This document is intended to provide general clinical guidance in the care of patients with known or suspected COVID-19 infection. Content will be evaluated and updated continuously as new information becomes available and our understanding of this disease advances.

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Emergency Department Triage

1) All personnel should be wearing appropriate PPE (Appendix A).

2) Patients arriving in the Emergency Department (ED) for care are sorted into designated zones according to presence or absence of respiratory complaints and acuity (refer to ED surge diagram below).

3) Patients with suspected COVID-19 should be evaluated for presence and content of Advance Directives, particularly regarding intubation and mechanical ventilation.
   a. If no documented Advanced Directive/DNR/DNI is available, an attempt to obtain this should be made as soon as possible. Education regarding disease course balanced with patient choice is of utmost importance.

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**May be revised to meet operational needs**

*Note: If patient acuity level changes, appropriately move patient to newly identified zone and maintain appropriate PPE

Updated 3.18.2020
Suggested Emergency Department Workup for Suspected/Confirmed COVID-19 Patients Requiring Admission

<table>
<thead>
<tr>
<th>Labs</th>
<th>• CBC</th>
<th>• CMP</th>
<th>• Lactate</th>
<th>CLUES TO COVID-19: leukopenia, lymphocytopenia and other inflammatory markers</th>
</tr>
</thead>
<tbody>
<tr>
<td>Micro</td>
<td>• COVID-19</td>
<td></td>
<td></td>
<td>CONSIDERATIONS: Consider: Rapid Flu, RSV, RVP, blood cultures, sputum Co-infection rate is unknown; bacterial co-infection might increase with severity of illness</td>
</tr>
<tr>
<td>Imaging</td>
<td>• Portable CXR</td>
<td>• CT should be reserved for hypoxic patients or those where there is clear clinical indication in order to reduce contamination of CT scanner and conserve PPE. CT should only be performed if the results would change clinical management.</td>
<td>CONSIDERATIONS: Limited role in diagnosis of COVID-19 as PCR is the test of choice. Primary role of CT is the evaluation of superimposed processes such as pulmonary embolism or aortic dissection.</td>
<td></td>
</tr>
<tr>
<td>Supportive TX</td>
<td>• Empiric antibiotics within 1 hour</td>
<td>• Conservative use of IV fluids</td>
<td>Per system pneumonia order set Unless concern for septic shock, recommend intermittent 500cc boluses as needed based on clinical targets</td>
<td></td>
</tr>
</tbody>
</table>
COVID-19 Testing

All admitted patients with signs and symptoms consistent with COVID-19 should be tested.

As of March 31st, 2020, testing availability in the DFW area is still somewhat limited, with variation in result turnaround times. Current CDC priority groups for testing are indicated in the table below:

Priorities for Laboratory Testing for COVID-19

PRIORITY 1
Ensure optimal care options for all hospitalized patients, lessen the risk of nosocomial infections, and maintain the integrity of the healthcare system

- Hospitalized patients
- Symptomatic healthcare workers

PRIORITY 2
Ensure that those who are at highest risk of complication of infection are rapidly identified and appropriately triaged

- Patients in long-term care facilities with symptoms
- Patients 65 years of age and older with symptoms
- Patients with underlying conditions with symptoms
- First responders with symptoms

PRIORITY 3
As resources allow, test individuals in the surrounding community of rapidly increasing hospital cases to decrease community spread, and ensure health of essential workers

- Critical infrastructure workers with symptoms
- Individuals who do not meet any of the above categories with symptoms
- Health care workers and first responders
- Individuals with mild symptoms in communities experiencing high COVID-19 hospitalizations

NON-PRIORITY

- Individuals without symptoms


There is a specific COVID-19 test order available in CareConnect.
Med-Surg/Intermediate Care

1) Admitted patients with a COVID-19 lab test confirmed or pending should be placed in a designated zone or unit per individual entity capacity and workflow.
2) Notify Infectious Disease Specialist or ID Medical Director at your facility (Appendix B).
3) Provide supportive care

<table>
<thead>
<tr>
<th>Imaging</th>
<th>Baseline CXR, repeat if condition worsens</th>
</tr>
</thead>
<tbody>
<tr>
<td>Oxygen</td>
<td>Recommend face mask oxygen delivery, avoid HFNO and NIV</td>
</tr>
<tr>
<td></td>
<td>Minimize use of nebulizer therapy</td>
</tr>
<tr>
<td>Vital Signs</td>
<td>Q4 hours with temp and O2 sat, consider continuous pulse ox if available</td>
</tr>
<tr>
<td>Labs/Micro</td>
<td>Sputum culture, if not already done</td>
</tr>
<tr>
<td>Treatment</td>
<td>Initiate pneumonia order set when bacterial co-infection suspected</td>
</tr>
<tr>
<td></td>
<td>Avoid all corticosteroids, including inhaled</td>
</tr>
<tr>
<td></td>
<td>Conservative use of IV fluids, absent septic shock</td>
</tr>
<tr>
<td></td>
<td>There are currently no FDA approved treatments for COVID-19; beyond supportive care, pharmacotherapy options at this point are off-label or investigative</td>
</tr>
<tr>
<td></td>
<td>See figure “Potential pharmacotherapy options for patient in high risk populations or with high acuity”</td>
</tr>
<tr>
<td></td>
<td>Convalescent plasma transfusion is another investigative therapy for specialized cases meeting criteria</td>
</tr>
<tr>
<td>Discharge Planning</td>
<td>Early CTM consult for patients who may require post-acute placement</td>
</tr>
<tr>
<td>Discharge criteria</td>
<td>Afebrile x 24 hours without use of anti-pyretics</td>
</tr>
<tr>
<td></td>
<td>Clinical improvement in signs and symptoms</td>
</tr>
<tr>
<td></td>
<td>Sustainable home oxygen requirement</td>
</tr>
<tr>
<td>Post-discharge isolation instructions</td>
<td>Continue to self-isolate until no fever for at least 72 hours without anti-pyretics, and other symptoms (e.g., cough and shortness of breath) have improved and at least 7 days since first symptom appeared.</td>
</tr>
<tr>
<td></td>
<td>Separate from other family members and pets</td>
</tr>
</tbody>
</table>
Potential Pharmacotherapy Options for COVID-19 Patients

**POTENTIAL PHARMACOTHERAPY OPTIONS FOR COVID-19 PATIENTS IN HIGH RISK POPULATIONS OR WITH HIGH ACUITY**

Updated 3.27.2020

This is intended to be a SUGGESTED GUIDELINE on potential COVID-19 options and is subject to change. It is NOT to supersede any patient-specific medical judgement and decision. NOTE: there is currently NO FDA approved treatment for COVID-19.

1. **CONFIRMED COVID-19 POSITIVE**

   - Consider AVOIDING and TAPERING OFF corticosteroids if at all possible.
     - Corticosteroids may prolong viral shedding and time to clearance
     - If patient needs steroids (e.g. asthma exacerbation), then attempt to taper to lowest effective dose
     - If patient progresses to ARDS, steroids may be beneficial, but should be a case-by-case decision

   - Consider AVOIDING NSAIDs (specifically Ibuprofen) and utilizing Acetaminophen for fever/gripes. If patient does not respond to APAP, may consider using short courses of NSAIDs.

   - Does patient have ANY of the following?
     - Critically Ill
     - Age > 70 OR immunocompromised, AND with fever/cough/cold symptoms
     - COPD/asthma/DM/heart disease (eg HF), AND with fever/cough/cold symptoms
     - P/F Ratio < 300
     - Respiratory rate > 30
     - Worsening CT with ground glass opacities

   - **HYDROXYCHLOROQUINE (HCQ) t/- Azithromycin -/- Zinc**
     - **Yes** Check serum K and serum Mg to ensure K and Mg are adequate. Consider using electrolytes replacement order set to help maintain adequate K and Mg level while on treatment.
     - Hydroxychloroquine (HCQ) 400mg BID X 2 doses, then 200mg BID X 8 doses (5-day regimen)
       - If on prednisone/steroids absorption, then consider 400mg BID X 10 doses (5-day regimen)
       - If severe hypokalemia/Hyponatremia at day 5, may consider extending 200mg BID X another 5 days (total 10 day regimen)

   - **NO**
     - Hydroxychloroquine (HCQ) 400mg PO daily X 4 doses (5-day regimen).
     - **NOTE:** Synergies, NOT to replace HCQ.
     - Zinc 50mg = 220mg BID

   - **YES**

   - **For Critically Ill patients with the following criteria:**
     - Rapid deteriorating respiratory status over previous 48 hours, AND
     - At least one of the following: (1) F cond > 800, (2) L/D > 250, or (3) if d-dimer > 1, AND
     - Temp > 102F despite antipyretics.

     May consider adding tocilizumab therapy.

     Tocilizumab 400mg IV infused over 1 hour X 1 dose, if patient continues to deteriorate, then consider repeating 400mg IV infused over 1 hour X 1 dose after 12hrs for cytokine release syndrome (NOT an antiviral).

   - **OPTIONS:**
     - Neutropenia with ANC < 500
     - AST/ALT > 5X ULN
     - Platelets < 50K

   - **REFERENCES:**

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***TREATMENT OPTIONS CONSIDERATION***

1. There is currently NO FDA approved treatment for COVID19. All options are based on small trials and anecdotal data.
2. There is a potential risk with using hydroxychloroquine in G6PD deficiency patients. ACR Rheumatology guidelines do NOT mention G6PD testing prior to initiation of hydroxychloroquine. Consider risk/benefit.
3. Lopinavir/Ritonavir monotherapy has not been shown to be effective compared to standard therapy. (Cao B, et al. NEJM 2020)
4. As of 3/12/2020, thecompass use program for Remdesivir has been closed. Gilead is working on expanded access program. Once more data is available, we will include the information in this chart.

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Critical Care

Intubation

1) Admitted patients with a COVID-19 lab test should be placed in a designated zone or unit
   a) Refer to the Surge Management of Emerging and Pandemic Respiratory Illness policy
2) Apply Airborne Plus PPE before intubation
3) Notify Infectious Disease Specialist or ID Medical Director (Appendix B)
4) Manage respiratory failure, ARDS if present

<table>
<thead>
<tr>
<th>Consider dedicated intubation teams</th>
<th>• Anesthesia provider, if available</th>
</tr>
</thead>
<tbody>
<tr>
<td>Have intubation kits pre-assembled</td>
<td>• Self-inflating bag with Viral filter attached and keep closed seal, PEEP valve at zero all times.</td>
</tr>
<tr>
<td></td>
<td>• (2) anesthesia masks with head straps on to tighten the seal.</td>
</tr>
<tr>
<td></td>
<td>• LMA iGel size 4 and 5 (as backup airway if unable to obtain ET intubation)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Follow airway management guidelines</th>
<th>Minimize Aerosolization of Virus</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>• Early Tracheal Intubation instead of Bi-PAP of HFNO</td>
</tr>
<tr>
<td></td>
<td>• Intubate in a negative pressure room, if available, and avoid nebulization</td>
</tr>
<tr>
<td></td>
<td>• HEPA filters for positive pressure ventilation</td>
</tr>
<tr>
<td></td>
<td>• Rapid sequence intubation for apnea and lack of cough. Use high dose paralytics</td>
</tr>
<tr>
<td></td>
<td>• PPV, high-flow oxygen and manual bagging only if clinically necessary</td>
</tr>
<tr>
<td></td>
<td>• Immediate endotracheal tube cuff inflation before PPV</td>
</tr>
<tr>
<td></td>
<td>• Limit ventilator disconnects. If needed, do so at end-expiration</td>
</tr>
</tbody>
</table>

Maximize First Attempt Success

• Use a checklist and closed loop communication
• Most experienced clinician should intubate
• Use video laryngoscopy (VL) if possible
• Have all necessary equipment at the bedside
• Robust preoxygenation with 100% O2 for 3-5 minutes
• Early placement of a supraglottic airway instead of manual bagging for rescue oxygenation
- Second clinician with personal protective equipment (PPE) outside of the room for immediate assistance

**Limiting Contamination**
- Enhanced respiratory PPE with N95 respirator or PAPR and observer-ensure donning compliance
- Use double-glove technique
- Use VL for indirect tracheal intubation if available
- Limit to a 3-person intubation team when possible (RN, RT and Intubator); Two staff on standby for CPR if needed
- Placed soiled equipment in double seal biohazard bags
- Proper coached doffing procedure with hand hygiene

**ETT Clamping Procedure**
- 2 Respiratory Therapists will perform this procedure.
- Therapist 1: clamp (non-serrated) will be applied across the ETT at the end of inspiration.
- Therapist 2: circuit will be disconnected and the new circuit applied.
- Therapist 1: clamp will be removed and ventilation continued. (This procedure should take no longer than a few seconds.)
- Monitor patient for several minutes to verify effective ventilation on new device.

<table>
<thead>
<tr>
<th>Utilize lung protective strategies</th>
<th>Low tidal volumes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Utilize prone positioning</td>
<td>Rotoprone bed or manual proning</td>
</tr>
<tr>
<td></td>
<td>See Appendix D for detailed manual proning procedure</td>
</tr>
<tr>
<td>If ventilators in short supply, consider alternatives</td>
<td>NICU ventilators</td>
</tr>
<tr>
<td></td>
<td>Anesthesia machine</td>
</tr>
<tr>
<td>Conservative approach to vent weaning</td>
<td>Minimize re-intubations</td>
</tr>
</tbody>
</table>

5) Manage septic shock per usual sepsis guidelines, if present
   - Society of Critical Care Medicine suggests a conservative as opposed to liberal fluid strategy
6) Transfer to non-ICU setting when ICU criteria no longer present
Manual Proning Procedure

Video from NEJM

Prone positioning procedure:

1) Perform hand hygiene and don nonsterile gloves and other PPE as needed; verify that all assisting personnel do the same
2) Identify the patient according to facility protocol
3) Establish privacy by closing the door to the patient’s room and/or drawing the curtain surrounding the patient’s bed
4) Introduce yourself and all others who will participate in repositioning to the patient, if conscious, and family member(s), if present; explain your clinical role and assess for knowledge deficits and anxiety about prone positioning
   - Determine if the patient/family requires special considerations regarding communication (e.g., due to illiteracy, language barriers, or deafness); make arrangements to meet these needs if they are present
     - Use professional certified medical interpreters, either in person or via phone, when language barriers exist
   - Explain the procedure and its purpose; answer questions and provide emotional support as needed
   - Request visitors and/or family members to leave the room, if indicated, to promote patient privacy
5) Assess the patient’s general health status, including his/her pain level using a facility-approved pain assessment tool; premedicate patient with prescribed sedative and/or analgesia, as appropriate, and allow time for a therapeutic level to be reached before initiating patient repositioning
6) Assess the patient’s vital signs, oxygen saturation, and cardiac status (e.g., EKG). Remove EKG leads from the front of the body in preparation for repositioning
7) Secure all equipment that is attached to the bed or to the patient (e.g., oxygen tubing, intravenous lines). Place tubes and lines that extend from the upper body over the patient’s right or left shoulder, and place excess tubing at the head of the bed. Place tubes and lines that extend from the lower body in line with the right or left leg; place excess tubing at the foot of the bed. Check that all tubes and invasive lines are of adequate length to allow for the change in the patient’s position
   - If chest tubes are present, place the tubing and collection system on the side of the bed that will be closest to the insertion site after the patient is repositioned
8) Disconnect and cap the nasogastric (NG) tube and pause the feeding pump, if these are present
9) If present, suction the ETT; check the position of the ETT (note insertion depth) and check that it is securely fixed to the patient. The respiratory therapist should hold the ETT in place during repositioning
10) Perform other patient care procedures that require access to the front of the patient’s body (e.g., eye care, ostomy care), as appropriate
11) Reduce your risk for injury (especially to the back) by positioning the bed at a comfortable working height (e.g., thigh level) and checking that the bed wheels are locked
12) Have one staff member (e.g., yourself) stand on one side of the bed, one on the other side, and one at the head of the bed (e.g., respiratory therapist who will secure the ETT as the patient is turned)

13) Position the head of the bed flat

14) Lower the side rails

15) Remove pillows and other items that would interfere with repositioning the patient

16) Use a transfer assistive device or draw sheet to avoid friction and move the patient to the side of the bed closest to you such that he or she will be positioned in the center of the bed when subsequently placed in the prone position

17) If using a prone positioner, apply it to the front of the patient’s body according to manufacturer instructions. If using the Vollman prone positioner, perform the following:
   - Place the straps of the positioner under the patient at the level of the head, chest, and pelvis
   - Place the frame device on top of the patient such that the chest piece is between the clavicle and the 6th rib, the pelvic piece is ~.5 in (1 cm) above the ileac crest, and the forehead and chin pieces support the patient’s face
   - Secure the straps on one side of the device and then on the other. Verify that the straps are tightly fastened because loose straps increase risk for skin breakdown due to friction and shear forces

18) Collaborate with the assisting staff members to adjust the remaining steps for repositioning the patient according to his/her mobility limitations and as appropriate if a prone positioner is being used (refer to manufacturer instructions)

19) Perform the following to turn the patient from the supine to the prone position:
   - Align the patient’s head and legs with the spine
   - Make sure that there is sufficient length in the EKG wires for reattaching to the leads on the patient’s chest after the turning of the patient
   - Raise the arm farthest from you over the patient’s head in a “swimmer’s position” and gently roll the patient to the side toward the center of the bed
   - Continue to roll the patient until he or she is lying on the abdomen in the prone position in the center of the bed
   - Position the patient’s head with the face toward the ventilator, if applicable

20) Perform the following, as appropriate, after the patient is repositioned in the prone position from a supine position:

21) Recheck the ETT or airway and suction if needed
   - Reassess the position and patency of all lines and tubes
   - Reattach all EKG lines to the patient’s chest, making sure they are not positioned on pressure points (e.g., position on upper left and right shoulder areas away from bony prominences and on the left lateral side of the chest)
   - Recalibrate all EKG lines and other measurement devices as needed
   - Reassess cardiac rhythm and hemodynamic status
   - Assess the patient’s comfort level and the need for sedation or analgesia
   - Resume the feeding system, if present

22) Perform the following to turn the patient from the lateral (i.e., side-lying) position to the prone position:
   - Align the patient’s head and legs with the spine
   - Make sure that there is sufficient length in the EKG wires attached to the leads on the patient’s chest
   - Gently roll the patient toward the center of the bed until he or she is lying in the prone position
23) Perform the following after the patient is repositioned in the prone position from the lateral position:

24) Recheck the ETT or airway and suction if needed
   • Reassess the position and patency of all lines and tubes
   • Reattach all EKG lines to the patient’s chest, making sure they are not positioned on pressure points (e.g., position on upper left and right shoulder areas away from bony prominences and on the left lateral side of the chest)
   • Recalibrate all EKG lines and other measurement devices as needed
   • Reassess cardiac rhythm and hemodynamic status
   • Assess the patient’s comfort level and the need for sedation and analgesia
   • Resume the feeding system, if present

25) Perform the following after the patient is repositioned in the prone position from either the supine or lateral position:
   • If a prone positioner was used and the patient is clinically stable, loosen the straps. In accordance with the facility/unit protocol and the treating clinician’s orders, keep the straps tightly fastened if it is anticipated that the patient will require rapid supine positioning (e.g., if the patient is clinically unstable and sudden initiation of emergency interventions may be necessary)
   • Reassess vital signs, cardiac rhythm, and hemodynamic status; clinical status should stabilize within 10 minutes of prone positioning as an indication of the patient’s response to the procedure
   • Assess the skin on the back of the patient’s body (e.g., sacral area) for new or worsening areas of irritation or breakdown

26) Perform the following to correct body alignment, promote patient comfort, and prevent pressure areas that increase risk for development of PrUs:
   • Turn the patient’s head to one side, as indicated; if using a prone positioner, move the head piece to different positions frequently (e.g., hourly) to prevent skin breakdown
   • Place the patient’s arms in a flexed position with the elbows at or near shoulder level

The lumbar and sacral areas of the back are at risk for strain when a patient is placed in the prone position. Use pillows or cushions to properly support these areas. Copyright© 2014, EBSCO Information Services.
• Place hand rolls in the patient’s hands to maintain proper positioning of the fingers and thumbs
• Place pillows and/or gel pads under the lower back, knees, and calves to relieve pressure
• Place therapeutic boots on the patient’s feet, if prescribed

Therapeutic boots, also called ankle contractor boots, are often used to reduce the risk of plantar flexion contractures, hip rotation, and pressure on the heels. Copyright© 2014, EBSCO Information Services.

• Place a footboard or pillow at the foot of the bed to support the patient’s feet in a normal flexed position
• Smooth visible wrinkles in the bed linen

27) Raise the side rails and lower the bed for patient safety
28) Reassess the patient’s comfort level and place the call light and bedside table within his or her reach
29) Discard PPE and perform hand hygiene
30) Document the following information in the patient’s medical record:
   • Date and time of prone positioning
   • Indication for prone positioning
   • Description of the procedure used for patient positioning, including use of assistive transfer devices and/or positioning devices
   • Patient assessment findings such as
     o vital signs
     o respiratory status
     o cardiac status
     o level of pain and if prescribed medication was administered
     o skin assessment findings, including signs of skin breakdown
   • Patient’s tolerance of the prone position, including patient report or indications of pain or discomfort
   • Any unexpected patient events, interventions performed, whether or not the treating clinician was notified, and patient outcome
   • All patient/family member education, including topics presented, response to education provided, plan for follow-up education, barriers to communication, and techniques that promoted successful communication
General Infection Control Guidelines

Refer to most current Infection Control guidelines

1) Place in negative pressure room, if available
   a) If negative pressure not available, place in private room with door closed

2) Place droplet+ precautions sign on door
   a) Droplet+ precautions =
      o Face mask
      o Eye protection
      o Gown
      o Gloves

3) Implement airborne+ precautions for aerosolizing procedures
   a) Airborne+ precautions = N-95 respirator instead of face mask
   b) Aerosolizing procedures:
      o Intubation/Extubation
      o Manual ventilation
      o Anytime the ventilator circuit is broken
      o CPR
      o Bronchoscopy
      o Autopsy
      o Non-invasive Ventilation (BIPAP/CPAP/High Frequency Oscillatory Ventilation)
      o Induction of Sputum
      o Open suction catheter use (trach, oral, nasal)
      o Placing or exchanging tracheostomy tubes
      o Nebulization
      o Continuous aerosol therapy
      o Have designated disposal area for PPE
Resuscitation

General Principles

1) **All providers entering the room should be appropriately trained in use of the appropriate PPE. All appropriate PPE (airborne plus precautions) must be in place prior to entry. It is recommended that the fewest number of caregivers as possible enter the room.**

2) Ventricular fibrillation is a commonly seen arrhythmia in cardiopulmonary arrest. The first ACLS provider to don PPE should bring the defibrillator to the bedside and deliver the first shock, if indicated, per ACLS protocol.

3) In a non-trauma code, begin chest compressions with all healthcare providers donning the required PPE prior to entering the room.

4) The patient should be initially ventilated with a bag-valve mask by a healthcare provider wearing appropriate PPE. Do not begin intubation until all personnel are wearing the appropriate PPE.

5) If intubated, the patient is to be placed on a ventilator, so that there is a filtered contained circuit.

6) If transfer of the patient is required after intubation, all persons in the room should doff and degerm prior to moving the patient. Then, in close contact with the patient during transfer, each person should don a new gown, gloves, eye protection and respiratory protection.

7) Prior to any transfer, the patient should receive new bed linens.

8) All equipment will remain in room after code event.

9) Await infection preventionist direction in removal of cart, contents and other equipment brought into the room.

10) If intraosseous needed: wipe with bleach solution/wipe and leave on crash cart until further direction given.

11) Glidescope: wipe down with bleach solution/wipe and leave in room until further direction given.

12) Patients should be transferred to a negative pressure room if immediately available. If a negative pressure room is not available, the patient can be placed in a private room with closed door.
Adult Discharge and Care Transitions

Discharge considerations: It should be recognized the guidance below may evolve as experiences and data for the hospitalized patients continues to accumulate. Adjustments may be necessary when resources and health system capacity is limited.

- Although may vary between different facilities, below are guiding principles.
- In order to decrease readmissions, effort should be made to discharge to home, and to place clinical, social and pharmacy f/u for patient prior to discharge.

Covid-19 Clinical Criteria

<table>
<thead>
<tr>
<th>Discharge criteria (clinical)</th>
<th>Post-discharge isolation instructions</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Afebrile x 24 hours without use of anti-pyretics</td>
<td>• Continue to self-isolate until no fever for at least 72 hours without anti-pyretics, and other symptoms (e.g., cough and shortness of breath) have improved and at least 7 days since first symptom appeared. This includes quarantine from other family members and pets.</td>
</tr>
<tr>
<td>• Clinical improvement in signs and symptoms</td>
<td></td>
</tr>
</tbody>
</table>

- Engage care transition managers (CTM) early in the care of the COVID-19 patients to facilitate placement with in the most appropriate level of post-acute care.
- Interdisciplinary teams to discuss and reinforce importance of timely discharge home with patients and families throughout admission, recommend discharge home, as opposed to facility, whenever safe and reasonable.
- Engage social services/social workers early to begin facilitating at home social needs for these patients assuming most will remain quarantined at home. This would include at home services and durable medical equipment, including Home Oxygen.
  - If patient cannot return home safely, coordination with local public health department is warranted.
- Particular high-risk COVID-19 patients (e.g. immunosuppressed, transplant, HIV-positive, and pregnant patients), close communication with specialists is critical to clarify post-discharge clinical care (e.g. immunosuppressive medication management, special precautions) and appointment follow up.
- Confirm telehealth or other appointment with patient’s PCP and/or specialist and instructions given to the patient prior to discharge.
- Pending Test Results: Patients who are discharged from a wholly owned or JV hospital on CareConnect with COVID-19 test results still pending will receive a phone call from a Texas Health nurse informing the patient of test results
  a) This will include both ED or inpatients whose results are received after discharge.
  b) Both positive and negative results will be called to the patient.
Department of Public Health and Infection Control Coordination

- Entity-based Infection Prevention reports positive COVID-19 patients to public health. It’s public health's responsibility to conduct contact tracing in community.
- Patients need to understand their infectious risk to household contacts and necessary precautions. Refer to After Visit Summary.

Discharge to Post Acute Facilities

- Please consider new waiver from THHS for patients needing post-acute facilities.
Full PPE should be worn when performing post-mortem care (same as used when treating patient). Body should be double bagged. After patient has been placed in bags, wipe down outer bag with disinfectant wipes. At this point, contact precautions are sufficient. If patient has been delivered to the morgue, wipe down transport morgue cart with disinfectant wipes per usual protocol.

If an autopsy is performed, collection of the following postmortem specimens is recommended:

2) Postmortem clinical specimens for testing for SARS-CoV-2, the virus that causes COVID-19:
   - Upper respiratory tract swabs: Nasopharyngeal Swab AND Oropharyngeal Swab (NP swab and OP swab)
   - Lower respiratory tract swab: Lung swab from each lung
3) Separate clinical specimens for testing of other respiratory pathogens and other postmortem testing as indicated
4) Formalin-fixed autopsy tissues from lung, upper airway, and other major organs

If an autopsy is NOT performed, collection of the following postmortem specimens is recommended:

1) Postmortem clinical specimens for testing for SARS-CoV-2, the virus that causes COVID-19, to include only upper respiratory tract swabs: Nasopharyngeal Swab AND Oropharyngeal Swab (NP swab and OP swab)
2) Separate NP swab and OP swab specimens for testing of other respiratory pathogens

Detailed guidance for postmortem specimen collection can be found in the section: Collection of Postmortem Clinical and Pathologic Specimens

In addition to postmortem specimens, submission of any remaining clinical specimens (e.g., NP swab, OP swab, sputum, serum, stool) that may have been collected prior to death is recommended. Please refer to Interim Guidelines for Collecting, Handling, and Testing Clinical Specimens from Persons Under Investigation (PUIs) for Coronavirus Disease 2019 (COVID-19) for more information.

Collection of Postmortem Upper Respiratory Tract Swab Specimens

1) Individuals in the room during the procedure should be limited to healthcare personnel (HCP) obtaining the specimen. If HCP are not performing an autopsy or conducting aerosol generating procedures (AGPs), follow Standard Precautions.

Engineering Control Recommendations

1) Since collection of nasopharyngeal and oropharyngeal swab specimens from deceased persons will not induce coughing or sneezing, a negative pressure room is not required. Personnel should adhere to Standard Precautions as described above.
PPE Recommendations:

The following PPE should be worn at a minimum:

1) Wear nonsterile, nitrile gloves when handling potentially infectious materials.
2) If there is a risk of cuts, puncture wounds, or other injuries that break the skin, wear heavy-duty gloves over the nitrile gloves.
3) Wear a clean, long-sleeved fluid-resistant or impermeable gown to protect skin and clothing.
4) Use a plastic face shield or a face mask and goggles to protect the face, eyes, nose, and mouth from splashes of potentially infectious bodily fluids.

Autopsy Procedures

Standard Precautions, Contact Precautions, and Airborne Precautions with eye protection (e.g., goggles or a face shield) should be followed during autopsy. Many of the following procedures are consistent with existing guidelines for safe work practices in the autopsy setting; see Guidelines for Safe Work Practices in Human and Animal Medical Diagnostic Laboratories.

1) AGPs such as use of an oscillating bone saw should be avoided for confirmed or suspected cases of COVID-19. Consider using hand shears as an alternative cutting tool. If an oscillating saw is used, attach a vacuum shroud to contain aerosols.
2) Allow only one person to cut at a given time.
3) Limit the number of personnel working in the autopsy suite at any given time to the minimum number of people necessary to safely conduct the autopsy.
4) Limit the number of personnel working on the human body at any given time.
5) Use a biosafety cabinet for the handling and examination of smaller specimens and other containment equipment whenever possible.
6) Use caution when handling needles or other sharps, and dispose of contaminated sharps in puncture-proof, labeled, closable sharps containers.
7) A logbook including names, dates, and activities of all workers participating in the postmortem and cleaning of the autopsy suite should be kept to assist in future follow up, if necessary. Include custodian staff entering after hours or during the day.

Engineering Control Recommendations

1) Autopsies on decedents with known or suspected COVID-19 should be conducted in Airborne Infection Isolation Rooms (AIIRs). These rooms are at negative pressure to surrounding areas, have a minimum of 6 air changes per hour (ACH) for existing structures and 12 ACH for renovated or new structures, and have air exhausted directly outside or through a HEPA filter. Doors to the room should be kept closed except during entry and egress. If an AIIR is not available, ensure the room is negative pressure with no air recirculation to adjacent spaces. A portable HEPA recirculation unit could be placed in the room to provide further reduction in aerosols. Local airflow control (i.e., laminar flow systems) can be used to direct aerosols away from personnel. If use of an AIIR or HEPA unit is not possible, the procedure should be performed in the most protective environment possible. Air should never be returned to the building interior, but should be exhausted outdoors, away from areas of human traffic or gathering spaces and away from other air intake systems.
PPE Recommendations:

The following PPE should be worn during autopsy procedures:

1) Double surgical gloves interposed with a layer of cut-proof synthetic mesh gloves
2) Fluid-resistant or impermeable gown
3) Waterproof apron
4) Goggles or face shield

5) NIOSH-certified disposable N-95 respirator or higher
   • Powered, air-purifying respirators (PAPRs) with HEPA filters may provide increased worker comfort during extended autopsy procedures.
   • When respirators are necessary to protect workers, employers must implement a comprehensive respiratory protection program in accordance with the OSHA Respiratory Protection standard (29 CFR 1910.134 external icon) that includes medical exams, fit-testing, and training.

Surgical scrubs, shoe covers, and surgical cap should be used per routine protocols. Doff (take off) PPE carefully to avoid contaminating yourself and before leaving the autopsy suite or adjacent anteroom (https://www.cdc.gov/hai/pdfs/ppe/ppe-sequence.pdf pdf icon).

After removing PPE, discard the PPE in the appropriate laundry or waste receptacle. Reusable PPE (e.g., goggles, face shields, and PAPRs) must be cleaned and disinfected according to the manufacturer’s recommendations before reuse. Immediately after doffing PPE, wash hands with soap and water for 20 seconds. If hands are not visibly dirty and soap and water are not available, an alcohol-based hand sanitizer that contains 60%-95% alcohol may be used. However, if hands are visibly dirty, always wash hands with soap and water before using alcohol-based hand sanitizer. Avoid touching the face with gloved or unwashed hands. Ensure that hand hygiene facilities are readily available at the point of use (e.g., at or adjacent to the PPE doffing area).

Additional safety and health guidance is available for workers handling deceased persons under investigation (PUI) for COVID-19 at the Occupational Safety and Health Administration (OSHA), COVID-19 website (external icon).
Obstetrical Care

Mode of transmission of COVID-19/SaRs-CoV-2

At this time, the primary mode of transmission appears to be from respiratory droplets formed by coughing and sneezing from an infected individual as well as through close personal contact. This does not appear to spread through airborne transmission. Vertical transplacental transmission seems rare but may occur. The virus does not appear to be in amniotic fluid, cord blood, or breastmilk from infected mothers.

Pregnancy-specific risks from infection

A systemic review of 19 studies examined 79 women affected by COVID-19, MERS, and SARS. Complications cited included miscarriage, preterm delivery, premature rupture of membranes, preeclampsia, and fetal growth restriction. Specific to COVID-19, there was a higher rate of preterm delivery (about 41%). Although the initial data has been encouraging for COVID-19 with a lower maternal morbidity/mortality than observed with similar coronavirus infections, the data remains sparse. Therefore, until more comprehensive studies of COVID-19 outcomes become available, it is prudent to consider the pregnant population high-risk.

Evaluation of the patient under investigation (PUI) or coronavirus-confirmed patient

*Pregnant healthcare providers should not be assigned to a PUI or COVID-19+ patient

Initial Evaluation

1) Screen for symptoms upon arrival (see Obstetrical Care Process Flow Diagram)
2) Notification of charge nurse once PUI suspected
3) Patient placed on droplet plus isolation
4) PPE for specimen collection performance includes droplet precautions, eye protection and contact precautions
   a. Nasopharyngeal swab preferable
   b. Order set for coronavirus screening is available in Epic (if possible, specify pregnant patient for prioritization)
5) Consult infectious disease physician on all PUI or COVID + patients
   a. Determine need for inpatient versus outpatient management (refer to Figure 1).
   b. Candidates for outpatient monitoring should be capable of breathing without significant discomfort, maintaining normal oxygenation (>94% on room air), and tolerating PO intake
   c. If admission deemed necessary, notify house supervisor and NICU charge nurse (if preterm or NICU care anticipated). Admit either to L&D (negative pressure room, if available) or a COVID-19-specific unit (as designated by the individual hospital) based on clinical needs.
Assess Patient’s Symptoms
Symptoms typically include fever ≥38°C (100.4°F) or one or more of the following:
• Cough
• Difficulty breathing or shortness of breath
• Gastrointestinal symptoms

No

Routine Prenatal Care

Yes

Conduct Illness Severity Assessment
• Does she have difficulty breathing or shortness of breath?
• Does she have difficulty completing a sentence without gasping for air or needing to stop to catch breath frequently when walking across the room?
• Does patient cough more than 1 teaspoon of blood?
• Does she have new pain or pressure in the chest other than pain with coughing?
• Is she unable to keep liquids down?
• Does she show signs of dehydration such as dizziness when standing?
• Is she less responsive than normal or does she become confused when talking to her?

Any Positive Answers

Elevated Risk
Recommend she immediately seek care in an emergency department or equivalent unit that treats pregnant women. When possible, send patient to a setting where she can be isolated.
Notifying the facility that you are referring a PUI is recommended to minimize the chance of spreading infection to other patients and/or healthcare workers at the facility.
Adhere to local infection control practices including personal protective equipment.

No Positive Answers

Assess Clinical and Social Risks
• Comorbidities (Hypertension, diabetes, asthma, HIV, chronic heart disease, chronic liver disease, chronic lung disease, chronic kidney disease, blood dyscrasias, and people on immunosuppressive medications)
• Obstetric issues (eg, preterm labor)
• Inability to care for self or arrange follow-up if necessary

Any Positive Answers

Moderate Risk
See patient as soon as possible in an ambulatory setting with resources to determine severity of illness.
When possible, send patient to a setting where she can be isolated. Clinical assessment for respiratory compromise includes physical examination and tests such as pulse oximetry, chest X-ray, or ABG as clinically indicated.
Pregnant women (with abdominal shielding) should not be excluded from chest CT if clinically recommended.

No Positive Answers

Low Risk
• Refer patient for symptomatic care at home including hydration and rest
• Monitor for development of any symptoms above and re-start algorithm if new symptoms present
• Routine obstetric precautions

If no respiratory compromise or complications and able to follow-up with care
Admit patient for further evaluation and treatment.
Review hospital or health system guidance on isolation, negative pressure and other infection control measures to minimize patient and provider exposure

If yes to respiratory compromise or complications

Abbreviations: ABG, arterial blood gases; CDC, Centers for Disease Control and Prevention; HIV, human immunodeficiency virus.
Healthcare providers should immediately notify their local or state health department in the event of a PUI for COVID-19 and should contact and consult with their local and/or state health department for recommendations on testing PUIs for COVID-19.

Figure 1 Retrieved April 1, 2020 from https://www.acog.org/-/media/project/acog/acogorg/files/pdfs/clinical-guidance/practice-advisory/covid-19-algorithm.pdf
Antenatal Management

1) Consult infectious disease prior to discontinuing or de-escalation of droplet+ precautions
2) Does not require continuous external fetal monitoring for COVID-19 alone. Should be considered if maternal instability.
3) Continuous pulse oximetry is recommended with respiratory symptoms
4) Antenatal corticosteroids may worsen the maternal clearance of the virus. Consider withholding them, especially late preterm corticosteroids. This may be individualized to the clinical circumstance.
5) If respiratory distress, early escalation of respiratory support recommended.
6) At this time, iatrogenic preterm delivery is not recommended as a treatment for COVID-19.
7) CT Chest (abdominal shielding preferable) may be used to evaluate severity of illness and potentially confirm diagnosis
8) Consider assigning the same care teams to the patient to limit the transmission risk and thus risk of needing to quarantine multiple staff members
9) Bedside ultrasound preferred
10) Consultation of Maternal-Fetal Medicine, particularly if ICU admission

Labor and Delivery Room Management

1) Follow Texas Health guidelines for visitation.
2) Reserve induction of labor for standard obstetrical indications
3) Water birth is contraindicated
4) Droplet+ precautions for all healthcare providers while in room. It is particularly important to use proper PPE upon room entry, even when urgent patient evaluation is needed.
5) N95 masks recommended for personnel present during aerosolizing procedures including intubation
6) N95 masks should be used during the second stage of labor
7) Patient to wear mask, if possible, in the second stage to reduce the risk of droplet transmission
8) Recommend early epidural placement in an attempt to avoid intubation for emergent procedures, which are aerosolizing
9) Recommend face mask instead of nasal cannula to avoid inadvertent aerosolization of infection
10) Reserve supplemental oxygen for maternal indications
11) Avoid inhaled nitrous oxide due to risk of contaminating equipment and risk of inadequate sterilization
12) If NICU staff needed at delivery, preferable for them to remain outside of the delivery room until delivery imminent
   a. NICU staff should utilize airborne plus precautions, including use of N95 masks
13) Infant warmer should be placed at least 6 feet from bedside
14) If the placenta/membranes are sent to pathology, these should be marked as from a suspected coronavirus-infected patient, though they do not need to be sent for this indication alone
15) If possible, keep patient in delivery room until discharge.
   a. If transferring to postpartum, this should be performed by L&D staff and not hospital transportation. Elevator should be empty during transportation between floors
b. Patient to wear surgical mask during transport

Operating Room Management

1) Cesarean delivery should be reserved for standard obstetrical indications
2) Entity leadership discretion as to who may be in delivery suite (support person). These individuals to 
don appropriate PPE prior to entering the operating room
3) Patient to wear surgical mask for transport to and from operating room
4) Infant warmer should be placed at least 6 feet from OR table
5) Recommend early epidural placement to achieve adequate anesthesia instead of requiring 
intubation
6) Staff present should utilize airborne plus precautions, including N95 masks
7) For those procedures requiring the use of electrocautery, the recommendation is to use an 
electrocautery device with smoke evacuation capability OR the use of N95 mask for those 
individuals in direct contact of the released smoke

OR Room Cleaning

1) All items should remain in the OR until appropriate number of air exchanges have occurred.
2) After the designated wait time, room should be terminally cleaned. Staff should wear full PPE.
3) Return case cart and notify SPD of patient infection status.
4) If available, use Xenex machine as part of room cleaning process.

Postnatal Management

1) May have one visitor present, who does not have signs/symptoms of COVID-19, who must 
remain masked while in the room and cannot leave the room until discharge to prevent the 
exposure of others. Must follow similar isolation rules as the patient. If the visitor leaves before 
the patient is discharged, the visitor will not be allowed re-entry into the hospital unless the 
patient is no longer a PUI.
2) It is recommended that the infant be separated from the PUI or COVID+ mother in an isolation 
room, if available.
   a. If no separate room is available or separation is declined, the infant should be housed in 
the same isolation room as the mother in an isolette. If no isolette is available, infant 
can be housed in an open crib with a screen or curtain as a barrier between infant and 
mom. Infant should be positioned at least 6 feet from the mother.
3) PUI or COVID+ mom should not directly breastfeed. A healthy caregiver should administer 
expressed breastmilk or formula to the infant. If mom chooses to directly breastfeed, she should 
wear a mask at all times and perform diligent hand hygiene and wash the breast with soap and 
water before and after breastfeeding.
4) Aim for early discharge to an outpatient setting (maintaining separation between the infant and patient at home until isolation is ended)
5) CDC guidelines recommend discontinuing isolation following two negative tests performed 24 hours apart or, if testing unavailable, once a patient has been afebrile (without the aid of antipyretics) for at least 72 hours with at least 7 days passed from symptom-onset and the symptoms are resolving.
Screen Pregnant Mother at point of entry. If positive screen, place mask on patient. Place in negative pressure room if available, otherwise place patient in regular patient room and keep door shut.

If mother is in labor, determine mode of delivery based on mother’s clinical symptoms.

For vaginal delivery:
- Deliver in negative pressure room if available. Keep mother in delivery room post delivery until time of discharge if possible.
- Ask mother to wear surgical mask while delivering if tolerable.
- Have caregiver wear facemask while in room.
- Staff to wear Airborne Plus PPE during delivery.
- Ensure that infant warmer is 6 feet from bedside. Infant to go to immediately to infant warmer at time of delivery (no skin to skin)
- Refer to infant algorithm for infant care

For non-emergent C-Section delivery:
- Entity leadership discretion as to who may be in delivery suite (support person). These individuals to don appropriate PPE prior to entering the suite.
- Staff to don Airborne Plus during the course of delivery and surgery.
- Attempt to make last procedure of the day.
- Ensure that infant warmer is 6 feet from bedside. Infant to go immediately to infant warmer at time of delivery (no skin to skin).
- Refer to infant algorithm for infant care

For emergent C-Section delivery:
- No Support person in delivery suite.
- Staff to wear Airborne Plus during the course of delivery and surgery.
- Ensure that infant warmer is 6 feet from bedside. Infant to go to immediately to infant warmer at time of delivery (no skin to skin)
- Refer to infant algorithm for infant care

Mother’s Requiring Higher Level of Care within the Facility
- All staff in Airborne Plus for transport.
- Have one staff in facemask and gloves with cleaning supplies to wipe down any touches by staff caring for mother (i.e. elevator, buttons, hall etc.)
- While mother in higher level of care, infant should be cared for in appropriate setting (nursery in isolation, mom/baby room with identified support person (who is banded and cleaned as above) with door closed, or NICU as appropriate for infant care algorithm).
- Baby should not visit mom while she is requiring higher level of care until COVID is ruled out. If COVID confirmed keep baby separate from mom until discharge.

Transportation of PUI/COVID (+) Mother
- During transport mother must be masked and covered in a clean gown.
- At least one staff member in Droplet Plus PPE.
- Additional staff as needed to ensure no contamination during transport and to clear hall.

Mother requiring higher level of care outside Facility
- Staff to don Airborne Plus PPE during transport.
- Follow current THR maternal transportation guidelines for determining entity selection for higher level of care.
Neonatal Care

Newborn Risk

1) It remains unclear if SARS-CoV-2 is vertically transmitted from mother to fetus antenatally via maternal viremia and transplacental transfer. Prior published experience with respiratory viruses would suggest this is unlikely.

2) Perinatal exposure may be possible at the time of vaginal delivery based on the detection of virus in stool and urine.

3) Newborns are at risk of infection from a symptomatic mother’s respiratory secretions after birth, regardless of delivery mode

Delivery room management

1) Initial stabilization/resuscitation of the newborn will take place as per usual care

2) Newborn resuscitation should not be compromised to facilitate maternal/infant separation

3) All providers in the delivery room during the delivery process should practice airborne precautions including an N-95 mask and eye shield.

Well, term infants

1) Infant warmer should be placed at least 6 feet from bedside
   a. Avoid delayed cord clamping or skin-to-skin
   b. Infant goes directly to infant warmer

2) Infant should be bathed as soon as is reasonably possible after birth

3) It is recommended that the infant be separated from the PUI or COVID+ mother in an isolation room, if available.
   a. If no separate room is available or separation is declined, the infant should be housed in the same isolation room as the mother in an isolette. If no isolette is available, infant can be housed in an open crib with a screen or curtain as a barrier between infant and mom. Infant should be positioned at least 6 feet from the mother.

4) Breastmilk may be expressed by mom and administered by a healthy caregiver to the neonate. PUI or COVID+ mom should not directly breastfeed.

5) If a PUI or COVID+ mom chooses to directly breastfeed, she should wear a mask at all times and perform diligent hand hygiene and wash the breast with soap and water before and after breastfeeding.

6) PPE Guidance to preserve protective equipment when a well newborn infant is >6 feet away but in the room with the maternal PUI/COVID + mom
   a. Droplet Plus precautions

7) Follow Texas Health visitation guidelines.
Symptomatic Infant from a PUI or COVID Positive Mother

Symptomatic infants (or preterm infants automatically requiring NICU admission) from mothers who are PUI or who are SARS-CoV-2 POSITIVE will be admitted to the NICU in an isolette and should remain in isolation using an isolette until status is made clear. A negative airflow isolation room is preferable, but if not available a private room with a door that can be closed is acceptable.

1) Avoid skin to skin
2) In infants <30 weeks, there may be significant benefits to delayed cord clamping so decisions should be made on a case by case basis in discussion with the delivering physician
3) COVID testing on the infant should be delayed until the mother’s test results are returned.
   i. If the mother is COVID+, the infant should be tested.
   ii. COVID testing should be deferred until after 24 hours of age to minimize risk of detecting transient viral colonization versus true replication.
   iii. If possible, infant should be bathed prior to COVID testing.
4) The respiratory therapy manager, charge nurse, nurse manager, and the medical director for the NICU/SCN should be notified on admission
5) PPE guidance to preserve protective equipment when infant in isolation room in NICU/Nursery
   a. Airborne Plus Precautions for patients on HFNC >1Lpm, CPAP, or ventilator
   b. Droplet Plus Precautions for patients on low flow NC 1Lpm or less or room air
6) Infants requiring Airborne Plus Precautions should be housed in a single patient room
7) Infants requiring Droplet Plus Precautions should ideally be in a single patient room. If one is not available, these infants can be housed in a shared patient area with minimum of 6 feet and a physical barrier (i.e. isolette/curtain/screen) between patients.
8) Attempt to limit the exposure of pregnant personnel (especially those in the third trimester) and other at-risk persons from caring for these infants
9) In the absence of evidence, routine care including CPAP management is indicated. The evidence for early intubation exists only for adults and older pediatric patients and there is data that early intubation for preterm infants may be harmful

COVID-19 Precautions for the NICU/SCN

1) Visitation is limited to 2 primary care givers of infants (typically the mother and father). No grandparents or visitors <18 years old will be allowed entry. Exceptions must be discussed with NICU manager, SCN manager, and medical director.
2) Out of an abundance of caution, all visitors and staff entering the NICU will be asked to submit to temperature taking and COVID screening questionnaire.
3) Support persons exposed to PUI/COVID+ mother may not visit until completion of 14 days of quarantine if maternal testing is positive, or until mother’s COVID testing results are confirmed negative.
4) Maternal visitation – Maternal COVID+ mom may not visit until cleared from requiring any isolation precautions by Infectious Disease and hospital infection prevention. Maternal visitation if COVID-19 negative depends on maternal symptomatology and diagnosis and should be evaluated on a case by case basis with the hospital infection prevention team
5) Availability of Angel Eye cameras will be encouraged
Breastfeeding instructions:

- Direct breastfeeding may increase infant’s exposure to maternal respiratory secretions. Expressed breast milk may be fed by bottle to the infant by a well caregiver.

- If pumping EBM, mother should use personal breast pump if available. If mother needs to use hospital pump, dedicate a pump to mother and disinfect pump per manufacturer IFU of pump.

- Pumping mother to perform diligent Hand Hygiene and wash breast with soap and water prior to pumping.

- Label and store EBM per current policy for isolated patients.

- If mother breastfeeding, mother should perform diligent hand hygiene, wash breast with soap and water, and wear a face mask at all times.
Operating Rooms and Invasive Procedural Areas

General resource for COVID-19 guidance: https://www.facs.org/covid-19/clinical-guidance

Preparation

1) OR should remain in POSITIVE pressure airflow
   a. Place a blanket at the bottom of all doorways to prevent OR air from exiting
   b. Consider performing these procedures as the last case of the day
2) Remove all non-essential items
   a. Furniture, equipment, documents, glove boxes (keep minimal supply in the OR),
      containers, etc.
3) Verify cabinets and drawers are closed and do not open or use during case.
4) Keep hold items in sub-sterile area.
5) Designate 1 or 2 runners to stay in sub-sterile area and outside of the OR to run/pass supplies
   needed.
6) Patient will be transported by unit, directly to the OR, so that staff will be in PPE upon patient
   arrival. Follow suspected/known COVID-19 patient transport guidelines. Consider notifying security
   to clear the path before patient transport.

Intraoperative

1) Minimize personnel present in room during intubation and extubation.
   a) All staff in room should utilize airborne plus precautions during intubation and extubation.
   b) Airborne plus precautions are continued until appropriate number of air exchanges have
      occurred following intubation and extubation.
      i) All staff entering the OR during this time must utilize airborne plus precautions.
   c) A filter should be added to all respiratory connections where possible (vent, ambu bag, ET tube)
2) Surgeon, Scrub and other OR personnel not required for intubation to wait outside the room until
   the room air exchanges are complete
   a) The OR door should not open and no one should enter or leave during this time
   b) If there is an emergency, any staff entering the room before the air exchanges have occurred
      are required to wear a N95 respirator
3) Pharmacy will be stationed outside the room during an emergency to provide medications
   a) reduces N95 respirator usage unless directed to come into the room
4) For those procedures requiring the use of electrocautery, the recommendation is to use an
   electrocautery device with smoke evacuation capability OR the use of N95 mask for those
   individuals in direct contact of the released smoke
5) Surgical mask with face shields will be worn by staff who are not present during intubation and
   extubation
   a) reduces N95 respirator usage
6) Communicate intubation and extubation times so that staff outside the room know when the
   required wait time has been met
a) Room RN will document the intubation time and document the time (Intubation time + time required for air exchanges) that other team members can enter the room in appropriate attire post intubation.
   i) A staff member outside the room documents this time on a sign outside the room.

b) Just before extubation, all staff in the OR who are not essential in the extubation and recovery of the patient will leave the OR.

c) Room RN will document the time that the team will leave the room with the patient (extubation time + time required for air exchanges) and call the front desk to have the exterior sign changed to reflect the post-extubation wait time.

7) Label specimens as “PUI for COVID” or “COVID positive”

8) Document infection status under notes on the Pathology requisition

**Recovery**

1) COVID-19+ patients or PUI will be recovered in the OR by anesthesia and OR staff, and PACU, as appropriate.

2) COVID-19+ patients or PUI will be transferred directly from the OR to their room on the receiving unit. The patient will not go to PACU.
   a. Refer to most current visitor guidelines.
   b. Staff will remove PPE in designated area inside the OR but mask and eye shield will remain on.
   c. Don facemask with face shield and gloves to transport patient

3) Place facemask on patient – ensuring the mask completely covers both the nose and mouth

4) Cover patient with clean sheet/blanket prior to transport

**Cleaning**

1) All items should remain in the OR until appropriate number of air exchanges have occurred.

2) After the designated wait time, room should be terminally cleaned per cleaning guidelines.

3) Return case cart and notify SPD of patient infection status.

4) If available, use a Ultra-violet machine as part of the room cleaning process.

**Transport**

1) Patients should be wearing a facemask and be covered with a clean sheet

2) Follow suspected/known COVID-19 patient transport guidelines.
Cardiovascular Care

Final determination on the timing of a procedure and drug therapies deemed essential to patient care remains at the discretion of the physician’s clinical judgment.

1) Echocardiograms (TTEs, stress echoes and TEEs) should be performed only when the benefit to patient care outweighs risk (from the procedure or from potential staff exposure). Repeat echocardiograms should not be performed unless there has been a clear change in clinical status.

2) TEEs carry a heightened risk of spread of the SARS-CoV-2 since they can provoke aerosolization. TEEs therefore deserve special consideration in determining when and whether they should be performed. Airborne plus PPE precautions are recommended. (https://www.asecho.org/ase-statement-covid-19/)

3) Cath/PCI: should be performed in accordance with best practices and evidence-based medicine as with the non-COVID patient. However, special consideration should be given to the COVID patient who requires a cath lab procedure in terms of clinical benefit versus staff exposure risk. Consider when noninvasive or clinical parameters (STEMI, ongoing ACS, high risk NSTEMI) place the patient in a high cardiovascular risk group that would likely benefit from invasive testing/intervention compared to aggressive medical therapy.

4) STEMI patients are at high risk for instability and developing situations during their intervention leading to aerosolization; the caretaker team should anticipate this prior to starting the case and utilize airborne plus* PPE precautions. See accompanying ACS management algorithm.

Recommend no field activated STEMI patient go directly to Cardiac Catherization Lab. Patients must be assessed in ED and Cardiologist consulted prior to proceeding with cardiac intervention. STEMI transfers from other facilities must also be evaluated in receiving facility ED with Cardiologist consultation prior to proceeding with cardiac intervention.

6) ACE/ARB recommendation: The HFSA, ACC, and AHA recommend continuation of RAAS antagonists for those patients who are currently prescribed such agents for indications for which these agents are known to be beneficial, such as heart failure, hypertension, or ischemic heart disease. In the event patients with cardiovascular disease are diagnosed with COVID-19, individualized treatment decisions should be made according to each patient’s hemodynamic status and clinical presentation. Therefore, be advised not to add or remove any RAAS-related treatments, beyond actions based on standard clinical practice.

7) Outpatient cardiac rehab should be closed to avoid placing patients and staff an increased risk for acquiring COVID-19. As part of this social distancing process we would recommend that the patients be provided with education on simple low-level activities they can safely perform at home until it is safe for them to return to their local cardiac rehab center.
8) PPE recommendations: Droplet plus precautions hat standard, contact precautions with face mask, eye protection, gown, and gloves are necessary for Cardiac Cath Lab procedures. When performing certain procedures that are aerosol-generating, such as transesophageal echocardiography, endotracheal intubation, cardiopulmonary resuscitation and bag mask ventilation, airborne plus* precautions are required.

a. Airborne plus PPE = N-95 respirator, eye protection, gown, gloves.
Interim guidelines for management of acute symptomatic coronary artery disease

**Interim Guidelines for the Management of Patients with Acute Symptomatic Coronary Artery Disease**

Patients must be assessed in ED and Cardiologist consulted prior to proceeding with cardiac intervention.

**STEMI**

- **Unstable**
  - Proceed to PCI using Airborne Plus precautions (N-95)
  - Medical therapy if refused and unable

- **Stable**
  - Consider risk vs. benefit of thrombolysis vs. intervention for revascularization
  - Proceed to PCI using Airborne Plus precautions (N-95)

**Risk stratify for COVID-19**

- **High Risk of COVID-19**
  - Test for COVID-19
  - PUI or positive for COVID-19

- **Low Risk of COVID-19**
  - Angio as indicated
  - Negative for COVID-19

**NSTEMI/ACS/Unstable Angina**

- **Unstable**
  - Proceed to PCI using Airborne Plus precautions (N-95)

- **Stable**
  - Medical Therapy
  - Risk stratify for COVID-19

  - **High Risk of COVID-19**
    - Test for COVID-19
    - PUI or positive for COVID-19
    - Continue Medical Therapy
    - If PCI indicated, use Airborne Plus precautions (N-95)

  - **Low Risk of COVID-19**
    - Proceed with usual workflow for ACS
    - Negatives for COVID-19
    - Process with usual workflow for ACS

**Severely debilitated patient with multiple co-morbidities (ESRD, end stage COPD, metastatic disease) strongly consider medical therapy for all categories.**

Texas Health Resources proprietary and confidential
Appendix A – Personal Protective Equipment Guidelines

Appendix A content begins on next page.
Personal Protective Equipment (PPE)
GeneralMaskingGuidelines–AllEmployees

Thisprocedureshouldbefollowedeachtimestamaskchangeisrequired:

1. Perform appropriate hand hygiene.
2. Remove your face mask and discard.
3. Perform appropriate hand hygiene.
4. Put on a face mask before entering a patient's room or patient care area.
5. Replace mask if it becomes damp, soiled, contaminated, or there is suspicion of contamination while providing patient care and discard after leaving patient room or care area.
6. Throw away your face mask at the end of your shift and anytime it becomes damp or soiled.

Maskingguidelinesforcommon/publicareas:

- The same facemask may be worn continuously between rooms of non-isolated patients and in common areas.
- Masks should be worn in common/public areas while maintaining safe social distancing.
- “Safe social distancing” is considered six feet or greater.
- Mask should be changed if it becomes damp, soiled, or contaminated.
- N95 masks should only be worn during or immediately after aerosol-generating procedures in patient rooms and not in common/public areas.
- See department-specific guidelines for further guidance and information.
# PPE Guidelines - Emergency Department (1/2)

<table>
<thead>
<tr>
<th>EMERGENCY DEPARTMENT</th>
<th>PUI/COVID+ PATIENT</th>
<th>NON-COVID PATIENT</th>
</tr>
</thead>
</table>
| Direct clinical care givers (Providers, RNs, PCTs, RTs, PTs, rad tech, lab tech, etc.) | Droplet Plus precautions  
• Facemask / Eye protection  
• Gown / Gloves | Facemask  
• Should be worn continuously between rooms of non-isolated patients and in common areas  
• Replace if mask becomes damp, soiled, contaminated, or there is suspicion of contamination while providing patient care.  
• Replace each time after caring for a patient in isolation | Other routine PPE should continue as appropriate. |
| Aerosol-generating procedure (Nebulizers, CPAP, intubation/extubation, CPR) | Airborne Plus  
• N95 respirator / Face shield  
• Gown / Gloves | Airborne Plus  
• N95 respirator / Face shield  
• Gown / Gloves |
<table>
<thead>
<tr>
<th>EMERGENCY DEPARTMENT</th>
<th>PUI/COVID+ PATIENT</th>
<th>NON-COVID PATIENT</th>
</tr>
</thead>
</table>
| EVS                  | Droplet Plus if room is occupied  
• Facemask / Eye protection  
• Gown / Gloves  
Facemask and other routine PPE if room is empty  
• Mask should be worn continuously between rooms of non-isolated patients and in common areas  
• Replace if it becomes damp, soiled, contaminated, or there is suspicion of contamination while interacting with patient  
Airborne Plus if cleaning within one hour of aerosol-generating procedure  
• N95 respirator / Face shield  
• Gown / Gloves | Facemask  
• Should be worn continuously between rooms of non-isolated patients and in common areas  
• Replace if it becomes damp, soiled, contaminated, or there is suspicion of contamination while interacting with patient  
Other routine PPE should continue as appropriate.  
Airborne Plus if cleaning within one hour of aerosol-generating procedure  
• N95 respirator / Face shield  
• Gown / Gloves |
| Patient Access       | Droplet Plus if entering a patient room  
• Facemask / Eye protection  
• Gown / Gloves  
If aerosol-generating procedure occurred, wait one hour prior to entering. | Facemask  
• Should be worn continuously between rooms of non-isolated patients and in common areas  
• Replace if it becomes damp, soiled, contaminated, or there is suspicion of contamination while interacting with patient  
• Replace each time after interacting with a patient in isolation |
## PPE Guidelines – Inpatient Units (1/2)

### INPATIENT UNITS

<table>
<thead>
<tr>
<th>Direct clinical care givers (Providers, RNs, PCTs, RTs, PTs, rad tech, lab tech, etc.)</th>
<th>PUI/COVID+ PATIENT</th>
<th>NON-COVID PATIENT</th>
</tr>
</thead>
</table>
| | Droplet Plus | Facemask / Face shield  
• Gown / Gloves | Facemask  
• Should be worn continuously between rooms of non-isolated patients and in common areas  
• Replace if mask becomes damp, soiled, contaminated, or there is suspicion of contamination while providing patient care.  
• Replace each time after caring for a patient in isolation | Other routine PPE should continue as appropriate. |
| Aerosol-generating procedure (Nebulizers, CPAP, intubation/ extubation, CPR) | Airborne Plus | Airborne Plus |
| | | • N95 respirator / Face shield  
• Gown / Gloves | • N95 respirator / Face shield  
• Gown / Gloves |
### PPE Guidelines – Inpatient Units (2/2)

<table>
<thead>
<tr>
<th>INPATIENT UNITS</th>
<th>PUI/COVID+ PATIENT</th>
<th>NON-COVID PATIENT</th>
</tr>
</thead>
</table>
| **EVS**         | Droplet Plus if room is occupied  
• Facemask / Eye protection  
• Gown / Gloves  
Facemask and other routine PPE if room is empty  
• Mask should be worn continuously between rooms of non-isolated patients and in common areas  
• Replace if it becomes damp, soiled, contaminated, or there is suspicion of contamination while interacting with patient  
Airborne Plus if cleaning within one hour of aerosol-generating procedure  
• N95 respirator / Face shield  
• Gown / Gloves | Facemask  
• Should be worn continuously between rooms of non-isolated patients and in common areas  
• Replace if it becomes damp, soiled, contaminated, or there is suspicion of contamination while interacting with patient  
Other routine PPE should continue as appropriate.  
Airborne Plus if cleaning within one hour of aerosol-generating procedure  
• N95 respirator / Face shield  
• Gown / Gloves |
| **Patient Access** | Droplet Plus precautions  
• Facemask / Face shield  
• Gown / Gloves  
If aerosol-generating procedure occurred, wait one hour prior to entering. | Facemask  
• Should be worn continuously between rooms of non-isolated patients and in common areas  
• Replace if mask becomes damp, soiled, contaminated, or there is suspicion of contamination while interacting with patient  
• Replace each time after interacting with a patient in isolation |
## PPE Guidelines: OR/PACU/Procedure areas

<table>
<thead>
<tr>
<th>OR/PROCEDURE AREAS</th>
<th>PUI/COVID+ PATIENT</th>
<th>NON-COVID PATIENT</th>
</tr>
</thead>
<tbody>
<tr>
<td>Direct clinical care givers (Providers, RNs, PCTs, RTs, rad tech, lab tech, etc.)</td>
<td>Droplet Plus</td>
<td>Facemask</td>
</tr>
<tr>
<td></td>
<td>• Facemask / Face shield</td>
<td>• Should be worn continuously between rooms of non-isolated patients and in common areas</td>
</tr>
<tr>
<td></td>
<td>• Gown / Gloves</td>
<td>• Replace if mask becomes damp, soiled, contaminated, or there is suspicion of contamination while providing patient care</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Replace each time after interacting with a patient in isolation</td>
</tr>
<tr>
<td>Aerosol-generating procedure (Nebulizers, CPAP, intubation/extubation, CPR)</td>
<td>Airborne Plus</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• N95 respirator / Face shield</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Gown / Gloves</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Intubation/extubation should occur with only essential airway staff in the OR/procedure room.</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Other staff members should wait for appropriate number of air exchanges prior to entering. (Please check with OR leader for air exchange time as this varies by facility.)</td>
</tr>
<tr>
<td>EVS</td>
<td>Facemask</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Should be worn continuously between rooms of non-isolated patients and in common areas</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Replace if it becomes damp, soiled, contaminated, or there is suspicion of contamination while interacting with patient</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Other routine PPE should continue as appropriate for terminal clean.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>All effort should be made to wait until appropriate air exchanges have occurred.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Airborne Plus if cleaning within one hour of aerosol-generating procedure</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• N95 respirator / Face shield</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Gown / Gloves</td>
<td></td>
</tr>
</tbody>
</table>
## PPE Guidelines – Women’s Services (1/4)

<table>
<thead>
<tr>
<th>WOMEN’S SERVICES</th>
<th>PUI/COVID+ PATIENT</th>
<th>NON-COVID PATIENT</th>
</tr>
</thead>
<tbody>
<tr>
<td>First stage of labor</td>
<td>Place patient in negative pressure room if available.&lt;br&gt;Droplet Plus&lt;br&gt;• Facemask / Face shield&lt;br&gt;• Gown / Gloves</td>
<td>Facemask&lt;br&gt;• Should be worn continuously between rooms of non-isolated patients and in common areas&lt;br&gt;• Replace if mask becomes damp, soiled, contaminated, or there is suspicion of contamination while providing patient care&lt;br&gt;• Replace each time after caring for a patient in isolation&lt;br&gt;Other routine PPE should continue as appropriate.</td>
</tr>
<tr>
<td>Direct clinical care givers (Providers, RNs, PCTs, RTs, rad tech, lab tech, etc.)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Second stage of labor through vaginal delivery</td>
<td>Mother – surgical mask if possible&lt;br&gt;Airborne Plus&lt;br&gt;• N95 respirator / Face shield&lt;br&gt;• Gown / Gloves</td>
<td>Droplet Plus&lt;br&gt;• Facemask / Eye protection&lt;br&gt;• Gown / Gloves</td>
</tr>
<tr>
<td>Direct clinical care givers (Provider and RN)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Delivery by C-section</td>
<td>Airborne Plus&lt;br&gt;• N95 respirator / Face shield&lt;br&gt;• Gown / Gloves</td>
<td>Droplet Plus&lt;br&gt;• Facemask / Eye protection&lt;br&gt;• Gown / Gloves&lt;br&gt;Other routine PPE should continue as appropriate</td>
</tr>
<tr>
<td>Direct clinical care givers (Providers, RNs, scrub tech, etc.)</td>
<td>Other routine PPE should continue as appropriate</td>
<td>Airborne Plus if patient under general anesthesia&lt;br&gt;• N95 respirator / Face shield&lt;br&gt;• Gown / Gloves&lt;br&gt;Other routine PPE should continue as appropriate.</td>
</tr>
</tbody>
</table>
# PPE Guidelines – Women’s Services (2/4)

<table>
<thead>
<tr>
<th>WOMEN’S SERVICES</th>
<th>PUI/COVID+ PATIENT</th>
<th>NON-COVID PATIENT</th>
</tr>
</thead>
<tbody>
<tr>
<td>NICU team at delivery</td>
<td>Airborne Plus&lt;br&gt;• N95 respirator / Face shield&lt;br&gt;• Gown / Gloves</td>
<td>Droplet Plus&lt;br&gt;• Facemask / Eye protection&lt;br&gt;• Gown / Gloves</td>
</tr>
<tr>
<td>Antepartum and Mother/Baby Direct clinical care givers (Providers, RNs, PCTs, RTs, PTs, rad tech, lab tech, etc.)</td>
<td>Droplet Plus&lt;br&gt;• Facemask / Face shield&lt;br&gt;• Gown / Gloves</td>
<td>Facemask&lt;br&gt;• Should be worn continuously between rooms of non-isolated patients and in common areas&lt;br&gt;• Replace if mask becomes damp, soiled, contaminated, or there is suspicion of contamination while providing patient care&lt;br&gt;• Replace each time after caring for a patient in isolation</td>
</tr>
<tr>
<td>Aerosol-generating procedure (Nebulizers, CPAP, intubation/extubation, CPR)</td>
<td>Airborne Plus&lt;br&gt;• N95 respirator / Face shield&lt;br&gt;• Gown / Gloves</td>
<td>Airborne Plus&lt;br&gt;• N95 respirator / Face shield&lt;br&gt;• Gown / Gloves</td>
</tr>
</tbody>
</table>

- **NICU team at delivery**
  - Airborne Plus
  - N95 respirator / Face shield
  - Gown / Gloves
  - **Droplet Plus**
  - Facemask / Eye protection
  - Gown / Gloves

- **Antepartum and Mother/Baby Direct clinical care givers**
  - Providers, RNs, PCTs, RTs, PTs, rad tech, lab tech, etc.
  - **Droplet Plus**
  - Facemask / Face shield
  - Gown / Gloves
  - If infant rooming in with mom, place infant greater than six feet from mom and have mom wear facemask.
  - If infant in nursery, place infant in single room, if available. If pod setting, place infant >6 feet from other infants.

- **Aerosol-generating procedure** (Nebulizers, CPAP, intubation/extubation, CPR)
  - Airborne Plus
  - N95 respirator / Face shield
  - Gown / Gloves

---

*FOR INTERNAL DISTRIBUTION ONLY*
# PPE Guidelines – Women’s Services (3/4)

<table>
<thead>
<tr>
<th>WOMEN’S SERVICES</th>
<th>PUI/COVID+ PATIENT</th>
<th>NON-COVID PATIENT</th>
</tr>
</thead>
<tbody>
<tr>
<td>NICU</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
| Direct clinical care givers (Providers, RNs, PCTs, PTs, RTs, rad tech, lab tech, etc.) | Droplet Plus | Facemask  
•  Should be worn continuously between rooms of non-isolated patients and in common areas  
•  Replace if mask becomes damp, soiled, contaminated, or there is suspicion of contamination while providing patient care  
•  Replace each time after caring for a patient in isolation |
|                   | Place infant in negative pressure room, if available. |                  |
|                   | If pod, setting place >6 feet from other infants. |                  |
| EVS              | Droplet Plus if room is occupied | Facemask  
•  Should be worn continuously between rooms of non-isolated patients and in common areas  
•  Replace if it becomes damp, soiled, contaminated, or there is suspicion of contamination while interacting with patient |
|                   |   •  Facemask / Eye protection  
•  Gown / Gloves | Other routine PPE should continue as appropriate. |
|                   | Facemask and other routine PPE if room is empty | Airborne Plus if cleaning within one hour of aerosol-generating procedure  
•  N95 respirator / Face shield  
•  Gown / Gloves |
|                   |   •  Mask should be worn continuously between rooms of non-isolated patients and in common areas  
•  Replace if it becomes damp, soiled, contaminated, or there is suspicion of contamination while interacting with patient |
## PPE Guidelines – Women’s Services (4/4)

<table>
<thead>
<tr>
<th>WOMEN’S SERVICES</th>
<th>PUI/COVID+ PATIENT</th>
<th>NON-COVID PATIENT</th>
</tr>
</thead>
<tbody>
<tr>
<td>Patient Access</td>
<td>Droplet Plus precautions&lt;br&gt;• Facemask / Face shield&lt;br&gt;• Gown / Gloves&lt;br&gt;</td>
<td>Facemask&lt;br&gt;• Should be worn continuously between rooms of non-isolated patients and in common areas&lt;br&gt;• Replace if mask becomes damp, soiled, contaminated, or there is suspicion of contamination while interacting with patient&lt;br&gt;• Replace each time after interacting with a patient in isolation</td>
</tr>
<tr>
<td></td>
<td>If aerosol-generating procedure occurred, wait one hour prior to entering.</td>
<td></td>
</tr>
</tbody>
</table>
## OUTPATIENT SERVICES

### OUTPATIENT SERVICES

<table>
<thead>
<tr>
<th>Direct clinical care givers (Providers, RNs, PCTs, RTs, PTs, rad tech, lab tech, etc.)</th>
<th>PUI/COVID+ PATIENT</th>
<th>NON-COVID PATIENT</th>
</tr>
</thead>
<tbody>
<tr>
<td>Droplet Plus</td>
<td>Facemask / Face shield</td>
<td>Facemask</td>
</tr>
<tr>
<td>• Gown / Gloves</td>
<td>Should be worn continuously between rooms of non-isolated patients and in common areas</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Replace if mask becomes damp, soiled, contaminated, or there is suspicion of contamination while providing patient care.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Replace each time after caring for a patient in isolation</td>
<td></td>
</tr>
</tbody>
</table>

### Aerosol-generating procedure (Nebulizers, CPAP, intubation/ extubation, CPR)

<table>
<thead>
<tr>
<th>Airborne Plus</th>
<th>Airborne Plus</th>
</tr>
</thead>
<tbody>
<tr>
<td>• N95 respirator / Face shield</td>
<td>• N95 respirator / Face shield</td>
</tr>
<tr>
<td>• Gown / Gloves</td>
<td>• Gown / Gloves</td>
</tr>
</tbody>
</table>
### PPE Guidelines – Outpatient Services (2/2)

<table>
<thead>
<tr>
<th>OUTPATIENT</th>
<th>PUI/COVID+ PATIENT</th>
<th>NON-COVID PATIENT</th>
</tr>
</thead>
<tbody>
<tr>
<td>EVS</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Droplet Plus if room is occupied</td>
<td>Facemask</td>
</tr>
<tr>
<td></td>
<td>• Facemask / Eye protection</td>
<td>• Should be worn continuously between rooms of non-isolated patients and in common areas</td>
</tr>
<tr>
<td></td>
<td>• Gown / Gloves</td>
<td>• Replace if it becomes damp, soiled, contaminated, or there is suspicion of contamination while interacting with patient</td>
</tr>
<tr>
<td></td>
<td>Facemask and other routine PPE if room is empty</td>
<td>Other routine PPE should continue as appropriate.</td>
</tr>
<tr>
<td></td>
<td>• Mask should be worn continuously between rooms of non-isolated patients and in common areas</td>
<td>Airborne Plus if cleaning within one hour of aerosol-generating procedure</td>
</tr>
<tr>
<td></td>
<td>• Replace if it becomes damp, soiled, contaminated, or there is suspicion of contamination while interacting with patient</td>
<td>• N95 respirator / Face shield</td>
</tr>
<tr>
<td></td>
<td>Airborne Plus if cleaning within one hour of aerosol-generating procedure</td>
<td>• Gown / Gloves</td>
</tr>
<tr>
<td></td>
<td>• N95 respirator / Face shield</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Gown / Gloves</td>
<td></td>
</tr>
<tr>
<td>Patient Access</td>
<td>Droplet Plus</td>
<td>Facemask</td>
</tr>
<tr>
<td></td>
<td>• Facemask / Face shield</td>
<td>• Should be worn continuously between rooms of non-isolated patients and in common areas</td>
</tr>
<tr>
<td></td>
<td>• Gown / Gloves</td>
<td>• Replace if mask becomes damp, soiled, contaminated, or there is suspicion of contamination while interacting with patient</td>
</tr>
<tr>
<td></td>
<td>If aerosol-generating procedure occurred, wait one hour prior to entering.</td>
<td>• Replace each time after interacting with a patient in isolation</td>
</tr>
</tbody>
</table>
# PPE Guidelines – Laboratory & Pharmacy Services

<table>
<thead>
<tr>
<th>LAB SERVICES</th>
<th>PUI/COVID+ PATIENT</th>
<th>NON-COVID PATIENT</th>
</tr>
</thead>
</table>
| Direct patient care (Individuals entering patient rooms) | Droplet/Contact precautions  
  • Facemask / Face shield  
  • Gown / Gloves  
  If aerosolizing procedure occurred, wait one hour prior to entering.  
  Airborne Plus if entering within one hour of aerosol-generating procedure  
  • N95 respirator / Face shield  
  • Gown / Gloves | Facemask  
  • Should be worn continuously between rooms of non-isolated patients and in common areas  
  • Replace if mask becomes damp, soiled, contaminated, or there is suspicion of contamination while providing patient care  
  • Replace each time after caring for a patient in isolation |
| Laboratory and pharmacy personnel within department | Facemask  
  • Replace if damp, soiled or contaminated | Other PPE per standard laboratory and pharmacy protocol |
## PPE Guidelines – Food and Nutrition Services

<table>
<thead>
<tr>
<th>FOOD &amp; NUTRITION SERVICES</th>
<th>PUI/COVID+ PATIENT</th>
<th>NON-COVID PATIENT</th>
</tr>
</thead>
<tbody>
<tr>
<td>Direct patient care</td>
<td><strong>Droplet Plus</strong>&lt;br&gt;• Facemask / Eye protection&lt;br&gt;• Gown / Gloves</td>
<td><strong>Facemask</strong>&lt;br&gt;• Should be worn continuously between rooms of non-isolated patients and in common areas&lt;br&gt;• Replace if mask becomes damp, soiled, contaminated, or there is suspicion of contamination while providing patient care&lt;br&gt;• Replace each time after caring for a patient in isolation</td>
</tr>
<tr>
<td>(Individuals entering patient rooms)</td>
<td><strong>Airborne Plus if entering within one hour of aerosol-generating procedure</strong>&lt;br&gt;• N95 respirator / Face shield&lt;br&gt;• Gown / Gloves</td>
<td></td>
</tr>
<tr>
<td>Food and Nutrition staff within department</td>
<td><strong>Facemask</strong>&lt;br&gt;• Replace if damp, soiled or contaminated</td>
<td></td>
</tr>
</tbody>
</table>
## PPE Guidelines – Other Support Services

<table>
<thead>
<tr>
<th>OTHER SUPPORT SERVICES</th>
<th>PUI/COVID+ PATIENT</th>
<th>NON-COVID PATIENT</th>
</tr>
</thead>
</table>
| Other support services (e.g. Engineering, BioMed, Security) | Droplet Plus  
• Facemask / Face shield  
• Gown / Gloves  
If aerosol-generating procedure occurred, wait one hour prior to entering.  
Airborne Plus if entering within one hour after aerosol-generating procedure  
• N95 respirator / Face shield  
• Gown / Gloves  
Other PPE per standard department protocol | Facemask  
• Should be worn continuously between rooms of non-isolated patients and in common areas  
• Replace if mask becomes damp, soiled, contaminated, or there is suspicion of contamination while providing patient care  
• Replace each time after interacting with isolation patient  
Other PPE per standard department protocol |
<table>
<thead>
<tr>
<th>THPG</th>
<th>ALL PATIENTS</th>
</tr>
</thead>
<tbody>
<tr>
<td>All staff</td>
<td>All employees and providers will now be required to wear face masks (formerly referred to as surgical or isolation masks) continuously while in any building that provides patient care.</td>
</tr>
<tr>
<td></td>
<td>• The mask should be changed daily, or when it is obviously wet or soiled.</td>
</tr>
<tr>
<td></td>
<td>• Wash or foam hands before and after changing face masks</td>
</tr>
<tr>
<td></td>
<td>• Remove and discard the face mask after leaving the exam room of a patient suspected for COVID-19 and replace with a new mask before entering the next patient room.</td>
</tr>
<tr>
<td>Receptionists/</td>
<td>• Wear gloves and use hand sanitizer (on the gloves) between patients at reception. Gloves should be changed daily – sooner if they become torn or soiled.</td>
</tr>
<tr>
<td>Front-desk staff</td>
<td>• Minimize exchange of items. For example, allow patient to insert credit card in the machine where possible.</td>
</tr>
<tr>
<td></td>
<td>• Staff should also encourage patients to use hand sanitizer before handing objects to an employee and after taking the object back.</td>
</tr>
<tr>
<td></td>
<td>• Staff should always perform hand hygiene before and after glove use.</td>
</tr>
<tr>
<td>Aerosolizing procedures</td>
<td>These treatments are reserved for patients in severe distress. If possible, have the patient perform nebulizer treatments in the home.</td>
</tr>
<tr>
<td>(Nebulizers)</td>
<td>• For those patients who are in severe distress and the decision is made to provide the treatment, consideration should be given to doing the treatment in a lesser-used room.</td>
</tr>
<tr>
<td></td>
<td>• Following a nebulizer treatment, close the door. The room should be left dormant until the next day, and cleaned before use. Staff who must enter the room during the treatment should wear N95 respirators and eye protection. Stethoscopes should be thoroughly cleaned after use, or disposable stethoscopes may be used.</td>
</tr>
<tr>
<td></td>
<td>If provider has not been fit tested, AND YOU MUST DO LIFE SAVING NEBULIZER TREATMENT, start the patient on the nebulizer after you exit the room. When the treatment is complete, have the patient mask and exit the room, and move the patient to another exam room to complete the encounter. During the treatment, monitor the patient to the best of your ability from outside the room.</td>
</tr>
</tbody>
</table>
## PPE Guidelines – Special Circumstances/FAQs

<table>
<thead>
<tr>
<th>SITUATION</th>
<th>RESPONSE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Individuals with respiratory issues or other health issues</td>
<td>• Please contact Employee Health to discuss accommodation needs and/or best alternatives.</td>
</tr>
<tr>
<td>Personal N95 respirators and homemade masks</td>
<td>• Personal N95 respirators and homemade masks are not allowed and should not be worn in the facility at this time.</td>
</tr>
</tbody>
</table>
| Mask usage in private areas                         | • If you are in a private office or work in an isolated/controlled area, you may choose to remove your mask.  
  • Before removing mask, lay clean paper towel down on a clean surface  
    ✓ Perform hand hygiene  
    ✓ Remove mask and lay exterior face down on paper towel  
    ✓ Perform hand hygiene again  
    ✓ When reapplying mask, perform hand hygiene and place interior side of mask to your face  
    ✓ Discard paper towel and perform hand hygiene                                                                                              |
| N95 and face mask skin care                          | Here are some tips to keep your face fresh and reduce skin breakdown:  
  • “Double wash” your face with the correct cleanser for skin type, before and after work  
  • Moisturize face with water-based moisturizers  
  • Avoid wearing make-up  
  • Exfoliation two or three times per week (depending on skin type) may also help                                                              |
Protecting our friends and family

We know that keeping our friends and family safe is a top priority. Here are some simple tips:

**Have everyone use everyday preventative actions:**
- Wash your hands frequently
- Avoid touching your eyes, nose, and mouth
- Cover your cough or sneeze with a tissue, then throw the tissue in the trash
- Clean and disinfect frequently touched objects and surfaces
- Watch for early signs and symptoms in yourself and family members (fever, cough, shortness of breath)
- Stay informed about the local outbreak situation

**If you or someone in your household become sick:**
- Stay home from work
- Contact your healthcare provider
- If possible, keep the ill person in a separate room from others in the household
- Keep surfaces disinfected
- Avoid sharing personal items
- Follow recommended precautions and monitor your own health
- Notify your work if your schedule needs to change
- Stay in contact with others by phone, email or other social channels
- Take care of the emotional health of your household members, including yourself!
Appendix B – Infectious Disease Medical Directors by Entity

Call your entity Infectious Disease Physician/Medical Director:

- If patient is PUI or COVID+
  
  OR

- Prior to de-escalation of isolation
  
  OR

- For COVID-19 related treatment guidance

Escalate to Dr. Nikhil Bhayani:

1) If there is a discrepancy between treatment orders/recommendations and Texas Health guidelines

   OR

2) If a second opinion is needed

   OR

3) If there is no response from entity ID within a timely manner

   OR

4) Prior to transfer into the system or between entities

Infectious Disease Entity Physicians/Medical Directors

**Texas Health Arlington Memorial:** Dr. Ricardo Quezada

**Texas Health Azle:** Dr. Nikhil Bhayani

**Texas Health Cleburne:** Dr. Nikhil Bhayani

**Texas Health Denton** Dr. Javed Akram

**Texas Health Flower Mound:** Dr. Sujatha Krishnan

**Texas Health Frisco:** Dr. Thompson

**Texas Health Harris Ft. Worth:** Dr. Ceres Tiu

**Texas Health Harris Methodist Alliance:** Dr. Nikhil Bhayani

**Texas Health Harris Methodist HEB:** Dr. Priya Subramanian

**Texas Health Huguley:** Dr. Krishna Bobbili

**Texas Health Kaufman:** Dr. Sij

**Texas Health Presbyterian Allen:** Dr. Zartash Khan

**Texas Health Presbyterian Dallas:** Dr. Allison Liddell

**Texas Health Presbyterian Plano:** Dr. Dina Torten

**Texas Health Rockwall:** Dr. Claire Brenner

**Texas Health Southwest:** Dr. Steve Sotman

**Texas Health Southlake:** Dr. Mennakshi Prabhakar

**Texas Health Stephenville** Dr. Marilyn Brister