

**RAPID RESPONSE REPORT ON LIFTING
RESTRICTIONS FOR COVID-19
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SUMMARY

The purpose of this rapid review (Part 1 in a 2-part series) is to examine the literature on the various steps being taken around the world to lift restrictions implemented to suppress the spread of COVID-19 – including social restrictions, such as those related to physical distancing, and economic restrictions, such as those affecting the closure of non-essential stores and other businesses.

We find that some restrictions, such as the closure of schools and non-essential stores and services, are more commonly among the first to be lifted – though this is done so gradually and with accompanying physical distancing and hygiene requirements. Countries around the world have also begun to ease and/or recommend measures impacting travel, recreation, and sectors of the workforce. While it is too soon to observe the outcomes for many of these measures, modelling studies and observations of case trajectories in Asia suggest a COVID-19 resurgence is likely to occur as restrictions are eased – but if appropriate measures are in place to monitor further infection and reinstate intermittent restrictions, future resurgence could be managed.

The information presented herein on the experiences of other locations ahead of New Brunswick in their COVID trajectories and in the process of reopening their economies can provide valuable insights into the steps this province could take when lifting its own restrictions in future. For Part 2 of this report, we propose to supplement the current work with a qualitative review of the outcomes of easing restrictions, as well as quantitative metrics on the indicators leading up to lifting restrictions – both of which will be used to guide a discussion of implications for scaling back COVID-19 restrictions in New Brunswick.

INTRODUCTION

The purpose of this rapid review (Part 1 in a 2-part series) is to examine the literature on the various steps being taken around the world to lift restrictions implemented to suppress the spread of COVID-19 – both social restrictions, such as those related to social distancing, and economic restrictions, such as those affecting the closure of ‘non-essential’ stores and other businesses – as well as any outcomes that appear to result from the new measures taken.

COVID-19 is a global health emergency – unprecedented in recent history for its geographic scope and magnitude of infection. Yet, despite the growing number of COVID-19 cases around the world, certain regions have begun to see a decline in the number of infections reported daily, prompting political leaders to look ahead to the days when their societies – and economies – can return to “normal.” Physical distancing measures have been enacted around the globe to control the spread of COVID-19. In some cases, such as in Austria and Denmark, steps are already being taken to reopen regions by lifting restrictions and lockdown measures. In other cases, such as in France and Germany, governments are choosing to maintain restrictions amid slowing case rates – at least for now.ⁱ

Political leaders in NB, like others around the world, are being tasked with performing a dangerous balancing act – preventing economic collapse while protecting citizens from the spread and resurgence of a deadly virus. One recently published studyⁱⁱ argues that COVID-19 lockdowns should only be lifted once a vaccine is found, as relaxing measures could result in further resurgence of infection.ⁱⁱⁱ However, some researchers have voiced the concern that a vaccine might not be available until 2021 at the earliest,^v and further peer-reviewed research suggests physical distancing could be required into 2022 – whether prolonged or intermittent.^{vi}

The drastic public health measures in place are at odds with economic stability, evidenced by unprecedented economic fallout. Projections estimate that Canada's GDP could decline by 5.2%

if restrictions remain in place until August 2020,^{vii} with numbers appearing just as dire for European countries.^{viii} There is a strong need to lift restrictions as soon as reasonably possible in order to fuel economic growth and recovery. For countries who appear to have passed the peak of their COVID trajectories, the European Commission is urging coordination to “relax measures gradually,”^{ix} with the World Health Organization (WHO) warning that lifting restrictions too early could lead to a “deadly resurgence.”^x

There is no easy approach to reopening society in the midst of a pandemic. Yet, certain countries have implemented strategies for balancing economic and population health while lifting COVID-19 restrictions. And as New Brunswick progresses through its COVID trajectory, it becomes increasingly important to consider ways the province could start reopening sectors of the economy while managing the risk of further infection. While lifting COVID-19 restrictions might not be advisable at present, policy makers will need to have recommendations in place for the day when such actions are more feasible. After all, there is mounting speculation that COVID-19 will move from an epidemic to an endemic infection – a seasonal virus that circulates regularly in our communities.

Until sufficient population immunity is achieved (whether through herd immunity or a vaccination program), it is essential to limit the spread of COVID-19 while promoting economic recovery and growth. The gradual lifting of restrictions will be an essential component of NB’s COVID-19 maintenance phase; thus, it would be beneficial for provincial leaders to review various approaches to lifting COVID-19 restrictions around the world, as well as outcomes related to these practices.

To this end, this rapid response explores

- **The steps other countries are taking to reduce COVID-19 restrictions,**
- **The justifications behind the new measures being implemented, and**
- **The observable outcomes of lifting various restrictions around the world.**

The experiences of other locations ahead of NB in their COVID trajectories and in the process of reopening their economies can provide valuable insights into the steps this province could take when lifting its own restrictions in future. However, the ways in which the key measures in the literature (reviewed below) could be realized in practice depend on the unique needs of this province, as will be discussed in Part 2 of this series on lifting COVID restrictions.

Note: Due to the specific focus of this rapid response report, certain topics are beyond the present scope but should nonetheless be explored in future analyses. These include considerations of the economic outcomes related to the easing of restrictions and the targeting of resources and designing of new programs to aid recovery. We propose to examine these issues, and more, in future reports to guide specific recovery measures beyond the easing of restrictions.

While tactics for monitoring the resurgence of infection, such as tracking and contact tracing, are integral to successfully managing the spread of COVID-19 once restrictions are lifted, few countries to date have released the specific details of their approaches. As more information becomes available, we will be able to examine strategies for testing, tracking, tracing, and treating cases in various regions – however, due to the present lack of data on this topic, this is beyond the scope of the present report.

OVERVIEW OF MEASURES

In its recently updated COVID-19 guidelines, WHO details six steps countries should follow as they consider lifting COVID-19 restrictions. In order, these steps include

- ⇒ confirming transmission has been controlled;
- ⇒ ensuring health systems are capable of detecting, testing, isolating, and treating every case, along with tracing every contact;
- ⇒ minimizing outbreak risks, especially in high-risk locations;
- ⇒ placing preventing measures in workplaces and schools;
- ⇒ managing importation risks; and, finally,
- ⇒ educating and empowering communities to adjust to this “new norm.”^{xi}

While these guidelines specify the conditions that should be met before restrictions are lifted, decisions regarding which restrictions to lift – and how – are left to individual countries and their policy makers. Below are highlights from the literature detailing the measures¹ taken internationally to ease and/or lift restrictions originally implemented to reduce the spread and impact of COVID-19.

Some measures are already in place, some have been assigned a start date in the near future, and others represent the first steps countries plan to take when the timing is right. To indicate the status of the various measures, we have labelled them either **implemented**, **pending**, or **recommended** and have organized them according to the broad categories listed below.

Economy

Opening select types of shops while upholding physical distancing regulations for customers

- Implemented in Quebec, Austria, and select regions of Italy
- Pending in Poland and Germany
 - Shops by size
 - Shops by product (i.e., children's clothing, bookstores, garden centres)
 - Reduced hours of operation
 - Upholding number of customers allowed in store, maintaining physical distancing
 - Compelling customers to wear masks/gloves

Opening larger retail businesses (i.e., stores, shopping centres, bars, restaurants, hairdressers) while upholding physical distancing measures

- Implemented in China
- Pending in Austria

Education

Opening schools, but doing so gradually and with distancing/hygiene requirements

- Implemented in Japan and Denmark
- Pending in China, Norway, France, and Switzerland
- Recommended in Germany, British Columbia, and the US

¹ Note: the measures listed in the overview are not mutually exclusive.

Recreation

Lifting some restrictions on sports and other exercise

- Implemented in the Czech Republic and Veneto, Italy
- Recommended in Germany
 - Allowing individuals to exercise further from their homes
 - Opening training stadiums to athletes, with scheduling to reduce numbers
 - Allowing participation in less crowded sports (i.e., tennis, swimming)

Allowing larger gatherings (i.e., larger than max number of individuals allowed during lockdown)

- Implemented in Hokkaido prefecture, Japan
- Pending in Switzerland
- Recommended in Germany

Gradually lifting stay-at-home lockdown measures for residents in "epidemic-free" communities

- Implemented in China

Travel

Allowing local travel for individuals with proper documentation (i.e., certificate of recovery)

- Implemented in Wuhan, China

Easing national border controls

- Pending in Switzerland

Allowing justified travel (i.e., for business trips), with mandatory quarantine upon return

- Pending in Czech Republic

Lifting restrictions on non-essential travel to and from regions within the same country

- Pending in Finland

Workforce

Allowing employees to return to work by sector

- Implemented in Spain and Quebec
- Recommended in Germany
 - Construction and manufacturing sectors, etc.
 - Staggering arrival times and wearing masks

Allowing employees to return to work by age and living situation

- Recommended in UK
 - Workers aged 20-30 who do not live with their parents

DISCUSSION OF FINDINGS²

Measures

While different locations around the world are implementing and/or recommending various ways to begin lifting restrictions, certain measures are more common than others. Based on the summary presented above and the literature discussed below, the two most widely implemented strategies at present appear to be (i) gradually reopening schools and (ii) opening select types of stores and services, along with select industries.

Each new step is accompanied by new or existing measures to suppress the spread of COVID-19. As schools begin to open, faculty are tasked to ensure distance can be maintained between students and that rigorous handwashing procedures can be upheld. Physical distancing requirements are similarly in place in newly opened stores, along with requirements that customers wear masks. In open training centres, athletes are being scheduled to access the building at specific times to reduce the number of individuals present at one time. And in non-essential sectors now open for business, employees are required to practice physical distancing and/or wear masks, while recommended to stagger arrival times to further reduce crowding in the workplace and on public transit.

Various regions have prioritized lifting certain restrictions before others, and for various reasons. For example, governments that began easing restrictions by reopening schools, daycares, and nurseries have cited the importance of providing childcare settings that will enable parents to return to work as the economy gradually reopens. Moreover, children are believed to be at a low risk of suffering complications from COVID-19 (unless they have underlying conditions), and therefore opening these institutions is believed to be a relatively low-risk measure.

Likewise, recommendations to send a younger age cohort (20-30-year-olds who do not live with their parents) back to work first is motivated by both the relatively low risk of poor COVID-19 outcomes among this age group as well as the large proportion of this cohort involved in private sector work. Given the expectation that the private sector will fare more poorly than the public sector during the pandemic and recovery stage, having this group return to work would restart the economy in a relatively low-risk way while mitigating some of the harsh economic outcomes expected to impact the private sector.

Outcomes

Asia

As is discussed in the literature review below, regions of China and Japan have seen a resurgence of infection following measures to lift restrictions earlier in the year. In China, this has resulted in the removal of “epidemic-free” statuses from communities where stay-at-home measures were being eased. In Japan, various prefectures that had reopened schools and allowed small gatherings less than a month ago are now in lockdown again as part of a nation-wide state of emergency.^{xii} The extent to which this resurgence is due to the lifting of restrictions, however, is still unclear.

For instance, in a rapid systematic review on school closures published by *The Lancet*,^{xiii} researchers examine data from the 2003 SARS outbreak in China, Hong Kong, and Singapore (due to a lack of data on the contribution of school closures to the suppression of COVID-19). They find that school closures did not contribute to the control of the SARS epidemic; and other recent modelling studies predict that while school closures alone could prevent 2-4% of COVID deaths, this is notably lower than the percentage of deaths prevented by other physical distancing

² The sources from which this information is derived are provided in the literature review below.

interventions. However, research from the MRC Centre for Global Infectious Disease Analysis cautions against overlooking the impact school closures can have when implemented as part of other physical distancing measures.^{xiv} Thus, it is difficult to estimate the impact of opening schools in Japan on the rise in case rates and even more difficult to identify which measures may have contributed most to the spread, if any. What is much easier to discern is the need for continued testing to monitor and manage such resurgence – a tactic Japan had not widely employed leading up to the recent surge in cases but which it is now quickly adopting.^{xv}

Similarly interesting are the outcomes in countries that have begun to loosen restrictions and those in countries that have not. Despite incredibly high success rates in managing virus transmission, Hong Kong and Taiwan in particular were among the earliest regions to lock down, and they maintained extraordinary tracking and tracing techniques. However, as one article^{xvi} notes, cases have begun to grow in these countries. And while the numbers are still low compared to the United States, for example, it could be surprising to some to see a resurgence – even a small one – in places that had so successfully kept the virus at bay. As a result, these nations have enacted stricter physical distancing controls, such as school and workplace closures and cancelling mass gatherings. Their strategy aims for containment, then mitigation, with smaller, slower numbers the second time around.

Singapore has also recently closed schools and workplaces (previously open during the pandemic) due to a surge in cases believed to stem from the return of migrant workers. The rise of infection in the above Asian countries at diverse stages of restriction make it difficult to attribute to the resurgence to lifting measures alone – though, it is largely believed that the majority of new cases emerged due to travel.

Europe

Because some restrictions were lifted in European countries as recently as yesterday (April 15), and the incubation period of COVID-19 is estimated to be approximately 14 days, it may be too early to accurately identify the outcomes of these changes. As time passes and more data become available, we will be able to examine case rates following the incubation period and determine outcomes based on that information. In the meantime, however, it should be noted that the European countries that implemented strict lockdown measures earlier in their trajectory than others are also the first to begin lifting restrictions, as their case rates have declined earlier than others. The Czech Republic, for instance, had the first European government to require the wearing of protective masks in public, and it is also the first European country to relax its lockdown measures.^{xvii}

In comparison, countries that did not implement restrictions have experienced much poorer case rates and fatality outcomes, prompting the late implementation of lockdown measures. The government of Sweden, for example, pursued a strategy of social responsibility that involved encouraging citizens to take responsible measures, rather than closing non-essential services or enforcing physical distancing. As discussed in the literature review below, the infection rate in Sweden is relatively high – especially compared to neighbouring Denmark, which has a remarkably similar culture and population demographics – and the country is now bracing for a large number of deaths.

Given these two very different outcomes leading up to the easing of measures in certain countries, it appears NB was right to take the early lockdown measures it did. Again, more time is needed to observe outcomes related to the lifting of restrictions in Europe, which could shed light on the outcomes NB can expect in future when it also begins to lift restrictions. However, we can presume that by following the examples set by Austria, Denmark, the Czech Republic, and other European countries in implementing early measures, NB may have positioned itself well to begin considering ways to restart the economy and rewind COVID restrictions earlier than some other provinces (that

enacted emergency measures later in their COVID-19 trajectories). In our follow-up report (Part 2), we will include a quantitative analysis of the emerging trends for easing restrictions in order to make sense of what this might mean for NB.

Key Messages

Modelling studies based on the progression of COVID-19 in China suggest that a level of resurgence will inevitably result from the lifting of restrictions and should therefore be expected. Thus, it is highly recommended that countries closely monitor the case reproduction number and be prepared to reinstate intermittent measures if necessary – especially if outbreaks are present in neighbouring regions, as was the case in Hokkaido, Japan.^{xviii} According to epidemiologist Ben Cowling, coronavirus is not going to be eliminated, so we need to control it until we can identify treatment or a vaccine. One long-term strategy is testing; another is the maintenance of physical distancing – though, over time, schools could reopen, with better ventilation and smaller classes; stores and restaurants could reopen. People's work hours could be more flexible so business places and factories aren't packed, and commute times could be spread out.^{xix} As risk cannot be avoided entirely, there should be a heavy focus on ways to manage the risk.

The key message emerging from the literature – from the WHO, health policy experts, government officials, and researchers worldwide – is that societies should reopen very gradually, and only after transmission has been controlled and measures are in place to monitor and manage further infection. Lifting restrictions too early could result in deadly resurgence; and while lifting restrictions at the appropriate time is also likely to result in transmission, the increase should not prove catastrophic – given appropriate measures are in place to observe and manage the spread.

As proposed in the "Looking Forward" section at the end of this report, further qualitative work on the outcomes of these measures and quantitative metrics on the indicators leading up to them, coupled with the current review, could be used to guide discussions on the implications of scaling back COVID-19 restrictions in New Brunswick.

LITERATURE REVIEW

Practices Established by Region

Asia

China

On April 7, travel restrictions were lifted in Wuhan, China – though, to be allowed to leave, travellers must prove they are not at risk of infection, indicated through a government-approved phone app that considers their medical history, address, and other personal factors.^{xx}

More restrictions are being lifted in areas further from the epicentre of the pandemic, with many factories, shops, and restaurants open to the public – though, workers who are able to work from home largely continue to do so. In Beijing, the government is requiring bars to set tables one metre apart and to uphold vigorous cleaning standards. Meanwhile, Shanghai plans to begin reopening schools on April 27.^{xxi}

Earlier, in March, Chinese governments began assigning “epidemic-free” statuses to various communities throughout the Hubei province, allowing residents from these areas to leave their homes for two hours a day. However, many communities have since had their status revoked after the resurgence of further infection.^{xxii}

Because some measures have only been lifted recently, it may be too soon to determine what the outcomes of these changes have been. However, according to a modelling study on planning for a second wave of infections in China,^{xxiii} relaxing interventions – and particularly the resumption of international travel – is likely to increase the cumulative case count “exponentially” and thus there is a need to closely monitor the infection reproduction number.

Japan

On March 19, the prefecture of Hokkaido, Japan lifted the state-of-emergency measures it had implemented in February and began to reopen schools and allow certain public gatherings. In early April, other schools across Japan followed suit, celebrating the start of a new academic year. Restrictions remained in place, with students required to stand two metres apart, wash their hands, and check their temperatures every day. Schools in Tokyo did not open, though certain high schools announced they would be opening for ceremonies for each grade before closing again.^{xxivxxv}

However, less than a month after lifting school-related and other restrictions, regions of Japan – and Hokkaido in particular – experienced a resurgence of COVID-19, prompting officials to reinstate previous restrictions and declare another state of emergency across the nation.^{xxvixxvii}

COMPARISON – Singapore

The COVID-19 trajectory in Singapore has been somewhat unique, as the country initially experienced a good deal of success in controlling the spread of infection. By using sophisticated testing, contact-tracing, and quarantining methods, the government of Singapore was able to keep many aspects of society open. While there were indeed COVID restrictions in place, it should be noted that lockdown measures were not in place previously. Schools and workplaces remained open for the most part, and only travellers were required to quarantine – not their families. It is believed that a recent surge in cases, which has since led to the implementation of lockdown measures such as the closing of schools and workplaces, is due to the return of migrant workers and consequent asymptomatic transmission caused by family members who were not self-isolating.^{xxviii}

Europe

Austria

On April 14, 2020, Austria began to ease its lockdown measures by opening thousands of shops in specific categories – such as garden centres, DIY stores (i.e., hardware retailers), and small shops under 400 square metres. However, physical distancing rules remain in place for customers who are now compelled by law to wear a mask while shopping.^{xxix} Restrictions on larger stores, shopping centres, and hairdressers are expected to lift on May 1, 2020, followed by the later opening of restaurants and hotels – however, as the Austrian chancellor points out, the lifting of these restrictions depends fully on the state of public health at the time. At the end of April, the government will decide whether to extend home-schooling beyond the middle of May or to ease schooling restrictions as well.^{xxx}

Czech Republic

In the Czech Republic, certain non-essential stores are now open to the public, including hardware and bicycle stores. More novel than this, however, is the country's decision to lift many bans on recreation – measures that are still in place in most other countries. Not only are citizens now allowed to participate in sports that allow physical distancing – such as tennis and swimming – but they can also train in sports stadiums, which are scheduling athletes at different times to ensure the number of people present remains small.^{xxxi} Tennis and golf courses are also open to groups of no more than two people.^{xxxii} The government has further announced plans to allow “justified” travel outside of the country – such as business trips – though returnees will need to observe a 14-day quarantine upon return, and foreigners are still banned from entering the country.

Denmark

On April 15, Denmark opened nurseries, kindergartens, and schools for children up to age 11.^{xxxiii} However, other regulations will remain in place, including bans on gatherings with more than ten people and the extended closure of churches, cinemas, and shopping centres. Further, the country's borders will remain shut.

According to Denmark's Prime Minister, the country will be taking “one cautious step at a time.” This involves preparation for potential COVID-19 flareups, including the need to build testing capacity.^{xxxiv} Moreover, there are many hurdles to overcome for schools to open safely – including greater distance between children, better cleaning regimes, and more outdoor classes. According to the Danish Teachers' Union, these complicated requirements might mean that some schools will not be ready to open when the restrictions are lifted. The decision to reopen has been met with mixed reactions from parents, some of whom have come across as very angry; however, according to one professor in clinical microbiology, opening schools may be the only way to get parents “back to work.”^{xxxv} It is not clear when other restrictions will be lifted, though the government has announced its intention to consider next steps on May 10.

Finland

On April 19, 2020, Finland plans to lift restrictions on non-essential traffic to and from the Uusimaa region, which includes Helsinki – the capital city.^{xxxvi}

France

While officials in France have not lifted lockdown measures to date, officials have decided to begin easing restrictions on May 11 – barring any downturn in public health. Early measures include the gradual reopening of schools, though restaurants will remain closed and festivals will remain banned until mid-July. President Macron also cautions that the most vulnerable members of the population should remain in isolation, even once restrictions begin to be lifted.^{xxxvii}

Germany

While the majority of restrictions in Germany are expected to remain in place until at least May 11, researchers at Germany's Ifo Institute have been making recommendations on ways to ease the country out of lockdown.^{.xxxviii} Steps include (in no specific order) lifting restrictions on small group meetings if protective measures are still taken; restarting production in industry-related services, particularly in companies where distance and hygiene standards can be followed; opening day cares, nurseries, schools, and universities to enable parents to return to work – accompanied by continued development of online education in case of a resurgence of cases; and allowing small groups to participate in sports outside. As of April 15, Chancellor Angela Merkel announced plans to allow shops to open – if they have plans to maintain hygiene – though schools will not begin to reopen until May 4 at the earliest.^{.xxxix}

Italy

After five weeks of lockdown in Italy, a limited number of stores and businesses are being allowed to reopen, including stores that sell books, stationary, and clothes for children and babies. As in many other countries, certain restrictions are still in place for these businesses, including rules dictating the number of customers allowed in the building at a time, as well as strict hygiene expectations, such as the requirement to wear a mask and gloves.

Not all regions have adopted these measures, however; the hardest hit regions in the north of the country continue to maintain many of their restrictions. Lombardy, for instance, is now opening children's clothing shops but not bookstores; areas of Emilia-Romagna remain in complete lockdown, and Veneto is allowing bookstores and clothing stores to open two days a week, along with lifting a ban on exercising more than 200 metres away from one's home.^{.xi}

Norway

Like Denmark, Norway plans to ease restrictions by opening schools – beginning with kindergartens on April 20 and elementary schools the following week.^{.xii}

Poland

The government of Poland has announced that it will begin to gradually lift lockdown restrictions on Sunday, April 19, including certain restrictions placed on shops.^{.xiii} This will be accompanied by new measures, however, such as the requirement that Poles cover their faces when in public.

Spain

Despite the heavy burden of COVID-19 cases in Spain, the country has lifted a specific set of lockdown restrictions, allowing approximately 300,000 workers in the construction and manufacturing sectors to return to work – though, with recommendations from the health ministry for employees to stagger arrival times and wear masks if they cannot maintain physical distancing at work.^{.xliixliv}

Switzerland

The government of Switzerland has announced that if the virus spread is “kept in check,” the country will begin relaxing restrictions near the end of April – including strict regulations around border controls, school closures, and bans on gatherings.^{.xiv}

United Kingdom

Although the UK is still in the thick of the COVID-19 pandemic, researchers at Warwick University have released a policy brief^{.xvi} recommending the government lift lockdown measures on a specific group of the population: individuals 20 to 30 years old who do not live with their parents. According to researchers Andrew Oswald and Nattavudh Powdthavee, approximately 4.2 million UK individuals fall into this category, of which 2.6 million work in the private sector. They argue that releasing a young workforce in this way would not only lead to overall economic benefits but would also alleviate much of the harsh economic effects expected to disproportionately impact the private sector relative to the public sector. While the lockdown is expected to continue into

May, some government officials are also pushing to release further restrictions, such as those on the manufacturing and construction industries.^{.xlvii}

COMPARISON – Sweden

In Sweden, a strategy of “self-responsibility” has motivated the country’s use of COVID-related guidelines, rather than strict rules.^{.xlviii} While citizens are encouraged to stay home if sick or elderly, wash their hands, avoid non-essential travel, and work from home if able, the government has not enacted restrictions keeping people at home. Officials cite the benefits of keeping people happy and healthy – physically and mentally – as a key reason for avoiding strict isolation rules.

Business owners have noted a significant decrease in customers, as many Swedes appear to be following the same recommendations being enforced by neighbouring countries. Nonetheless, the outcomes of Sweden’s strategy of personal responsibility do not appear to be positive. According to a study published by the Imperial College COVID-19 Response Team,^{.xlix} a significantly larger proportion of the Swedish population was infected at the end of March (3.1%) compared to similar countries (0.41% in Norway and 2.5% in the UK). Consequently, as the country’s Prime Minister told media outlets, the country is bracing for a higher number of deaths,^{.l} though the restrictions introduced recently have still been fairly relaxed – involving the banning of gatherings or over 50 people, closing high schools and universities, and encouraging high-risk individuals to self-isolate.^{.li}

United States

To date, lockdown measures remain in place In the United States, though President Trump’s claims that he has “total authority” to reopen the economy have led to worries among some governors that the US could lift restrictions too early.^{.lii} Some states, however, are making preparations for a gradual reopening when the time is right and proper protective measures are in place.

The government of California has recently released a “Roadmap to Modify the Stay-at-Home Order,”^{.liii} consisting of indicators that must be met before restrictions can be eased (i.e., the ability to test, trace, isolate, and support infected persons), as well as gestures toward preventive measures that will remain in place as society gradually reopens. While the document does not specify first steps, it does provide examples of possibilities, such as the reopening of restaurants with fewer tables and the wearing of face coverings in public. Similar but much more thorough lists of steps that should be taken before safely reopening society have been compiled by a team of public health-trained researchers at PolicyLab in Philadelphia,^{.liv} as well as researchers at the American Enterprise Institute in Washington, D.C.^{.lv}

Although official measures for the reopening of the American economy have yet to be announced, a leaked document obtained by the Washington Post^{.lvi} suggests the first priority – accompanied by adequate measures to monitor transmission – is to reopen settings where children are cared for. This would include schools, daycares, summer camps, and more, in an attempt to enable parents to return to work. The approach presented suggests that, following 1-2 week pauses between measures, restrictions would gradually be lifted on essential workplaces, followed by restaurants and bars, general workplaces, social gatherings, high-risk facilities, and finally colleges and universities.

Canada

According to results from a Canadian survey recently administered across the provinces,^{.lvii} the majority of Canadians represented are not ready for restrictions to be lifted. Only 6% of respondents said measures should be eased “now,” while the most common response (29%) was “Not until there have been no new cases for at least two weeks.” The remaining respondents replied that measures should be lifted “When there are only sporadic cases being discovered and there are no pressures on the healthcare system” (25%); “Not until there is a COVID-19 vaccine”

(21%); and “When the pressure on healthcare system has reduced and it is able to manage a moderate flow of new cases over time” (19%).

According to Premier Blaine Higgs, New Brunswick is likely two to three weeks away from considering easing current restrictions,^{.lviii} though if COVID numbers continue to decline, it is possible the province could begin to resume normalcy this May.^{.lix} The form this could take has not yet been announced, but other provinces are beginning to discuss publicly their tentative plans for reopening their societies and their economies.

British Columbia

No restrictions have been lifted in British Columbia to date, but the province is considering a strategy that involves tailoring restrictions according to region.^{.lx} One measure that could be among the first to change is the closure of schools. Education Minister Rob Fleming announced that school facilities could potentially open before the end of June – though, this will depend on discussions in the coming weeks over strategies to maintain physical distancing and handwashing measures as schools open.^{.lxi}

Saskatchewan

While Saskatchewan has not lifted any restrictions as of yet, Premier Moe announced early this week (April 14) that his government will unveil a plan to reopen parts of the economy – gradually and in phases, depending on the number of new cases. If Saskatchewan continues to see a flat case rate, the provincial plan could be released as early as next week,^{.lxii} though there must be a few weeks of consistently low case numbers before any changes are actually implemented, and strict testing and contact tracing procedures will accompany the measures.^{.lxiii}

Alberta

Due to the large range of cases identified in various regions of the province (i.e., 2% of cases are in the south while 61% are in Calgary), Premier Kenney has recommended Alberta consider lifting restrictions in rural areas more quickly than in urban areas, provided the former continue to have a significantly lower case rate.^{.lxiv} There are no plans to ease restrictions in Alberta as of yet, though the provincial government has announced that it will protect the population from further risk once changes are implemented by increasing testing to 20,000 tests per day, maintaining strict border screenings and more aggressive quarantine measures, and relying on smartphone apps to keep track of those under mandatory quarantine.

Manitoba

Like Saskatchewan, Manitoba is also considering rolling back restrictions in the “relatively near future” – as long as case numbers remain low. Over the past week, the average number of new cases in the province has been less than six a day, with no new cases reported on April 14. Though no decisions have been announced yet, Manitoba’s chief public health officer claims it is likely the first measures to be relaxed will involve business restrictions.^{.lxv}

Quebec

Only yesterday (April 15), Quebec expanded its list of essential services to include stores for landscaping, lawn maintenance, and swimming pools; garden centres and nurseries; retailers of necessary equipment for transportation and logistics services; and service stations, vehicle maintenance and repairs, and tow trucks and roadside assistance.^{.lxvi} These businesses are now open, though with physical distancing and hygiene rules in place. Certain residential construction services will also tentatively resume on April 20. Although Premier Legault had considered also opening schools before the planned May 4 return date, the province experienced its largest spike in COVID-related deaths to date on April 14, prompting him to backtrack on the possibility.^{.lxvii}

LOOKING FORWARD

On April 15, 2020, NB Premier Blaine Higgs stated that the initial phase of reopening the province could be implemented in early May^{lxviii} – a much earlier timeframe compared to previous expectations that this would only occur in the summer. ^{lxix} The number of cases in New Brunswick continues to reduce/stay in the single digits/continues to be less than 3 per day, similar to those in British Columbia in Saskatchewan. Between April 9 and April 15, only six new cases emerged in NB, resulting in an average of less than one new case a day. Further, the number of recovered cases in the province has now outpaced the number of active infections, and NB hospitals are at less than capacity.^{lxx}

While Dr. Jennifer Russell, the province's Chief Medical Officer of Health, has mentioned that border restrictions and the banning of mass gatherings are likely to be the last measures lifted,^{lxxi} NB is quickly moving toward a time at which it can begin to ease other measures – provided the province maintains the ability to stay below hospital capacity.

The review of the literature in this report (Part 1 of a 2-part series) serves as an examination of the early measures being taken to rewind the strict COVID-19 restrictions implemented in different locations around the world. While the information presented can provide valuable insights into the steps this province could take when lifting its own restrictions in future, there is a need for further, more comprehensive work to enable a discussion of the implications easing restrictions could have for New Brunswick. Moreover, because efforts to relax the measures discussed herein are in the earliest stages, they should be revisited at such a time as outcomes can be observed.

To this end, we propose undertaking the following in Part 2 of this series:

1. An update on the status of international restrictions presented in Part 1 and qualitative review of the outcomes of easing restrictions in countries implementing this now or very shortly
2. Quantitative metrics on the outcomes of easing restrictions
3. Implications of other countries' experiences for scaling back COVID restrictions in NB, taking into account our unique characteristics/geography/layout, etc.

Future work, following the conclusion of this 2-part series could include

- Planning guidelines for specific recovery measures beyond the easing of restrictions – such as considerations of the economic outcomes related to the easing of restrictions, as well as the targeting of resources and designing of new programs to aid recovery and
- Research into the long-term societal health and wellness issues that will emerge in a post-COVID world.

While the number of COVID-19 cases in NB has been relatively low, the consequences of physical distancing and bottlenecks in important social services is an “all-or-none” situation – the magnitude of effect would be expected to be similar because everyone is locked down in a similar fashion.

Around the world, reports are emerging of societal implications, such as an increased divorce rates in China post-lockdown.^{lxxii} Similarly – psychologists have identified that stress resulting from a crisis like COVID-19 is expected to increase domestic violence and child abuse, as potential

victims find themselves lacking much needed support and being forced to shelter with potential abusers. In fact, reports of spousal abuse are higher where shelter-in-place orders are in effect and children who require social services from schools (e.g., meal programs, wellness checks) have been cut off.^{.lxxiii}

Other areas of concern include reports that alcohol sales (and presumably consumption) have increased significantly (40% in Canada in March); there is decreased screening for cancers; and monitoring of chronic health conditions has worsened.^{.lxxiv}

Taken together, all of these societal health implications will require study to understand their full effects for the province of New Brunswick going forward.

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