Infection Prevention and Control (IPC) Protocol for Obstetrical Procedures During COVID-19

Updated: June 9, 2020

Guiding Principles:

- Provider Safety
- Patient Safety
- PPE Conservation

Approach to IPC Includes:

- Patient COVID-19 Assessment
- Surgical Risk Assessment
- PPE Recommendation
- PPE Allocation Framework[1]

Background/Current Status

This guidance supports B.C. health authorities with ongoing obstetrical operative procedures in the context of the COVID-19 pandemic.

Through effective public health measures the COVID-19 pandemic curve has reached its peak and is on the downward slope. The prevalence of COVID within the maternity population in BC is low and in keeping with the general population. The current recommendations are based on the low prevalence within the pregnancy population and our current understanding of risk.

Based on the epidemiology of COVID-19 in B.C.[2], obstetrical patients who do not have risk factors or symptoms of COVID-19 should not be considered suspect cases. This is based on the advice of the BC Centre for Disease Control (BCCDC), the Office of the Provincial Health Officer (PHO) and the Provincial Infection Control Network of BC (PICNet). BCCDC, PHO, maternity consultants and PICNet review the epidemiology on a regular basis and will amend or update this advice as required.

All patients and support persons arriving to a maternity or birthing unit must be assessed for risk factors and symptoms of COVID-19, and where appropriate tested. Refer to the most recent BCCDC testing and

[1] COVID-19: Emergency Prioritization in a Pandemic Personal Protective Equipment (PPE) Allocation Framework, Provincial COVID-19 Task Force, March 25, 2020: https://www2.gov.bc.ca/assets/gov/health/about-bc-s-health-care-system/office- of-the-provincial-health-officer/covid-19/ppe_allocation_framework_march_25_2020.pdf

[2] Epidemiologic considerations: daily case counts; test positivity rate; incidence rate; point prevalence.

laboratory guidance for COVID-19. For women who are confirmed cases of COVID-19 please see the latest BCCDC recommendations for guidance on self-isolation and management during pregnancy. PCR, NAT, or serologic SARS-CoV-2 tests are not currently recommended for screening asymptomatic patients due to the low clinical sensitivity and low positive predictive value in lower acuity patients and in low prevalence contexts.

The guidance includes a patient screening tool and classification of patients based on a Patient Risk Categorization into green, yellow and red categories. **The entire surgical team, including anesthesiologist, surgeon, assistant, nurses, etc., is responsible for deciding the Patient Risk Category together** and the expectation is that obstetrical surgery will not be delayed as a result.

Given this guidance and the current low incidence and prevalence of COVID-19 in B.C, the risk of infection or transmission to health care workers when protocols are followed is extremely low.

Scope

This guidance and protocol does not apply to non-obstetrical populations. There is separate provincial guidance available regarding specific adult and pediatric surgical protocols.

A. Pre-surgical Patient Assessment

- For patients presenting for scheduled obstetric surgery, the **COVID-19 Surgical Patient Assessment Form (see Appendix 1)** should be completed 24 to 72 hours prior to scheduled surgery, by the pre-admission unit (nurse, medical office assistant or anesthesiologist) over the phone, and then repeated in person when the patient arrives at the hospital on the day of surgery. This is done to allow for testing (if clinically indicated) to be complete prior to scheduled procedures[3,4].
- Procedures performed under local or regional anesthesia should be performed under droplet precautions. For cases where a patient is classified as yellow or red, the risk of conversion to general anesthesia must be discussed at the huddle to help guide appropriate PPE under Section D.
- There needs to be a mechanism in place within each facility unit to ensure the Surgical Patient Assessment Form is included in the patient chart.
- For urgent or emergent procedures, the COVID-19 Patient Assessment Form shall be completed upon arrival to the peri-operative area. At many sites, an equivalent site-specific COVID patient assessment form will have been completed on admission to the hospital for labouring patients. This assessment should be considered equivalent to the pre-surgical form due to the evolving nature of obstetrical care. A delay in the OR procedure should not occur if the pre-surgical form (or equivalent) has not been performed due to the time-sensitive nature of obstetrical care. If a patient has signs and symptoms consistent with COVID-19 testing should be conducted as per provincial COVID-19 testing guidelines[3].
- IPC risk categories have been developed to guide PPE use before, during, and after a surgical procedure:
  i. Low or no risk (green) – a patient with no risk factors for COVID-19, and/or no symptoms or signs of COVID-19, and/or a negative COVID-19 RNA test where relevant

[3] As defined by the BCCDC. See http://www.bccdc.ca/health-professionals/clinical-resources/covid-19-care/lab-testing for more information.

[4] Every attempt should be made to assess the patient in their preferred language.

ii. Unknown risk (yellow) – a patient where the risk factors history and symptomatology are unknown, and a RNA COVID-19 test result is pending or unknown, OR a CODE OB/CODE PINK patients where a history cannot be obtained
iii. Moderate to high risk (red) – a patient with risk factors for COVID-19, and/or symptoms or signs of COVID-19, and/or a COVID-19 RNA test result is pending or unknown, OR a lab confirmed COVID-19 RNA test.

- For the CODE OB/CODE PINK patient where an appropriate history has been obtained and has not changed, for example, fever in labour, during the admission, patients can continue to be classified as either green or red. **For CODE OB/CODE PINK patients where a history cannot be obtained due to the emergent nature of care they are classified as yellow.**
- Obstetrical cases should not be delayed while COVID-19 test results are pending.

B. Pre-surgical Procedure Huddle

- The pre-surgical huddle, when the full surgical team is engaged (anesthetist, surgeon, maternity care provider, pediatricians, assistants, nurses, etc.), is one of the strongest determinants for achieving the highest levels of safety and quality. All of the other usual elements of a surgical checklist should also be discussed at this time.
- The Patient Risk Category is determined based on information gathered from the assessment form, including COVID-19 testing results, if applicable (see Appendix 1).
- For operative procedures that occur during the course of labour or post partum care, the team needs to ask "***has the patient's clinical status changed to warrant a change in patient risk category****?"* such as new onset of fever in labour (green to red or COVID swab turns negative red to green).
- **Surgical team members must agree on the Patient Risk Category (green, yellow or red)**
- Neuraxial anesthesia is the usual practice for the majority of obstetrical surgical cases. Procedures performed under local or regional anesthesia should be performed under droplet precautions. For cases where a patient is classified as yellow or red, the risk of conversion to general anesthesia must be discussed at the huddle to help guide appropriate use of PPE.
- Recommended PPE to be used during the surgical procedure is provided in **Section D: Algorithm for Management of Obstetrical Surgical Patients.**

C. Air Clearance

- Airflow considerations, including appropriate times for air clearance post-aerosol generating medical procedure (AGMP), should be made for each OR suite in consultation with local infection prevention and control (IPAC), and facilities, maintenance and operations (FMO).
  - In most ORs and post-operative areas, the relative humidity (RH) is kept between 40% and 45% which aids in reducing the amount of virus or bacteria in the air.
  - Raising the RH not only causes more rapid "fallout" of particles below the respiratory zone, but also has been documented to be beneficial for clearing respiratory secretions and hydrating mucous membranes with associated improved outcome.
  - Increased RH decreases viral survival. The air exchange rate (or air changes per hour – ACH) is kept between 18 and 23 in most ORs (higher in positive pressure rooms).
  - Between the increased RH and the ACH, the potential for bioaerosol spread will be reduced by over 95% within 10-12 minutes following aerosol creation (extubation).
- The AGMP should be performed with the door(s) closed. Limiting the number of personnel and equipment in the room and minimizing door openings is a key element in environmental infection control.

D. Algorithm for Management of Obstetrical Surgical Patients

Infection Prevention & Control Risk Category			
	Green	**Yellow** *(Code OB or Code Pink)*	**Red**
Team Huddle	Team to Review: • Confirm patient Risk Category • Anesthetic approach • Staff to be in OR (eg. RM/FP) • Presence of support person in OR as per routine	Team to Review: • Confirm patient Risk Category • Anesthetic approach • Staff to be in OR (eg RM/FP) • Presence of support person in OR*	Team to Review: • Confirm patient Risk Category • Anesthetic approach • Staff to be in OR (eg RM/FP) • Presence of support person in OR*

Neuraxial Anesthesia	Routine personnel in the OR
	• All personnel in the OR:
	  • Routine OR PPE
		Limit personnel in the OR
		• Surgical Team and Anesthesia:
		  • Fit-tested N95 Respirator
		  • Face shield or goggles
		  • Gown & gloves
		Pediatric Team and other personnel in droplet and contact in room at start of procedure
		If appropriate neuraxial analgesia can consider droplet and contact for all personnel
			Limit personnel in the OR
			• Surgical Team and Anesthesia:
			  • Fit-tested N95 Respirator
			  • Face shield or goggles
			  • Gown & gloves
			Pediatric Team and other personnel in droplet and contact in room at start of procedure

IF General Anesthetic: Intubation and Extubation	Routine personnel in the OR • All personnel in the OR: • Routine OR PPE	Limit personnel in the OR All staff in the OR don: • Fit-tested N95 Respirator • Face shield or goggles • Gown & gloves Pediatric Team in N95 in room at start of procedure All non-essential personnel to leave the room for extubation	Limit personnel in the OR All staff in the OR: • Fit-tested N95 Respirator • Face shield or goggles • Gown & gloves Pediatric Team in N95 in room at start of procedure All non-essential personnel to leave the room for extubation
Recovery Regional	Recover as per routine at site	• Recover in the designated COVID location using Droplet/Contact Precautions until ready to move to designated unit	• Recover in the designated COVID location using Droplet/Contact Precautions until ready to move to designated unit
Recovery GA	Recover as per routine at site	• Recover in the OR suite until ready to move to designated unit	• Recover in the OR suite until ready to move to designated unit
Cleaning and Disinfection	Cleaning should be determined as per site specific routine protocols	All cleaning staff in OR don: • Surgical mask • Eye protection • Gown/Gloves	All cleaning staff in OR don: • Surgical mask • Eye protection • Gown/Gloves
Disposition	Transfer patient to postpartum as per routine care.	Return patient to appropriate inpatient unit based on further patient risk assessment.	Return to appropriate COVID-19 isolation room if confirmed positive or isolation room if unknown.

* The guiding principle is that there is a support person in the OR if the procedure is performed under neuraxial anesthesia, including RED and YELLOW patients. Support persons should be screened for symptoms and wear appropriate PPE as per site/HA protocol.

Appendix 1: COVID-19 Surgical Patient Assessment Form - Obstetrics

Health Authority LOGO

Patient Information

Name:
Date of Birth:
Language:
PHN:

NURSE OR MEDICAL OFFICE ASSISTANT SCREEN:

Able to obtain patient history? □ Yes □ No If No, go to Physician Screen section

Does the patient have a risk factor for COVID-19 exposure? In the last 14 days has the patient:

Returned from travel outside of Canada?	□ Yes □ No	When? Date: _____
Been in close contact with anyone diagnosed with lab confirmed COVID-19?	□ Yes □ No	When? Date: _____
Lived or worked in a setting that is part of a COVID-19 outbreak?	□ Yes □ No	When? Date: _____
Been advised to self-isolate or quarantine at home by public health?	□ Yes □ No	Contact info: _____

Does the patient have new onset COVID-19 like symptoms in the last 14 days?

24 to 72 hours prior – Date/Time: _____		Day of surgery – Date/Time: _____	
Fever	□ Yes □ No	Fever	□ Yes □ No
Cough	□ Yes □ No	Cough	□ Yes □ No
Shortness of breath	□ Yes □ No	Shortness of breath	□ Yes □ No
Diarrhea	□ Yes □ No	Diarrhea	□ Yes □ No
Nausea and/or vomiting	□ Yes □ No	Nausea and/or vomiting	□ Yes □ No
Headache	□ Yes □ No	Headache	□ Yes □ No
Runny nose/nasal congestion	□ Yes □ No	Runny nose/nasal congestion	□ Yes □ No
Sore throat or painful swallowing	□ Yes □ No	Sore throat or painful swallowing	□ Yes □ No
Loss of sense of smell	□ Yes □ No	Loss of sense of smell	□ Yes □ No
Loss of appetite	□ Yes □ No	Loss of appetite	□ Yes □ No
Chills	□ Yes □ No	Chills	□ Yes □ No
Muscle aches	□ Yes □ No	Muscle aches	□ Yes □ No
Fatigue	□ Yes □ No	Fatigue	□ Yes □ No

Screened by: **Signature:** **Screened by:** **Signature:**

PHYSICIAN/SURGEON SCREEN:

COVID-19 NP test performed	□ Yes □ No	Date: _____ Result: □ Negative □ Positive
If test has not been performed, do you recommend testing patient?	□ Yes □ No	Reason: _____
Unable to perform swab?	□ Yes □ No	Reason: _____

Screened by: **Signature:** **Date/Time:** _____

FINAL SURGICAL TEAM ASSESSMENT:

COVID-19 risk factor (travel, contact, outbreak)?	□ Yes □ No □ Unknown
COVID-19 like symptoms that cannot be explained by another medical or surgical diagnosis?	□ Yes □ No □ Unknown
COVID-19 test result?	□ Yes □ No □ Unknown □ N/A

PATIENT RISK CATEGORY TABLE:

COVID-19 Risk Factors	COVID-19 Symptoms	COVID -19 Test Results	COVID-19 Risk Category
NO	NO	NOT REQUIRED	GREEN
NO	NO	NEGATIVE	GREEN
YES	NO	NEGATIVE	GREEN
NO	UNKNOWN	NEGATIVE	GREEN
NO	YES	NEGATIVE	GREEN
YES	YES	NEGATIVE	GREEN
UNKNOWN	UNKNOWN	UNKNOWN/PENDING	YELLOW
YES	NO	UNKNOWN/PENDING	RED
NO	YES	UNKNOWN/PENDING	RED
YES	YES	UNKNOWN/PENDING	RED
-	-	**POSITIVE**	RED

PATIENT RISK CATEGORY (CIRCLE ONE):

GREEN	YELLOW	RED

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To provide feedback on this document please email **covidguidelines@bcpsqc.ca** - including the document title in the subject line.

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