THE UNIVERSITY OF BRITISH COLUMBIA
Continuing Professional Development
Faculty of Medicine

UBC CPD
The Division of
Continuing Professional Development
Faculty of Medicine
City Square, 200-555 W 12th Ave
Vancouver BC Canada V5Z 3X7
T 604.675.3777
ubccpd.ca

EXPERT Q&A ON MANAGEMENT OPTIONS FOR COVID-19 PATIENTS WITH EMERGENCY, HOSPITAL-BASED, PRIMARY CARE, AND PUBLIC HEALTH CLINICIANS SPECIALISTS

Webinar date: **December 17, 2020**
Recording: **https://ubccpd.ca/covid-19-update-expert-qa-management-options-covid-19-patients-emergency-hospital-based-primary-care**

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. Birinder Narang and not by the speakers.

Learning Objectives:

- Become updated on best evidence and suggested best practices for managing your COVID-19 patients.
- Be able to confidently manage your COVID-19 patients after hearing the expertise and experiences of emergency, hospital-based, public health and primary care clinicians.

General:

Q: What is the survival rate for intubated COVID-19 patients?

A: New data from 1st Wave and 2nd Wave, not stratified to being ventilated or not, 1st wave – 25.6% mortality, median age 70, 86% had comorbidities (1 or more), 2nd wave – mortality – 14.1% , median age 59.5, 47% have comorbidities. In hospitalized patients in general, 1st wave – mortality rate is 21.2% + 2nd wave it is 10.6%.

Q: When should a patient with COVID-19 be hospitalized? What should initial management be?

A: If they require Oxygen, if extremely volume deplete, delirious/confusion – similar as to non COVID populations, supportive therapy + dexamethasone along w/ double dose DVT Prophylaxis + supportive management + treating comorbidities

Q: D-Dimer in ER, do we need CTPA to r/o Pulmonary Embolism?

A: From NYC: All expert opinion at this point, 6x upper limit of normal (whatever assay may be), will start therapeutic anticoagulation, don't necessarily do angiography unless hypoxemia/hypotension. Have seen more PE than initially expected. Coagulopathy, looks like you are in a hypercoagulable stable, based on retrospective data. Still have seen clotting despite DVT prophylaxis. Not great evidence yet locally, but if you look at it physiologically. Heparin peak levels, 4-6 hours. Doesn't make sense, to only dose once a day, are dosing it BID, even without robust evidence. High D-dimers, ie >1000, has been associated with increased mortality.

Q: What is the best protocol to treat frail patients with COVID-19 in a rural setting?

A: Goals of care discussions, early and often are important with family and patients. Can avoid a lot of suffering, if documented prior to someone deteriorating. Patients can go south quickly, sooner the better. Most older, frail, patients, do not tend to do well, they have long admissions without great outcomes, as therapeutics don't change outcomes significantly unfortunately. Communication with nearby hospital, can be helpful. There is a system in BC, to transfer patients to COVID hospitals as soon as possible. Be trauma-informed and culturally sensitive in decision making re: transport, goals of care. BCCDC has protocol on how to approach to intubate and manage COVID-19 patient. RCC has connection to Intensive Care tele-support provincially.

Q: What is known re: mutation affecting spike protein reported in UK?

A: The vaccine has been effective in populations tested on, and they were tested in various parts of the world, showed efficacy regardless of the genotype. Here in BC, we have been affected by multiple different genotypes, don't expect a major effect on vaccination, but if it does, new vaccines will need to be made. There have been other mutations in the last 11 months, including on the spike protein. We do not know what this mutation's effects will be yet, with regards to transmission

Q: How, when and in whom should we start investigating for post COVID myocarditis? Cardiac MRI? Biomarkers? Echos?

A: Complex situation. Logistically, imaging requires a tech, potentially transportation through hospital. Any diagnostic test, have to consider if it changes management. What would you do with a diagnosis of COVID myocarditis, not really sure right now, other than steroids than supportive care.

Q: Any thoughts on bedside and home tests?

A: Antigen tests are being used since they can be done on site, i.e. congregate settings and shelters. Even with 24 hour turn around time, the person may not be there anymore, so antigen testing has been useful in these settings. Just this week, found 10 positive cases in a shelter, and they were moved to a COVID isolation facility. Proactive testing in the DTES when positive cases and can find old infections that way. Antigen test can help differentiate acute vs previous infections.

Q: Please expand on whether students and studying abroad from home, can they come home to visit for Christmas?

A: Public health orders can be confusing. Real prohibition is on social gatherings, ie having people who don't live with you, over to your house for a party, dinner, games night etc. If your child lives elsewhere but is part of your household, they are able to come home to their household for the holidays. If they are traveling internationally, then they have to isolate within your house. Within Canada, no isolation requirement. Families still have to decide whether that is best for them for Christmas. Traveling on planes can still be risky, and you have to assess the risk profile in your own house.

Q: Patients with flu immunization having less severe COVID19 symptoms? Any truth?

A: No evidence about this yet, concerns re: sensitizing immune system with different vaccines. Not enough experience with this yet. Concerted effort to decrease influenza this year as to not confuse picture. Record numbers of people did get influenza vaccine this year.

Q: US CDC, only recommending 7-day quarantine, for someone exposed to COVID19, if they have a negative COVID19 test at that point. Any change coming for BC?

A: BC is looking to potentially shorten isolation periods, as we look at more cases/treatments. The US has decreased the isolation for contacts to 10 days, not 7, and in our data, we see very few contacts become cases after 10 days. With cases, isolation here is 10 days, US is 7 days. We haven't made that change yet. We don't think most people are infectious after 7 days, but some ppl can be infectious up to 3 weeks. Other jurisdictions that have done asymptomatic testing, that has really bogged down testing systems, we have not done that in BC. People who need tests, get tests in BC.

Therapeutics:

Q: What is the role of and value of Vitamin D in prevention and Treatment of COVID-19?

A: Vitamin D, correlation of places with increased COVID-19 burden, and low rates of Vitamin D, although there are lots of confounding variables. Has not been a good study to show benefit from Vitamin D supplementation in acute treatment. Studies ongoing.

Q: What is the use for Ivermectin?

A: Reasonably safe medication that in lab seems to work against virus. Similar to Hydroxychloroquine space. First few small studies may have some small amounts of benefit. Access may be an issue, dose level needed for therapeutic range are high, so that may be a barrier. Need more evidence.

Q: For those people in ER, Walking O2 Sat >95%, look clinically well, mildly elevated inflammatory markers, but have uni or bilateral infiltrates on CXR, is there a role of Abx?

A: Have to look for overt sign for bacterial infection before prescribing antibiotics, ie for CAP. COVID-19 can elevate, CRP, leukocytosis, elevated procalcitonin, makes it very difficult for COVID Pneumonia. If it's just COVID Pneumonia, Azithromycin doesn't work. In NYC, similar experience, initially prescribed Azithromycin upon discharge from ER, but now are asking for re-assessment if uncertain re: bacterial/viral.

Q: Are there any medication that a family physician can prescribe, which will diminish severity of COVID-19?

A: Short answer is no. No medication that can help treat the severity of symptoms. That's the 'holy grail' right now. Reminder for Dexamethasone, the mortality benefit is for patients are requiring oxygen supplementation. Signal towards to harm for those who aren't. In influenza, we have seen steroids has decreased viral clearance, so infectivity rate is higher, maybe can extrapolate that to COVID.

Dosing for Dexamethasone – patients on O2, maybe on High-Flow O2 (Recovery Trial) – 6 mg daily x 10 days. DEXA-ARDS Data – for decompensating patients while on Dexamethasone, we don't know yet. In NYC – have gone with added higher doses of methylprednisolone for patients that are intubated who are decompensating. A lot of discrepancy between sites.

Q: Best management of O2 supplementation for COVID patients.

A: BCCDC has a reference on this. Typically start with nasal prongs, target >92%, up titrate as needed. In some bigger hospitals, critical care outreach team, if patients is on 4L. ICU Attending gets called if on 6L. We know patients can decompensate quickly, and want to make sure in the right place for intubation.

By the time they reach critical care, have to differentiate between hypoxia vs hypoxemia, a lot of redundant oxygen delivery. NEJM trial – liberal vs conservative therapy in ARDS, patients in conservative arm, signal towards not doing as well, see resources, but still don't know overall.

Q: Is there a role of steroid inhalers in COVID-19 patients, to reduce severity in mild symptoms?

A: No trials on that specifically, if COVID infection has concomitant COPD/Asthma flare, then may be a role. Wouldn't prescribe it otherwise, has been evidence of increased rates of pneumonia in patients with COPD when rx inhaled corticosteroids. There is a theory, that as it is such a pro-inflammatory illness, that if you are already on it, it may help, but not substantiated yet.

Q: Are any panelists aware of local collection of convalescent plasma donations, and is it being tested locally as a treatment intervention?

A: Go to blood.ca, Canadian Blood services website (see resources), if you have had COVID 19, and recovered, 28 days since your recovery, will accept your plasma, to test in a clinical trial that is operational across Canada. Has been tried previously, but not a lot of high quality data to date.

Vaccines:

Q: Key differences between COVID-19 Vaccines

A: Most vaccines have to do with spike protein (the antigen) that you are building immunity to. Different vaccines use different mechanisms to get your body to make an antibody to this protein. Pfizer mRNA vaccine – little piece of RNA, encodes spike protein, in lipid envelope, gets into cell, and makes the spike protein, to stimulate immune system to make antibodies against it. They are effective and safe. Moderna vaccine, similar mechanism. Other vaccines in the pipeline, i.e. attenuated virus, synthetic version of spike protein, using a viral vector, to get the genetic material into the cell to make the spike protein.

We know that when people get vaccinated with current vaccines, they still need to follow current public health measures, and still would need to isolate if they were in contact with a case.

Q: Vaccine – will it prevent transmission?

A: Prevents, clinical illness and severe illness, don't know if it will eliminate risk of transmission. People are still going to have to follow public health measures + wear PPE.

Q: Vaccine timeline for children, pregnant, breastfeeding? Implications on weaning?

A: Not tested on pregnant women, lactating women or children. The people who developed recommendations, are hesitant to give to these groups, as novel mechanism. Children are not a priority group for vaccine really, as has low risk of complication. Pregnant women, probably not in high-risk population, as tend to be younger as well. Not in first group of candidates of vaccine. By the time they are candidates, should have other vaccines available, that have the more traditional vaccine mechanisms, may be more reasonable to trial those vaccines in these populations. Right now we are focusing on highest risk populations. Also ones that are not candidates for vaccines are protected by the rest of the population that is getting immunized, by high rates of immunization hopefully

Post-Covid:

Q: Post COVID Syndrome – what do we know about it?

A: Different studies published, i.e. in France – classic "syndrome" young women with very few comorbidities, and other centres, older patient population. Not a great way of diagnosing, predicting, could be from outpatient and inpatient settings. Post COVID recovery clinic, is running at 3 sites, in lower mainland, likely will be another webinar on that. Diagnostics and therapeutics may overlap with Central Sensitivity Syndromes, therapies/approaches to that can be tried. Lot of unknown.

We don't know re: the long term effects of COVID-19 yet. Mortality rate 0.4-0.6%, total, in younger population still 0.1-0.2%, not 0.

We don't know if having infection gives you sterilizing immunity post infection, still being studied right

Q: Are we retesting patients who have tested positive for COVID?

A: We are not routinely re-testing patients who have had COVID, if they are community cases, and have been released from isolation after 10 days. With hospitalized patients, isolation up to 20 days. If they are still in hospital at 20 days, do tend to keep isolated in hospital, may do a test-based strategy, if transferring to a higher risk area, i.e. a LTC facility. 1 patient in BC has had 2 different strains (different genotype). May need to do testing for public health reasons.

Q: Persistent Post-COVID Dyspnea, how long may this last?

A: We don't know how long this may last. A struggle can be a lack of accessibility to PFT, only doing spirometry for urgent cases.

Resources

- **BCCDC - Hospital and Critical Care Guidelines**
  - http://www.bccdc.ca/health-professionals/clinical-resources/covid-19-care/clinical-care/hospital-and-critical-care
- **NEJM - Liberal or Conservative Oxygen Therapy for Acute Respiratory Distress Syndrome**
  - https://www.nejm.org/doi/pdf/10.1056/NEJMoa1916431
- **Canadian Blood Services:**
  - https://www.blood.ca/en/plasma/covid-19-and-convalescent-plasma

Thanks to the speakers on the video:

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