precaution for 10 days AND symptom free and afebrile for 24 hours without antipyretic medications.

If you have any questions regarding this exposure guidance, please contact the [Associate Health COVID-19 Call Center: \(716\) 447-6418](mailto:AssocHealthCovid19@chsbuffalo.org) or Email: AssocHealthCovid19@chsbuffalo.org

Patients with a reported Exposure**Inpatients**

- Should be tested after the exposure and tested again if they develop any symptoms (assuming prior test was negative). Initial testing should ideally be done 3-5 days after the original exposure but should not be delayed if it is a new admission or pending discharge.
- Should be placed in a single room. They may not have a roommate until 14 days have passed (assuming negative/no symptoms)
- Can be discharged if medically appropriate prior to completion of the 14 day quarantine. They must be given instructions on quarantine at time of discharge.
- Should wear a mask whenever anyone enters the room or if they leave the room

Outpatients:

Should quarantine at home 14 days from time of exposure, regardless of negative testing.

- Should defer medical appointments ONLY if they can be safely delayed without harming the patient
- If a patient cannot defer the appointment AND is exhibiting no symptoms, the patient should wear a mask at all times in the office, be placed in the exam room as soon as possible after entering the building (they should wait in car if there is a wait time).
- If a patient develops symptoms while on quarantine, he or she should be retested.
- It is important to remember that any patient entering the office could have had an exposure. Universal masking is key to preventing transmission among staff and from patients (the mask prevents transmission from the infected person wearing it).

Healthcare Workers with COVID-19 Infection

Healthcare Workers (HCWs) with a diagnosis of COVID-19 may not return to work until cleared by Associate Health. In general, HCWs will be considered for return to work when the following criteria are met:

HCW's with mild to moderate illness¹:

- At least 24 hours have passed *without* fever (without use of fever-reducing medications)
- **and** improvement in respiratory symptoms (e.g., cough, shortness of breath);
- **and** at least 10 days have passed since symptoms first appeared (if unclear, use date of positive test).

HCW's with severe or critical illness or severe immune compromise^{1,2}:

- At least 24 hours have passed *without* fever (without use of fever-reducing medications)
- **and** improvement in respiratory symptoms (e.g., cough, shortness of breath);
- **and** at least 20 days have passed since symptoms first appeared (if unclear, use date of positive test).

1. **Mild Illness:** Individuals who have any of the various signs and symptoms of COVID-19 (e.g., fever, cough, sore throat, malaise, headache, muscle pain) without shortness of breath, dyspnea, or abnormal chest imaging.

Moderate Illness: Individuals who have evidence of lower respiratory disease by clinical assessment or imaging, but minimal signs of respiratory distress/hypoxia (no evidence of persistent hypoxia, no substantial or prolonged need for supplemental oxygen therapy)

Severe Illness: Individuals who have new and sustained need for supplemental oxygen to maintain oxygen saturation >93%, or lung infiltrates >50%.

Critical Illness: Individuals who have respiratory failure, septic shock, and/or multiple organ dysfunction.

2. **Severe Immunocompromise:** being on chemotherapy for cancer, untreated HIV infection with CD4 T lymphocyte count < 200, combined primary immunodeficiency disorder, receipt of prednisone >20mg/day for more than 14 days, on transplant immune suppression medications, active hematologic malignancies regardless of chemotherapy

Infectious Disease Clinical Guidance for Suspected and Confirmed COVID-19

Laboratory studies outlined below for the purposes of initial Infectious Disease evaluation. Additional studies pertinent to patient’s comorbidities, organ dysfunction etc. may also be warranted

Baseline Labs and Studies	Additional Studies to consider Based on Presentation & Severity of Illness
Influenza/RSV PCR	ABG
SARS-CoV-2 PCR	D-dimer (prognostic marker)
CBC w/ differential	PT/INR, PTT
Complete Metabolic Panel	SARS-CoV-2 IgG (if contemplating convalescent plasma)
Blood Culture X 2 sets	Troponin I ²
HIV Screen per guidelines	Echocardiogram
CRP (prognostic marker)	Urinalysis
Ferritin (prognostic marker)	Urine Legionella Ag
Procalcitonin	Urine Pneumococcus Ag
Chest X-ray ¹	Sputum Culture (induced sputum NOT recommended)
12 lead EKG	U/A and Urine Culture

1. CT chest may be considered for pulmonary embolism evaluation or for other indications as warranted, but should not be used routinely solely for aiding in the diagnosis of COVID-19.
2. An elevated Troponin I should prompt trending with considering for a transthoracic echocardiogram if there are signs/symptoms of hemodynamic compromise/myocarditis

Quick Guide: Pharmaceutical Treatments for COVID-19 in Hospitalized Patients

1. Dexamethasone

Dexamethasone is the only pharmaceutical intervention to date with strong evidence for reducing mortality in patients with COVID-19. Dexamethasone dosed at 6mg daily for 10 days (IV or PO) is associated with a significant reduction in mortality in patients with COVID-19 that exhibit hypoxia (defined as an oxygen saturation of <94% on room air).¹

Recommended indication for use of Dexamethasone

- Oxygen saturation below 94% on room air
- Duration of therapy is 10 days
- 6 mg daily dosing can be provided PO or IV
- Therapy should not be discontinued before 10 days unless there is an adverse event

2. Remdesivir

There is some evidence that remdesivir can reduce the duration of illness in moderately ill hospitalized individuals with COVID-19. A multicenter randomized controlled trial (RCT) demonstrated reduced duration of illness in a subset of patients that required low dose supplemental oxygen prior to initiation of the drug.^{2,3} No benefit was noted in patients that required non-invasive positive pressure ventilation, high flow oxygen or mechanical ventilation prior to initiation of the drug. There was no benefit seen in patients that had oxygen saturations at or above 94% on room air prior to drug initiation. A second multinational RCT that is only available as a pre-publication did not show a mortality benefit for remdesivir.

Recommended indication for use of Remdesivir:

- Oxygen Saturation below 94% on room air BUT NOT requiring any of the following: BIPAP, Mechanical Ventilation, ECMO
- Maximum duration of therapy is 5 days.
 - If the patient is sufficiently recovered for discharge before that time, the drug should be discontinued and the patient should be discharged.
 - If patients initiated on remdesivir subsequently require BIPAP, Mechanical Ventilation or ECMO, the drug should be continued to complete the treatment course.
- Dosing: 200 mg IV X 1 then 100 mg daily up to 5 days
 - Contraindicated with GFR<30
 - Monitor CrCl, LFT's and PTT on therapy

3. Convalescent Plasma (CP)

There is mixed evidence on the efficacy of CP for the treatment of COVID-19.⁴⁻⁶ Some studies suggest a mortality and duration of illness benefit. However, other studies have shown no benefit. There are several RCT's that are pending or have not yet undergone peer review. If beneficial, it appears to be most useful when given in very early in the course of infection. It does have FDA authorization for emergency use in hospitalized patients with COVID-19.

Recommended indication for use of Convalescent Plasma

- SARS-CoV-2 IgG levels should be obtained prior to ordering CP.
- CP may be considered in hospitalized patients that test negative for SARS-CoV-2 IgG antibodies.
- The patient or healthcare proxy must be provided with the FDA emergency use authorization patient sheet as part of the consent process for giving CP. The consent form can be found here: <https://www.fda.gov/media/141479/download>
- CP should be ordered as a single unit of fresh frozen plasma. Comment in the order for the blood bank should clearly state: “**COVID-19 Convalescent Plasma**”.

Treatments that are Not Recommended

Tocilizumab/IL-6 Inhibitors

The IL-6 inhibitor, Tocilizumab, was investigated as a possible treatment for COVID-19 in an effort to disrupt multisystem organ dysfunction and acute lung injury. Early observational data suggested a possible benefit. Subsequently, several larger randomized trials have failed to show a benefit.⁷⁻⁹

- Tocilizumab is not routinely recommended for the treatment of COVID-19 due to lack of efficacy observed in three RCT's.

Hydroxychloroquine (+/- Azithromycin)

Numerous trials have failed to demonstrate any efficacy in the use of hydroxychloroquine with or without azithromycin for the treatment or prevention of COVID-19.¹⁰⁻¹³ A higher incidence of adverse events, including significant arrhythmias have been reported with the use of these agents.

- Hydroxychloroquine (+/- Azithromycin) is **not** recommended for the treatment or prevention of COVID-19 due to lack of efficacy observed in several RCT's and potential for significant adverse events.

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APPENDIX: PPE RE-USE PROCEDURES

N95 RE-USE

Supplies of N95 respirators are in increased demand in critical settings during infectious diseases outbreaks. Existing CDC guidelines recommend a combination of approaches to conserve supplies while safeguarding health care workers in such circumstances. In these situations, existing guidelines recommend that healthcare institutions:

- Minimize the number of individuals who need to use respiratory protection through the preferential use of engineering and administrative controls;
- Use alternatives to N95 respirators where feasible. For example procedure masks when no aerosol generating procedures are expected.
- Implement practices allowing extended use and/or limited reuse of N95 masks and reuse when acceptable

PROCEDURE: Re-use of N-95 respirators

Re-use can occur under the following conditions:

- o N-95 respirators must only be used by a single user
- o Use a full face shield or a surgical mask over an N95 respirator to reduce surface contamination of the respirator.
- o Keep used respirators in a clean breathable container **between uses**. (e.g. paper bag)
- o Store respirators so that they do not touch each other. Staff will write their name on the bag and/or on the elastic straps so the person using the respirator is clearly identified (Do NOT write on the actual mask)
- o Paper bags should be disposed of or cleaned each time mask is removed.
- Always use clean gloves when donning a used N95 respirator and performing a user seal check.
- **Perform hand hygiene before and after touching or adjusting the respirator** (if necessary for comfort or to maintain fit).
- Discard gloves after the N95 respirator is donned and any adjustments are made to ensure the respirator is sitting comfortably on your face with a good seal. **Perform hand hygiene after removing gloves AND after touching the re-used mask.**
- Avoid touching the mask. Anytime one touches the N95, it is necessary to perform hand hygiene as described above.

Do NOT Reuse and DISCARD N-95 respirators if:

- Contaminated with blood, respiratory or nasal secretions, or other bodily fluids from patients.
- The straps are stretched out so they no longer provide enough tension for the respirator to seal to the face.
- If the nosepiece or other fit enhancements are broken.
- The respirator that is obviously damaged or becomes hard to breathe through.
- The respirator has been used more than 5 times, or has been used continuously for >8 hours (not removed during that time period).
- The respirator was used during an aerosol generating procedure without a procedure mask or face

shield covering the respirator.

EYE PROTECTION RE-USE PROCEDURE

When manufacturer instructions for cleaning and disinfection are unavailable, such as for single use disposable face shields or goggles:

1. While wearing gloves, carefully wipe the *inside, followed by the outside* of the face shield or goggles using a clean cloth saturated with neutral detergent solution or cleaner wipe.
2. Carefully wipe the *outside* of the face shield or goggles using a wipe or clean cloth saturated with EPA- registered hospital disinfectant solution.
3. Wipe the outside of face shield or goggles with clean water or alcohol to remove residue.
4. Fully dry (air dry or use clean absorbent towels).
5. Remove gloves and perform hand hygiene.