

Evanston Hospital and Highland Park Obstetrics COVID-19 Workflow

General Guidelines

- Pregnant patients who have confirmed COVID-19 or who are Persons Under Investigation (PUIs) should notify the obstetric unit prior to arrival so the facility can make appropriate infection control preparations.
- At Highland Park (HP) LDRP, if COVID-19 or PUI patient is expected or presents at HP LDRP, attending physician should notify MFM on call. During the day, MFM will be on Evanston L&D (847-570-2222).
- Attending physicians caring for HP patients who are PUI or COVID-19 positive at HP, consult with EH MFM early to determine if potential transfer to EH may be appropriate. Decision to transfer from HP LDRP to EH will be made on an individual basis. MFM will communicate with EH charge nurse per current practice.

Before Patient Arrives

- Attending physician will request that patient drive themselves, park at the Women's Hospital entrance and remain in the vehicle until a staff member in appropriate PPE escorts them to L&D/LDRP
- Designate room for patient. Room G640 at EH and room 1356B at HP (the negative airflow rooms) are preferred.
- Notify the following people of expected patient, and assign care team (prefer Fit Tested RN):
 - Attending physician at both Evanston Hospital (EH) and Highland Park (HP) will call the COVID-19 hospitalist team pager 1870 at Evanston.
 - Notify Infection control: 9:00am – 5:00pm EH 772-2420 HPH 779-2624.
 - After 1700 and on weekends Evanston Hospital and Highland Park Hospital, will call operator and request that On Call Infection Preventionist be paged.
 - Screeners/Public Safety at Entrance
 - Charge Nurse
 - Primary Nurse
 - Attending (house staff/residents will not be asked to evaluate or care for known or suspected COVID-19 patients).
 - If patient is a service patient, Resource Attending Physician will care for COVID-19 patient without resident involvement. On call MFM will be available per current protocol.
 - At HP, the attending physician will consult HP hospitalist if needed.
 - If patient develops an oxygen requirement and/or new shortness of breath patient will be transferred to EH.
 - ISCU Charge Nurse or HP Pediatrician (ISCU/Pediatrician will attend all deliveries at EH)
 - OB Tech
 - Anesthesia
 - Housekeeping
 - Public Safety (EH only) – request that they keep patient in anteroom for staff to escort patient to L&D
 - Place stop sign on door. Signs kept at UC desk, and attached to this document.
 - Keep adjacent rooms available for additional COVID-19 patients.
 - G640 will alarm locally when negative pressure malfunctioning (ex: door is left open). Room is kept at neutral pressure until negative pressure is required.
- Obtain an isolation cart including the following supplies and place it outside of the patient room.
 - Hand gel if there is no dispenser on the wall outside the patient room.
 - Isolation gowns

- Green gloves
- Standard masks
- Disinfectant wipes
- Staff member's personal N95 and face shield in zip top bag for each care provider entering room.
 - N95 mask should be kept in a zip top bag – do not completely seal the bag. Face shield should be wiped prior to placing in a separate plastic bag after each use, and both bags should be kept in a large zip top bag with the staff member's name on it – do not completely seal outer zip top bag. Face shields and masks should be kept by each individual staff member. N95 masks can be reused until visibly soiled, torn, or does not pass the fit check test.
- See pink and green chart: “Admission of COVID/Respiratory Infection Patient” for appropriate PPE.
- Obtain PAPR if available, in case intubation is required. See attached perioperative workflow for PAPR use.
 - If a PAPR is not available, a N95 mask covered with a surgical mask will be allowed. The N95 mask must be reused (unless visibly soiled, torn, or no longer passes the fit-check).

Unexpected Patient

At time of registration, ask ALL patients AND support person presenting to L&D if they have the following symptoms: (patients may be screened at door. Check COVID-19 page on PULSE for updated screening criteria):

- Fever
OR
- Shortness of Breath
OR
- Had contact with a person confirmed for COVID-19
 - If “NO”, process/register as usual.
 - If “YES”
 - Hand patient and support person an isolation mask and ask them to put it on.
 - Instruct the patient to ensure the mask covers the nose and mouth and pinch the mask over the bridge of the nose.
 - Notify Charge Nurse immediately.
 - Move the patient and support person to a room (G640 at EH and 1356B at HP, due to presence of anteroom)
 - Do not allow patient to remain in waiting room.
 - Charge Nurse will assign a primary RN to immediately triage patient
 - Follow steps outlined in first section, “Before Patient Arrives”
 - See Pink and Green chart: “Admission of COVID/Respiratory Infection Patient” for appropriate PPE

Transportation of Persons with Suspected COVID-19 (Obstetrics):

From outside hospital

- Patients will be asked to wear a standard mask during transportation in the hospital and in an ambulance.
- Intra-facility transport will be limited to movements essential for patient care (e.g. from ED to ICU) through pre-defined routes. Superior Ambulance has agreed to provide transportation of these patients between facilities.
- Patients who drive themselves will be advised to enter at the Women's Hospital entrance at both EH and HP. See section “Upon Patient Arrival” below.

Within the hospital

- Movement of a suspect COVID-19 patient within the hospital should be minimized as far as possible
- The patient should wear a standard mask and be transported using the shortest route possible and to avoid public movement areas where possible.
- Transport will be done by the healthcare provider looking after the patient and not transport services.
- The healthcare worker should wear PPE including a N95 respirator if they have been fit tested or a standard mask, face shield, gown and gloves.
- Public safety personnel should accompany the healthcare worker to help with securing an empty elevator and help avoid contact with the public, other patients or healthcare workers.
- The public safety officer should wear a standard mask.

Upon Patient Arrival

- Patient driving themselves will park at WH entrance and remain in vehicle until a staff member in appropriate PPE escorts them to L&D/LDRP. The patient and support person will be given a standard mask given to them and they will put it on over their mouth and nose.
- When notified of patients' upcoming arrival, receiving staff will wear face shield, N95 mask if they have been fit tested or a standard mask, gown, and gloves when meeting patient at Women's Hospital entrance ante room.
- Valet should not re-park patient cars. Support person will wear standard mask while parking and reentering hospital.
- Attending physician at both EH and HP will call the COVID-19 hospitalist team pager 1870 at Evanston.
 - Notify Infection control: 9:00 – 5:00pm EH 772-2420 HPH 779-2624.
 - After 1700 and on weekends Evanston Hospital and Highland Park Hospital, will call operator and request that On Call Infection Preventionist be paged.
- Follow steps outlined in first section, "Before Patient Arrives"
- See Pink and Green chart: "Admission of COVID/Respiratory Infection Patient" for appropriate PPE
- L&D and LDRP RNs will collect COVID-19 and specimen will be hand delivered to the lab.
 - HP will send specimen to EH. Inform lab that swab was completed on laboring patient to expedite results.
- Document .covidvisitor epic note to document that patient understands visitation policy.

During Hospitalization

- N95 mask should be kept in a zip top bag – do not completely seal the bag. Face shield may be wiped prior to placing in a separate plastic bag after each use, and both bags should be kept in a large zip top bag with the staff member's name on it – do not completely seal outer zip top bag. Face shields and masks should be kept by each individual staff member. N95 masks can be reused until visibly soiled, torn, or no longer passes the fit check test.
- Patients will be allowed to have one support person. That person may not change during patient's stay (to minimize the number of people coming into the hospital). That person must remain in the patient room for the duration of the stay. That individual will have their temperature checked and monitor symptoms. If they develop a temperature or display new respiratory symptoms, they will be asked to leave. If they leave for this or any other reason, they may not return.

- Maintain a log of all persons (staff and visitor) entering the patient's room. (The log can be found on the Infection Prevention and Control Pulse page).
- Patient and support person are not required to wear standard masks when in the presence of staff, because staff will be wearing PPE.
- Oxygen via face mask will not be administered for fetal indications. Oxygen via face mask may be used for maternal indications.
- Stop sign will remain on door.
- Dedicated medical equipment (preferably disposable, when possible) should be used for the provision of patient care.
- All non-dedicated, non-disposable medical equipment used for patient care should be cleaned and disinfected according to manufacturer's instructions and hospital policies.
- Procedures, and laboratory testing should be limited to the minimum necessary for essential diagnostic evaluation and medical care.
- Minimize movement of patient around the hospital. If required, see Transport Protocol in COVID-19 Preparedness Plan on Pulse.
- Minimize the use of specialty consultation services. Neonatologist, Perinatal Family Support, consults can be performed via phone.
- The nurse will perform all tasks, bringing tray, drawing labs, starting IVs, and housekeeping. Garbage bags should be tied and disposed of with regular trash. OB Techs should not go into rooms.
- Instructions on daily cleaning of room within the NSUHS Preparedness Plan (page 16).
- Blood and respiratory samples should be obtained by the clinical staff caring for the patient.
 - At EH, hand deliver specimens to the lab. At HP courier to the EH lab.
 - At EH 2WH, phlebotomy will draw labs. If possible, phlebotomy dedicated to COVID-19 patients should be used. This phlebotomy team may not be available at all times.
- Any staff that enter patient's room must follow NSUHS donning and doffing procedures. Shower is not necessary prior to seeing non-COVID-19 patients and staff may continue to see non-COVID-19 patients.
- In the Epic flowsheet, document in "Isolation" row the type of precautions patient is on (ex: airborne and contact plus).

Vaginal Delivery

- **Consider an early epidural in COVID-19 patients in case emergency cesarean is required.**
- ISCU to attend all deliveries of confirmed COVID-19 and PUIs at EH. Pediatrician to attend at HP.
- Please give advance notification of delivery to allow time for ISCU at EH or Pediatrician at HP to don PPE.
- Any additional staff that enter patient's room, donning and doffing procedures must be followed. Shower is not necessary prior to seeing non-COVID-19 patients.
- Follow transfer protocol for transfer of infant to ISCU. See ISCU Workflow.
- Cleaning of room after patient transfer or discharge:
 - Room to be left empty with door closed for 25 minutes if negative pressure room, or 70 minutes for a standard room.
 - Designated housekeepers will need to clean the room, call EVS.

Patient Requires Cesarean Section

- Dedicated medical equipment (preferably disposable) should be used
- Remove nonessential equipment from the OR, including Jetsons when possible

- If COVID-19 patient is admitted at EH, close OR 2 to all other procedures and use OR 2 exclusively for COVID-19 patients.
 - HP LDRP will use OR 1 for COVID-19 and PUI patients.
- L&D and HP ORs will remain in positive pressure mode during procedure
- Staff are to remain in the OR and not move in and out of the room during the case
- Staff will be assigned in the core to deliver additional supplies as requested by the operative team
- All OR staff will follow standard, droplet and contact plus precautions in addition to eye protection.
- Minimal staff will be utilized. Only necessary staff attend delivery.
- Staff will wear standard PPE in addition to N95 masks if they have been fit tested or a standard mask and face shields/eye protection. Staff to wear gown, and gloves per current practice. PAPR available in case intubation is required.
- Specimens are to be hand delivered to the Lab. Do not use the pneumatic tube.
- Follow transfer protocol for transfer from L&D/LDRP room to OR.
- Wear the same PPE in OR as required in room, surgical gowns are effective. All staff in OR should wear N95 and face shield. Follow perioperative workflow.
- Keep patient in OR for recovery period – **do not move to PACU or to previous labor room**. Bring a cart into OR for recovery and transport. **See below for HP LDRP workflow for increase in patient acuity.**
- At EH, follow transfer protocol for transfer to room for postpartum period (same as a vaginal delivery).
 - Exit OR via main hallway (do not go through recovery room)
 - Take K Elevator to 2 Women’s at EH.
- Give advance notification of delivery to allow time for ISCU or Pediatrician to don PPE.
- ISCU RN at EH and Pediatrician at HP to attend all deliveries of confirmed and suspected cases. Newborn will stay in ISCU as long as space is available. Neonatologist to attend at HP when appropriate.
- After patient is transferred out of OR:
 - OR to remain empty for 20 minutes to allow the air to completely exchange
 - EVS will then clean the OR wearing eye protection, mask (N95 not required), gown and gloves
 - Bleach should be used to clean the room followed by Tru-D.
 - Trash and linen require no special handling
 - Dirty case cart is picked up by SPD. Place sign (the same stop sign placed on patient door) on case cart indicating that cart was used by COVID-19 patient, so that SPD staff may wear appropriate PPE when handling.

Highland Park LDRP Emergent Cesarean or Increase in Patient Acuity

- If additional assistance required due to patient acuity, LDRP staff member will contact the nursing consultant to obtain additional staff to assist depending on need and availability (ex: ICU RN, CRNA).
- Minimize additional staff members entering OR when possible to minimize staff exposure.
- Initial recovery and stabilization will occur in Operating Room. Keep patient in OR for recovery period – **do not move to PACU or to previous labor room**. Bring a cart into OR for recovery and transport as need.
- Transfer from operating room directly to Evanston following NSUHS transfer protocol for COVID-19 patients.

Scheduled Cesarean Section

- Patient brought immediately to G625 for pre-op preparation at EH.

- Perform hand hygiene before and after patient contact
- Healthcare worker should wear PPE; N95 respirator if they have been fit tested or a standard mask, or PAPR, face shield, gown and gloves.
- Public Safety will secure an empty elevator as necessary for transport and wear a regular mask
- Patient will wear a mask during transport using the shortest route possible, avoiding public movement
- Transport will be done by the healthcare provider caring for the patient
- Patient will be transported from patient room directly to the OR suite
- If possible, the patient will be scheduled as last case of the day in an OR away from any other cases
- Remove all unessential equipment from room and cover remaining/unmovable with plastic. (i.e. monitors)
- Confirmed or suspected COVID-19 patients will be delayed or rescheduled as is clinically appropriate.

Highland Park LDRP

- Patients will be kept in one room for entire stay. Negative pressure room will be used whenever possible.
- Adjacent rooms to be used for staff and extra equipment.
- Rooms should be cohorted to minimize exposure to unit.
- Newborns will follow colocation guidelines outlined by the CDC below because the rooms are large enough to accommodate 6 feet of separation. Infant needs to be placed in isolette.
- If HP newborns need additional care they may be transferred to ISCU. The decision to transfer will be made on an individual basis.
- Until LDRP RN training completed, an ED RN will come to LDRP to perform COVID-19 testing on patient.
- Suspected and confirmed COVID-19 patients of gestational age less than 35 weeks will be transferred to Evanston Hospital

2 Women's Care

- Patient room assignment postpartum will be determined by Infection Prevention and Control (IPC) prior to transfer out of L&D. The decision will be made on an individual basis.
 - If patient deemed appropriate by IPC for 2 Women's, use rooms 2640 or 2644. Adjacent rooms 2642 and 2646 will be kept empty to be used for staff showers and equipment.
- Maintain 1:1 RN to patient ratio.
- If the patient needs to transfer to another floor due to an acuity change, the manager will evaluate each case to determine if a Postpartum nurse will move with the patient to continue care.
- Blood and respiratory samples should be obtained by the clinical staff caring for the patient.
 - At EH, hand deliver specimens to the lab. At HP courier to the EH lab.
 - At EH 2WH, phlebotomy will draw labs. If possible, use phlebotomy dedicated to COVID-19 patients should be used. This phlebotomy team may not be available at all times.
- See chart: "Admission of COVID/Respiratory Infection Patient" for appropriate PPE.
 - N95 mask should be kept in a zip top bag – do not completely seal the bag. Face shield should be wiped prior to placing in a separate plastic bag after use, and both bags should be kept in a large zip top bag with the staff member's name on it – do not completely seal outer zip top bag. Face shields and masks should be kept by each individual staff member. N95 masks can be reused until visibly soiled, torn, or does not pass the fit check test.
 - Showers in the L&D locker rooms as well as Highland Park room 1358 and Evanston rooms 3413 and 3417 are available for staff to shower. Individuals who have directly cared for a patient with

COVID-19 or a PUI should place scrubs for laundering, shower, and change into clean clothes before going home.

- Turnaround time for room after patient discharge is included in NSUHS preparedness plan.

Antepartum Patients

- If a PUI or confirmed COVID-19 patient presents to HP and is a risk for preterm delivery, please call Maternal Fetal Medicine. Presently, they are likely to be transferred to EH if less than 35 weeks.
- Highland Park antepartum patients prior to 35 weeks (not in labor) displaying severe symptoms of COVID-19 will be directed to EH Emergency Department for triage and potential admission after determination is made by COVID-19 team.

If patient develops symptoms which meet COVID-19 screening criteria after admission

- Put a mask on the patient, close the door, put on Droplet precautions and call COVID-19 team for additional screening and guidance.
- All patients may not meet criteria to be tested for COVID-19, but will remain on Droplet precautions.
- If patient meets criteria for COVID-19 and the test returns negative:
 - Patient should remain on Droplet precautions for the duration of their hospitalization.
 - The COVID Hospitalist team in addition to the Infection Prevention and Control team may discontinue the Droplet and Contact Plus precautions and order Droplet precautions.
- Only Infection Prevention and Control or the COVID team can discontinue the isolation. If a patient is under isolation precautions, **DO NOT** Discontinue or select Not Applicable.
- Follow instructions in “Infection Control Guidelines in Women’s Hospital” found on the Infection Control Pulse Page.

Mother/Baby Contact

Transmission after birth via contact with infectious respiratory secretions is a concern. To reduce the risk of transmission of the virus that causes COVID-19 from the mother to the newborn, facilities should consider temporarily separating (e.g., separate rooms) the mother who has confirmed COVID-19 or is a PUI from her baby until the mother’s transmission-based precautions are discontinued:

- The risks and benefits of temporary separation of the mother from her baby should be discussed with the mother by the attending provider or midwife and documented in the electronic health record EHR.
- All newborns will be treated as PUI, until negative COVID-19 test is obtained at 24 hours of life. Newborn discharge and removal of precautions will be addressed on an individual basis.
- PUI newborns will be in droplet precautions or negative pressure rooms in the ISCU as long as space is available at EH.
 - If ISCU isolation rooms are full, discuss with IPC and Unit Manager, and prepare to use the 2WH nursery as overflow.
- At HP, newborns will be kept in patient’s room in isolettes, following CDC guidelines.
- Mother and her support person cannot visit ISCU due to being a PUI.
- NSUHS’s recommendation is that mom and baby are kept separate, and that mom should not directly breastfeed. If refused by mother after discussion with attending provider, follow the below guidelines:
 - If colocation (sometimes referred to as “rooming in”) of the newborn with his/her ill mother in the same hospital room occurs in accordance with the mother’s wishes or is unavoidable due to facility

limitations use physical barriers (e.g., a curtain between the mother and newborn) and keeping the newborn ≥ 6 feet away from the ill mother. These can be obtained from ISCU at EH.

- If no other healthy adult is present in the room to care for the newborn, a mother who has confirmed COVID-19 or is a PUI should put on a standard mask and practice hand hygiene before each feeding or other close contact with her newborn. The facemask should remain in place during contact with the newborn. These practices should continue while the mother is on transmission-based precautions in the hospital.
- The decision to discontinue temporary separation of the mother from her baby should be made on a case-by-case basis in consultation with clinicians, Infection Prevention and Control, and public health officials. The decision should take into account disease severity, illness signs and symptoms, and results of laboratory testing for the virus that causes COVID-19, SARS-CoV-2. Considerations to discontinue temporary separation are the same as those to discontinue transmission-based precautions for hospitalized patients with COVID-19:
 - Resolution of fever without the use of anti-pyretic medications
 - Improvement in respiratory symptoms
 - Consultation with health department regarding discontinuation of precautions.

Breastfeeding

- Recommendation is that mom does not directly breastfeed.
- Obtain breast pump for the immediate postpartum period, patient encouraged to bring pump from home.
- During temporary separation, mothers who intend to breastfeed should be encouraged to express their breast milk to establish and maintain milk supply. A dedicated breast pump should be provided. Prior to expressing breast milk, mothers should practice hand hygiene. After each pumping session, all parts that come into contact with breast milk should be thoroughly washed and the entire pump should be appropriately disinfected per the manufacturer's instructions.
- To transfer breastmilk:
 - Prepare clean area in patient room: wipe table, put paper towel down, and put clean open containers on paper towel.
 - Perform hand hygiene, don gloves, and take the bottles from the mom. Pour milk into clean containers. Dispose of used bottles, and perform hand hygiene.
 - Don fresh gloves, screw tops on bottles, and hand off clean bottles to staff member holding clean zip top bag in anteroom. Ensure bottles are labeled.
- The CDC has developed Interim Guidance on Breastfeeding for a Mother Confirmed or Under Investigation for COVID-19. There are rare exceptions when breastfeeding or feeding expressed breast milk is not recommended. Whether and how to start or continue breastfeeding should be determined by the mother in coordination with her family and health care practitioners.
 - Currently, the primary concern is not whether the virus can be transmitted through breastmilk, but rather whether an infected mother can transmit the virus through respiratory droplets during the period of breastfeeding.
 - A mother with confirmed COVID-19 or who is a symptomatic PUI should take all possible precautions to avoid spreading the virus to her infant, including washing her hands before touching the infant and wearing a face mask, if possible, while breastfeeding.
 - RN caring for baby will feed the expressed breast milk to the infant while wearing appropriate PPE until negative COVID-19 status is confirmed.
- In limited case series reported to date, no evidence of virus has been found in the breast milk of women infected with COVID-19; however, it is not yet known if COVID-19 can be transmitted through breast milk

(i.e., infectious virus in the breast milk). Overall, given what we know today, the benefits of breastmilk for the newborn outweigh the risks.

Hospital Discharge

- Discharge for postpartum women should follow recommendations described in NSUHS Preparedness Plan.
- For infants with pending testing results or who test negative for the virus that causes COVID-19 upon hospital discharge, caretakers should take steps to reduce the risk of transmission to the infant, including following the CDC's [Interim Guidance for Preventing Spread of Coronavirus Disease 2019 \(COVID-19\) in Homes and Residential Communities](#).

Internal References

<http://pulse/ClinicalResources/InfectionControl/Pages/default.aspx>

NorthShore University HealthSystem 2019 Novel Coronavirus (CoVid-19) Preparedness Plan

External References

ACOG Practice Advisory: Novel Coronavirus 2019 (COVID-19). Accessed March, 17 2020.

<https://www.acog.org/Clinical-Guidance-and-Publications/Practice-Advisories/Practice-Advisory-Novel-Coronavirus2019>

AWHONN. Novel Coronavirus (COVID-19) resources. Accessed March, 17 2020. <https://awhonn.org/novel-coronavirus-covid-19/>

Coronavirus Disease 2019 (COVID-19) Pregnancy and Breastfeeding. Accessed March, 17 2020.

https://www.cdc.gov/coronavirus/2019-ncov/prepare/pregnancy-breastfeeding.html?CDC_AA_refVal=https%3A%2F%2Fwww.cdc.gov%2Fcoronavirus%2F2019-ncov%2Fspecific-groups%2Fpregnancy-faq.html

Interim Considerations for Infection Prevention and Control of Coronavirus Disease (COVID-19) in Inpatient Obstetric Healthcare Settings. Accessed March, 17 2020. <https://www.cdc.gov/coronavirus/2019-ncov/hcp/inpatient-obstetric-healthcare-guidance.html>

Society for Maternal-Fetal Medicine. Coronavirus (COVID-19) and Pregnancy: What Maternal-Fetal Medicine Subspecialists Need to Know.

ALL VISITORS & STAFF:



**PLEASE SEE NURSE
BEFORE ENTERING**