The World Health Organization described the coronavirus outbreak as a pandemic in early march [1]. Therefore, it officially became a global concern and this caused a lot of individuals to panic. However, now that it is a growing concern, unified steps have to be taken to mitigate risk and aim towards the common goal, which is to minimize the number of deaths in Alberta. This is important because the virus has no cure yet and it takes a long time to exhibit symptoms, therefore, it can be spread to many more people unknowingly. Thus, if the steps are not taken fast enough or with enough seriousness, the situation in Alberta could turn just as bad as the epicenter in China. The highest populated provinces are Ontario, Quebec and British Columbia, [2] all of which have the highest number of cases in Canada [3]. However, Alberta is also a big province with Calgary and Edmonton being one of the largest populated cities in all of Canada. Therefore, there is a very high chance that the virus may spread rapidly if no actions are taken. In order to come up with an action plan, first, the virus must be analyzed and appropriate measures must be taken by organizations and individuals after careful but fast planning.

The first step in analyzing the Covid-19 pandemic is to understand the virus itself. Without knowing what the virus is capable of and how it functions, one cannot protect against it nor can they come up with a solution for it. A coronavirus is part of a bigger family of viruses that usually cause mild illnesses such as a cold or a fever. Coronaviruses are made of a single strip of RNA that has these “little spike proteins” and they attach to host cells inside the body and “inject that RNA into the cell’s nucleus”. Consequently, they hijack the cells and force it to create more of the virus. The severity of these viruses can depend on a few factors. One factor that makes the new strain of coronavirus i.e Covid-19, more virulent, is that these proteins are “better at latching onto human cells” than other, more mild strains. The virus also affects mainly the respiratory system and thus, people with existing respiratory issues are at a higher risk. Also, individuals with a lower immune system cannot keep the virus from spreading to more cells, which is why some individuals have reported to have severe pneumonia or other respiratory problems [4]. A World Health Organization investigation reported that Covid-19 has an R0 number of 2-2.5 which they believe is “relatively high”. An R0 number essentially measures how many people can a carrier of the virus infect before it dies out [5]. Even though it may not be as contagious as some other common infectious diseases, it is still very much capable of spreading rapidly if steps are not taken to mitigate that. The biggest question to answer in order to find a solution is, how does the virus actually spread? According to multiple sources [6,7,8], it is believed that the virus is transmitted through droplets that may come from sneezing or coughing. Therefore, it can spread through close contact or touching surfaces with the virus on it. The virus has an incubation period that ranges from 2 to 14 days. Therefore, an individual who is infected may not show any symptoms for upto 2 weeks, while actively carrying the virus and potentially spreading it. Lastly, the virus is a “novel” strain, which means that there is currently no vaccine or cure for the virus. Therefore, it is almost entirely up to the immune system to fight off the virus or stop it from spreading at the very least. There are currently around 1.5 million cases worldwide and in

Alberta, the count sits at around 1400 [3]. Even if the number is significantly smaller compared to other places around the world, the virus is still a very real threat and serious action must be taken in order to prevent a bigger outbreak.

The collective goal is to minimize the number of deaths in Alberta. The simplest solution is to slow down and eventually stop the spread of the virus by collectively taking preventative measures. Meanwhile, allowing health officials and researchers to work on finding a vaccine for the virus. Therefore, what are some actions, most if not all organizations can take in order to meet the end goal? First off, any decision taken by an organization will have many more repercussions than an individual taking action, therefore, they must plan before taking any step. Project management ideas could be implemented in order to effectively take the action that's in the best interest of everyone. The company has to focus on its 'needs', while also determining the needs of the consumers and their employees. This allows them to narrow down their focus. Furthermore, there needs to be specific objectives that tie to these needs and an assessment of the constraints that may affect the decision making. The major constraints will mostly relate to time, money and resources available. Also, all actions should be assessed by considering the trade-offs that come with them. For example, if masks are required to be worn by everyone in a company, it would cause a shortage and affect the people who really do require masks, such as infected persons. Therefore, an alternate solution could be to allow people to work remotely if possible. Organizations can revise their plans and brainstorm many iterations before coming up with an action plan to move forward. Once a plan is made, they can monitor the progress and compare it to the original plan in order to stay on track. They must also have some controls in place to accomodate any adjustments that may need to be made. Once the decision has been made, it must be effectively communicated so that employees and customers have a good understanding and can collectively work towards the set goal. The government should also follow a similar process and be assertive in implementing the necessary action. Due to the severity, they must stand their ground and work in the best interest of the people. Now, on a smaller scale, there are things individuals can also do to help reduce the spread. They must be proactive and be responsible. Individuals can focus on their circle of influence and initiate change on a smaller scale while also learning and staying updated on any developments that occur regarding the virus. Together, the government, organizations and individuals can synergize by working effectively and following the above techniques to come up with solutions that fit them personally. Each can do their part, which in turn will have a collective positive outcome.

To fight a pandemic effectively and efficiently, everyone needs to come together and follow the same rules. However, even in just Alberta there are millions of individuals, who may not all agree on the same thing. This is a situation which has caused a lot of panic amongst people, therefore, everyone most likely will not see the bigger picture right away. In order to convince everyone and have them follow the rules, the government has to be assertive and guide everyone

to follow the decisions it makes. This also means, individuals need to show cooperation and try to understand the bigger picture. If extra precaution is taken fast, the chances of fighting a pandemic are higher because this will result in less people getting infected, which would mean less deaths due to the virus. As of now, since there is no cure, an individual has to heavily depend only on their immune system to fight off the virus. The Alberta government predicts in the best situation possible, there will be around 800 individuals that would be hospitalized and around 230 individuals would need to be in an ICU. Currently in Alberta, there are only 300 ICU beds [9]. These need to be used for all sorts of patients and if 80% of them will be occupied by Covid-19 patients, how will they accommodate everyone else who does not have Covid-19? Logically, there is only one way to stop that from happening and that is, to take preventative measures and follow them strictly. According to cases in Alberta so far, the majority of individuals affected were age 40 or above, where individuals above 80 have a death rate of 25% [9]. Effective measures must be taken in order to curb the spread of the virus, otherwise, it will have other long lasting effects as well, such as hurting the economy. Lastly, effective communication is absolutely necessary because everyone is in a state of panic and fear. Therefore, people tend to believe false information and due to social media being a very big influence, it can create more panic. For example, people bought toilet paper in bulk just because others were doing so and there was a sense of fear, which guided people to gather in large numbers in stores [10]. The government has to intervene if necessary and communicate clearly to avoid panic and confusion, especially when it pertains to a pandemic which spreads more in crowded places.

As the virus got declared a pandemic, the Canadian government has already begun taking steps and planning ahead to fight the virus. In Alberta, the spread has been significantly lower than other provinces like Ontario and Quebec, however, the risk is just as high and action has to be taken in order to stop it from spreading more. In order to predict what may occur, the Alberta government has created some models from data collected from other countries like Italy and China. They have modelled two scenarios, the ‘Probable’ and the ‘Elevated’. As the name suggests, Alberta expects the scenario to be in the probable region where they predict the peak of this virus to hit in Mid-May. They have begun to prepare for the worst case, which is when there will be a significantly higher number of cases and not enough capacity in hospitals to accommodate that [9]. They have focused on creating more acute care beds, increasing the ICU capacity, ventilator capacity, increased PPE stock etc. They have advised individuals to stay quarantined, unless absolutely necessary and to not come in close contact with others. Schools and organizations have begun adopting online alternatives [8]. The Covid-19 pandemic is very much a real and tangible threat which needs to be handled seriously. Each organization and individual is different and an exact plan may not work for everyone, however, if everyone follows some of the steps and techniques mentioned above, they can come up with a custom plan that suits them, but also aligns with the end in mind, to reduce the number of deaths in Alberta.

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