

Date:	June 25, 2020
To:	All Staff and Physicians (specific to acute care areas treating pediatric patients)
From:	Jennifer Begg, Executive Lead, Child and Youth Health Program; Darlene Fjellgaard, Clinical Nurse Educator, Pediatrics; Dr. Kirsten Miller, Medical Lead, Child and Youth Health Program; Kelly Gunn, VP Primary & Community Care and Chief Nursing Executive
CC:	Penny Anguish, Northern Interior Chief Operating Officer (NI COO); Angela De Smit, NE COO; Ciro Panessa, NW COO; Dr. Tony Preston, Medical Director, Prince George; Dr. Dietrich Furstenburg, NI Rural Medical Director; Dr. Shannon Douglas, NI Medical Director- Lakes Omineca; Dr. Becky Temple, NE Medical Director, Dr. Jaco Fourie, NW Medical Director
Re:	COVID-19 in Children <ul style="list-style-type: none"> • Update: Clinical Guidance for Pediatric services • Guidance for clinicians in British Columbia about: Multisystem inflammatory syndrome in children (MIS-C) temporally associated with COVID-19 • Information for parents and caregivers on when to seek care • Guidance for families of children with immune compromise for school and group gatherings • Update: Information for families of children with medical complexity

Issue

To provide information on updates to the clinical guidance for staff and physicians on:

- Caring for children with confirmed or suspected COVID-19 including the recent Public Health Alert regarding multisystem inflammatory syndrome in children (MIS-C) temporarily associated with COVID-19
- Information for parents and caregivers on when to seek care for their children
- Guidance for children with immune compromise in school and group settings
- Answers to additional questions about children with medical complexity

Background

At this time our pediatric populations are being managed:

- For acute care delivery services
 - [Hospital and critical care](#) BCCDC clinical guidance
 - [NH Hospital Outbreak Preparedness Assessment Tool for COVID-19](#)
 - [BCCDC Clinical Care Pediatrics](#)
- For community services (pediatric care)
 - [Primary care](#) clinical guidance and [clinical response guidelines for COVID-19 in an outpatient setting](#) (primary care clinics, private medical offices, urgent and primary care centres, and Northern Health Clinics).

The Provincial Clinical Reference Group has updated the guidance on COVID-19 in children including infection prevention and control, diagnosis, and treatment options. The Canadian Pediatric Society issued a Public Health Alert (May 12, 2020) to notify health practitioners and the public of an acute inflammatory syndrome temporally linked to COVID-19 that has been reported in children and teenagers. Children with this condition present with symptoms of systemic inflammation, often with

features of Kawasaki Disease; they can quickly become critically ill and there have been deaths reported.

Child Health BC along with health authority partners has developed recommendations for parents and caregivers on when to seek care for their children. This was developed to address the risks of not seeking medical care, including routine immunizations, which can be much higher than the risks of a child getting sick from COVID-19. In addition, there has been guidance developed for families of children with immune compromise in school settings and group gatherings and an update to the information for families of children with medical complexity.

Clinical Guidance:

- Refer to provincial guidance available through: [BCCDC Clinical Care Pediatrics](#)
 - Health care providers refer to [Clinical Guidance- Multisystem Inflammatory Syndrome in Children \(MIS-C\) Temporally Associated with COVID-19](#) and [Canadian Paediatric Society- Public Health Alert](#) when children 0-19 years of age are presenting with:
 - Fever >3 days **AND two** of the following:
 - a) Acute gastrointestinal symptoms (abdominal pain, vomiting, diarrhoea)
 - b) Rash or bilateral non-purulent conjunctivitis or muco-cutaneous inflammation signs (oral, hands or feet)
 - c) Hypotension or shock
 - d) Features of myocardial dysfunction, or pericarditis, or valvulitis, or coronary abnormalities (ECHO findings or elevated Troponin/BNP/NT-proBNP)
 - e) Evidence of coagulopathy (abnormal PT, PTT, elevated d-dimer)
- AND**
Elevated markers of inflammation such as ESR, C-reactive protein, or procalcitonin
- AND**
No other obvious microbial cause of inflammation, including bacterial sepsis, staphylococcal or streptococcal shock syndromes
- AND**
Evidence of SARS-CoV-2 infection (positive PCR test or serology), or close contact¹ with a confirmed or lab-probable COVID-19 case.

Recommendations

All pediatric populations should be advised to avoid coming to health care facilities unless absolutely necessary. Most children with COVID-19 are generally presenting with mild illness. Children with complex underlying medical conditions or immune suppression may present with more severe disease.

Cases of MIS-C are reportable under the Reporting Information Affecting Public Health Regulation and Public Health Act. Please contact your local Medical Health Officer to report cases of MIS-C. They can provide guidance regarding further testing required to confirm COVID-19 and liaise with the consultant pediatric specialists.

They can be reached through:

Northern Health Communicable Diseases Hub

Mon – Fri, 8:30 am – 4:30 pm

- 250-565-2990
- 1-855-565-2990
- Fax: 250-649-7071

After hours- Medical Health Officer on call (250-565-2000, press 7, ask for the Medical Health Officer on call).

Direct parents and caregivers to [A Message to Parents and Caregivers of Children During the COVID-19 Pandemic](#) for guidance and further information on when to seek medical care for their children.

Refer to the [Pediatric Clinical Guidance for COVID-19](#), some key updates are highlighted below.

Infection Prevention and Control

In brief, respiratory droplet and contact precautions should be used for all suspected or confirmed cases of COVID-19. Airborne precautions (including an N95 mask and protective eyewear/face shield, gown and gloves) should be used for any aerosol generating procedures (AGMPs).

AGMPs include:

- Endotracheal tube insertion or removal
- Tracheotomy
- Bronchoscopy
- Nebulized therapy

The full list of AGMPs is available at: <http://www.bccdc.ca/Health-Info-Site/Documents/Respiratory-protection-COVID19.pdf>

Clinical Features and Diagnosis

Pediatric studies are consistently reporting that most children have mild disease or asymptomatic infection. It is not known why children are significantly less affected compared to adults.

Compared to adults, children report more gastrointestinal symptoms, including abdominal discomfort, nausea, vomiting, and diarrhea. These gastrointestinal manifestations may be the sole presentation, without any accompanying respiratory symptoms.

New data suggests that COVID-19 can present with skin changes, including acrocyanosis, pernio-like changes, and acral ischemia. Skin lesions may appear as acraly distributed red-purple papules or nodules and should prompt testing and referral to a pediatric dermatologist.

Recently there has been a small rise in the number of critically ill children presenting with multisystem inflammatory diseases, with overlapping features of toxic shock syndrome and atypical Kawasaki disease. Many of these children have tested positive for COVID-19.

Who to test:

This changes frequently; please refer to [BCCDC guidelines](#) for up to date testing criteria.

Management and Treatment

Therapeutic options for COVID-19 are actively being studied worldwide and rapidly evolving. The majority of data available is from adult literature. Current literature suggests that most children will have mild disease and will recover at home 1-2 weeks after symptom onset with no medical intervention necessary.

Supportive Care

Recommendation: Supportive care is the only known effective therapy for COVID-19. Use conservative fluid management when there is no evidence of shock.

Recommendation: Acetaminophen and ibuprofen at routine doses can be safely administered for fever and symptom relief in children with suspected or confirmed COVID-19.

Early in the outbreak, there were concerns that the use of [nonsteroidal anti-inflammatory drugs \(NSAIDs\) may worsen the severity of COVID-19 infection](#); however, the evidence has not demonstrated a link.

Corticosteroids

Recommendation: Corticosteroids are not recommended as a treatment of COVID-19 but should be administered in situations with established indications.

Children with asthma exacerbations and suspected/confirmed COVID-19 should receive inhaled or systemic corticosteroids according to current asthma guidelines. Similarly, children with moderate to severe croup should be given corticosteroids as per current guidelines.

Antiviral medications

Recommendation: There are currently no approved therapies to treat COVID-19. Please contact Pediatric Infectious Diseases to discuss a specific case. As per the WHO guidelines, investigational anti-COVID-19 medications will only be used in approved, randomized controlled trials (RCT).

COVID-19 Pediatric Resources

- BCCDC: [Pediatric Clinical Guidance for COVID-19](#)
- BCCDC: [Management of Pediatric Severe Respiratory Illness for COVID-19](#)
- BCCDC: [Clinical Guidance- Multisystem Inflammatory Syndrome in Children \(MIS-C\) Temporally Associated with COVID-19](#)
- BCCDC: [General Patient Handouts for COVID - 19](#)
- BCCDC [COVID-19 Information for Families of Children with Medical Complexity](#)
- BCCDC: [Guidance for Families of Immunocompromised Children in School and Group Gatherings](#)
- [Canadian Pediatric Society COVID-19 Resources](#) provides a wide variety of information and resources for pediatricians, children and families.

For more information, please contact:

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