



# COVID-19 UPDATE: ASK EMERGENCY & CRITICAL CARE SPECIALISTS – PART 4

Webinar recording: **May 5, 2020**

URL: <https://ubccpd.ca/ask-emergency-and-critical-care-specialists-part-4>

**Disclaimer:** Information on COVID-19 is changing rapidly and much of the research is preliminary. Assessment and management protocols are suggestions only; they do not take the place of clinical judgement. Please check with your own health authorities and local medical health officers as policies and support for the suggested approaches to patient care may vary between regions.

This summary was prepared by Dr. Simon Moore and not by the speakers.

**The speakers are contributors to ROSe, a 24/7 Telehealth service that physicians in BC can use for EM, Critical Care or other medical advice at 1-888-918-0626 or [rosetelehealth.com](https://rosetelehealth.com).**

## Webinar Summary

- **CPR is likely of little benefit in COVID-19 arrests**

This pandemic has demonstrated a discordance between what we think CPR can do and what it actually does. For most patients with COVID-19 the potential benefit of CPR is extremely low, as death tends to occur from non-reversible causes (e.g. refractory hypoxemia). For patients who arrest from refractory hypoxemic respiratory failure, CPR will not reverse this.

- **High frailty = low benefit from CPR**

High frailty scores tend to correlate with poorer outcomes from CPR.

- **We are well-prepared for a second wave in BC, if it occurs**

We are now in a much different situation than we were 2 months ago. Back then we could not do quick testing & there was significant turnaround time. Now, across the province, including at

rural sites, there is much better access to testing. Many rural and urban sites will have access to a test with a 30 to 40 minute turnaround. We have built increased capacity in our hospitals as well and our ability to trace contacts is much better.

- **Take care of yourself and your colleagues**

Health care providers are exposed to trauma which can take its toll emotionally, as well as physically with the challenges of wearing PPE. There are numerous and varied traumatic experiences including young patients dying of COVID-19 and watching family members say goodbye. Usual methods of self-care have been altered or removed by COVID-19 with the stress of perhaps being unable to get access to one's medications or worry about becoming ill. Health care providers are encouraged to access self-care in new ways; there are now increased mental health services (e.g. PhysicianHealth.com) and can engage in connection in other ways as well (e.g. telemedicine happy hours, virtual social connection).

- **Be wary of anchor bias**

Patients suspected of having COVID-19 may have one of the many other diseases that cause similar symptoms (e.g. pneumonia, acute coronary syndrome, etc.).

- **Each individual needs individualized care**

One size does not fit all for therapies of any disease. Remember to consider their unique physiology and weigh both risks and benefits each time (i.e. some patients with respiratory distress from COVID-19 or those with cardiomyopathies may also be hypovolemic and may benefit from fluids).

- **Do a full physical exam**

There are new dermatologic manifestations that are increasingly reported as having an association with COVID-19 e.g. vasculitis due to Kawasaki's, Pernio-like "covid toes," maculopapular rash, Stevens-Johnsons syndrome. Anecdotal reports suggest incidence of Kawasaki's disease has increased five-fold.

- **COVID-19 may cause CNS sequelae and long-term disability**

Neurosequelae have been reported such as extra-axial complications such as Guillain-Barre and meningioencephalitis. These may be above and beyond the usual sequelae of critical care (e.g. prolonged benzodiazepine infusion, critical illness polyneuropathy and myopathy). Pulmonary hypertension, lung scarring, and post-pulmonary embolus patients can result in longstanding decrease in lung capacity. Ultimately, long term sequelae are not yet known as this is still a new disease. We will know more over time.

- **COVID-19 likely causes a hypercoagulable state**

Micro- and macrovascular complications are being increasingly reported. Anecdotally, vascular surgery has been frequently consulted for arterial and venous occlusions in COVID-19 patients. Thrombosis Canada currently recommends treating as you normally would. BCCDC recommends increased dosing instead of 40mg enoxaparin daily to 30mg bid. (See the [COVID-19 Hospitalist Webinar summary](#) for further discussion on anticoagulation of COVID-19 patients).
- **Antiviral medications will not be the silver bullet**

Though many are being tested, none have shown promise as a cure.
- **Antibody-rich plasma is not yet proven**

We are early in the disease understanding and we do not know what titre equates to immunity. Though it is being trialed, results are pending; anecdotally, it is not helping patients magically come off ventilatory support.
- **Point-of-care serology testing is so far unreliable**

Despite the many options on the market, many have high rates of false positives.
- **Consider high-flow oxygen after 6 litres of nasal prongs**

Beyond 6 litres of nasal prongs, there is minimal benefit due to increased room air dilution, and excess discomfort and risk (e.g. epistaxis) for the patients. High flow oxygen options should be considered at that point.
- **Awake proning can be helpful to improve oxygenation**

Most lung disease occurs in the posterior lungs. When lying supine, blood tends to go where gravity lies, leading to a V:Q (ventilation:perfusion) mismatch. When proned, the blood is redistributed to the more healthy alveoli and better flow. This also removes intrathoracic pressure that is applied to the posterior damaged lungs, and improves recruitment of posterior alveoli. Case studies using imaging, as well as decades of research on ARDS, have supported this theory.
- **Visitation rules vary**

In the presenters' experience, visitors are not allowed in the COVID-19 ICU except with some exceptions with imminently dying patients for whom families are allowed to visit; in this case PPE is provided to families (if it is not in short supply). Because extubation is an aerosol-generating medical procedure, there may be decreased risk to families if terminal patients are not extubated.

- **Can home oximetry inform whether patients should go to ER?**

Trials are pending to answer this question. This is confounded by the “happy hypoxemics” – patients who do not feel short of breath yet are quite hypoxic.

## Resources

- **Does prone positioning improve oxygenation and reduce mortality in patients with acute respiratory distress syndrome?**  
<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4173887/pdf/crj-21-4-213.pdf>
- **A Comprehensive Review of Prone Position in ARDS:**  
<http://rc.rcjournal.com/content/respcare/60/11/1660.full.pdf>
- **CAEP:** <https://caep.ca/>
- **BC Provincial Critical Care Working Group:** <https://bcpsqc.ca/improve-care/critical-care/critical-care-working-group/>
- **Internet Book of Critical Care:** <https://emcrit.org/ibcc/covid19/>
- **EB Medicine:** <https://www.ebmedicine.net/topics/infectious-disease/COVID-19>
- **CMAJ:** [www.cmaj.ca](http://www.cmaj.ca)
- **Dr. Bonnie Henry Fan Club**

## Thanks to the speakers on the video:

- **Dr. Omar Ahmad** – Dept. Head of ER & Critical Care, Victoria, BC
- **Dr. Adam Thomas** – ER & Critical Care Physician in Vancouver & Victoria, Co-Editor of the Internet Book of Critical Care
- **Dr. Mario Francispragasam** – ER & Critical Care Physician in Mainland BC & Victoria
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