

# COVID-19 Maternity Care Simulation

## Case:

COVID-19 OBCU

## Authors:

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*\*Objectives adapted from COVID 19 Sample Scenario Script from Albert Chan et al. Prince of Wales Hospital 2020*

## Creation date:

March 15, 2020

## Last update:

Mar 17, 2020

## Target population:

OB nurses, anesthesia, OB team, NICU team, RT, CCTC, perimeter team, registration clerk

## Objectives

Group	Clinical and CRM Objectives
Entire team	<ul style="list-style-type: none"> <li>- Apply principles of infection control               <ul style="list-style-type: none"> <li>o Identify risk and respond appropriately by utilizing PPE properly to minimize risk of contamination</li> <li>o Minimize number of unnecessary healthcare providers at the bedside</li> </ul> </li> <li>- Anticipate possible respiratory compromise of suspected COVID patient</li> <li>- Establish and maintain shared mental model of infection control concerns and airway plan</li> <li>- Utilize consistent closed-loop communication during the management of a pregnant COVID obstetrical patient</li> <li>- Demonstrate situational awareness during the management of an OB patient with suspected COVID, particularly with respect to respiratory compromise and infection control procedures during all aspects of care including inter-unit transfer</li> </ul>
Registration clerk	<ul style="list-style-type: none"> <li>- Perform initial screening for ARI and travel hx</li> <li>- Communicate to triage nurses + prepare for containment</li> </ul>
OB Nurses	<ul style="list-style-type: none"> <li>- Follow proper isolation protocol in a timely fashion to reduce risk of contamination</li> <li>- Mitigate risk of support person</li> </ul>

	- Notification of remaining team members including NICU
OB team	- Perform C/S for obstetrical indications only - Upgrade to airborne precautions if indicated by circumstances (intubation or surgery)
Anesthesia team (incl. RT)	- Follow guidelines for airway management of suspected COVID patient (see attached/appendix) - Demonstrate meticulous equipment preparation before intubation for suspected COVID patient - coordinate with CCTC to enable safe transport of intubated patient from OBCU to CCTC
NICU team	- Anticipate and plan for the possible need for neonatal resuscitation and intubation
CCTC Team	- Coordinate with OB anesthesia team to safely transport patient to CCTC, while minimizing infectious risk to self/others, and determine appropriate disposition within CCTC

### Simulated case summary:

\*\*\*\* IN SITU SIMULATION\*\*\*\*

Grace Aspen is a 25y G2P1 at 36+0 with 2 d history of fever, cough and increasing shortness of breath (possible COVID), calls into triage and presents for care with threatened preterm labour. Patient progresses to preterm labour and experiences respiratory compromise immediately postpartum necessitating intubation and transfer to CCTC.

### Scenario Requirements

Equipment	Moulage	Confederates	Adjuncts (e.g. Imaging, bloodwork, forms)
<input type="checkbox"/> mannequin with baby in utero <input type="checkbox"/> wheelchair <input type="checkbox"/> extra baby (just in case) <input type="checkbox"/> FAKE NP swab	N/A	<input type="checkbox"/> patient partner *also symptomatic* <input type="checkbox"/>	<input type="checkbox"/> No previous chart needed <input type="checkbox"/> <input type="checkbox"/>

### Time required for simulation:

Event	Duration
Set-up	5 min
Simulation	45 min
Debrief	30 min

### Baseline simulator physiologic state:

(leave blank if not relevant)

<b>HR:</b> 120	<b>BP:</b> 90/65	<b>RR:</b> 20	<b>SpO2:</b> 95%
<b>Temp:</b> 38.5	<b>FHR:</b> 170	<b>Other:</b>	

<b>Neuro</b>	Intact
<b>Resp</b>	Tachypneic, increased work of breathing
<b>CVS</b>	Sinus tachycardia, normal heart sounds
<b>GI</b>	Loose stool x 2 days
<b>GU</b>	Normal
<b>Other</b>	FM+, no LOF/PVB, contracting q5-10 min for the last 1 hour

### Full background information for scenario:

(For the information of instructors/confederates only. Information provided to participants as appropriate for scenario)

<b>HPI</b>	25y G2P1 at 36+0 with TPTL and a hx of fever, cough and loose stool. Visiting family (lives in BC, recent travel to California)	
<b>OB History</b>	Previous term SVD 3 years ago. Uncomplicated	
<b>PMHx</b>	Asthma, well-controlled o/w healthy	
<b>ROS</b>	FM+ no LOF/PVB, contracting more regularly for the last hour (q5-10min) Loose stool – no blood, no hx of previous Cough for past few days, febrile x2 days, myalgias	
<b>Meds</b>	Prenatal vitamins	
<b>Allergies</b>	none	
<b>P/E</b>	<b>General</b>	As above
	<b>Wt/Ht</b>	162cm/65 kg
	<b>Vitals</b>	HR 120 BP 90/65. RR 20. SpO2 95% RA T 38.5. FHR 170
	<b>CNS/LOC</b>	Alert & oriented
	<b>CVS</b>	Sinus tachy, normal heart sounds
	<b>Resp</b>	Tachypneic, increased WOB
	<b>Abdo</b>	Gravid, measuring 35 cm SFH
	<b>Pelvic</b>	Cx 3 cm 50% sp-3 Vx
<b>Investigations</b>	WBC 5.0 Hgb 105. Plt 230. Cr 68. AST 40. ALT 45.	

## Information for participants:

Instructions about what information should be given to participants, including background and instructions regarding behaviour, scripted phrases, trigger points, etc.

Participant	Initial information provided
<b>Triage nurse</b>	Receives phone call from patient (as below)

## Scenario timeline:

### Stage 1: Pre-hospital notification and entering hospital perimeter

Clinical objectives addressed by this stage: (1) appropriate screening and anticipatory preparation/readiness for possible COVID patient			
Key event(s) in this stage (1) triage nurse receives phone call and advises patient to present to triage, screens for ?COVID (2) triage nurse notifies appropriate team members to prepare for possible COVID patient (3) patient enters hospital at patient entrance + undergoes screening			
Patient information	Scenario adjuncts (e.g. confederate tasks, environmental cues, results)	Expected Behaviours (i.e. observed and 'what if')	Progression if expected behaviours not met
History/condition: 25y G2P1 at 36+0 with 2 d history of fever, cough and increasing shortness of breath, also starting to feel contractions q 5-7 min for the past few hours. Normal FM, no leaking or bleeding.  ** Patient is visiting family from Kelowna, BC, (no antenatal records) with recent travel to California.	Confederate standardized patient places call to triage – wondering if she should come into hospital	Triage nurse receiving the call <ul style="list-style-type: none"> <li>- Perform screening incl. travel hx</li> <li>- Advise patient to present for assessment</li> </ul>	Patient will present to triage regardless of the advice given by triage nurse
		TPTL <ul style="list-style-type: none"> <li>- Notify charge nurse and registration clerk re: prepare for possible COVID pt</li> </ul>	

Uncomplicated pregnancy. Previous term SVD -no complications. GBS unknown.***		and visitor (also screens +ive), notify OB triage unit	contractions are getting stronger
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## Stage 2: Possible COVID patient arrives in triage for assessment

Objectives addressed by this stage: (1) Initial screening, appropriate isolation and PPE response engaged by healthcare team (2) key team members notified of possible COVID patient			
Key event(s) in this stage: (1) Patient presents to triage with positive ARI hx and threatened preterm labour (2) Patient is tested for COVID (3) Patient assessed in isolation room for preterm labour (4) Partner instructed to follow PPE			
Patient information	Scenario adjuncts (e.g. confederate tasks, environmental cues, results)	Expected Behaviours (i.e. observed and 'what if')	Progression if expected behaviours not met
History/condition:  History as above, now contracting q 3-4 min	*** bring FAKE swab so we do not use REAL NP swab***	Registration clerk - performs screen for COVID/ARI and notifies triage nurse ASAP	Patient calls out that she feels pressure if no one has checked her cervix since arrival into isolation room
Vital signs: HR 120 BP 90/65. RR 20. SpO2 95%(RA) T 38.5. FHR 170		Triage nurse – -demonstrate proper PPE use - bring patient +partner to isolation room in triage if available (follow droplet and contact precautions) -Notify OB+ anesthesia teams and charge nurse of pt arrival + suspicion for COVID + PTL -gain IV access, perform admission bloodwork, assess FHR + contractions	Patient partner will prompt for guidance from team if ignored “I’m not leaving my wife”
Physical Exam: Gravid uterus Cervix = fully dilated, sp+2, vertex Fetal tachycardia (otherwise normal tracing)		OB team - -demonstrate proper PPE use -perform timely vag exam assessment for ?TPTL -identify COVID risk/ARI and take initial management steps (O2 @<6L/min unless required to maintain sats >95%, gentle IV fluid	

		support, CEFM, Tylenol, admission b/w incl. CBC, G&S, LFT, Cr,lytes) -consideration for early empiric antibiotics - broad spectrum ?cover poss. pneumonia + GBS ppx -notify OB anesthesia (and RT!) potential patient needing resp. support	
Other:		Charge nurse -- notify NICU of possible preterm infant to COVID suspected patient	

### Stage 3: Possible COVID patient admitted for preterm labour + delivery of preterm baby

<b>Objectives addressed by this stage:</b> (1) follow proper PPE and infection control practices (admit to isolation room) and limit involvement of healthcare providers (essential only) (2) assign team members to gather equipment and observe donning/doffing as needed			
<b>Key event(s) in this stage:</b> (1) safe transfer and admission to delivery room OBCU (2) delivery of late preterm infant (3) NICU in attendance for possible resuscitation of late preterm infant (fetal tachycardia)			
Patient information	Scenario adjuncts (e.g. confederate tasks, environmental cues, results)	Expected Behaviours (i.e. observed and 'what if')	Progression if expected behaviours not met
History/condition: patient complaining of worsening shortness or breath, urge to push upon entering delivery room	bloodwork WBC 5.0 Hgb 105. Plt 230. Cr 68. AST 40. ALT 45. lytes-Normal	OB nurses -follow proper PPE -initiate CEFM -call NICU for delivery + communicate concern re COVID -apply O2 by FM	
Vital signs: HR 130 BP 90/60. RR 25. SpO2 94%(RA) T 39.		OB team (staff/resident) -follow proper PPE -recommend +facilitate delivery -ensure O2 applied given declining SaO2 (? PPE level	

FHR 170- with variables		change from droplet to airborne should occur once O2 >6L/min)	
Physical Exam: vertex sp+3 >> delivery		Anesthesia team (staff/resident) -Don appropriate PPE with resident acting as 'spotter' -Decision making RE: location of airway management (OR vs L&D room); prep chosen location. -notify RT (if not already notified by Charge Nurse) -initial patient airway assessment -prepare equipment for possible need to establish airway	
Other: neonatal status at birth: stable. No resuscitation needed		Charge nurse -assign extra nurse/staff to observe/support don/doffing and equipment needs -ensure OR 7 prepared and ready in case operative delivery indicated	
		NICU team:	

Stage 4: Possible COVID patient experiences respiratory compromise postpartum necessitating intubation and transfer to CCTC

<b>Objectives addressed by this stage:</b>			
(1) Team maintains situational awareness following delivery to identify and respond to respiratory compromise			
<b>Key event(s) in this stage:</b>			
(1) Patient develops respiratory compromise (2) Patient is intubated, stabilized and ultimately transferred to CCTC			
Patient information	Scenario adjuncts (e.g. confederate tasks, environmental cues, results)	Expected Behaviours (i.e. observed and 'what if')	Progression if expected behaviours not met
History/condition: patient develops worsening SOB, increased WOB, unable to speak	If ABG attempted/sent, will have to send RT down to main ORs (result will	Ob Nurses: - Ensure proper level of PPE donned. - Support anesthesia with airway equipment preparations.	- Risk of unnecessary exposure. - Unnecessary PPE use.

	<p>not return during scenario).</p> <p>Airway exam shows mallampati II, good Mouth Opening and full Neck movement.</p>	<ul style="list-style-type: none"> <li>- Contact ICU</li> <li>- Minimize unnecessary individuals in room for aerosol generating procedure.</li> <li>- If RT and 2 or more anesthesiologists in room, consider leaving the room or minimizing numbers (ie maybe 1 or 2 max).</li> <li>- Take husband/family out of room and provide support.</li> </ul>	<ul style="list-style-type: none"> <li>- Partner may be inadvertently left in room during aerosol generating procedure. Can prompt with some dialogue "Hey, where is everyone going? What's going on?"</li> </ul>
<p>Vital signs: HR 130 BP 80/60. RR 25. SpO2 82% if no O2 applied; maximum sat 89% with O2% (likely on O2 by this point) T 39.</p>		<p>OB Team:</p> <ul style="list-style-type: none"> <li>- Consider leaving the room to minimize exposure. If no obstetric issues remaining, can exhibit backup behaviour and attempt to take on roles needed outside the room (or if being critically helpful, don Airborne PPE and return to room).</li> <li>- Contact ICU staff/nurse/resident to provide history and prepare the unit for the patient.</li> </ul>	
<p>Physical Exam: EBL from delivery &lt; 500 cc; no lacerations; good uterine tone</p> <p>resp - ?wheezes and globally decreased breath sounds?</p>		<p>Anesthesia:</p> <ul style="list-style-type: none"> <li>-Early recognition of respiratory deterioration and plan for 'early' definitive airway.</li> <li>-Alert room of need to increase to Airborne precautions with escalating O2 therapy if not already done (vs. avoid escalating therapy beyond 6L/min and plan imminent ETT).</li> <li>-Must leave patient in order to properly don PPE</li> </ul>	

		<p>if not wearing aerosol precautions.</p> <ul style="list-style-type: none"> <li>- Call for help/2nd anesthetist.</li> <li>- Delegate resident to prepare "Covid Cart" of drugs (induction meds, pressors), equipment (ETT, 2nd Gen LMA, bougie, cricothyrotomy kit) etc... and clarify location of desired airway management.</li> <li>- How to preoxygenate out of the OR? (?&lt;6L/min?)</li> <li>- Verbalize plan for 1st/2nd/3rd attempt for securing airway.</li> <li>- Contact ICU for disposition/bed</li> <li>-Execute intubation using RSI to minimize aerosolization.</li> <li>- Plan for Propofol infusion to facilitate transfer to ICU.</li> <li>- Ensure appropriate filter attached to BMV; take steps to reduce number of disconnections of tube.</li> </ul>	
Other:		<p>Charge Nurse:</p> <ul style="list-style-type: none"> <li>- Contact ICU</li> <li>- Monitor situation and make environmental preparations as deemed necessary.</li> <li>- Coordinate clearing of hallways to reduce exposure?</li> <li>- Prepare ICU bed vs. transfer to ICU in L&amp;D bed?</li> </ul>	



## Discussion and Debriefing Guide:

Error Type	Common Errors Observed	Teaching Points
Technical Skills		
Crisis Resource Management		
Latent Safety Threats		

## **Guidelines for Airway Management of Suspect and/or Confirmed COVID-19 Patients**

Draft Version (March 12, 2020)

### **General principles**

1. Avoid non-invasive positive pressure ventilation
2. Avoid use of high flow nasal cannula if possible
3. Use MDI inhalers rather than nebulizer treatments
4. Early controlled intubation is favoured over intubating a rapidly deteriorating patient
5. Video assisted intubation is preferred, to maximize distance of intubator from the patient

### **Definitions**

- Aerosol generating procedures (AEGP) – include intubation, non-invasive positive pressure ventilation, nebulizer treatments, bronchoscopy
- Personal protective equipment (PPE) for AEGP includes:
  - Level 4 fluid impermeable gown (level 3 is acceptable if available but is currently on backorder)
  - Extended cuff nitrile gloves or sterile gloves which cover wrists
  - Fit tested N95 mask
  - Eye covering (Face Shield AND Disposable Goggles)
- Blue hair bouffant for intubation and bronchoscopy only

### **Setting**

1. The patient should be transferred to a negative pressure isolation room before aerosol generating procedures are initiated
2. Airway management (intubation) should occur in the critical care unit when possible.
3. Do not transfer non-intubated, unstable patients that will possibly require urgent airway intervention during transport – Intubate prior to transfer in the most appropriate location at the time.

### **Planning**

1. Discuss your airway plan in advance with the team (Preinduction pause from critical care intubation checklist – Appendix A)
2. Limit the number of healthcare workers in the room, an experienced RRT, MD and RN is ideal
3. Have two additional staff members (eg RN or RRT) outside the room, donned and available to assist during performance of AEGP
4. Learners should not be present during AEGP
5. Ensure all equipment is available and functioning
6. Have all necessary equipment in the room prior to starting the AEGP

### Process

1. Utilize an observer to assist with donning of PPE if not familiar with procedure
2. Don appropriate PPE (See Appendix B)
3. Provide five minutes of preoxygenation with oxygen 100% (via non-rebreather mask) to avoid manual ventilation
4. The most experienced HCW should attempt the intubation to maximize chances of first pass success
5. Utilize rapid sequence induction (RSI) when possible
6. Utilize video assisted intubation when possible
7. Avoid awake intubation and use of atomized anaesthetic
8. Avoid manual ventilation. If necessary, small tidal volumes should be applied
9. Ensure high efficiency hydrophobic filter interposed between facemask and breathing circuit or between facemask and Ambu bag (see Appendix C for diagram)
10. Post intubation auscultation and ventilation should only initiate once endotracheal balloon has been inflated
11. If intubation fails, either insert LMA, ventilate with bag-valve-mask (BVM) with filter attached (see appendix C for diagram)

**OR**

consider 2 person BVM with PERSON #1 dedicated to proper positioning of the airway while ensuring seal of mask and PERSON #2 bagging with low volume breaths

12. Practice appropriate hand hygiene after procedure and in the process of doffing PPE (See Appendix B)

13. Utilize an observer to assist with doffing of PPE if not familiar with procedure

#### Additional Notes:

1. If patient is intubated in the ED or other area of the hospital and is suspected/actual COVID-19 positive, consider completing an Xray once transported to Critical Care.

2. If patient is suspected/actual COVID-19 positive, consider early intubation prior to patient decompensation (eg. 50% ventimask to maintain SpO<sub>2</sub> greater than 90% with progressive respiratory decompensation). Place on 100% O<sub>2</sub> via non-rebreather mask and prepare to intubate.

3. Decrease the room temperature if able as it gets very hot wearing PPE.

Page Break

Appendix A: Intubation Record for Critical Care



**London Health  
Sciences Centre**  
CRITICAL CARE  
INTUBATION RECORD

ADDRESSOGRAPH

PRE-INDUCTION PAUSE <sup>a</sup>												
<input type="checkbox"/> Completed prior to induction <input type="checkbox"/> Not completed - reason: _____												
INDICATION FOR INTUBATION												
LOCATION			URGENCY				TYPE					
<input type="checkbox"/> ICU <input type="checkbox"/> Floor <input type="checkbox"/> ER <input type="checkbox"/> Other: _____			<input type="checkbox"/> Elective/Semi-elective <input type="checkbox"/> Urgent <input type="checkbox"/> Emergent <input type="checkbox"/> During CPR				<input type="checkbox"/> Initial <input type="checkbox"/> Failed extubation <sup>b</sup> <input type="checkbox"/> Failed self-extubation <sup>b</sup>					
PREOXYGENATION												
<b>Pre-induction</b> <input type="checkbox"/> BiPAP (any settings, 100% FiO <sub>2</sub> ) <input type="checkbox"/> Non-rebreather mask (100% FiO <sub>2</sub> )					<b>Post-induction</b> <input type="checkbox"/> Bag-mask ventilation (PEEP 5-10 cmH <sub>2</sub> O) <input type="checkbox"/> Apneic oxygenation							
ATTEMPT	PERFORMED BY <sup>c</sup>		TECHNIQUE <sup>d</sup>					CORMACK SCORE <sup>e</sup>				
1.			DL	GS	FOB	LMA	S	I	II	III	IV	n/a
2.			DL	GS	FOB	LMA	S	I	II	III	IV	n/a
3.			DL	GS	FOB	LMA	S	I	II	III	IV	n/a
APPROACH TAKEN			MEDICATION USED									
<input type="checkbox"/> Awake / light sedation <input type="checkbox"/> Asleep <input type="checkbox"/> Breathing <input type="checkbox"/> Apneic <input type="checkbox"/> Paralyzed <input type="checkbox"/> Not paralyzed			<input type="checkbox"/> Fentanyl _____ mcg <input type="checkbox"/> Midazolam _____ mg <input type="checkbox"/> Propofol _____ mg <input type="checkbox"/> Ketamine _____ mg <input type="checkbox"/> Phenylephrine _____ mg <input type="checkbox"/> Other _____			<input type="checkbox"/> Succinylcholine _____ mg <input type="checkbox"/> Rocuronium _____ mg <input type="checkbox"/> Cisatracurium _____ mg  <input type="checkbox"/> RSI <input type="checkbox"/> Cricoid pressure						
INTUBATION CONFIRMATION												
<input type="checkbox"/> In-line EtCO <sub>2</sub> <input type="checkbox"/> Auscultation												
COMPLICATIONS AND / OR ADDITIONAL COMMENTS												
Lowest MAP: _____ mmHg Lowest S <sub>p</sub> O <sub>2</sub> : _____ %												
<b>Completed By:</b> Printed Name _____ Signature _____ Date _____ <span style="float: right; font-size: small;">(YYYY/MM/DD)</span>												

**CRITICAL CARE INTUBATION RECORD**
**LEGEND**
**a** Pre-induction pause

## Mandatory:

- Two experienced operators present
- Airway assessment
- Suction at head of bed
- Bag valve mask connected to O<sub>2</sub>
- Oral airway
- Glidescope & LMA
- IV line running at least 500 ml/hr
- Phenylephrine
- Plan verbally communicated to team

## Considerations:

- Other desired airway adjuncts in room? (Bronchoscope, etc.)
- Positioning optimized? (Bed height, dentures removed, ramping, etc.)
- Fluid bolus or vasopressor infusion *prior* to induction?
- Patient-specific variables that might affect intubation taken into account?
- Using succinylcholine? If yes, check contraindications (see reverse)
- BiPAP for preoxygenation?
- Nasal prongs on for apneic oxygenation (15 L/min O<sub>2</sub> by nasal prongs during intubation)?

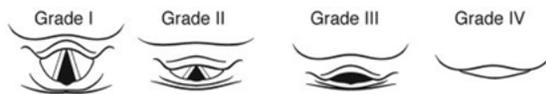
**b** Defined as ≤ 48 hrs from extubation

**c** Name, rank, and program

E.g. John Doe, Gen Surg PGY2

**d** Technique

- DL – Direct laryngoscopy
- GS – Glidescope
- FOB – Fiberoptic bronchoscopy
- LMA – Laryngeal mask airway
- S – Surgical

**e** Cormack Score

**Appendix B: Donning and Doffing PPE for Aerosol Generating Procedure COVID-19**

<b>DONNING PPE for Aerosol generating procedures (AEGP) of Suspect and/or Confirmed COVID-19 Patients</b>	<b>Initials</b>
<ul style="list-style-type: none"> <li>● Assemble required PPE:               <ul style="list-style-type: none"> <li>Level 4 fluid impermeable gown (Level 3 is acceptable if available)</li> <li>Long cuff nitrile/sterile gloves which cover cuff of gown</li> </ul> </li> </ul>	

<p>Fit tested N95 mask</p> <p>Eye covering (Face Shield <b>AND</b> Disposable Goggles)</p> <p>Blue hair bouffant</p> <ul style="list-style-type: none"> <li>● Utilize an observer to assist with donning of PPE if not familiar with procedure</li> </ul>	
<p><b>Step 1: Clean Your Hands</b></p> <ol style="list-style-type: none"> <li>1. Use alcohol-based hand rub when hands are not visibly soiled</li> </ol> <p style="text-align: center;"><b>OR</b></p> <ol style="list-style-type: none"> <li>2. Use soap and water when hands are visibly soiled</li> </ol>	
<p><b>Step 2. Put on Gown</b></p> <ol style="list-style-type: none"> <li>1. Put on Level 4 gown, opening to the back, to fully cover torso from neck to knees, arms to end of wrists and wrap around the back.</li> <li>2. Ensure ties are fastened at the back of neck and waist of gown</li> </ol>	
<p><b>Step 3. Put on N95 Respirator Mask</b></p> <ol style="list-style-type: none"> <li>1. Remove eye glasses, if applicable, prior to donning N95 Respirator</li> <li>2. Select respirator according to fit testing</li> <li>3. Place over nose, mouth and chin</li> <li>4. Fit flexible nose piece over nose bridge</li> <li>5. Secure on head with top, followed by bottom elastic</li> <li>6. Adjust to fit</li> <li>7. Perform a fit check:       <ol style="list-style-type: none"> <li>1. Inhale-respirator should collapse</li> <li>2. Exhale-check for leakage around face</li> </ol> </li> <li>8. If eye glasses were removed to don respirator, put glasses back on now</li> </ol>	

<p><b>Step 4: Put on Head and Eye Protection (bouffant, goggles and face shield)</b></p> <ol style="list-style-type: none"> <li>1. Position goggles over eyes and secure to the head, adjust to fit comfortably</li> <li>2. Position face shield over face and secure, ensure the shield is not tented outward</li> <li>3. Put on Blue hair bouffant</li> </ol>	
<p><b>Step 5: Put on Gloves</b></p> <ol style="list-style-type: none"> <li>1. Select correct type and size of gloves either Long cuff nitrile or sterile gloves</li> <li>2. Extend gloves over cuffs of Level 4 gown</li> </ol>	
<p><b>Part Six: DOFFING PPE for Aerosol generating procedures (AEGP) of Suspect and/or Confirmed COVID-19 Patients</b></p>	
<ul style="list-style-type: none"> <li>● Utilize an observer to assist with doffing of PPE if not familiar with procedure</li> <li>● Remove PPE in the ante room, after leaving the patient's room</li> </ul>	
<p><b>Step 1: Remove Gloves</b></p> <p>Outside of gloves are contaminated. Remove gloves in the following sequence:</p> <ol style="list-style-type: none"> <li>1. Grasp outside of glove with opposite gloved hand; peel off</li> <li>2. Hold removed glove in gloved hand</li> <li>3. Slide fingers of ungloved hand under remaining glove at wrist</li> <li>4. Peel glove off over the first glove</li> <li>5. Discard gloves into waste container</li> </ol>	
<p><b>Step 2: Clean Your Hands</b></p> <ol style="list-style-type: none"> <li>3. Use alcohol-based hand rub when hands are not visibly soiled</li> </ol> <p style="text-align: center;"><b>OR</b></p> <ol style="list-style-type: none"> <li>4. Use soap and water when hands are visibly soiled</li> </ol>	
<p><b>Step 3: Remove Gown</b></p> <p>Gown front and sleeves are contaminated. Remove gown in the following sequence:</p> <ol style="list-style-type: none"> <li>1. Unfasten ties and peel gown away from neck and shoulder touching the inside of the gown only</li> <li>2. Turn outside toward the inside</li> <li>3. Fold or roll into a bundle and discard into waste container</li> </ol>	

<p><b>Step 4: Clean Your Hands</b></p> <ol style="list-style-type: none"> <li>1. Use alcohol-based hand rub when hands are not visibly soiled</li> </ol> <p style="text-align: center;"><b>OR</b></p> <ol style="list-style-type: none"> <li>2. Use soap and water when hands are visibly soiled</li> </ol>	
<p><b>Step 5: Remove Head Protection (bouffant)</b></p> <ol style="list-style-type: none"> <li>1. Grasp bouffant at crown of head (top and toward the back) to remove and discard into waste container</li> </ol>	
<p><b>Step 6: Clean Your Hands</b></p> <ol style="list-style-type: none"> <li>1. Use alcohol-based hand rub when hands are not visibly soiled</li> </ol> <p style="text-align: center;"><b>OR</b></p> <ol style="list-style-type: none"> <li>2. Use soap and water when hands are visibly soiled</li> </ol>	
<p><b>Step 7: Remove Eye Protection (face shield and goggles)</b></p> <ol style="list-style-type: none"> <li>1. Grasp top elastic of face visor and lift away from face while holding the elastic and discard in waste container</li> <li>2. Grasp ear pieces or strap of goggles and lift away from face place into waste container</li> <li>3. Remove eye glasses, if applicable and disinfect prior to putting back on</li> </ol>	
<p><b>Step 8: Clean Your Hands</b></p> <ol style="list-style-type: none"> <li>a) Use alcohol-based hand rub when hands are not visibly soiled</li> </ol> <p style="text-align: center;"><b>OR</b></p> <ol style="list-style-type: none"> <li>b) Use soap and water when hands are visibly soiled</li> </ol>	
<p><b>Step 9: Remove N95 Respirator Mask</b></p> <ol style="list-style-type: none"> <li>a) Lift the bottom elastic over your head first</li> <li>b) Then lift off the top elastic</li> <li>c) Lift away from face while holding the elastic and discard into waste container</li> </ol>	
<p><b>Step 10: Clean Your Hands</b></p> <ol style="list-style-type: none"> <li>a) Use alcohol-based hand rub when hands are not visibly soiled</li> </ol>	

OR

b) Use soap and water when hands are visibly soiled

Page Break Appendix C:

Filter between ambu bag and endotracheal tube



Filter between face mask and ambu bag

Filter between LMA and ambu bag



Draft Document: March 11, 2020 S:\CBU\Director\COVID-19

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