Admission Guidelines for Pregnant Patients to CCTC

NOTE: Care of the critically ill pregnant patient requires a multidisciplinary approach with coordination of care plans between the critical care team, the obstetrical care team and the obstetrical anesthesia care team. This will require dialogue between care teams to synchronize management plans. This document complements the admission checklist.

If you have any questions or concerns, please page Brenda Morgan at 19914. A checklist of steps to take is available on the “What’s New Page” of the CCTC Website.

Upon admission of a pregnant patient to CCTC, initiate the following:

1. **Cohort** all pregnant patients in the same bay to facilitate sharing of emergency equipment and facilitate Obstetrical Care Unit (OBCU) support.

2. **Avoid adjacent placement or doubling of ARO positive patients.** Admit to a Bay where an adjacent room is available to serve as the neonatal resuscitation room.

3. **Maintain Uterine Displacement at all Times:**

   Pregnant patients can become very hypotensive in the supine position due to IVC and aortic compression from the gravid uterus. Patients who are sedated or with altered level of consciousness may be unable to recognize the signs of decreased BP that would make an alert woman spontaneously reposition herself.

   Nurse all pregnant patients in the left uterine displacement position (with wedge under the right hip, patient tilted toward left side). In the event of maternal CPR, manual displacement of the uterus toward the left is required (see emergency response guide).

4. **Notify Obstetrics or Maternal Fetal Medicine (high risk obstetrics).** Page the consultant:

   Direct communication between CCTC and Obstetrical Consultants should occur.

   a. To assess maternal and fetal health and risk and determine gestation age.
   b. To direct prenatal and perinatal care
   c. To determine fetal monitoring requirements
   d. To work in collaboration with the critical care team and obstetrical anesthesia care team to provide quality care of the critically ill maternity patient

   A multidisciplinary planning meeting including CCTC, OBCU, OB Anaesthesia, NICU and other relevant services should be organized to develop a plan of care.

5. **Notify the Charge Nurse OBCU: Extension 58168, Pager 14899:**

   a. Notification ensures the OBCU is aware of the status of any admitted patients.

   b. Obstetrician to determine type of fetal monitoring; this will be provided by OBCU nurse as required. This could range from being available for consultation on an “as needed basis” for first trimester pregnancies, to invasive and continual maternal and fetal monitoring. A plan for support will be developed at the time of admission and modified throughout the admission as required.
6. **Cardiology and Other Services**

Women with preexisting cardiac conditions (e.g. valvular disease, congenital heart defects, cardiomyopathy, arrhythmia) are usually followed during pregnancy by cardiology.

Pregnancy induced cardiomyopathy may mimic symptoms of preeclampsia or pulmonary embolic disease and accounts for some of the new onset cardiac disease of pregnancy that leads to critical care admission. Risk factors for cardiac disease during pregnancy have increased as maternal age, BMI and survival to adulthood of females with congenital anomalies has increased.

High risk patients usually have birth plans that identify all involved medical services. Upon admission, involved services should be notified of patient’s admission.

7. **Consult OBSTETRICAL Anesthesia: CCTC RN to page the Obstetrical Anaesthesia Consultant on call (notify upon patient admission to CCTC).**

   a. To assess maternal health and anesthetic risk
   b. To plan anesthetic care for labour and/or birth
   c. To be aware of all obstetrical in-patients.
   d. To work in collaboration with the critical care team and obstetrical care team to provide quality care of the critically ill parturient

8. **Document in the Physician Order Sheets** that the patient is X weeks and X days pregnant. This will be identified on the MAR. First trimester ultrasound provides the best estimate of gestational age. Obstetrics will determine the gestational age.

9. **Blood Transfusion Lab:**

Critically ill obstetrical patients are at risk for life threatening hemorrhage. Preparation in the event of hemorrhage is needed for all critically ill obstetrical patients (pregnant or immediately post partum). Ensure that blood transfusion consent has been obtained at admission and that Blood Transfusion Lab sample remains current during CCTC admission. Ensure that patients have adequate vascular access. Fibrinogen levels should be drawn with an obstetrical bleed and fibrinogen replacement considered early (e.g., cryoprecipitate).

Knowledge of a pregnant patient’s RH status is needed. Rh Immune Globulin must be administered anytime there has been potential communication of fetal and maternal blood (including delivery, vaginal bleeding, placental disruption, trauma etc). More information can be obtained from the Blood Transfusion Manual.

10. **Diagnostics:**

   Ensure that all radiology and investigational test requisitions include pregnancy status.

11. **Notify NICU Charge Nurse (pager 74631) if gestational age is deemed viable by obstetrician:**

NICU will provide emergency neonatal resuscitation equipment and will be responsible for the care of the neonate. The NERT team (Neonatal Emergency Response Team) will round daily and PRN to review equipment setup with CCTC RN and orient their team to environment.
12. Notify PCCU Charge Nurse (pager 15933) if gestational age is deemed viable by obstetrician:

   a. PCCU will provide emergency response during a Code OB until the neonatal resuscitation team arrives. The NICU team will assumes responsibility for neonatal resuscitation upon their arrival.
   b. NICU will provide emergency neonatal resuscitation equipment; PCCOT will round in CCTC to ensure their staff is aware and familiar with setup as first responders.


   In the event of an emergency birth or crash C-section, there may be insufficient time to obtain patient’s admission/pregnancy. Obstetrical and neonatal resuscitation teams will expect equipment to be available upon their arrival.

   Obtain C-section equipment for any patient who is visibly pregnant regardless of viability in the event of cardiac arrest and the need for perimortem C-section.

   **Maternal birth equipment (from OBCU; return to OBCU at discharge):**

   From Obstetrical Care Centre (Charge Nurse):

   a. Vaginal Birth Tray (for all pregnant patients, contact OBCU)
   b. C-Section Tray (Nb: only if > 23 weeks; obtain from OBCU)
   c. C-Section Disposable Pack (contains radiopaque sponges, blades and other disposables)
   d. 2-3 260 Vicryl sutures

14. Dedicated Neonatal Resuscitation Room:

   A dedicated neonatal resuscitation room is maintained close to maternal room. This provides quick access in the event of an emergency birth. A dedicated room is required to manage traffic and resuscitation activities of the two patients. Remove adult bed from room to ensure adequate space for emergency resuscitation.

   **Keep the infant warmer and supplies covered and ensure hand hygiene by all individuals entering the room.** Keep door closed and minimize entry to the room. Neonates have underdeveloped immune systems and strict precautions are required.

   Keep warmer plugged in at all times in an ADJACENT patient room that has been assigned as “infant resuscitation room”. Turn on if signs of maternal deterioration or if birth is anticipated.

15. Neonatal Resuscitation Equipment (if viable gestational age). Equipment is kept in NICU; return to NICU at discharge:

   The infant warmer and all infant resuscitation equipment will be kept in NICU and brought to CCTC upon notification of NICU Charge Nurse. Equipment and supplies will be regularly checked Q shift by BOTH NICU and PCCU along with the CCTC RN to ensure familiarity by all teams.

   Emergency supplies and medications are provided/maintained in a kangaroo bag that is brought with the infant warmer.

   The neonatal supplies will be kept in CCTC for the duration of the patient’s admission until birth.

*Last Updated: October 18, 2018*
**Warming Table** (also called "Infant Care Centre", this is an infant bed that allows easy access of the infant for resuscitation, and includes an overhead heater and skin sensing system):

Review how to turn the warmer on and how to drop the side rails at the start of each shift. Leave warmer on at 36 degrees. Review equipment with NICU and PCCOT team rounds.

Warmers must never be on in the servo mode unless skin temperature sensors are attached to neonate. Servo mode adjusts the warmer temperature based on neonatal temperature.

**Infant Resuscitation Supplies and Medication (from NICU):**

The infant resuscitation equipment is contained in a portable kangaroo bag. This is a standardized and portable bag used by the NICU and PCCOT teams.

Neonates who require ventilatory support will be manually ventilated initially. If required, the neonatal ventilator/transport unit will be obtained by neonatal resuscitation team.

**Neonatal oxygen and suction (NICU):**

NICU RRT will provide suction setup, oxygen and room air with blender (neonates are resuscitated with lower oxygen concentrations or on room air to avoid oxygen toxicity).

**Q Shift Equipment Review:**

Review neonatal resuscitation equipment with NICU NERT and PCCU-CCOT teams each shift to ensure appropriate supplies and sizing (e.g., BP cuffs, suction catheters). This familiarizes CCTC and both emergency response teams to supplies and to the environment in advance. This is also an opportunity for nurses to receive just-in-time education on the infant warmer and all teams to review expectations in the event of a CODE OB.

a. Cover warming table and emergency suction equipment to keep it clean until use.

b. Maintain room temperature in neonatal resuscitation room at 25-26C.

c. Maternal delivery equipment can be maintained in neonatal resuscitation room if space is an issue. Keep room uncluttered with unrestricted floor plan around warmer.

d. Maintain additional supply of hand hygiene products for ease of access in emergency and limit unnecessary room access. Ensure hand hygiene for anyone entering room to check equipment.

e. Maintain supply of clean gowns for neonatal emergency responders.

**16. Emergency Response:**

At the start of EACH shift, review the indications for CODE OB, ACLS modification for the pregnant patient, and team member expectations in the event of an obstetrical emergency. These are all listed on the CCTC Website. Be sure physicians, RRTs, Unit Clerk and all nurses in your Bay are aware of the CODE OB procedure.

Obstetrical emergencies are infrequent events and CODE OB is rarely required.
Preparation at the time of admission ensures efficiency during emergency situations.

17. Oxytocin/Magnesium:

Oxytocin and Magnesium infusions are both considered high risk medications. Prepared IV infusion bags are kept in the fridge in OBCU and can be prepared by Pharmacy for patients admitted to CCTC. A porter can obtain medications from OBCU after hours.

Oxytocin is used to induce labour or to maintain uterine tone following birth in patients at risk for/who are experiencing post partum hemorrhage.

Magnesium is the drug of choice for the prevention or treatment of seizures during pregnancy (eclampsia). It is also administered to a mother sed to provide neonatal cerebral protection if gestational age is less than 32 weeks and birth is imminent.

18. Infant Loss:

In the event that birth (or loss) occurs in CCTC, OBCU will assume responsibility for all procedures related to the fetus or neonate. This will include provincial registrations, notification of photographer and social worker and completion of memory box.

a. Fetal loss before 20 weeks is considered a miscarriage (spontaneous abortion) if there is no evidence of heart beat or breathing.

b. All deliveries of a live born infant (i.e. an infant that takes a breath or has a heart beat), regardless of gestational age, must be registered with the province of Ontario as a live birth or stillbirth.

c. Age of viability is generally considered as > 23 weeks; multiple factors may influence actual viability and decisions regarding neonatal resuscitation.