



Coronavirus COVID-19

BC Centre for Disease Control | BC Ministry of Health



HOW YOU CAN SLOW THE SPREAD OF COVID-19

Take care of others by taking care of yourself.

Wash your hands, don't touch your face, and stay home if you are sick.

Stay at Home and Physically Distance

Stay at home whenever you can. Maintain 2 meters distance from those outside of your household.

Guideline for the Admission and Hospital Management of Pregnant Women/Individuals Who Are a Confirmed or Suspect Case of COVID-19

Updated: Sept. 4, 2020

Knowledge is changing rapidly and therefore information below may be modified in response to new information and evidence. See Summary of Updates below for the latest changes in recommendations.

Site Applicability:

Sites in British Columbia that deliver health care to pregnant women/individuals and their newborns within birthing units, homebirth, and community settings.

General Information

- SARS-CoV-2 is a novel coronavirus that causes COVID-19 illness in adults and children. In the context of a global COVID-19 pandemic, B.C. has implemented a number of public health measures to prevent the spread of SARS-CoV-2.
- Pregnant women/individuals are not at more risk of acquiring SARS CoV-2, nor at more risk of getting severe disease than comparable aged adults.
- Pregnancy outcomes with Confirmed COVID-19: To date, information is available of about 60 cases of pregnant women with confirmed COVID-19 in China. The pregnancy outcomes have been reported to be good overall, with spontaneous and iatrogenic preterm labour being the most reported adverse pregnancy outcomes.
- **Vertical Transmission: Within the small cohort referred to in previous statement there is no strong evidence of vertical transmission at this point.**
- Teratogenicity: There is currently no reported increased risk of congenital anomaly, though the number of reported cases is small.

Definitions:

- COVID-19 disease categories as used in this document:
 - Confirmed case: Pregnant woman/individual has laboratory result confirmation for SARS-CoV-2
 - Suspect case: Pregnant woman/individual who has become symptomatic of a viral illness and COVID-19 is a part of the differential diagnosis and testing has been sent
 - Contact: Pregnant woman/individual is asymptomatic but was exposed to a health care provider or family member who has become symptomatic for, or diagnosed with COVID-19
- IPAC: Infection Prevention and Control

April 15, 2020

CRG 20 Guideline for the Admission and Hospital Management of Pregnant Women/Individuals Who Are a Confirmed or Suspect Case of COVID-19



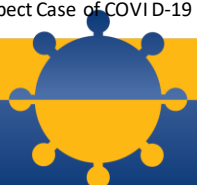
Ministry of Health



BC Centre for Disease Control

If you have fever, a new cough, or are having difficulty breathing, call 8-1-1.

Non-medical inquiries (ex. travel, physical distancing): 1-888-COVID19 (1888-268-4319) or text 604-630-0300



Additional information:

- For the most up to date information on PPE please refer to BCCDC Personal Protective Equipment document: <http://www.bccdc.ca/health-professionals/clinical-resources/covid-19-care/infection-control/personal-protective-equipment>
- For most up to date information aerosol generating medical procedures please refer to http://www.bccdc.ca/Health-Professionals-Site/Documents/AGMPs_requiring_N95.pdf

Overall Principles:

- Patients not in labour and asymptomatic or with mild COVID-19 symptoms should be kept at home in self-isolation when possible:
 - People that test positive for SARS-CoV-2, must self-isolate at home until:
 - At least 10 days have passed since the onset of symptoms; AND
 - Fever has resolved without the use of fever-reducing medication; AND
 - Symptoms (respiratory, gastrointestinal, and systemic) have improved
 - People that test negative for SARS-CoV-2, must self-isolate at home until:
 - Resolution of fever without the use of fever-reducing medication; AND
 - Improvement in symptoms (respiratory, gastrointestinal, and systemic): AND
 - People who are not tested for SARS-COV-2 must self-isolate at home until:
 - At least 10 days have passed since the onset of symptoms; AND
 - Fever has resolved without the use of fever-reducing medication; AND
 - Symptoms (respiratory, gastrointestinal, and systemic) have improved
 - Members of the general public who are identified by public health officials as close contacts of confirmed COVID-19 cases, must self-isolate for 14 days to ensure the full incubation and infectious period has passed
- Do not move patient between sites if at all possible. Sites should be able to manage their own patients as per their own Emergency Operations Committee (EOC) and COVID-19 plan.
- Minimize room transfers and in-hospital movement.
- Only essential staff should enter patient's room.
- Visitors should be kept to a minimum: currently one support person per patient.
- Inform delivering hospital if there is a confirmed COVID-19 pregnant woman or individual in community.
- Consult Reproductive Infectious Diseases (RID) at with a known confirmed COVID-19 case.
- Confirmed COVID-19 status in pregnancy alone is NOT a reason for admission to hospital. The need for higher level of care of a respiratory conditions or routine OB care for labour, are the only indications for admission. The majority of women can be managed in community.

Antenatal Patients:

- Most individuals will only experience mild or moderate cold or influenza-like symptoms.
- Pregnant individuals should be advised **NOT** to come to hospital unless they need urgent obstetric or medical care
- All antenatal patients should be told that if they are concerned about their symptoms or require urgent medical advice, they should contact their primary Obstetrical Care Provider **by phone or 811.**



- Refer to the BC COVID-19 Assessment Tool to help determine whether they may need further assessment or testing: <http://www.bccdc.ca/health-info/diseases-conditions/covid-19/about-covid-19/if-you-are-sick>
- If a pregnant woman/individual is advised to come to the hospital, they should be told to come by private car, not to call EMS and not to use public transport, taxi or rideshare. If they do not have access to private car and there are no other option in your community, EMS may be necessary. They should call the unit before entering the hospital and self-identify as being a confirmed case of COVID-19 and/or having respiratory symptoms. Advise patient to wear a face mask.
- Any enhanced fetal surveillance for confirmed COVID-19 cases is based on the clinical condition of the pregnant woman and should be performed after consultation with the Reproductive ID Team at BC Women's Hospital
- When a pregnant patient is:
 - At least 10 days passed the onset of symptoms; AND
 - Fever has resolved without the use of fever-reducing medication; AND
 - Symptoms (respiratory, gastrointestinal, and systemic) have improved
 they should be offered an US for growth. Some individuals who clear the COVID-19 virus continue to have a dry cough for several weeks and are not considered infectious.
- Routine antepartum fetal surveillance of confirmed COVID-19 cases should occur monthly and include fetal ultrasound assessment for growth and anatomy.
- **Admission is only necessary when individuals meet criteria for admission for medical reasons.**
- If medical admission needs to take place for a pregnant patient with confirmed COVID-19 status they should be admitted on a medical unit unless delivery is anticipated.

For treatment:

- Ideally, care should be done by a multidisciplinary team, this team may include Internal Medicine, Infectious diseases, Critical Care, Anesthesia and Obstetrics and Gynecology.
- For maternal surveillance, close monitoring or initiation of an obstetrical early warning system is appropriate.
- Delivery for pregnant patients should be expedited for fetal reasons or if it is felt that delivery will help maternal resuscitation.
 - If delivery is required, maternal stabilization should be the priority
- All imaging should be carried out as per non-pregnant patient protocols.
- Consider empiric antibiotic therapy for superimposed bacterial pneumonia or severe respiratory disease. Note: as we gather data this recommendation may change.
 - First-line antibiotics are oral amoxicillin for stable patients and ceftriaxone for severe disease, based on general recommendations for the management of pneumonia
- Initiation of antepartum corticosteroids for fetal maturation could be considered as per current guidelines if preterm delivery is indicated or anticipated based on maternal condition.

For Labouring Patients:

If a patient presents in labour has an influenza-like illness (ILI) or is a confirmed COVID-19 case, and the planned delivery site can manage the medical needs of both the patient and the newborn, delivery should take place at that hospital.

- Hospital birth is recommended because of the increased risk of fetal distress associated with COVID-19.
- Limit visitors to one support person (not including Doulas), or as per site protocol.



Care in Labour:

- There is no evidence that second stage of labour creates aerosols, so contact and droplet precautions are adequate. For most up to date information on contact and droplet precautions please refer to <http://www.bccdc.ca/health-professionals/clinical-resources/covid-19-care/infection-control/personal-protective-equipment>
- PPE is only indicated for aerosol-generating medical procedures. For most up to date information aerosol generating medical procedures please refer to For most up to date information aerosol generating medical procedures please refer to refer to http://www.bccdc.ca/Health-Professionals-Site/Documents/AGMPs_requiring_N95.pdf
- If Entonox® is used then the breathing system should contain a hydrophobic filter to prevent it being contaminated with the virus ($\leq 0.05\mu\text{m}$ pore size).
- Intrapartum continuous electronic fetal monitoring is recommended as evidence shows fetal distress during labour in confirmed COVID-19 cases.
- Timing and mode of delivery are governed by OB indications.
- Delayed cord clamping can still take place and skin-to-skin should still be encouraged.

For pregnant patients requiring ICU:

- For sites with an onsite ICU, mother-baby dyads will be cared for at the local site assuming the onsite NICU can manage the gestational age of the newborn. Do not transfer unless cannot meet both mother and neonate requirements.
- Royal Columbian, Surrey Memorial and Victoria General Hospitals can manage pregnant women with COVID-19 who require an onsite HAU/ICU and require a NICU for a baby at <30 weeks GA.
- Those requiring escalation of postpartum care not available at their local site will be transferred as per Patient Transfer Network (PTN) and COVID-19 protocol within their health authority.
- For hospitalized confirmed COVID-19 patients whose goals of care align with full critical care support, contact Critical Care outreach Team or equivalent if oxygen requirements reach 4LPM to maintain SpO₂ >93%
- When oxygen requirements exceed 6L, contact the ICU team on call immediately.

Postpartum Care and Care of the Newborn:

- Newborns should be bathed as soon as reasonably possible after birth to remove virus potentially present on skin surfaces.
- Routine testing for SARS-CoV-2, of newborns born to mothers who are suspect cases of COVID-19 is not recommended. Test only if mother's test results come back as positive for SARS-CoV-2.
- Test ALL newborns born to mothers who are confirmed cases of COVID-19 for SARS-CoV-2 within 1- 2 hours of birth.
 - If newborn tests positive for SARS-CoV-2 isolate until:
 - At least 10 days have passed since the onset of symptoms; AND
 - Fever has resolved without the use of fever-reducing medication; AND
 - Symptoms (respiratory, gastrointestinal, and systemic) have improved



- If newborn tests negative for SARS-CoV-2 isolate as per a close contact and monitor for influenza like symptoms.
- Newborn of mother with confirmed COVID-19 is considered a close contact and should isolate with mother for 14 days to ensure the full incubation and infectious period has passed
- Isolation of newborn from mother is not necessary unless clinically indicated by disease severity
- Mother to mask and utilize strict hand washing protocol for skin-to-skin
- Document confirmed COVID-19 status of mother/newborn on the liaison form to ensure appropriate follow up by public health after discharge into the community
- Discharge mother and newborn as soon as both are stable;
 - Newborn screening is considered an essential service
 - Birthing hospitals should collect blood spot cards as close as possible to 24 hours after birth
 - Birthing hospitals may consider increasing blood collection rounds to facilitate timely discharge
 - If a newborn is discharged before 24 hours of age, an initial card should be collected. Deferral is not recommended to avoid the risk of COVID-19 exposure at an outpatient blood collection facility and to ensure timely diagnosis for conditions on the newborn screening test panel

Newborn feeding:

- For mothers wishing to breastfeed, precautions should be taken to limit viral spread to newborn:
 - Hand washing before and after touching the newborn and related equipment, for example, breast pump, breast pump parts of newborn feeding equipment
 - Wearing a mask to minimize respiratory secretions to the newborn during breastfeeding and skin-to-skin contact
 - Avoiding coughing or sneezing on milk storage containers and breast pump parts
 - Following recommendations for pump and pump parts cleaning after each use
 - Cleaning outside of the pump areas of high touch, such as buttons and dials, with sanitizer or wipes, each time it is used
 - Routinely cleaning and disinfecting surfaces with which the symptomatic mother has been in contact
- Mothers who are formula feeding should also practice strict hand hygiene, wear a mask, and adhere to sterilisation guidelines with feeding equipment as per usual

After discharge home:

- Advice should be given to mother about self-isolation measures while at home until the end of the isolation period.
 - People that test positive for SARS-CoV-2, must self-isolate at home until:
 - At least 10 days have passed since the onset of symptoms; AND
 - Fever has resolved without the use of fever-reducing medication; AND
 - Symptoms (respiratory, gastrointestinal, and systemic) have improved
 - People that test negative for SARS-CoV-2, must self-isolate at home until:
 - Resolution of fever without the use of fever-reducing medication; AND
 - Improvement in symptoms (respiratory, gastrointestinal, and systemic): AND
 - Two negative NP swabs collected at least 24 hours apart
 - People who are not tested for SARS-COV-2 must self-isolate at home until:
 - At least 10 days have passed since the onset of symptoms; AND



- Fever has resolved without the use of fever-reducing medication; AND
- Symptoms (respiratory, gastrointestinal, and systemic) have improved
- Members of the general PUBLIC that are considered a CLOSE CONTACT of a confirmed COVID-19 case, must self-isolate for 14 days to ensure the full incubation and infectious period has passed
- Breast pumps should be cleaned and disinfected according to the manufacturer’s instructions
- Parents/caregivers should be given instructions how to appropriately don/discard PPE, effective handwashing, and ensuring the pump and pump parts are as clean as possible. For example, wash breast pump kit collection with warm soapy water, rinse with clear water then air dry; sanitize parts at least once daily.
- Phone contact by Public Health Nurse or Primary Care nurse should occur within 24-48 hours after discharge.
- Public health workers should don PPE for respiratory droplet precautions if they are providing direct patient contact and, if not, they can provide care and advice either virtually or from outside the home.
- Primary care provider follow-up should be arranged within 3-5 days of discharge if possible. Advise parent/caregiver to call ahead and notify clinic prior to arrival so that healthcare workers can don PPE for contact and droplet precautions.

Parents should be told of the signs and symptoms to watch for in newborn at home:

- Fever or low temperature (<36.5 or > 37.5)
- Signs of respiratory distress
 - Respiratory rate >60
 - Nasal flaring
 - Chest retractions
 - Grunting
 - Changes in baby’s skin color to blue or gray
 - Cough
- Vomiting
- Diarrhea
- Poor feeding

Re-admission to hospital

- If the newborn develops any of these signs and/or symptoms at home, mothers or caregivers should phone 8-1-1, as well as their primary care provider to communicate the findings and determine plan for newborn assessment. Call ahead to notify hospital staff if bringing the newborn into the hospital and notify them of their COVID-19 status.

References

1. Puopolos, Karen, Hudak, Mark L. et al. “Management of Infants Born to Mothers with COVID-19”, 2 April, 2020, American Academy of Pediatrics Committee on Fetus and Newborn, Section on Neonatal <https://downloads.aap.org/AAP/PDF/COVID%2019%20Initial%20Newborn%20Guidance.pdf>
2. Dong YY, Mo X, Hu YB et al. “Epidemiological characteristics of 2143 Pediatrics Patients with 2019 Coronavirus Disease in China”. Pediatrics 2020 Mar [Epub]
3. Royal College of Paediatrics and Child Health. “COVID-19 – guidance for paediatric services”. Updated 13th March, 2020.



4. Hospital Authority Central Committee on Infectious Diseases and Emergency Response, Hong Kong. "Interim Recommendation on Clinical Management of Paediatric Patients of Coronavirus Disease 2019 Infection". Effective 13th March, 2020.
5. Royal College of Obstetricians & Gynaecologists. "COVID-19 Virus Infection and Pregnancy". Downloaded 16th March, 2020.
6. Lu Q, Shi Y. "Coronavirus disease and neonate: what neonatologist need to know". Medical Virology 2020 Feb [Epub]
7. Wang LS, Shi Y, Xiao TT et al. "Chinese expert consensus on the perinatal and neonatal management for the prevention and control of the 2019 novel coronavirus infection 1st edition". Annals of Translational Medicine. 2020 February [Epub].
8. Neonatal Unit, Department of Paediatrics, Prince of Wales Hospital, Hong Kong. Management of infants with COVID-19. 2020 March [personal communication]
9. Neonatal Unit, Department of Paediatrics & Adolescent Medicine, Queen Mary Hospital, Hong Kong. Management of infants with COVID-19. 2020 March [personal communication]
10. Kam KQ, Yung CF, Cui L et al. "A well infant with coronavirus disease 2019 with high viral load". Clinical Infectious Diseases. 2020 February [Epub].
11. Rasmussen SA, Smulian JC, Lednicky JA et al. "COVID 19 and Pregnancy: what obstetricians need to know". American Journal of Obstetrics & Gynecology. 2020 February [Epub]
12. Pediatric Committee, Medical Association of Chinese People's Liberation Army; Editorial Committee of Chinese Journal of Contemporary Pediatrics. "Emergency response plan for the neonatal intensive care unit during epidemic of 2019 novel coronavirus". Chi J Contemp Pediatrics 2020;22(2):91-95.
13. Working group for the Prevention and Control of Neonatal 2019-nCoV Infection in the Perinatal Period of the Editorial Committee. "Perinatal and neonatal management plan for prevention and control of 2019 novel coronavirus infection 1st edition". Chin J Contemp Pediatr. 2020; 22(2):87-90.
14. Section on COVID-19 Infection Precaution, BCCW Infection Control Manual.
15. Toronto Region Recommendations for management of Pregnant Women and Neonates with Suspected or Confirmed COVID-19. Version date: 17th March, 2020.
16. Alberta Health Service. COVID-19 (Novel Coronavirus, 2019-nCoV) Interim IPC Recommendations. Version date: 13th March, 2020
17. BC CDC – PICNet (Provincial Infection control Network of British Columbia). 2019 Novel Coronavirus: Aerosol Generating Medical Procedures in Healthcare Settings http://www.bccdc.ca/Health-Professionals-Site/Documents/2019-nCoV_AGMP_PICNet.pdf Version date: February 7, 2020
18. BC CDC. Pregnant Women with COVID-19+ or PUI General Guidelines for Admission and Hospital Treatment. <http://www.bccdc.ca/Health-Professionals-Site/Documents/Pregnancy-COVID19-Hospital-Admission-Treatment.pdf> Version date: March 18, 2020
19. SOGC Committee Opinion on COVID-19: <https://sogc.org/en/content/featured-news/Updated-SOGC-Committee-Opinion%E2%80%9393%20COVID-19-in-Pregnancy.aspx>
20. Royal College of Obstetrics and Gynecology of UK: Coronavirus 19 Infection in Pregnancy (published Friday March 21, 2020)
21. WHO Clinical Guidelines for the Management of COVID-19 related acute respiratory distress syndrome
22. Centers for Disease Control Guidelines: Pregnancy and Breastfeeding
23. Royal College of Obstetrics and Gynecology of Australia: COVID-19- guidance for pediatric services, last updated March 16, 2020
24. <https://www.health.gov.bc.ca/library/publications/year/2013/healthy-start-initiative-phs.pdf>



25. <https://www.health.gov.bc.ca/library/publications/year/2019/BBC-7th-edition-FINAL-Nov2019.pdf>
26. <http://www.bccdc.ca/health-professionals/clinical-resources/covid-19-care/infection-control/personal-protective-equipment>
27. <http://www.bccdc.ca/health-professionals/clinical-resources/covid-19-care/infection-control/personal-protective-equipment>
28. http://www.bccdc.ca/Health-Professionals-Site/Documents/AGMPs_requiring_N95.pdf

