

## **Introduction:**

Public health is the crux of society. A healthy, able population is essential for the economic and socio-political well-being of a country. Which is why the ability to manage pandemics and exit with minimal repercussions is important. In this essay we will look at how the province of Alberta is managing the COVID-19 pandemic to determine how to minimize the number of deaths in Alberta today by adjusting current practices. We will also discuss effective strategies to convince the public and government organizations to implement helpful actions as it relates to them.

## **Alberta Today:**

As of the writing of this report, the  $R$ -naught of COVID-19, a measure of contagiousness, is 2.5, meaning one person will be responsible for an average of 2.5 transmissions. This value is subject to change as more information comes to light while the pandemic progresses. Now we will look at some actions that Alberta is taking to mitigate the COVID-19 crisis. Since no vaccine exists, all the government can do is limit interactions through effective policies and updated data.

In terms of disease mitigation Alberta is proactive and effective. Already, the number of new cases is decreasing, a sign that the measures taken by the province to flatten the curve is working. Starting in early March the province shut down “early childhood service programs, daycares, out-of-school care, preschool programs, post-secondary institutions and other educational settings in Alberta”<sup>[7]</sup>. From then on, many orders were immediately enacted to limit public gathering, moving from a maximum of 50 people in a gathering to a maximum of 15 people in a gathering, to banning any social interactions in public areas for any non-essential service. Many businesses either shut down or were encouraged to conduct its business with their employees working from home. Another order was passed which required those who were confirmed positive with COVID-19 to remain in isolation for a minimum of 10 days from the start of symptoms, until symptoms are completely resolved.

To battle financial hardships, the government pledged \$92 million through a program called “The Government of Alberta’s Emergency Isolation Support” while the federal government set up a broader financial support program. It has also waived the waiting period for employment insurance, differed payment on loans, lines of credit and mortgages, and deferred the 2019 tax returns until June 1<sup>st</sup>, 2020.

While Alberta is doing an exemplary job already through its orders, policy, and legislation, two spots of improvement identified where further changes can be applied are thus: increasing the rate of testing and closing down provincial borders to protect from COVID-19 hotspots within the country.

## **The Government's Role in Alberta:**

The World Health Organization, referred to as WHO, defines three essential factors which a government must take into consideration whilst managing a pandemic: pandemic surveillance, policies to allocate scarce resources, and policies to restrict movement. The changes suggested in the previous section, increasing the rate of testing and closing down provincial borders to protect from COVID-19 hotspots within the country, address all of these concerns.

Alberta is already testing 152 people for every 10000, testing more than any other province in the country, the United States and South Korea. This has already proved useful to Alberta, helping to develop effective health-based policies. Furthering testing will assist in both pandemic surveillance and policy to allocate scarce resources. It will help the government more accurately develop projections on where the disease is going in Alberta and make the necessary adjustments for medical supplies across hospitals in Alberta.

Another effective change, which builds on previous policy, is closing provincial borders. While Alberta is managing the corona pandemic effectively, other provinces are struggling. Compared to Alberta's 3.3 cases /10 000, Ontario has a 4.3 cases/10 000, and Quebec has a staggering 13.7 cases/ 10 000. Closing provincial borders helps increase the isolation technique as it prevents migration of possible COVID-19 carriers from hotspots like Montreal or Toronto to Alberta which is ahead of the curve in terms of recovery. We refer to figure 1 in the Appendix to truly illustrate. To minimize deaths, the goal is not only to flatten the curve, ie reduce the exponential rate of disease transmission, but to also reduce the amount of people that come into contact with it in the first place. In that sense, with extreme distancing, we won't have to rely on herd immunity to keep the populace safe, as most people will not come in contact with the active disease after the pandemic is gone, giving the medical community enough time to develop a vaccine for immunity.

## **The Role of the Individual in Alberta:**

While the role of the individual shouldn't be the sole dependence of a nation to overcome a pandemic, it is still an important factor, especially with a high R-naught, as is the case with the current pandemic, COVID-19. The importance of individual quarantine and social distancing has been highlighted by many different health agencies around the world.

Individuals who are sick with coronavirus and do not need to be hospitalized must quarantine themselves in their homes until the sickness is over, and a few days after just in case there is residue infection. They are responsible for reaching out to everyone they'd come into contact with up to three weeks before they got sick. This means that individuals who have come into contact with someone who has had coronavirus must also self-quarantine to avoid spreading it to others and inform others who they've come into contact with since.

The rest of the public must self-isolate as well, to avoid coming into contact with sick people or carriers of COVID-19. Refer to figure 1 in the appendix to observe how extreme social distancing flattens the curve so completely. While it is now against the law for gatherings or

meeting to occur in public spaces, and people who do not share an address found in the same car by police are fined, further actions can be taken to strengthen the social distancing measures.

Realistically, a maximum of two weeks can be expected for individuals to stay at home before needing to exit the house for groceries. Therefore, it is a rule of thumb to have groceries and supplies for two weeks. People should not be leaving twice a week to replenish nonessentials and “luxury” foods. This approach also evens out resources as they arrive and allow people to find the hygiene essentials, instead of having to leave the house multiple times to look for toilet paper or Clorox while other individuals hoard supplies in their homes and keep closets full of supplies.

### **Effective Communication Strategies:**

To communicate some of our findings and suggestions to governments and individuals, we will take two different approaches, informational and emotional.

As the government struggles to keep the pandemic contained and spend huge amounts of resources everyday under a weakening economy, they are both desperate for a solution and straining to upkeep what they are already doing. To convince the government of any steps, we must prove either very low effort strategies or highly effective strategies. To accomplish this, a comprehensive report must be drafted which thoroughly describes the importance of the steps, the resources required to accomplish it, and lastly include models on how it would affect the population in current conditions. This would help the government make a quick and informed decision as they are more aware of the implications of a solution.

While interacting with the public, we cannot rely on data alone. Though, logically, they may be aware of the dangers of leaving one's home, as the quarantine drags on, resolve quickly melts. As we move into nicer weather, it will be more difficult to convince people to stay at home by reminding them of possible infection.

To make people more pliable to suggestion, it is important to acknowledge what they are going through. In times of crisis and uncertainty, anxiety runs rampant as people worry about their jobs, their family's wellbeing and the disruption of the life they are accustomed to. It is important to address those worries not only verbally, but by showing them how the proposed solution benefits them and quells their problems, so that they feel like they are heard and being taken care of.

### **Conclusion:**

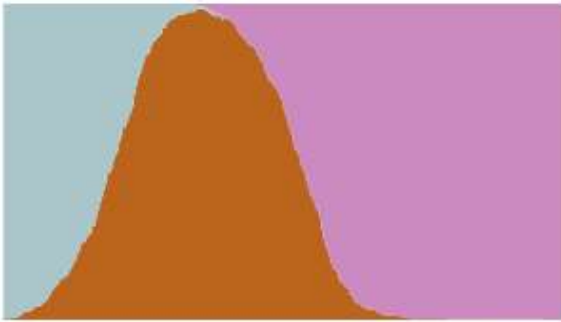
While Alberta is already well on its way to defeating COVID-19 and returning to normalcy, by doubling down on social distancing and limiting interactions in the coming days we can speed up the process and minimize infections and deaths in Alberta. Three key strategies were discussed: increasing rate of testing in Alberta, closing provincial borders except for essential transport and further limiting social interactions as much as possible.

## References:

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## APPENDIX

**Free-for-all**



**Attempted quarantine**



**Moderate distancing**



**Extensive distancing**



**Figure 1- Simulations of multiple distancing attempts.**