



The Canadian Orthopaedic Association *L'Association Canadienne d'Orthopédie*



COA Position Statement Orthopaedic Surgical Care During the COVID-19 Pandemic

Background

COVID-19 is a disease caused by the Coronavirus (SARS-CoV-2) transferred from an animal source. The major route of transmission is through droplets produced from coughing or sneezing, between people who are in close contact with one another, or by touching contaminated surfaces and then touching one's face. It is carried primarily in the respiratory tract of infected individuals, and occasionally in their stool. While 80% of patients have mild symptoms, 20% of patients will present with severe symptoms and it can be fatal in a minority of patients. The postulated mechanism for respiratory failure is a cytokine storm leading to a severe pulmonary inflammatory reaction with rapid onset of adult respiratory distress syndrome. Current evidence suggests that the most vulnerable populations are the elderly and those with comorbidities (in order: cardiovascular disease, diabetes, respiratory disease and cancer). However, younger and healthier individuals remain susceptible. Evidence, at present, suggests that viral load increases the risk of severe illness in younger and otherwise healthy individuals.

There are currently no vaccines or effective antiviral treatment, and the current test is an NP (nasopharyngeal) swab with reverse transcription polymerase chain reaction (RT-PCR) analysis. Although estimates vary by country, population and denominator, mortality risks associated with COVID-19 range between 1 to 10%. Severe symptoms result in hospital and ICU admissions from respiratory failure, which can happen very rapidly in susceptible individuals. If uncontained, this virus will exceed the current available resources in the Canadian health-care system. Therefore, provincial health authorities have instigated a containment strategy which requires the reduction of person to person contact by means of a global campaign of social distancing, voluntary self-isolation, mandatory quarantines, and well-publicized education campaigns.

Orthopaedic surgeons are a vital asset in the health-care system. There are no other surgeons or physicians able to perform or teach orthopaedic care. Canada has a deficit of orthopaedic surgeons by international standards. They are required to be available for urgent cases, to teach and provide care for both fractures and disabling musculoskeletal disease during the period of resolution. The Canadian Orthopaedic Association considers it a priority that surgeons assist in reducing transmission of COVID-19. There is currently an ethical necessity to respect the needs of society ahead of the needs of an individual.

The COA recommends orthopaedic surgeons consider the following guides:

Risk Mitigation

1. Physically isolate – stay home. Avoid any activity that brings you in contact with other people.
2. Perform all meetings and teaching remotely or if necessary, in a room with two-metre physical distancing.
3. Work out of one institution if possible. Avoid potential spread between hospitals. Create call groups that are isolated from each other.
4. Practice a routine of care that assumes that all patients are COVID-19 +ve. Plan your trip to the hospital. Treat all common surfaces (door handles, keyboards) as potentially infected. Take only a cell phone and basic ID. Clean the inside of your vehicle. Remove your ID lanyard and keep your hospital ID clean. Change clothes and shoes before patient contact. Monitor your temperature. Follow your hospital's guidelines with reference to the use of personal protective devices (PPE). Ensure that you have been properly test-fitted for an N95 mask, and review PPE donning and doffing procedures as they must be used effectively and not wasted. Follow your hospital's protocol with respect to re-sterilization and reuse of PPEs such as cloth gowns and N95 masks. If the hospital does not have a re-cleaning program, you may consider keeping masks for later use with appropriate cleaning. Shower immediately on getting home or as you leave the hospital. Hand wash at every opportunity for 20 seconds using correct technique.

5. If you develop symptoms, immediately inform the hospital and your Surgeon-in-Chief. Remain home and follow the advice of Infection Protection and Control (IPAC).

Peri-Operative Care

- 1 Create a virtual office. Every patient you see increases your risk of acquiring the disease, and the office visit brings them into contact with multiple people that can be avoided. Cancel all unnecessary travel.
- 2 If a patient needs to be assessed in person for an urgent issue, such as in a fracture clinic, ensure that there are adequate physical distancing measures in place and avoid multiple patients simultaneously in a waiting room, cast room, office, etc.
- 3 Reduce X-ray, laboratory and imaging utilization. Each trip to the facility increases the risk of disease transmission.
- 4 Preoperative COVID-19 testing should follow provincial guidelines. A negative test in an asymptomatic patient may be falsely reassuring as they may be incubating the virus. A temperature over 38°C is the most reliable sign of possible infection for patients that must have surgery.

Surgical Care

- 1 Minimize all non-urgent surgery. All elective surgery should not be done at this time. Every surgery brings a patient into contact with multiple people who are required to provide care. Each care provider infected removes them from a potentially overloaded health system that is reliant on their service. It also uses up a large volume of PPE that may be required for COVID-19 +ve care. Injuries such as Achilles tendon ruptures, calcaneal fractures, distal radius fractures, stable ankle fractures and clavicle fractures, to name a few, which can be treated nonoperatively or operatively, should be considered for nonoperative care in discussion with the patient. Decisions will need to be individualized and additionally consider access to OR at the time and follow-up needs for the chosen treatment option.
- 2 For potentially COVID-19 symptomatic patients with closed fractures that require surgery (such as a tibial fracture), nonoperative treatment may be necessary initially until approximately 14 days later (depending on provincial guidelines), or when either the symptoms have resolved or they are clearly not incubating the virus. This might not apply to asymptomatic or low-risk patients.
- 3 Currently, some non-life and limb threatening surgeries are required to prevent permanent disability. However, the availability of resources may, at any time, deem that surgery should be limited to life and limb threatening surgery only. The need to protect surgeon availability, preserve resources, and reduce spread of the virus must be considered and balanced with the individual patient's needs. This decision cannot be made by the surgeon in isolation, but rather in collaboration with local health authorities as they increase the alert level.
- 4 Follow the advice of your local health officers, surgical and hospital management and infection protection and control. Advice with respect to operative access, appropriateness of surgery, testing and use of PPE is likely to change in time and vary regionally. Please stay apprised on the local guidelines and access to surgery as they are also expected to evolve over the ensuing weeks. Please involve these teams in individual case management if there are questions with regards to interpretation of guidelines.

Personal Protective Equipment (PPE)

Provincial and hospital recommendations for PPE for surgery and patient contact should be followed. These are rapidly changing so it is important to stay informed and current with your surgical head and provincial health mandates.

Advocacy

Work with your community to emphasize the need to reduce disease transmission and flatten the curve to prevent overload of the health system. Use social media responsibly and communicate this message in positive terms. Act out the message and lead by example.

Additional Reading:

1. COVID-19 Resource Centre, OrthoEvidence <https://myorthoEvidence.com/covid19>
2. Novel Coronavirus COVID-19: Current Evidence and Evolving Strategies. The Journal of Bone & Joint Surgery March 2020. <https://journals.lww.com/jbjsjournal/Documents/Vannaboutathong.pdf>

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