COVID-19 Obstetric Preparedness Manual

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Introduction & Overview

The current COVID-19 pandemic presents challenges to the medical community on a scale not seen previously in our lifetime. Even though there is much we do not know about the virus, the CDC has classified pregnant patients as a group that may be at increased risk.* Additionally, patients presenting in labor or with complications of the disease may require delivery, which presents additional logistical and infection control issues.

In order to prepare for patients who present during pregnancy, we are providing these simulation exercises as a way for institutions of all sizes to help design and/or practice their local protocols for management of obstetric patients who present with suspected for confirmed COVID-19 infections.

These are meant to be conducted to walk through institution plans for how to triage, transport and manage obstetric patients by reviewing each step of the process from the time they present and then addressing any gaps identified. It will also improve team preparedness and improve the care team's confidence in their ability to handle this new and unfamiliar situation.

With each simulation, there is a global checklist that addresses the key areas for patient care and infection prevention. Of note, because of the significant potential for shortages of personal protective equipment (PPE), when running the simulations it is recommended that the team place a "mask"* on the simulated "patient" but all other physician or health care professional PPE and donning/doffing procedures be discussed rather than actually done in order to maintain supplies for real cases.

Realize that information and recommendations will continue to change as more is understood about the virus. In line with this, although we intend to revise as recommendations are modified, please continue to check with the ACOG and CDC websites for updates.

Finally, thank you for all that you are doing for your patients during this time.

**For the purposes of simulation and due to limited PPE resources, use a mask substitute such as a bandana or cloth in lieu of a mask on the simulated patient.*

Reference

*Centers for Disease Control and Prevention. Coronavirus disease 2019 (COVID-19): people who are at higher risk. Atlanta, GA: CDC; 2020. Available at: https://www.cdc.gov/coronavirus/2019-ncov/need-extra-precautions/people-at-higher-risk.html. Retrieved April 2, 2020.

Disclaimer

This document has been developed to respond to some of the questions facing clinicians providing care during the rapidly evolving COVID-19 situation. As the situation evolves, this document may be updated or supplemented to incorporate new data and relevant information. This information is designed as an educational resource to aid clinicians in providing obstetric and gynecologic care, and use of this information is voluntary. This information should not be considered as inclusive of all proper treatments or methods of care or as a statement of the standard of care. It is not intended to substitute for the independent professional judgment of the treating clinician. Variations in practice may be warranted when, in the reasonable judgment of the treating clinician, such course of action is indicated by the condition of the patient, limitations of available resources, or advances in knowledge or technology. The American College of Obstetricians and Gynecologists reviews its publications regularly; however, its publications may not reflect the most recent evidence. Any updates to this document can be found on acog.org or by calling the ACOG Resource Center.

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Simulation Setup and Preparation

Simulation Facilitator: The person who acts as the Simulation Facilitator is responsible for briefing the initial team on the planned simulation walk-through. They will begin with the orientation as explained below and then help the team walk through the simulation and provide information about patient vital signs. When the team completes the simulation, the Simulation Facilitator will inform the team that the simulation is over and then facilitate walking through the review checklist and local protocols.

Prior to the simulation, the Simulation Facilitator may brief the team on the drill. In most cases, this will involve discussion with both the charge nurse and staff physician on the unit where the drill is being done as well as the hospital supervisor/infectious disease contact.

Begin by orienting the care team to the plan for the simulation. Then, explain the following:

- Emphasize that the drill is meant for training and practicing / reviewing current protocols and it is not a test.
- Treat the simulator or simulated patient as they would a real patient.
- If the team needs additional supplies or instruments, they should go and obtain them.
- Because of the significant potential for shortages of PPE, when running the simulations it is recommended that the team place a mask substitute* on the simulated "patient" but all other health care professional PPE and donning or doffing procedures be discussed rather than actually done in order to maintain supplies for real cases.
- Call for assistance and other health care professionals and inform supervisors/infectious disease service as they would in a real situation, however, make sure they inform anyone they call that this is a drill and not a real patient.

**For purposes of the simulation and to save valuable PPE resources, use a substitute such as a bandana or cloth in lieu of a mask on the simulated patient.*

Simulation Review or Debrief

When the simulation scenario is completed, gather the team together to review. At this time, reinforce that this exercise is meant to provide the opportunity to practice and become familiar with your facility protocols.

Go through the exercise checklist included with the simulation. As you review the different sections, discuss the facility protocol and make sure to clarify any areas of confusion. If the team identifies a better process than the one currently in place, record this in the section titled "Summary/Lessons Learned" and provide a copy of this to the unit leadership.

Simulation Scenarios

Simulation #1: Obstetric patient with suspected Coronavirus (COVID-19) patient presenting to hospital in active labor

Simulation #2: Obstetric patient with suspected Coronavirus (COVID-19) patient in labor who progresses to have a spontaneous vaginal delivery

Simulation #3: Suspected Coronavirus (COVID-19) obstetric patient in labor who requires cesarean delivery

Simulation #4: Suspected Coronavirus (COVID-19) obstetric patient in labor with worsening respiratory status requiring transfer to ICU then vaginal delivery in ICU

Simulation #1

Suspected Coronavirus (COVID-19) Obstetric Patient Presenting to Hospital in Lab

Learning Objectives

By practicing this scenario, members of an interdisciplinary care team should be able to do the following:

- Recognize risk factors for infection with COVID-19
- Demonstrate appropriate triage, isolation and describe PPE use for patients with suspected COVID-19 infection
- Explain how to transport patient to appropriate location or room by specified route to decrease risk of exposure to other patients/healthcare professionals
- Provide correct contact information for supervisor, infection control staff, or both as directed by institutional policy
- Describe current policy recommendations with regards to patient evaluation and COVID-19 testing

Planned Completion Points

In order to successfully complete this scenario, the care team should do the following:

- Recognize the patient as having risk factors for COVID-19
- Isolate the patient and describe appropriate PPE use and do an initial assessment on the patient
- Transport patient to unit/room (if they present to a screening location rather than the Labor and Delivery unit)
- Notify supervisor, infection control staff, or both

Expected Duration of Exercise

Approximately 40 minutes (20 minutes for simulation; 20 minutes for debriefing)

1.0 Simulation #1 Setup

- **Simulators to be used:** Any full body simulator can be used for this simulation. If you decide to use a real person to act as the patient we recommend clearly informing all observers/other patients in the area about the drill so as to prevent any misunderstanding or concerns that they are being exposed to an actual infected patient.

- **Room Setup:** No special setup is needed as the simulator/simulated patient will be brought to the clinical care area.

- **Simulator Setup:** If a simulator is used, it can be seated in a wheelchair and brought to the initial clinical triage area by a person playing the family member.

- **Vital Signs:** When the team takes vital signs with their equipment, the Simulation Facilitator will provide these from the scenario directions.

- **Simulation Pre-Brief:** Gather the care team together and perform the Pre-Simulation Briefing/Orientation.

2.0 Pre-Simulation Briefing/Orientation

Prior to the simulation, you may brief the team on the drill. Begin by orienting them to the simulator and its capabilities and limitations if you are using one (in general, the mannequin does not need to demonstrate vital signs or the physiology as the goal of the drill is to go through process more than clinical care.) Then, the Simulation Facilitator will explain the following:

- Emphasize that the drill is meant for training and practicing / reviewing current protocols and it is not a test.
- Treat the simulator or simulated patient as the team would treat a real patient.
- If the team needs additional supplies or instruments, they should actually go and obtain them.
- **Because of the significant potential for shortages of PPE, when running the simulations it is recommended that the team place a simulated mask* on the simulated "patient" and patient family member but all other physician and health care professional PPE and donning/doffing procedures be discussed rather than actually done in order to maintain supplies for real cases.**
- Call for assistance and other health care professionals and inform supervisors/infectious disease service as they would in a real situation, however, make sure they inform anyone they call that this is a drill and not a real patient.

**For purposes of the simulation and to save valuable PPE resources, use a substitute such as a bandana or cloth in lieu of a mask on the simulated patient.*

3.0 Basic Scenario Management and Tips

Beginning the Simulation Scenario:

- After you have conducted your pre-simulation briefing/orientation, bring the simulator or simulated patient to the initial triage area.
- At this point, the person playing the role of the patient/family member should tell the person at the triage area about the patient's presenting symptoms. The screener should ask questions regarding potential exposure/risk factors for COVID-19 and then take appropriate actions when the patient screens positive.
- The scenario should end when the team has done the following:
    - Isolated the patient and described appropriate PPE use
    - Performed an initial assessment of the patient
    - Transport patient to unit/room (if they present to a screening location rather than ER)
    - Notified supervisor / infection control staff of the patient and suspicion of COVID-19 infection

4.0 Case Scenarios / Family Member & Facilitator Roles

Mrs. Pam Demik is a 31-year-old G3P2002 at 37+3wks gestation who presents with two days of fevers accompanied by a cough and worsening shortness of breath. She reports that her sister that lives with her returned from travel to Italy about 10 days ago but that she has not been sick.

The patient reports regular uterine contractions every 5 minutes apart for the past 3 hours. She denies any vaginal bleeding but thinks that her water may have broken about an hour ago.

Patient Information:

- No other significant past medical history
- Her pregnancy has been uncomplicated to date
- She has no known drug allergies
- Her last two pregnancies resulted in term vaginal deliveries without complications
- She last saw her primary obstetrician 3 days ago and she says that her cervix was already 3cm dilated at that time.

Family Member/Patient Instructions: The family member will speak for the simulator if a mannequin is used and explain their history based on the scenario chosen. You can provide the patient's history as above and add in details as appropriate.

The patient or family member should emphasize painful contractions occurring every 3-5 minutes. This is meant to help push the scenario to where the team understands the patient may need to be delivered and taken to a location where that can be safely accomplished.

Simulation Facilitator Instructions: You will help guide the team through the scenario and provide information on physical findings and vital signs. There will be no laboratory data available during the simulation. When the care team does check vital signs and performs a physical examination, you can provide them with the following information:

Vital Signs	Physical Examination
• Pulse: 110bpm • Blood Pressure: 120/70 • PulseOx: 99% on room air • Temp: 101.3F • FHRT*: 170s with moderate variability and accelerations noted • TOCO*: Regular uterine contractions every 4 minutes	• HEENT: PERRL, oropharynx with mild erythema of oropharynx, + shoddy cervical lymphadenopathy • Ears: TM clear, mobile • Lungs: Bilateral wheezes heard bilateral lower lobes • Cardiac: Tachycardia with no murmurs • Abdomen: Soft, gravid, NTTP • Extremities: WNL • Cervix^: 100/6/-1 VTX

*Only provide this information if they put fetal monitors on the patient
^Only provide this information if they ask to check cervix

5.0 Case Flow/Algorithm with completion criteria:

Simulation facilitator will introduce the scenario to the team and then bring the simulated patient to the initial triage area. The healthcare team should then assess the patient and call for assistance

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Initial clinician interviews/screens patient / Patient screens positive for possible COVID-19 infection

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The team should place a mask on the patient and family member and place them in an appropriate isolation room / location

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Simulation Facilitator will ask team members to verbally discuss appropriate PPE

Care team should verbalize that they are alerting supervisor / infection control and be able to find the correct numbers to call

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Simulation Facilitator provides history / vital signs/ physical findings for scenario

After vital signs obtained and patient moved to isolation, have team members leave patient room and discuss removal of PPE

Care team should contact Labor and Delivery staff and transport patient (if patient does not present directly to Labor and Delivery)

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Scenario ends when the team has done the following:

- Isolated and evaluated the patient
- Discussed proper PPE donning/doffing
- Informed supervisor/infectious disease team of patient
- Transported the patient to Labor and Delivery (if presents to other location first)
- Reviewed plans for initial evaluation / disposition

At the end of the scenario, CLEARLY STATE THAT THE SIMULATION IS OVER and then gather the team and do the following:

- Go through the general evaluation checklist
- Review current institution COVID-19 protocols
- Record areas to review/improve

Simulation Review Form

Criteria & Instructions

Place a ✓ in the box next to the skill step the participants complete successfully. After completing the simulation, review all steps and practice any that were not done correctly.

If facilities/equipment/systems are identified, further remediation is required, document the plan below.

	Done Well	Delayed or Incompletely / Incorrectly Done	Not Done
Initial Care			
Recognizes patient is at risk for COVID-19 infection with screening			
Initial Infection Control - When a patient suspected to have a high-consequence infectious disease is identified, *gives the person and family member a facemask.*			
Isolate – Immediately moves the patient away from other people and to a room (negative pressure room preferably) and closes the door.			
Recognizes patient is in labor and requires admission			
Transports patient to Labor and Delivery or designated area through prearranged route to minimize exposure to other patients/health care professionals			
Informs Key Personnel - Notifies the Nursing Supervisor and Infection Control Department of patient			
Initiates efforts to limit number/frequency of personnel that enter the room and restricts visitors			
Creates room log to document all personnel entering/exiting room.			
PPE			
Describes necessary PPE and donning process / procedure			
Able to **locate** appropriate PPE supplies			
Evaluation and Disposition			
Discusses patient case and makes decision regarding COVID-19 testing			

Summary/Lessons Learned

Review and Comment on the following areas:

Equipment Availability (PPE and other supplies):

Facilities Issues Identified:

Other Issues:

Simulation #2

Obstetric Patient with Suspected Coronavirus (COVID-19) Patient in Labor Who Progresses to Spontaneous Vaginal Delivery

Simulation #2: Obstetric patient with suspected Coronavirus (COVID-19) patient in labor who progresses to have a spontaneous vaginal delivery

Learning Objectives

By practicing this scenario, members of an interdisciplinary care team should be able to do the following:

- Recognize risk factors for infection with COVID-19
- Demonstrate appropriate triage, isolation and describe PPE use for patients with suspected COVID-19 infection in labor
- Explain points of care for patient in active labor to decrease risk of exposure to other patients/clinicians
- Explain institutional policy and provide correct contact information for supervisor/infection control staff
- Describe current policy recommendations with regards to care of patient in labor and COVID-19 precautions

Planned Completion Points

In order to successfully complete this scenario, the care team should do the following:

- Recognize the patient as having risk factors for COVID-19
- Isolate the patient in labor and delivery unit and describe appropriate PPE use for all designated healthcare professionals who enter the room
- Describe institutional management of a patient in labor with suspected COVID-19 infection (maternal vitals sign monitoring, fetal heart monitoring, fluid management, pain management)
- Describe institutional management of spontaneous vaginal delivery of a patient with suspected COVID-19 infection (appropriate PPE use for delivery personnel, prevention of needle-stick injuries, perineal laceration repair, timed cord-clamping, initial assessment/isolation of newborn, prevention of postpartum hemorrhage)
- Describe institutional management of postpartum care for a patient with suspected COVID-19 infection

Expected Duration of Exercise

Approximately 40 minutes (20 minutes for simulation; 20 minutes for debriefing)

1.0 Simulation #2 Setup

- **Simulators to be used:** Any full body simulator can be used for this simulation. Hybrid simulation may be performed with a birthing torso or task trainer and a real person to act as the patient (we recommend clearly informing all observers/other patients of the drill so as to prevent any misunderstanding or concerns)

- **Room Setup:** Negative pressure labor and delivery room (as available) or LDR with door closed with institutional equipment.

- **Simulator Setup:** The simulator/simulated person should be in a labor and delivery bed with fetal and toco external monitoring belts on, IV taped to arm. Other props include epidural pump, emesis basin, labor and delivery instrument table set up.

- **Vital Signs:** When the team takes vital signs with their equipment, the simulation facilitator will provide these from the scenario directions. Fetal monitoring may be displayed on a screen or printed for the team to review.

- **Simulation Pre-Brief:** Gather the care team together and perform the Pre-Simulation Briefing or Orientation.

2.0 Pre-Simulation Briefing/Orientation:

Prior to the simulation, you may brief the team on the drill. Begin by orienting them to the simulator and its capabilities and limitations. Then, the Simulation Facilitator will explain the following:

- Emphasize that the drill is meant for training and practicing / reviewing current protocols and it is not a test.
- Treat the simulator or simulated patient as they would a real patient.
- If the team needs additional supplies or instruments, they should actually go and obtain them.
- Because of the significant potential for shortages of PPE, when running the simulations it is recommended that the team place a mask on the simulated “patient” but all other health care professional PPE and donning/doffing procedures be discussed rather than actually done in order to maintain supplies for real cases.
- Call for assistance and other health care professionals and inform supervisors/infectious disease service as they would in a real situation, however, make sure they inform anyone they call that this is a drill and not a real patient.

3.0 Basic Scenario Management and Tips

Beginning the Simulation Scenario:

After you have conducted your pre-simulation briefing/orientation, bring the simulator/simulated patient to the labor and delivery room.

At this point, the person playing the role of the patient/family member should tell the person in labor and delivery that they are feeling painful contractions and the following should happen:

- The patient should request pain management.
- The patient should complain of rectal pressure and start pushing.
- The labor and delivery team should respond to the impending delivery and simulate donning appropriate PPE.
- The labor and delivery team should perform the delivery to minimize needle-stick injuries and healthcare personnel exposure.

The scenario should end when the team has done the following:

- Completed a normal spontaneous vaginal delivery
- Performed cord-clamping based on institutional guidelines
- Handed off the baby to the NICU team (at least 6 feet away from the patient)
- Performed appropriate steps to actively manage the third stage and prevent a PPH
- Performed routine postpartum care
- Instructed the patient about breastfeeding guidelines
- Notified supervisor / infection control staff of the patient transfer to postpartum isolation unit and suspicion of COVID-19 infection
- Transported the patient to the postpartum care isolation unit using appropriate transport precautions

4.0 Case Scenarios / Family Member & Facilitator Roles

Mrs. Cora Viris is a 25y/o G2P1001 at 39+2wks gestation who presented with two days of fevers accompanied by a cough and worsening shortness of breath. She had family visiting from Seattle over the past week and said one of them had a fever as well. She screened positive for possible COVID-19 infection and was admitted to labor and delivery for labor management.

The patient reports regular uterine contractions every 3-4 minutes apart for the past 6 hours and she thinks that her water just broke.

Patient Information:

- The patient has no other significant past medical history
- Her pregnancy has been uncomplicated to date
- She has no known drug allergies
- Her last two pregnancies resulted in a term vaginal delivery without complications
- She last cervical examination demonstrated that she was 5cm dilated.

Family Member/Patient Instructions: The family member will speak for the simulator if a mannequin is used and explain their history based on the scenario chosen. You can provide the patient's history as above and add details, as appropriate.

The patient or family member should emphasize painful contractions occurring every 3–4 minutes. The patient or family member should ask for an epidural or pain control. As the care team assemble, the patient or family member should state that rectal pressure is being felt and then start pushing. A baby will be delivered either by the mannequin or push the baby through the task trainer.

The patient/family member should ask to see the baby.

The patient/family member should ask if she can breastfeed the baby.

Simulation Facilitator Instructions: You will help guide the team through the scenario and provide information on physical findings and vital signs. There will be no laboratory data available during the simulation. When the care team does check vital signs and performs a physical examination, you can provide them with the following information:

Vital Signs	Physical Examination
• Pulse: 120bpm • Blood Pressure: 110/74 • PulseOx: 99% on room air • Temp: 101.3F • FHRT: 170s with moderate variability and accelerations noted • TOCO: Regular uterine contractions every 3 minutes	• HEENT: PERRL, oropharynx with mild erythema of oropharynx, + shoddy cervical lymphadenopathy • Lungs: Bilateral wheezes heard bilateral lower lobes • Cardiac: Tachycardia with no murmurs • Abdomen: Soft, gravid, NTTP • Extremities: WNL • Cervix: C/C/0 station when checked

Simulation #2: Obstetric patient with suspected Coronavirus (COVID-19) in labor who progresses to have a spontaneous vaginal delivery

5.0 Case Flow/Algorithm with completion criteria:

Simulation facilitator will introduce the scenario/vitals/physical findings to the team outside the labor and delivery room. The healthcare team should then discuss* appropriate PPE to care for the patient (one nurse and one OB clinician)

***(In an attempt to conserve PPE, Care Team may just describe rather than don PPE)**

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The simulated patient and family member should both already have masks on and are in negative pressure labor and delivery room

Care team should verbalize that they are alerting supervisor / infection control and be able to find the correct numbers to call

↓

Care team should proceed with routine labor and delivery care but minimize risks for contact with body fluids and needle-stick exposure

Simulation Facilitator provides maternal / fetal vital signs

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Care team should consult anesthesia regarding the use of an epidural or PCA pump for pain management (they will not have time to place during the scenario but should be consulted)

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NICU team should arrive for delivery, receive an SBAR, discuss appropriate PPE and prepare to receive infant with equipment at least 6 feet away

↓

Patient begins pushing and Care team proceeds with normal spontaneous vaginal delivery and performs cord clamping per institutional policy and hands infant to baby care team/NICU

*Patient asks if she can breastfeed at this time.

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Care team performs active management of third stage to prevent postpartum hemorrhage (may add an atonic uterus requiring management at this time)

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Baby care/NICU team proceeds with institutional policy on transfer of suspected COVID-19 exposed infant

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Care team prepares for and transfers mother to where she will recover postpartum and notify supervisor/infection control

Scenario ends when the team has done the following:

- Discussed proper PPE donning/doffing
- Successfully performed normal spontaneous delivery, minimizing risk of exposure to healthcare team
- Transferred care of newborn to NICU team
- Actively managed third stage
- Informed supervisor/infectious disease team of postpartum patient
- Transported the patient to postpartum care isolation unit
- Reviewed plans for transfer of care/disposition

At the end of the scenario, CLEARLY STATE THAT THE SIMULATION IS OVER and then gather the team and do the following:

- Go through the general evaluation checklist
- Review current institution COVID-19 protocols
- Record areas to review/improve

Simulation #2: Obstetric patient with suspected Coronavirus (COVID-19) in labor who progresses to have a spontaneous vaginal delivery

Simulation Review Form

Criteria & Instructions

Place a ✓ in the box next to the skill step the participants complete successfully. After completing the simulation, review all steps and practice any that were not done correctly.

If facilities/equipment/systems are identified, further remediation is required, document the plan below.

	Done Well	Delayed or Incompletely / Incorrectly Done	Not Done
Initial Care			
Isolate – Patient is in designated room (negative pressure room preferably) and door remains closed whenever possible			
Inform – Notifies the Nursing Supervisor and Infection Control Department.			
Initiates efforts to limit number/frequency of personnel that enter the room and restricts visitors			
Creates room log to document all personnel entering/exiting room.			
PPE			
Describes necessary PPE and donning process / procedure			
Able to **locate** appropriate PPE supplies			
Management			
Recognizes patient is in labor and requires management for pain			
Contacts appropriate staff and informs them of patient's condition (anesthesia / NICU)			
Provides appropriate labor management while minimizing invasive procedures (IV access, uterine and fetal external monitoring)			
Monitors patient for signs of maternal sepsis and worsening respiratory symptoms			
Informs NICU team to prepare for suspected COVID-19 exposed infant (provides SBAR)			
Delivers patient by minimizing risk of exposure during cord clamping and handoff of infant			
Actively manages third stage to prevent postpartum hemorrhage			
Discusses need to separate infant and pumping/breastfeeding recommendations with patient/family			
Informs postpartum unit and infection control of new postpartum patient with suspected COVD-19			
Transports patient to postpartum care isolation unit (if not recovering in same room) through predetermined route to minimize exposure to other personnel.			

Summary/Lessons Learned

Review and Comment on the following areas:

Equipment Availability:

Facilities Issues Identified:

Other Issues:

Simulation #3

Suspected Coronavirus (COVID-19) obstetric patient in labor who requires cesarean delivery

Simulation #3: Suspected Coronavirus (COVID-19) obstetric patient in labor who requires cesarean delivery

Learning Objectives

By practicing this scenario, members of an interdisciplinary care team should be able to do the following:

- Identify risk factors for infection with COVID-19
- Demonstrate appropriate triage and isolation
- Describe personal protective equipment (PPE) use for patients with suspected COVID-19 infection who require cesarean delivery
- Explain points of care to decrease risk of exposure to other patients/healthcare providers
- Explain institutional policy and provide correct contact information for supervisor and infection control staff
- Describe current policy recommendations with regards to care of patient for cesarean delivery and COVID-19 precautions

Planned Completion Points

In order to successfully complete this scenario, the care team should do the following:

- Recognize the patient as having risk factors for COVID-19
- Isolate the patient in labor and delivery unit and describe appropriate PPE use for all designated healthcare providers who enter room
- Describe institutional management of a patient requiring cesarean delivery with suspected COVID-19 infection (maternal vitals sign monitoring, fetal heart monitoring, fluid management, pain management)
- Describe institutionally appropriate PPE use for delivery personnel, prevention of needle-stick injuries, timed cord-clamping, initial assessment/isolation of newborn, prevention of postpartum hemorrhage.
- Describe institutional management of postoperative and postpartum care for a patient with suspected COVID-19 infection

Expected Duration of Exercise: Approximately 40 minutes (20 minutes for simulation; 20 minutes for debriefing)

1.0 Simulation #3 Setup

- **Simulators:** Any full body simulator can be used for this simulation. Hybrid simulation may be performed with a wearable trainer or belly pillow and a real person to act as the patient (we recommend clearly informing all observers/other patients of the drill so as to prevent any misunderstanding or concerns)

- **Room Setup:** Operating room (negative pressure as available) with institutional equipment. Designated donning and doffing areas per institution.

- **Simulator Setup:** The simulator/simulated person should be transferred to the operating room per institutional guidelines. Props include IV taped to arm, O2 nasal cannula on, epidural pump set up, cesarean delivery table set up.

- **Healthcare Providers:** To conserve PPE, all team members discuss use of appropriate PPE including N95 masks.

- **Vital Signs:** When the team takes vital signs with their equipment, the simulation facilitator will provide these from the scenario directions. Fetal monitoring may be displayed on a screen or printed for the team to review.

- **Simulation Pre-Brief:** Gather the care team together and perform the Pre-Simulation Briefing or Orientation.

2.0 Pre-Simulation Briefing/Orientation

Prior to the simulation, you may brief the team on the drill. Begin by orienting them to the simulator and its capabilities and limitations. Then, the Simulation Facilitator will explain the following:

- Emphasize that the drill is meant for training and practicing / reviewing current protocols and it is not a test.
- Treat the simulator or simulated patient as they would a real patient.
- If the team needs additional supplies or instruments, they should go and obtain them.
- Because of the significant potential for shortages of PPE, when running the simulations it is recommended that the team place a mask on the simulated “patient” but all other provider PPE and donning/doffing procedures be discussed rather than actually done in order to maintain supplies for real cases.
- Call for assistance and other providers and inform supervisors/infectious disease service as they would in a real situation, however, make sure they inform anyone they call that this is a drill and not a real patient.

3.0 Basic Scenario Management and Tips

Beginning the Simulation Scenario: After you have conducted your pre-simulation briefing/orientation, bring the simulator/simulated patient to the operating room.

At this point, the person playing the role of the obstetric team leader should announce that a non-reassuring fetal heart tracing warrants a cesarean delivery and the following should happen:

1. The obstetric and anesthetist teams should discuss the level of urgency of cesarean delivery to optimize the ability for regional anesthesia.
2. The anesthesia team should simulate donning appropriate PPE outside the OR then prepare their equipment in the OR.
3. The scrub nurses and surgical assists should simulate donning appropriate PPE outside the OR then prepare their setup in the OR.
4. The NICU team should simulate donning appropriate PPE outside the OR then prepare their setup inside for receiving and initial resuscitation, and outside the OR for transfer of the newborn.
5. The labor and delivery team should transfer the patient to the OR team simulating appropriate PPE donning then doffing.
6. The anesthesia team should perform the appropriate regional or general anesthesia.
7. The OR team should perform the cesarean delivery to minimize needle-stick injuries and healthcare personnel exposure.
8. The OR team should not perform delayed cord clamping and hand off the newborn to the pediatric / NICU team to minimize healthcare personnel exposure.
9. The NICU team should perform initial assessment and resuscitation of the newborn then transfer the newborn to the NICU minimizing healthcare personnel exposure.
10. The NICU team should simulate/discuss doffing and donning of new PPE outside the OR.
11. The OR team should pro-actively manage the third stage of labor to minimize the risks of postpartum hemorrhage and need for blood products.
12. The scrub nurses should transfer specimens (placenta, etc.) to the lab minimizing healthcare personnel exposure per institutional protocol.
13. The post-anesthesia care unit should simulate/discuss donning of appropriate PPE.
14. Patient should be recovered in the operating room or in a location designated by the institution to minimize healthcare personnel exposure.
15. The Post-Anesthesia Care Team should transfer the patient minimizing risk of exposure to other patients and personnel (designated route and location per institution).
16. The OR team and Anesthesia team should simulate doffing of PPE.

The scenario should end when the team has done the following:

1. Completed the cesarean delivery
2. Handed off the newborn to the NICU team
3. NICU team has transferred the newborn to the NICU
4. Performed appropriate steps to actively manage the third stage and prevent a PPH
5. Handed off the specimens (placenta, etc.) through institutional protocol
6. Transported the patient to the post-anesthesia care isolation unit using appropriate transport precautions

4.0 Case Scenarios / Family Member and Facilitator Roles

Mrs. Cora Viris is a 25y/o G2P1001 at 39+2wks gestation who presented with two days of fevers accompanied by a cough and worsening shortness of breath. She screened positive for possible COVID-19 infection and was admitted to labor and delivery for labor management. The fetal heart tracing has demonstrated persistent tachycardia, absent variability and recurrent late decelerations for the past 60 minutes and she has been counseled for a cesarean delivery.

Patient Information:

- The patient has no other significant past medical history
- Her pregnancy has been uncomplicated to date
- She has no known drug allergies
- Her last two pregnancies resulted in term vaginal deliveries without complications
- Her last cervical examination demonstrated she was 5cm dilated.

Family Member/Patient Instructions: The family member will speak for the simulator if a mannequin is used and explain their history based on the scenario chosen. You can provide the patient's history as above and add in details as appropriate.

The patient or family member should emphasize that she is fine having a cesarean section and understands the indication for this (persistent category 3 FHRT). The patient or family member should ask if they may be present during the cesarean delivery and also if they can see the baby once born.

Simulation Facilitator Instructions: You will help guide the team through the scenario and provide information on physical findings and vital signs. There will be no laboratory data available during the simulation. When the care team does check vital signs and performs a physical exam, you can provide them with the information below:

Vital Signs	Physical Exam
Pulse: 120bpm Blood Pressure: 110/74 PulseOx: 99% on room air Temp: 101.3F FHRT: 170's with absent variability and recurrent late decelerations, no accelerations noted TOCO: Regular uterine contractions every 3 minutes	HEENT: PERRL, oropharynx with mild erythema of oropharynx, + shoddy cervical lymphadenopathy Lungs: Bilateral wheezes heard bilateral lower lobes Cardiac: Tachycardia with no murmurs Abdomen: Soft, gravid, NTTP Extremities: WNL Cervix: 5cm/100%/0 station when checked

5.0 Case Flow/Algorithm with completion criteria

Simulation facilitator will introduce the scenario/vitals/physical findings to the team outside the operating room. The healthcare team should then discuss* appropriate PPE to care for the patient (labor and delivery team, OR team, anesthesia team, NICU team, PACU team)

***(In an attempt to conserve PPE, Care Team may just describe rather than don PPE)**

↓

The simulated patient and family member (if support person allowed) should both already have masks on and be in a labor and delivery room (negative pressure if available)

Labor and Delivery team should verbalize that they are alerting OR team of the need for cesarean delivery and be able to find the correct numbers to call

↓

Labor and Delivery team should discuss with Anesthesia team the indication and opportunity for regional anesthesia

Labor and Delivery team should notify NICU/pediatric team and PACU team of the need for cesarean delivery and be able to find the correct numbers to call

↓

OR team, Anesthesia team and NICU team simulate appropriate PPE outside OR

OR team, Anesthesia team and NICU team prepare equipment in OR (and outside OR for NICU)

PACU team prepares equipment and simulates PPE for patient transfer after cesarean delivery

↓

Labor and Delivery team transfers patient to OR team minimizing exposure to other patients and healthcare personnel

Labor and Delivery team simulates doffing of PPE in designated area

↓

Anesthesia team provides regional or general anesthesia based on scenario (if general anesthesia then the rest of the team should exit the room during intubation). This will also occur at extubation.

↓

OR team discusses / simulates cesarean delivery, minimizing risks for contact with body fluids

and needle-stick exposure

↓

OR team hands off newborn to NICU team in OR minimizing risks for contact with body fluids

↓

NICU team performs initial assessment and resuscitation of newborn

Simulation #3: Suspected Coronavirus (COVID-19) obstetric patient in labor who requires cesarean delivery

↓

NICU team transfers newborn to isolette and exits OR
NICU team simulates / discusses doffing and then donning new PPE in designated area
NICU team transports newborn to NICU minimizing exposure to other patients and healthcare personnel

↓

OR team performs active management of third stage to prevent postpartum hemorrhage and blood product utilization (may add an atonic uterus requiring management at this time if desired)

↓

OR team hands off specimens (placenta, etc.) to lab based on institutional protocol

↓

OR team notifies PACU team to prepare to receive patient

PACU team simulates donning of appropriate PPE

↓

OR team recovers patient in OR with PACU team or at institutionally designated location, minimizing risks of exposure to other patients and healthcare personnel

↓

OR team simulates doffing of PPE in designated area

Anesthesia team simulates doffing of PPE in designated area

Scenario ends when the team has done the following:

- Discussed proper PPE donning/doffing
- Successfully performed cesarean delivery, minimizing risk of exposure to healthcare team
- Transferred care of newborn to NICU team
- Actively managed third stage
- Informed supervisor/infectious disease team of post-anesthesia care patient
- Transported the patient to post-anesthesia care isolation unit or remains in OR per institutional protocol
- Reviewed plans for each step of transfer of care of patient, newborn and specimens

At the end of the scenario, CLEARLY STATE THAT THE SIMULATION IS OVER and then gather the team and do the following:

- Go through the general evaluation checklist
- Review current institution COVID-19 protocols for cesarean delivery, Anesthesia, NICU and PACU care
- Record areas to review/improve patient flow and discuss proper donning and doffing of PPE

Simulation Review Form

Criteria and Instructions

Place a ✓ in the box next to the skill step the participants complete successfully. After completing the simulation, review all steps and practice any that were not done correctly. If facilities/equipment/systems are identified, further remediation is required, document the plan below.

	Done Well	Delayed or Incompletely / Incorrectly Done	Not Done
Pre-Op			
Isolate – Patient is in designated room (negative pressure room preferably) and door remains closed whenever possible			
Inform – Notifies the OR, Anesthesia, NICU and PACU teams of need for cesarean delivery (regional or general anesthesia discussed)			
Initiates efforts to limit number/frequency of personnel requiring PPE and exposure to other patients and personnel			
Creates room log to document all personnel entering/exiting OR			
PPE			
Describes necessary PPE and donning process / procedure			
Able to **locate** appropriate PPE supplies and designated areas for donning and doffing of each team outside OR			
Intra-Op Management			
Transfers patient to OR team minimizing exposure to others			
Provides appropriate anesthesia while minimizing risk for aerosolized particles (regional, nasal cannula, low flow oxygen)			
Performs / Reviews cesarean delivery procedure and how to minimize risks for contact with body fluids and needle-stick exposure			
Monitors patient for signs of maternal sepsis and worsening respiratory symptoms			
Transfers newborn to NICU team minimizing risks for contact with body fluids			
NICU team **Performs** neonatal assessment and resuscitation followed by transfer to NICU, minimizing exposure risk to others			
Actively manages third stage to prevent postpartum hemorrhage			
Hands-off specimens (placenta, etc.) per institutional protocol			
Post-Op Management			
Informs and Transfers patient to post-anesthesia care team			
Patient **Recovers** in OR or is **Transported** to post-anesthesia care isolation unit through predetermined route to minimize exposure to other personnel. Team will exit with extubation as well as intubation, extubation being the most aerosolizing event.			

Summary and Lessons Learned

Review and Comment on the following areas:

Equipment Availability:

Facilities Issues Identified:

Other Issues:

Simulation #4

Obstetric patient with suspected Coronavirus (COVID-19) in labor with worsening respiratory status requiring transfer to ICU then vaginal delivery in ICU

Simulation #4: Suspected Coronavirus (COVID-19) obstetric patient in labor with worsening clinical status and requires transfer to ICU prior to delivery.

Learning Objectives

By practicing this scenario, members of an interdisciplinary care team should be able to do the following:

- Describe personal protective equipment (PPE) use for patients with suspected COVID-19 infection in labor and during transport.
- Explain points of care for patients in active labor and in the intensive care unit (ICU) to decrease risk of exposure to other patients/healthcare providers
- Recognize worsening respiratory status and the need for transfer to the ICU environment.
- Explain institutional policy and provide correct contact information for supervisor and consultation of critical care team.
- Explain how to transport patient to the appropriate location or room, by specified route, to decrease risk of exposure to other patients/healthcare professionals.
- Describe current institutional policy recommendations with regards to management of a pregnant laboring patient in the ICU and COVID-19 precautions
- Explain indications for proceeding with vaginal delivery versus cesarean delivery in a pregnant patient requiring ICU care.

Planned Completion Points

In order to successfully complete this scenario, the care team should do the following:

- Describe appropriate PPE use for all designated healthcare providers who enter the patient's room.
- Recognize the patient's clinical status is worsening and that consultation with the critical care team and transfer to the ICU is necessary.
- Provide temporizing measures to support maternal oxygenation.
- Transport patient to the ICU and describe institutional appropriate PPE use for patient transport.
- Describe institutional management of a patient in labor while in the ICU delivery with suspected COVID-19 infection (maternal vitals sign monitoring, fetal heart monitoring, fluid management, and pain management).
- Describe institutional appropriate PPE use for delivery personnel, prevention of needle-stick injuries, timed cord-clamping, initial assessment/isolation of newborn, prevention of postpartum hemorrhage.

Expected Duration of Exercise: Approximately 50 minutes (30 minutes for simulation; 20 minutes for debriefing)

Simulation #4: Obstetric patient with suspected Coronavirus (COVID-19) in labor with worsening respiratory status requiring transfer to ICU then vaginal delivery in ICU

1.0 Simulation #4 Setup

- **Simulators:** Any full body simulator can be used for this simulation. Hybrid simulation may be performed with a wearable trainer or belly pillow and a real person to act as the patient (we recommend clearly informing all observers/other patients of the drill so as to prevent any misunderstanding or concerns)

- **Room Setup:**
  1. Negative pressure labor and delivery room (as available) or LDR with door closed with institutional equipment.
  2. ICU room with institutional equipment for both an emergency cesarean section or a vaginal delivery. Designated donning and doffing areas per institution.

- **Simulator Setup:** The simulator/simulated person should be in a labor and delivery bed with external fetal and toco monitoring belts on, IV taped to arm, and epidural catheter taped to back and epidural pump running. Other props include a nasal cannula and/or face mask and delivery instrument table in the room.

- **Healthcare Providers:** To conserve PPE, all team members discuss use of appropriate PPE including N95 masks.

- **Vital Signs:** When the team takes vital signs with their equipment, the simulation facilitator will provide these from the scenario directions. Fetal monitoring may be displayed on a screen or printed for the team to review.

- **Simulation Pre-Brief:** Gather the care team together and perform the Pre-Simulation Briefing or Orientation.

2.0 Pre-Simulation Briefing/Orientation

Prior to the simulation, you may brief the team on the drill. Begin by orienting them to the simulator and its capabilities and limitations. Then, the Simulation Facilitator will explain the following:

- Emphasize that the drill is meant for training and practicing / reviewing current protocols and it is not a test.
- Treat the simulator or simulated patient as they would a real patient.
- If the team needs additional supplies or instruments, they should go and obtain them.
- **Because of the significant potential for shortages of PPE, when running the simulation it is recommended that the team place a mask on the simulated "patient" but all other provider PPE and donning/doffing procedures be discussed rather than actually done in order to maintain supplies for real cases.**

- Call for assistance and inform supervisors/infectious disease service/critical care team as they would in a real situation, however, make sure they inform anyone they call that this is a drill and not a real patient.

3.0 Basic Scenario Management and Tips

Beginning the Simulation Scenario: After you have conducted your pre-simulation briefing/orientation, the patient is in the labor and delivery room. At this point, the person playing the role of the patient should call out to the nursing station to announce that they are feeling short of breath:

17. The obstetric team should simulate donning appropriate PPE outside the L&D room prior to entering.
18. The obstetric team should reassess the patient's vital signs and auscultate the heart and lungs.
19. Maternal hypoxia should be identified, and management discussed with supplemental oxygen, titrated as needed to maintain maternal O2 saturations >95%.
20. Discuss with obstetric team, supervisor/ infection control, and critical care team need to increase level of care due to concern for impending respiratory failure.
21. Transfer patient to the Intensive Care Unit with focus on institutional practices for safe transport of patient with suspected COVID-19 infection.
22. Demonstrate appropriate doffing and donning of PPE per institutional practices by all personnel throughout the transfer process.
23. Consultation between critical care team and obstetric team regarding maternal status and indications for cesarean versus vaginal delivery.
24. The patient should complain of constant rectal pressure.
25. The labor and delivery team should respond to the impending delivery, simulate donning appropriate PPE, and prepare for a vaginal delivery.
26. The NICU team should arrive for the delivery, simulate donning appropriate PPE outside the room, prepare their setup at least 6 feet from the patient as able, or per institutional guidelines.
27. The labor and delivery team should perform a vaginal delivery and minimize needle-stick injuries and healthcare personnel exposure.
28. Unless institutional guidelines state otherwise, the obstetric team should not perform delayed cord clamping and hand off the newborn to the pediatric / NICU team to minimize healthcare personnel exposure.
29. The obstetric team should pro-actively manage the third stage of labor to minimize the risks of postpartum hemorrhage and need for blood products.

The scenario should end when the team has done the following:

7. Recognized the worsening maternal status and need for higher level of care
8. Transferred the patient to the ICU
9. Discussed ideal/preferred delivery route with Critical Care team and Obstetric team
10. Performed a vaginal delivery
11. Passed the neonate off to the NICU team
12. Performed appropriate steps to actively manage the third stage and prevent a PPH
13. NICU team has transferred suspected COVID exposed infant per institutional policy.

4.0 Case Scenarios / Family Member and Facilitator Roles

Simulation #4: Obstetric patient with suspected Coronavirus (COVID-19) in labor with worsening respiratory status requiring transfer to ICU then vaginal delivery in ICU

Mrs. Cora Vida is a 29y/o G4P3003 at 39+2wks gestation who presented with two days of fevers accompanied by a cough and worsening shortness of breath. She screened positive for possible COVID-19 infection and was admitted to labor and delivery for labor management.

Patient Information:

- The patient has no other significant past medical history
- Her pregnancy has been uncomplicated to date
- She has no known drug allergies
- Her last three pregnancies resulted in term vaginal deliveries without complications
- Her last cervical examination demonstrated she was 5cm dilated.
- Her family member screened negative for COVID like illness

Family Member/Patient Instructions: The family member will speak for the simulator if a mannequin is used and explain their history based on the scenario chosen. You can provide the patient's history as above and add in details as appropriate.

The patient or family member should emphasize that she is more short of breath and feels like she cannot get enough air.

After baby is born, patient should ask to see the baby.

Simulation Facilitator Instructions: You will help guide the team through the scenario and provide information on physical findings and vital signs. No laboratory tests or diagnostic imaging is available during this simulation. When the care team does check vital signs and performs a physical exam, you can provide them with the information below:

Vital Signs	Physical Exam
Pulse: 130bpm Blood Pressure: 125/74 PulseOx: 91% on room air, RR28 Temp: 101.3F FHRT: 170's with minimal variability and intermittent late decelerations, no accelerations noted TOCO: Regular uterine contractions every 2 minutes	Gen: alert and oriented, mild distress HEENT: PERRL, oropharynx with mild erythema of oropharynx, + shoddy cervical lymphadenopathy Lungs: Bilateral wheezes/rhonchi heard bilateral throughout all lung fields Cardiac: Tachycardia with no murmurs Abdomen: Soft, gravid, NTTP

	Extremities: WNL Cervix: 7cm/100%/0 station when checked

After placement of supplemental O2 via face mask at 6L: Pulse Ox improved to 96%. Work of breathing improved with no accessory muscle use. RR 24

After arrival to the ICU:

Vital Signs	Physical Exam
Pulse: 118bpm Blood Pressure: 115/74 PulseOx: 96% on 6L face mask; RR 24 Temp: 100.7F FHRT: 155's with minimal variability and no decelerations, no accelerations noted TOCO: Regular uterine contractions every 2 minutes	Gen: alert and oriented, no acute distress HEENT: PERRL, oropharynx with mild erythema of oropharynx, + shoddy cervical lymphadenopathy Lungs: Bilateral wheezes/rhonchi heard bilateral throughout all lung fields Cardiac: Tachycardia with no murmurs Abdomen: Soft, gravid, NTTP Extremities: WNL Cervix: 10cm/100%/+1 station when checked

Simulation #4: Obstetric patient with suspected Coronavirus (COVID-19) in labor with worsening respiratory status requiring transfer to ICU then vaginal delivery in ICU

5.0 Case Flow/Algorithm with completion criteria

Simulation facilitator will introduce the scenario/vitals/physical findings to the team outside the labor and delivery room. The healthcare team should then discuss* appropriate PPE to care for the patient (one nurse and one OB clinician)

***(In an attempt to conserve PPE, Care Team should just describe rather than don PPE)**

↓

The simulated patient and family member (if support person allowed) should both already have masks on and be in a labor and delivery room (negative pressure if available)

Care team should reassess the patient's vital signs and perform auscultation of the heart and lungs.

*Simulation facilitator provides maternal/fetal vital signs

↓

Supplemental O2 should be applied via nasal cannula or face mask and titrated up to maintain O2 saturations>95%.

*Simulation facilitator notifies team that saturations >95% have occurred at 6L.

↓

Care team notifies supervisor of need to consult critical care and transfer patient to the intensive care unit (ICU) due to acute worsening of respiratory status.

↓

Labor and delivery team doffs PPE prior to exiting the room, and dons appropriate PPE per institutional guidelines for transfer of the patient to the ICU, minimizing exposure to other patients and healthcare personnel

Labor and delivery and critical care team simulate doffing and donning of PPE in designated area

↓

Critical care team and labor and delivery team reassess maternal and fetal status on arrival to ICU.

↓

Critical care team and labor and delivery team discuss indications for cesarean section versus allowing a vaginal delivery.

The simulated patient or family member states she is feeling constant rectal pressure.

*Simulation facilitator provides updated cervical exam at this time.

↓

NICU team should arrive for delivery, receive an SBAR, discuss appropriate PPE and prepare to receive infant with equipment at least 6 feet away

↓

Patient begins pushing and Care Team proceeds with normal spontaneous vaginal delivery and, per institutional guidelines, performs cord clamping per institutional policy and hands infant to baby care team/NICU

↓

Baby care/NICU team proceeds with institutional policy on transfer of suspected COVID-19 exposed infant

↓

Care team performs active management of third stage to prevent postpartum hemorrhage (may add an atonic uterus requiring management at this time)

Scenario ends when the team has done the following:

- Discussed proper PPE donning/doffing
- Recognized worsening maternal status, and used supplemental O2 as a temporizing measure
- Consulted the critical care team and safely transferred the patient to the ICU
- Reviewed indications for emergent cesarean delivery in the ICU versus allowing a vaginal delivery.
- Had a spontaneous vaginal delivery in the ICU, minimizing risk of exposure to the healthcare team
- NICU team has transferred the infant out of the ICU room
- Actively managed the third stage

At the end of the scenario, CLEARLY STATE THAT THE SIMULATION IS OVER and then gather the team and do the following:

- Go through the general evaluation checklist
- Review current institution COVID-19 protocols for patient transfers to the ICU, and obstetric delivery and neonatal care protocols in the ICU.
- Record areas to review/improve patient flow and discuss proper donning and doffing of PPE

Simulation #4: Obstetric patient with suspected Coronavirus (COVID-19) in labor with worsening respiratory status requiring transfer to ICU then vaginal delivery in ICU

Simulation Review Form

Criteria and Instructions

Place a ✓ in the box next to the skill step the participants complete successfully. After completing the simulation, review all steps and practice any that were not done correctly. If facilities/equipment/systems are identified, further remediation is required, document the plan below.

	Done Well	Delayed or Incompletely / Incorrectly Done	Not Done
Initial Care			
Isolates Patient is in designated room (negative pressure room preferably) and door remains closed whenever possible			
Initiates efforts to limit number/frequency of personnel requiring PPE and exposure to other patients and personnel			
Creates room log to document all personnel entering/exiting room			
PPE			
Describes necessary PPE and donning process / procedure			
Able to **locate** appropriate PPE supplies and designated areas for donning and doffing of PPE			
Labor and Delivery Management			
Recognizes patient's respiratory status has changed			
Provides supplemental oxygen administration to maintain O2 saturations >95%.			
Contacts appropriate staff (supervisor, critical care team, NICU) to alert them of change in patient's condition and need for higher level of care.			
Transfers patient to ICU team minimizing exposure to others			
ICU Management			
Monitors patient for signs of worsening respiratory symptoms or maternal sepsis			
Reviews indications for emergency cesarean delivery versus allowing a vaginal delivery in the ICU with the critical care team			
Provides appropriate labor management while minimizing invasive procedures (IV access, uterine and fetal external monitoring)			
Informs NICU team to prepare for suspected COVID-19 exposed infant (provides SBAR)			
Delivers patient by minimizing risk of exposure during cord clamping and handoff of infant			
Actively **Manages** third stage to prevent postpartum hemorrhage			
Discusses need to separate infant and pumping/breastfeeding recommendations with patient/family			
Transfers infant out of the ICU minimizing exposure to others			

Summary and Lessons Learned

Review and Comment on the following areas:

Equipment Availability:

Facilities Issues Identified:

Other Issues:

Simulation #4: Obstetric patient with suspected Coronavirus (COVID-19) in labor with worsening respiratory status requiring transfer to ICU then vaginal delivery in ICU

Key Resources

Please go to this link to read and download relevant and up-to-date information on COVID-19:

American College of Obstetricians and Gynecologists. Novel coronavirus 2019 (COVID-19). ACOG Practice Advisory. Washington, DC: American College of Obstetricians and Gynecologists; 2020. Available at: https://www.acog.org/clinical/clinical-guidance/practice-advisory/articles/2020/03/novel-coronavirus-2019. Retrieved April 20, 2020.

Resources / Links: Frontline Screening Protocol Script Example

Background: At many of the hospitals, the personnel at the screening station may not have a clinical background. In these cases, it is important to provide them with a very clear script of exactly what to do when patients screen positive. This is an example of a screening script for obstetric patients.

Screening Point **Protocol for Obstetric Patients**

If a pregnant patient presents to the hospital entrance, ask her the normal COVID-19 screening questions.

If the pregnant patient states she is here to be seen on Labor and Delivery and she screens positive, please ask the patient and family member(s) to put on a mask and then complete the following 3 tasks:

1) Ask the following questions:

- What is your name?
- When is your due date?
- Are you having any contractions?
- Do you feel like you are leaking fluid or if your water broke?
- Are you having any vaginal bleeding?
- Who is your OB Doctor?

2) Call Labor and Delivery at *-***-**** and ask for the Charge Nurse and provide the following report:**

"This is the Hospital Main Entrance screening station. I have a pregnant patient with a due date of _____ who has screened positive for possible COVID-19 infection. Her name is _____.

She ***is/is not*** contracting

She ***does/does not*** think her water has broken

She ***is/is not having*** vaginal bleeding

I have given her a mask and she is here at the screening station. Please come and perform initial triage."

3) Call Security with the radio and notify them with the following script:

"This is the Main Entrance lobby screening station. I have a pregnant patient who has screened positive for possible COVID-19 infection. Labor and Delivery is coming to evaluate her here. Can you please bring the golf cart for potential transfer to the Emergency Department Decon Room for evaluation?

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ACOG Fellows and Members may visit www.acog.org/simulations download didactic lectures, checklists, and other simulation-based training materials.