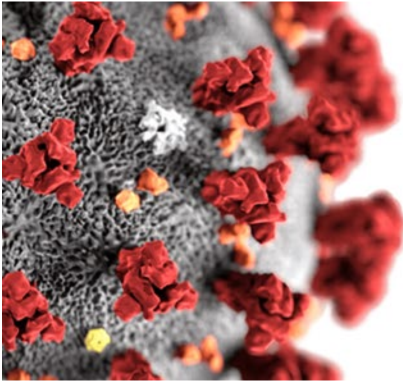


CANADIAN ASSOCIATION OF EMERGENCY PHYSICIANS

COVID-19

CAEP.CA

The Canadian Association of Emergency Physicians (CAEP) is the national specialty society for Emergency Medicine. Our 2500 members provide emergency care to the millions of Canadians who make over 15 million ED visits each year.

Background:

Canadians have a right to receive timely access to quality emergency care, but the decades-long neglect of our emergency health care system has made this an aspirational goal rather than a reality.

Emergency Departments are crowded because of our inability to transfer admitted patients to the wards and the ICUs in a timely fashion, leading to care routinely given in hallways, with increases in contagious risk and in unnecessary morbidity and mortality. The safe occupancy rate of a hospital is known to be 85% to allow for efficient operation and to provide surge capacity; however, Canadian hospitals routinely operate at over 100% capacity. In order to achieve needed surge capacity our provinces have had to drastically cut back on scheduled surgery and routine ambulatory care, however we are now gratefully at about 75% occupancy across the country.

The other major chronic challenge is insufficient human resources. We are chronically short of trained emergency physicians and have insufficient residency positions across the country to alleviate the shortage. Our Collaborative Working Group on the Future of Emergency Medicine in Canada identified that in 2016, Canada had a shortfall of 478 emergency physicians, estimated to increase to 1071 by 2020. No changes have been made in the intervening years.

The COVID 19 Pandemic:

A pandemic was declared by the World Health Organization on March 11, 2020. COVID-19, a novel coronavirus, has lived up to the phrase “novel”. Though we are slowly coming to an understanding of its epidemiology and transmission, we are already aware of its potential to rapidly evolve and cause serious respiratory illness and death. There is no cure for COVID-19 and management, at this point, is purely supportive.

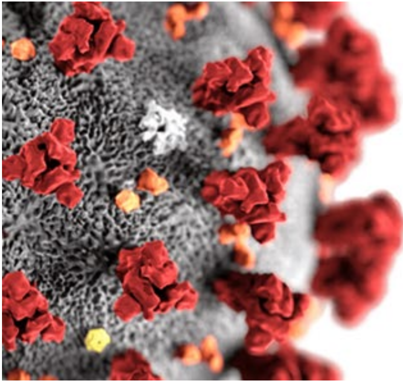
While it appears to be a mild illness for the majority of people infected, hospital admission rates of over 10% have been reported, with an ICU admission rate of approximately 3%.

The case fatality rate is estimated to be overall between 1-3%. The toll rises as the individual ages with a case fatality rate of 13% in those over age 80.

For those who require ventilator management, the case fatality rate is extremely high, the time on a ventilator is often long (weeks) and, for survivors, the extent of persistent health problems is unknown.

The Challenge:

In Canada, we have been provided with a precious window of opportunity to learn the lessons from Italy and New York and other areas hit hard early, and to maximally prepare for what may befall us should the curve not be flattened. In our view, there are three main components of the overall challenge we may face, but all can be encapsulated by the word “Capacity”.



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Health Human Resources (HHR):

Our first challenge will be maintaining adequate human resources in the Emergency Department.

Emergency Physicians – and nurses, on the front lines, are clearly at increased risk of exposure and being unable to work because of quarantine and/or infection.

Staffing, particularly in rural departments with a smaller pool of physicians to draw upon, is tenuous at best and given our overall shortage of emergency physicians, this undoubtedly will be the major issue.

The only way to maintain HHR capacity in the emergency department is to provide sufficient quantities of personal protective equipment to staff.

Our members are sharing with us disturbing reports of insufficient quantity, rationing or uncertain availability. The pandemic has not peaked, and the virus will be with us for some time. We need to continue to build our supply and distribution chains coast to coast so all front-line staff have the appropriate PPE to provide care safely.

Technology:

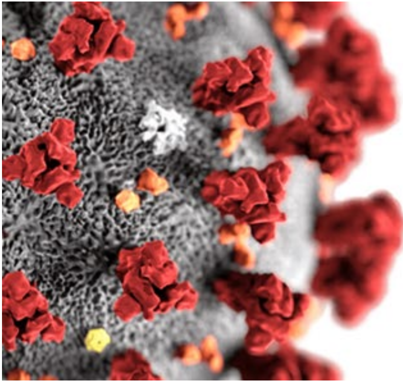
With respect to technological resources, there are two major concerns: access to adequate and appropriate laboratory testing and screening and of course, ventilators.

Current testing has by necessity needed to focus on the highest priority groups including HCW's and patient's in hospital, LTC and other facilities but we must radically increase capacity to allow us to expand testing to all who are symptomatic as well as a well-designed surveillance strategy to complement it. Public Health will need to increase capacity to react to an increased testing volume to ensure we promptly isolate and contact trace positives. Only when these two steps are in place could we safely loosen current public restrictions on gathering and movement.

The second, as you are no doubt aware, is the availability of life saving equipment, most notably ventilators.

Following the H1N1 pandemic in 2009, it was estimated that the Canada-wide ventilator supply was just less than 5,000. There was regional disparity with respect to their availability with Alberta having 10 ventilators per 100,000 people and Newfoundland having as high as 24 ventilators per 100,000.

In 2005, the Ontario government developed a plan for an Influenza Pandemic (OHPIP).
Based on standard modelling (a 35% attack rate), the OHPIP estimated that at the peak of the pandemic, influenza patients would require 170% of available ICU beds and 117% of the ventilators in Ontario. Particularly sobering, their study also predicted that up to 50% of health care providers could become infected. This model envisioned an almost apocalyptic--but now very realistic—scenario in which more than twice as many patients would require intensive care with less than half the usual staff available to provide it, underlining the aforementioned critical need for adequate PPE, surge capacity and a stockpile of ventilators.



Space Requirements:

Hospitals will also need to provide space for those patients requiring supportive and/or palliative care. No Canadian should ever be allowed to die in a hallway. We also need adequate space to continue to care for other patients needing acute care who cannot be forgotten.

The Role of the Federal Government:

There has been no apparent national coordination on public health measures leaving a very confusing and differing set of measures on business closures and public gathering restrictions from city to city and province to province. There must be clarity and federally coordinated messaging with respect to strict and uniform preventative public health measures, including public masking, gathering sizes and travel restrictions. The importance of consistent messaging for effective communication outweighs potential jurisdictional concerns. Till now the federal government has only been one voice among many and has led to conflicting and confusing direction to the Canadian public and health care providers. CAEP believes it could have a partnership role to play in a stronger federal role, in that emergency physicians are generally perceived as knowledgeable, credible and on the front lines of the battle and we are ready to help.

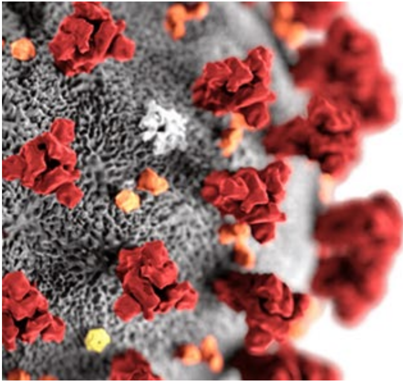
As we approach the surge in the coming weeks, to avoid provinces competing with each other for needed supplies) we need the federal government to ensure the rapid and continuous procurement and distribution of vital personal protective equipment (PPE), laboratory supplies and testing kits, and ventilators. Of all these things, personal protective equipment is of paramount importance, in order to secure the health and trust of its emergency workforce. Expert-based, standardized recommendations for PPE must be developed and disseminated across the country to ensure that rural and smaller centers, who may not have the local expertise, are provided with the same level of comfort and safety as those in larger centers. To the extent possible, complete transparency in this is necessary to ensure that recommendations are based on an abundance of caution, rather than availability of supplies.

During a crisis it is well-established that an effective and lean command and control system is critically important. Yet we still have no integrated Incident Management System in place. As a result, we have a situation where we have multiple ministries, departments and agencies involved in a confusing and overlapping span of control. An IMS approach would help implement all of our recommendations and assure the ability to respond quickly to changing science and circumstances.

We see an immediate need for the following:

1. Create a National Incident Management System (IMS) to vertically integrate with provincial IMS systems.
2. Standardize public health measures and communication nationally
3. Use the IMS and emergency powers act to ramp up domestic production of PPE, equipment and medications and create a national distribution system to avoid balkanization
4. Ramp up national testing capacity and standardize an aggressive national surveillance strategy along with isolation and contact tracing of positives.

Canada is facing an unprecedented public health crisis. A national crisis requires national leadership. We need the federal government to provide a steady, clear voice that signals decisive leadership and clear command and control.



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As emergency physicians, we will stand with you as we embark on this unique challenge and a national enterprise of delivering hope to of our citizens.