COVID-19 LESSONS LEARNED REVIEW

Final Report

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September 23, 2022

Honourable Mike Farnworth
Minister of Public Safety and Solicitor General
PO BOX 9041 STN PROV GOVT
Victoria B.C. V8W 9E1

Via email

Dear Minister,

We are pleased to provide the Final Report of the COVID-19 Lessons Learned Review.

As set out in the Terms of Reference for the review, we have conducted an operational review of the Government of British Columbia's response to the COVID-19 pandemic. In doing so, we have engaged extensively with the public, the B.C. government and broader public sector, First Nations and Indigenous organizations, and government stakeholders. We have conducted research into best practices in public health emergency response and emergency management. We have also created a timeline of events and compared outcomes for British Columbia with select Canadian provinces.

Based on lessons learned from things that went well and areas that could be improved, we have developed 26 findings and conclusions, intended to help the B.C. government be better prepared for future province-wide emergencies.

Thank you for the opportunity to contribute to improving this crucial government function.

Sincerely,

Bob de Faye Dan Perrin Chris Trumpy

Pc: Lori Wanamaker, Deputy Minister to the Premier

Acknowledgements

We would like to thank all of those who participated in our engagement process. We were impressed by the openness and candour in our interviews and written submissions, and each engagement gave us new information and perspectives on how the pandemic was experienced.

Emergency Management BC provided us with secretariat services, without which we could never have completed our task. We would like to thank Gillian Godfrey, Katharine Pretty, Melia Walker and Casey Pescod for the support they have provided in terms of research, analysis, and scheduling.

We would also like to thank Melissa Quocksister, for providing advice on Indigenous engagement; Kim Thorau, who undertook important research on our behalf; Stephen Smart, who provided us with communications advice; and our editor Merrie-Ellen Wilcox.

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EXECUTIVE SUMMARY

Overall, despite being unprepared for a province-wide emergency the Government of British Columbia's response to the COVID-19 pandemic was strong, showing resilience, balance, and nimbleness that should give British Columbians confidence in its ability to respond to future province-wide emergencies. There is an opportunity for the B.C. government to be better prepared to respond in future by acting ahead of time to apply lessons learned. We have made 26 findings related to trust, preparation, organization, communication, and working with First Nations and Indigenous organizations.

We were tasked with undertaking an operational review of the B.C. government's pandemic response to help government prepare for future events. The review looked at preparations for the pandemic, the processes used to make decisions, government communications related to the pandemic response, and the implementation of response measures. Our findings include things that went well and things that could have been improved, because there are lessons to be learned from both. We have been careful not to err on the side of reporting the many specific things to be improved and losing the bigger-picture successes that do not require as much detailed discussion for the lessons to be clear.

We approached our task through a combination of research and engagement. Our research examined the operational context within which government responded to the pandemic, public health and emergency management best practices, the events that took place during the pandemic, and how B.C. compared with other populous provinces in terms of several outcome indicators. We engaged broadly with the public, government, stakeholders, and Indigenous people and organizations to understand the response from a range of perspectives. Our 26 findings derived from this work, along with accompanying conclusions suggesting areas where government could focus its attention to be better prepared.

The effect of the government response on Indigenous Peoples, governments, and Indigenous-governed organizations was a particular focus of the review and is addressed in a separate part of the report, with three specific findings and conclusions.

Operational context

The pandemic response was set within the context of how government works and is organized because the response involved every part of government. Within the response, the key areas of responsibility were as follows:

- The public health function was responsible for public health measures.
- Emergency Management BC had a mandate to coordinate the government response.
- The Ministry of Health was the lead ministry and was responsible for managing the health-care system when the risk of it being overwhelmed could spike in days.
- Every ministry was responsible for continuing to provide services in the face of disruption for its clients and workers.
- All of government was responsible for mitigating the effects of the pandemic and supporting the public health response through new and enhanced programs.

Because this was an all-of-government response, it was important that our review be grounded in an understanding of how government works and of how authority and accountability for government action underlie the checks and balances inherent in Canada's system of government.

Public health played a central role in the response, so it's also important to understand that public health is about improving population health, defined broadly to include mental and physical health, determined in part by social connection and economic circumstances. Within this context, public health emergency response measures take a balance-of-harms approach, recognizing that restricting people's behaviour to reduce the effects of the disease also causes social and economic harm. Every decision is a judgment about the least restrictive approach possible in each particular circumstance, given available information.

While scientific knowledge is used to develop public health measures, science alone does not determine the response. During the pandemic scientific knowledge changed continually as the disease evolved. Uncertainty has been a backdrop to the pandemic response, and changes in public health direction have been, appropriately, a constant.

The presumption underlying government's pre-pandemic planning was that it would use the same approach to coordinate the government response as Emergency Management BC so successfully applies to coordinating the diverse response activities of many agencies in more common emergencies related to threats like urban interface fires and floods. That approach was largely abandoned almost immediately; instead, government's normal decision-making process was adapted into an effective crisis management approach, especially in the early part of the pandemic. In this shift, part of the cross-government coordination function was lost, raising an important question about how the government response should be coordinated in future pandemics and other province-wide emergencies.

What happened

To help us understand what happened in the incredibly complex response effort, we developed an extensive timeline database of almost 1,000 events[1] and used that to develop the story of how the response unfolded in BC. We identified five government pandemic response phases. Each phase represents a period of time during which government's pandemic response measures, especially the public health measures used, differed from the previous phase of the response. These phases are distinct from the waves of the disease. The waves of the disease are periods during which hospitalizations increase and then decrease, and each wave is associated with a different variant of the SARS-COV-2 virus being dominant in B.C.

After it became clear that COVID-19 was a global threat, in March 2020, the first phase of the response was characterized by public fear, extreme uncertainty, urgency, and high stakes. The early response focused on voluntary adherence to public health guidance and orders without the ability to enforce, ministries responding rapidly to continue providing government services, quickly finding ways to support those affected

[1] The event timeline database can be found on the Provincial Emergency Management Reports webpage on the Government of B.C.'s website.

by the pandemic, and developing recovery plans. This effort set the foundation for the entire response in a few short months.

As the first wave of the pandemic abated, the response entered a phase in which that foundation could be applied and refined to manage the pandemic from both a public health and a government operational response perspective. Public health measures shifted from voluntary compliance to mandatory enforceable orders more often targeted to specific activities that were sources of transmission.

When vaccines became available in January 2021, their rollout became an additional priority, since high vaccination rates were the single most effective public health measure once they became publicly available. B.C. was successful in achieving a high rate of vaccination for the first two doses for adults, with lower uptake for subsequent boosters and for younger people as they became eligible. In September 2021, with the introduction of the vaccine card and as vaccine mandates for workers in several sectors began to take effect, the public response to the government's pandemic response changed. These measures amplified a backlash to restrictions on personal freedom that had begun earlier, culminating in the Freedom Convoy Movement, with disruptive, weeks-long protests.

In April 2022, the high level of transmissibility, reduced severity of disease, and high vaccination rates associated with Omicron and its variants reduced the efficacy of public health restrictions. In response, B.C., jurisdictions across the rest of Canada, and countries around the world relaxed most restrictions and gave people free access to rapid tests, relying on people to decide for themselves what measures to take to protect themselves from disease.

Throughout the pandemic there has been a debate about how B.C. fared. We have used comparable quantitative indicators related to the pandemic response, the health effects of COVID-19 and the economic effects of the pandemic across Canada's four most populous provinces to answer this question.

The data shows that B.C. public health measures were somewhat less restrictive overall and somewhat more stable, that B.C. had the highest increase in program spending, and had a slightly higher vaccination rate than the other jurisdictions. In terms of health outcomes, B.C. had slightly lower rates of COVID-19 cases and deaths. From an economic perspective, employment in B.C. recovered to pre-pandemic levels by July 2021, about the same as most other provinces and had the least impact on gross domestic product (GDP) over the pandemic. Overall, this indicates that B.C. did at least as well as the other jurisdictions.

Another important indicator is trust in government, which we compared using consistent public opinion research results. They showed that public trust in government was relatively high throughout the pandemic up to August 2022, but that in all provinces, including B.C., there was a downward trend.

What we heard

Our engagement process included a public survey available in multiple languages hosted on the govTogetherBC website, to which we received over 15,000 responses with 3,000 pages of written comment; written submissions from every government ministry and several relevant agencies; interviews with every deputy minister and many other public service and broader public sector officials involved in the response; and engagement with over 200 individuals representing 145 stakeholder groups through interviews and written submissions, as well as over 20 responses to a survey directed to local governments. We also undertook an extensive effort to engage with Indigenous people and organizations.

Our public opinion survey was not representative of the population as a whole because people chose to participate. The results were considerably more negative than those seen in public opinion research results but served to emphasize that a significant part of the population was extremely upset by the pandemic response, especially mask and vaccine mandates, which were very divisive.

Our engagement with government and government stakeholders revealed a consistent set of themes from both, including:

- universal support for the daily briefing approach, led by the Provincial Health Officer, supported by the Minister of Health, with the Premier playing a limited public-facing role
- strong praise for the nimble, resilient response by the public service to maintain government services and develop new programs at previously unheard of speeds
- recognition of the fact that public health measures were less restrictive overall than in most other jurisdictions
- concerns about communications related to changes in public health measures after the initial phase of the pandemic, including needing a better explanation of why decisions were made and of apparent inconsistencies, giving little opportunity for the public service and stakeholders to have input on implications and implementation and providing insufficient notice and few written materials supporting announcements
- the importance of strong relationships with stakeholders when communicating about response measures and consulting on implications and implementation
- gaps in provincial government programs and functions, highlighted by the pandemic, including lack of focus on supply chain disruption for essential goods and a lack of understanding about the importance of social service providers who are not funded through government programs and linkages among government social support programs (the social supply chain)
- the challenge of enforcing public health orders, requiring increased legal authority and coordination of multiple regulatory agencies to provide increased capacity

In summary, many indicated that, overall, B.C. was not prepared for the pandemic.

What we found

In the report, we make 26 findings and conclusions in six categories: trust, preparation, decision-making, communication, implementation, and impacts of the pandemic response on Indigenous Peoples. The conclusions point to the areas where improvements can help prepare for the next province-wide emergency.[2]

There are several observations that serve as touchpoints for what we found. The pandemic experience was very personal, with every person and group affected in ways that created unique perspectives. Most

[2] A province-wide emergency is an event that causes significant disruption across the province for a period of months or longer.

expected this to be a health-care matter that would be over quickly, not a long-term societal disruption. People's natural reaction to the pandemic, together with necessary public health restrictions, led to that disruption. A society-wide disruption requires an all-of-government response, which continues today, over 30 months later.

Public trust

Our first finding addresses the overarching question of public trust. B.C. had a strong overall response to the pandemic, and the public trust built by the calm and competent daily press conferences led by the Provincial Health Officer contributed significantly to that success. Public support for the provincial government response has been relatively strong in B.C. throughout, but, as in other provinces, it has fallen over time. Division stoked by vaccine mandates has demonstrated that a significant minority are strongly resistant to restrictive public health measures. It is important that ways be found to rebuild trust, which will be necessary to support compliance with future restrictive measures should they be needed.

Preparation

The six findings in the preparation chapter deal with the fact that B.C.'s effective pandemic response overall came despite B.C., together with most jurisdictions, not being prepared for a pandemic. We suggest incorporating the lessons about preparation learned from the pandemic into a principle-based standard for preparation for province-wide emergencies. Planning is an important part of preparation, provided that it addresses much more than was addressed by the pre-existing coordination plan, and that planning is an ongoing activity across government.

The work by those who delivered the response across the public service and broader public sector as well as by contracted service providers was exceptional, but a price was paid in terms of exhaustion and burnout. Government's capacity to maintain an intense focus on an all-of-government basis was tested by the pandemic. Preparation should address ways to provide surge capacity and manage the workforce over a long-duration event.

Relationships proved key to the government response. It relied on stakeholder tables convened by almost every ministry, which interacted with the Office of the Provincial Health Officer. Stakeholder relationships were strengthened and new relationships built throughout the pandemic, something that should be maintained for their day-to-day value and in preparation for future events.

The pandemic and atmospheric river events focused attention on the need to be prepared when the supply of essential goods is disrupted. B.C. was not the only jurisdiction caught off-guard by the shortage of personal protective equipment, but it is a lesson that is important and should be applied more generally to prepare for all-of-society disruptions from province-wide emergencies. Similarly, B.C. lacked a full understanding of interactions among social support programs and the fact that a significant amount of social support is provided outside of government-funded programs. Disruption of those services harmed those also most likely to be severely affected by the pandemic, including many Indigenous people living off-reserve. Understanding the social supply chain and taking a system-wide view of the social supply chain should be part of preparation.

Decision-making

Our review of decision-making during the pandemic response was against a standard we call "informed decisions," under which the best available information is utilized in the time available through a process that has a clear objective and considerations that must be addressed, balanced by analyzing options and their implications. During a pandemic, when uncertainty, urgency, and consequences for the public are all high, informed decision-making is especially challenging. That standard was generally met throughout the government response. Public health decisions were better informed than many understood, specifically balancing the harms caused by the disease with the societal and economic effects of restricting behaviour. As the rest of government responded to mitigate the effects of the pandemic, its decisions were timely and had clear objectives. However, neither type of decision fully took implications and inconsistencies into account. We make five specific findings related to improved decision-making processes.

Before the pandemic, the presumption was that the same emergency management approach used for more common emergencies like wildfires and floods would be used to coordinate the government response. In fact, government used a crisis management approach in which a small group of Cabinet members supported by a small group of senior officials set government priorities in the initial phase of the pandemic. Disrupted service delivery across government was addressed through a business continuity management approach, and the emergency management approach was applied to only a few specific issues, such as communications coordination and the border enforcement initiative. The fact that all three approaches are useful should be reflected in preparations for future events.

The management approaches taken were effective, if unplanned, but created a gap. The very function the pandemic plan was intended to address—coordination of an all-of-government response—was not adequately addressed throughout the pandemic. As a result, there were difficulties in understanding and addressing internal and external implications. We suggest that Emergency Management BC be given accountability and responsibility for that coordination, including coordination of preparation. That would require enhancing its legitimacy as the coordinating central agency for province-wide emergencies.

There were, inevitably, many unintended consequences during the pandemic response, which can provide valuable lessons for future events—and for improving business as usual. We suggest that efforts could be made through case studies to learn and apply these lessons.

Many do not understand or believe that public health decision-making balances multiple considerations, particularly the overall health of the population with the effects of public health restrictions on society and people's interconnectedness, and on the economy. Further, concerns were raised about whether decisions were supported by or followed the scientific evidence. Science is only one factor that goes into public health decision-making, and during the pandemic related scientific knowledge advanced quickly. We suggest that increased transparency about the decision-making process and how it was applied could help allay concerns. That could include establishing one or more formal advisory groups to support the Public Health Officer and public health decisions.

Data about the pandemic was, of course, a key input for public health decisions and decisions about managing the health-care system. But access to that data by public health decision-makers was hampered by information technology systems used by hospitals and health authorities not being integrated and working together. Information on personal protective equipment inventories did not exist and the requirement to

manually compile hospitalization data highlighted longstanding issues that have for decades proven resistant to resolution. Nevertheless, we suggest that government again consider how best to address this problem.

Communications

Mostly government communications were unambiguous, clear, culturally appropriate, and timely, which are key elements of the standard we expected of communications. But communications could have been improved. We make four findings related to communications.

Overall, a comprehensive communications strategy—addressing the roles of key agencies, including the Provincial Health Officer, Government Communications and Public Engagement, the ministries, and Emergency Management BC, and anticipating changing the approach to communications as the event unfolds—was lacking. That should be part of preparation.

A more specific finding relates to the fact that communications needed to evolve over time because of high levels of uncertainty and ongoing changes in circumstances related to the pandemic. The public just wanted certainty and were not prepared for continuous change. As a result, many interpreted changes to guidance as evidence of earlier mistakes, damaging trust. Efforts should be made to build tolerance for uncertainty and ongoing change. In addition, many did not understand why decisions were made, leaving a vacuum to be filled with distrust and misinformation. Better explanations would help allay that.

One specific area where people wanted more information was local data about the pandemic for small geographical areas. There are valid privacy concerns that must be considered in determining what data can be made available, but B.C. delayed providing such detailed information, especially in comparison with Ontario and Alberta, contributing to concerns. More transparency about the privacy/transparency trade-off would help address this concern.

Implementation

Implementation refers to the operational actions of government in responding to the pandemic. It requires resources (people and funding), legal authority, and accountability for results compared with objectives. The effort across all of government to maintain service delivery and respond to the pandemic and its disruption showed a nimbleness and resiliency that was a major success for the pandemic response. The public service pulled together to do whatever needed to be done. Many in the public service want to maintain the best of that spirit as normalcy returns. Nevertheless, there are areas where lessons from the pandemic response can be applied in future, resulting in six findings in the implementation chapter.

While the public health decision-making process was strong, the rollout of public health orders could have been done better. Early in the pandemic, the urgency, uncertainty, and extreme pace of change necessitated a practice of policy announcements from the podium during daily press briefings, followed later by written orders. But as that urgency abated and as public health responses became increasingly targeted, the approach to releasing guidance did not change. In addition to the lack of explanation noted above, orders continued to be announced without notice, without written materials, and without sufficient effort to get input in advance about implications from those affected. These are all expected by government of itself when making policy announcements. We suggest that the Office of the Provincial Health Officer review its order rollout practices.

The pandemic provides an opportunity to learn more about how best public health measures can be used during a public health emergency. We suggest that those lessons be captured through a review of how well specific measures worked in specific circumstances.

Enforcement of public health orders required a coordinated approach from many regulatory and law enforcement agencies because day-to-day public health enforcement resources could never be sufficient to provide this function during a pandemic. Overall, that effort was successful, but it is an approach that government needs to be prepared to again activate a coordinated enforcement structure in the event of future province-wide emergencies.

The most successful collaborative implementation efforts, such as the reopening of schools and keeping the K–12 education system open for in-class instruction more than any other province, succeeded by having a strong shared objective (i.e., keeping schools open) and collaboration among all those affected on how best to achieve the objective. In many other areas, either there wasn't a clear identification of the objective or it wasn't widely shared.

There were some collaborations with non-government entities to implement response actions, like the vaccine rollout, but there were also many cases where groups outside of government were eager to help but faced barriers in doing so. At the same time, government resources were stretched thin, and capacity was an issue. Preparation should consider ways of reducing barriers to the use of these resources in a province-wide emergency.

Indigenous impacts

The distinct history, culture, circumstances, needs, impacts, and implications of the pandemic on B.C.'s Indigenous Peoples made clear the need to present their story as a whole in a separate part. The First Nations Health Authority (FNHA) has indicated that First Nations people in B.C. have tested positive for COVID-19 at higher rates, have had higher rates of hospital admissions at lower ages, and have had higher rates of death from COVID-19.[3] Many of the factors that make Indigenous communities more likely to be severely affected by COVID-19 have their roots in the past 200 years of colonialism and its impacts on the social determinants of health.[4]

Our objective for engagement was to provide Indigenous Peoples, Treaty Nations, First Nations, and Indigenous-governed organizations with opportunities to share their experiences while respecting the pressures placed on them by the pandemic and consultation demands. More than 600 individuals who self-identified as Indigenous responded to our public opinion research survey, providing extensive comments, and all 204 First Nations were invited to provide input through a separate public opinion research survey. We also

[3] https://www.fnha.ca/Documents/FNHA-COVID-19-Statement.pdf
[4] https://news.ubc.ca/2022/04/05/pandemic-shows-how-social-factors-impact-health-of-
https://news.ubc.ca/2022/04/05/pandemic-shows-how-social-factors-impact-health-of-indigenous-peoples/#:~:text=Many%20factors%20make%20Indigenous%20communities,living%20in%20multi%2Dgenerational%20homes

had several meetings with FNHA senior staff and spoke to several First Nations leadership groups. We held sessions with and received thoughtful written submissions from some Treaty Nations and Métis Nation British Columbia. The B.C. Association of Aboriginal Friendship Centres provided important insights on the impacts felt by B.C.'s urban Indigenous population.

The response to the pandemic highlighted the complex web of federal, provincial, and First Nations jurisdictions, which created gaps, overlaps, inconsistencies, and inequities. In particular, urban Indigenous populations were less well served. FNHA played the key role during the pandemic of coordinating among the governments, and Emergency Management BC also was involved in coordinating the pandemic response with First Nations.

Our three findings recognize that the *Declaration on the Rights of Indigenous Peoples Act* (DRIPA), enacted in 2019, establishes a framework for government-to-government relations in all spheres, including emergency management. While the government is committed to the principles of DRIPA and made early steps in the Act's implementation during the pandemic, it was not fully prepared for the rapid onset of the pandemic and was initially uncertain about how to collaborate jointly on emergency measures. As a result, our first finding calls for the further co-development of an Indigenous role in emergency preparedness.

We heard how quickly issues of jurisdiction arose as Treaty Nations and First Nations sought to protect their members by isolating communities and traditional territories, and about the Nations' desire to receive health information on their members to help them manage their own pandemic responses. Thus, our second finding calls for continued co-development of joint planning consistent with DRIPA commitments.

Our third finding speaks to overlaps and gaps encountered. It identifies the need for better coordination among the provincial and federal governments and B.C.'s First Nations. In particular, there is a need to co-develop protocols and agreements to provide more clarity, consistency, comprehensiveness, and certainty in the delivery of assistance and services to all Indigenous Peoples and, in particular, those living in urban environments.

Conclusion

Although there are many ways that the government could improve its ability to respond to future province-wide emergencies, as set out in our 26 findings, B.C. had a strong and effective response to the pandemic that bodes well for its ability to respond effectively to the next event. Government and society pulled together to do what needed to be done. Government was nimble and resilient.

PART 1: BACKGROUND

In this part of the report, we discuss the task we have been given and our process for approaching that task, provide operational context about what government is and how it works, as well as discussing two key functions, public health and emergency management, and describe what has happened during the pandemic so far.

1. Our Task

Terms of reference

On March 16, 2022, Honourable Mike Farnworth, Minister of Public Safety and Solicitor General, announced the appointment of an independent project team made up of the three of us—Bob de Faye, Dan Perrin, and Chris Trumpy—to conduct a review of the British Columbia public sector's response to the COVID-19 pandemic. The full terms of reference of the review are attached as Appendix A.

The objective of this review is to learn from the COVID-19 experience and to apply those learnings to be better prepared for the province-wide emergency. To do so, we have been asked to conduct an operational review of government's response.

The document specifically excludes "an assessment of economic recovery and public policy decisions made by government to deal with the consequences of the pandemic and decisions made by the independent Provincial Health Officer" from the scope of the review. That exclusion received a certain amount of criticism when the review was announced. Not reviewing the decisions themselves allowed our team and those we spoke with to focus on operational matters—how the large machine of government was able to adjust and respond. Nevertheless, criticism the mandate received may in itself have reduced the number of organizations willing to engage with us.

The reason why the decisions themselves were excluded from the scope was because the next event will differ substantially from this pandemic, and the specific decisions made then will be informed by the circumstances at the time.

Our mandate is to consider how the public policy decisions were made, communicated, and implemented. We also examine how government operations were adjusted in response to the pandemic. Those topics are covered in this report.

Our process

Our process consisted of undertaking research related to the pandemic response, engaging with those responsible for and affected by the response, and analyzing the results to develop findings of fact and conclusions about areas where government should consider making improvements.

Our research examined the operational context for the response, including what government does and how it is organized, as well as what the public health and emergency management functions of government do and how they operate. We also sought to gain an understanding of what happened during the pandemic response by developing a timeline, using that to tell the story of the response, and looking at how well B.C. performed compared with other provinces in terms of comparable, objective quantitative indicators.

Consistent with the terms of reference, we conducted extensive engagements, including:

- a public survey that was available in multiple languages for six weeks from the date on which the review was announced
- an engagement process directed at Indigenous organizations, including First Nations, B.C. Treaty Nations and Métis Nation British Columbia, the First Nations Health Authority and other Indigenous organizations, which included a survey specific to First Nations and their members (we also analyzed responses to the public survey by those identifying as Indigenous)
- a request for written submissions from every government ministry and several agencies, together with interviews with many senior public service leaders, including all deputy ministers
- engagement with government stakeholders, including through written submissions, interviews, and a survey made available to local governments (the organizations that engaged with us are listed in Appendix E)

We prepared summaries of what we heard from each of the three groups we engaged with and shared the relevant summary with participants from each group to give them a chance to point out any points we missed or did not describe accurately. Their feedback was used to develop the summaries included in Part 2:What We Heard

Our research and engagement laid the foundation for us to develop 26 findings and conclusions in the areas of preparation, decision-making, communications, implementation, and including three findings related to the impact of the pandemic response on Indigenous people.

2. Operational Context

Our task is to undertake an operational review of how the Government of British Columbia responded to a public health emergency. To do so, we needed at least a passing familiarity with:

- what government is, what it does, and how it operates
- what public health is and how it works, especially in a pandemic or similar event
- what emergency management entails and what other approaches can be taken together with or instead of an emergency management approach in dealing with an emergency situation

Many readers will have in-depth knowledge about some or all of these areas, but others may not. We learned an incredible amount about all three areas during the course of this review and found that knowledge essential to complete our task. The purpose of this chapter is to share that context, with an emphasis on the concepts that underlie our thinking in this report.

Government 101

BC government's pandemic response is a continuing all-of-government response that is extremely complex, involving almost all of the broad public sector and utilizing almost all of the mechanisms that government has at its disposal to deliver services and affect society. Our task is to undertake an operational review of this immense entity, with over 30,000 public service employees and about 500,000 public sector employees. As context to our review, the following provides an overview of what government does, how it is organized, and how it works, which we refer to as "Government 101."

The Province and the government

In Canada, there are several levels of government with roles dictated by the constitution, treaties, legislation, and historical practice. They include the federal government, Treaty Nations, First Nations, provincial and territorial governments, and local governments.

The Province of British Columbia[5] is part of the Canadian confederation, getting its powers and authorities from the Canadian Constitution. It is governed by the Legislature, made up of elected representatives from 87 ridings covering the province, and which reports to the Lieutenant Governor.[6] The role of the Legislature is to consider proposed legislation, to authorize spending, and to hold government to account. Government's

[5] Formally known as the Province of British Columbia in right of the Crown.
[6] The Lieutenant Governor is the head of state for the Province of British Columbia, responsible for approving Bills passed by the Legislature and Orders in Council approved by Cabinet as well as dissolving the Legislature when an election is called and asking a party to form government after an election, among other things.

role is to conduct the day-to-day business of the Province and to propose legislation for the consideration of the Legislature. There are several officers of the Legislature, such as the Auditor General and the Representative for Children and Youth, who assist the Legislature in its accountability role. These distinct roles and powers of the government and the Legislature are part of the checks and balances built into the Westminster parliamentary system of government used in Canada.

Our focus is on the role of the provincial government, but the relationships and interactions among the jurisdictions at all levels of government were relevant to the B.C. government's pandemic response and are discussed in this report.

How the B.C. government is organized

Public service

The direct government or public service is the set of ministries and agencies that report to Ministers of the Crown, who, as members of the Executive Council, are usually collectively referred to as Cabinet. The Premier chairs Cabinet and appoints ministers. Beyond direct government are a set of public bodies that government controls, which, in combination with the public service, make up the public sector, also known as the Government Reporting Entity.

Every part of government that reports to a minister is part of the public service, including the current 21 ministries, as well as agencies such as the Public Sector Employers' Council, the Public Service Agency, and Emergency Management BC, which are usually headed by a deputy minister. Most ministries that provide service to the public are responsible for multiple programs.

The structure of government results in a phenomenon familiar to those who work closely with government: silos. Those responsible for programs have a natural tendency to focus primarily on their program and area of responsibility. Ministries that deliver services likewise have an incentive to focus on their own services and associated programs. There are also several ministries and agencies whose mission is to work across government to provide shared services or to manage administrative supports needed to operate a complex provincial government. One of the most challenging government functions is the coordination of activities across silos. This is often accomplished with committees at various levels within the public service, together with the efforts of central agencies and the Office of the Deputy Minister to the Premier, who is the head of the public service.

Public sector

The broader public sector is made up of a large number of organizations with a variety of "corporate" and governance structures and a wide range of functions. Major groupings within the broad public sector include Crown corporations, the post-secondary education sector, the K–12 education system, the health-care system, and independent boards and commissions.

Any public sector organization that is structured as a corporation is considered a Crown corporation, but they include self-sustaining businesses like B.C. Hydro, government-supported businesses like B.C. Transit, and independent regulators like the B.C. Securities Commission and the Financial Services Authority.

The post-secondary education sector is made up of colleges, institutes, teaching universities, and research universities, with distinct authorities and structures. The K–12 education system includes both public schools operated by elected school boards in 60 school districts (which are part of the public sector) and independent schools (which are not).

The health-care sector includes five regional health authorities[7] that operate facilities like hospitals and some long-term care facilities, regulate independent residential care service providers and undertake public health regulation throughout the province. There is also the Provincial Health Services Authority, which provides centralized specialized health care and public health infrastructure through agencies like the B.C. Women's Hospital and Health Centre, B.C. Children's Hospital, the B.C. Cancer Agency, and the B.C. Centre for Disease Control.

For these three sectors, the agencies providing services have varying degrees of independence from government though their legislative and governance structures. While closely linked to government, there are limitations in the authority of government to direct these organizations.

Many government-funded services are delivered by organizations that are not part of the public service or public sector. This is especially true of social services delivered by the Ministries of Children and Family Development, Social Development and Poverty Reduction, and Public Safety and Solicitor General. Such organizations often deliver services under contractual relationships, or through subsidies. The ability of government to direct these service delivery providers is even more limited than it is for service delivery organizations that are part of the public sector.

WorkSafeBC is an organization that played an important role during the pandemic through its regulatory and enforcement functions but is not part of the public sector. It is an independent organization created by provincial legislation and funded by employer premiums, it is not within the Government Reporting Entity, and it has a mandate limited to regulating workplace health and safety and providing compensation for workplace injuries.

What governments do

There are four fundamental ways that a provincial government can take action to make a difference in society: spending, raising revenues (taxation), regulating, and influencing.

Government spending funds the provision of services to the public. This includes services such as social workers providing child welfare services, conservation officers, and other front-line service delivery roles. It also includes services that are paid for by the Province but delivered through a variety of mechanisms from public sector agencies like the K–12, post-secondary education, and health-care systems; services provided

[7] The First Nations Health Authority (FNHA) is an Indigenous-governed organization and is not part of the B.C. public sector, although it is an important partner and, as we discuss, played an important role during the pandemic.

by contracted service providers; and cash transfers, like income assistance and disability assistance payments and child-care subsidies.

The provincial government's pandemic response represented a significant increase in government spending in the fiscal years ending in both March 2021 and March 2022.[8] Spending increased for both existing programs, especially in health and social services, and new response programs, including cash transfers to individuals and organizations.

Taxation and other revenue sources, like fees, are primarily intended to generate the funds needed to operate the provincial government. But depending on how the revenue is raised, it can have powerful economic effects on society. The carbon tax is an example of a revenue source established to reduce greenhouse gases. During the pandemic, several measures were introduced to provide relief from taxes and fees, some of which reduced amounts owing while others provided more time to comply with filing and payment obligations.

Much of what government does to influence society is through regulatory powers. This includes consumer protection and financial services regulation, environmental regulation, the regulation of health professions, and restrictions imposed by the Provincial Health Officer to manage the pandemic. While regulation often includes enforcement measures, such as fines and other penalties, the regulatory system is very reliant on voluntary compliance. Public health orders are a form of regulation.

Regardless of how government acts, there is one fundamental principle underlying these three tools: government action, whether spending, taxation, or regulation, must be authorized by legislation. All of the many areas within which provincial governments operate are explicitly mandated through provincial government legislation. Ultimately, that authorization to act must be consistent with the constitutional roles assigned to the provinces and must be approved by the legislative assembly. The requirement for legislative authorization is an important part of our democracy because it places limits on what government can do and, crucially, how government can act, part of the system of checks and balances. Disputes over government authority are resolved through the courts, which ensure that government is acting within its authority and ultimately with the consent of the electorate.

Influence is the softer side of what governments do, essentially using communications and engagement to guide people to do or not do something, relying on voluntary compliance. In the early days of the pandemic, much of the public health response by the Provincial Health Officer was in the form of guidance as opposed to orders with the force of law. The deliberate use of guidance early in the pandemic was effective because it brought people together to respond to the uncertainty and potential catastrophe that this emergency represented. In many ways, exerting influence is key to enabling government to govern and get things done in conjunction with its other tools.

[8] The government's fiscal year runs from April 1 to the following March 31.

How government decision-making works

As noted, all authority for government to act stems from legislation. On a business-as-usual basis in the operation of existing government programs, that legislation creates the basic structure of the program. More details about how the programs operate are set out in administrative policies that must be consistent with the authorities set out in the enabling legislation. Some of those policies detail how a specific program operates. Others are administrative policies of general application, like those associated with financial administration and human resource management, providing a framework for the operation of government functions generally. The budget process and the annual *Supply Act* that results from it provide the financial resources needed to operate government and all its programs.

In general, the power to make decisions about most changes to government services (which we call public policy decisions) are in the hands of elected officials, either Cabinet as a whole or a particular minister, depending on the legislation. This includes decisions about proposing new legislation and amendments to existing legislation to the Legislature. In addition, many significant decisions under legislation must be made by regulation, which is an order that has the force of law made under authority that flows from legislation and is usually approved by Cabinet.

There are some public policy decisions that are explicitly given to an official appointed to a specific position under legislation. These officials are known as statutory decision-makers because their authority is set out in a statute, a particular act. Many regulators have statutory decision-making authority that can range from quite specific, local decisions with narrow effects to decisions with significant, wide-ranging effects. Examples of statutory decision-makers are the Chief Forester, who has statutory decision-making authority regarding the level of forestry activity on Crown land, and the Provincial Health Officer, who has statutory decision-making authority to impose public health measures during a public health emergency, among other things.

Cabinet public policy decisions are made by Cabinet after a rigorous process of review by multiple agencies, cross-government review by public service officials, and review by one or more Cabinet committees. In the case of legislation, its debate in the Legislature ultimately provides an opportunity for opposition politicians to express concerns and propose amendments as well.

The consequences of making the wrong choice can be significant, so it is important for decision-makers to get good advice. Later in this report, we describe a decision-making standard for public policy decisions that we refer to as informed decision-making. In short, we believe public policy decision-makers need enough information to fully understand the effects and implication of the decision they are making. This requires a decision-making framework focused on a clear objective, with principles that need to be considered, and consideration of alternative ways that the objective could be achieved. In every case, there are trade-offs and judgment calls that must be made in arriving at a decision, and understanding those trade-offs is crucial to making informed decisions. Public policy is inevitably about balancing interests, consequences, and effects, and public policy advice should make the trade-offs clear.

Within this process, the public service role is primarily that of policy advisor, providing the elected officials who form Cabinet with the information they need to make decisions. Many of these decisions have significant potential effects and are technically complex.

Statutory decision-makers are typically given their responsibility because they are technical subject-matter experts. This is certainly true of the Provincial Health Officer. Their need to balance considerations and understand the trade-offs being made, and the need for informed decision-making, is no less important.

Many decisions rest with Cabinet because under our system of representative democracy, as elected representatives, Cabinet and ultimately government are accountable to the public. That means that they must consider the public acceptability of the decisions they make. A concern sometimes raised about statutory decision-makers is that because these officials are unelected, they are not accountable. However, statutory decision-makers are appointed to their positions and are subject to removal by a minister or by Cabinet, making them accountable to elected officials who are accountable to the public. Concerns about lack of accountability are usually addressed by having a clear framework for how decisions will be made and by being clear in the decisions made how the framework was applied in each particular case.

Another important aspect of the public policy decision-making process is the implementation of decisions. It is important that the administrative structure and the operating models of agencies involved in implementing a public policy decision are well understood by decision-makers, to ensure that effective implementation is feasible and to avoid unintended consequences.

Public health

A key part of the B.C. government's response to the pandemic was the public health response led by the Provincial Health Officer. This section provides some context for our discussions of the public health response by discussing what public health is, how it works in general, and how it has been applied during the pandemic.

According to the US Centers for Disease Control and Prevention, public health was defined in 1920 by C.E.A. Winslow as "the science and art of preventing disease, prolonging life, and promoting health through the organized efforts and informed choices of society, organizations, public and private communities, and individuals."[9] The Chief Public Health Officer for Canada defines public health as "the organized efforts of society to keep people healthy and prevent injury, illness, and premature death. It is a combination of programs, services and policies that protect and promote the health of all Canadians."[10] These definitions include three key concepts that help explain what public health is: it is both a science and an art; it is about both prevention and promotion; and it operates at all levels of society, not just the health-care system. Public health is focused on the overall well-being of the population, including not just physical health but also mental health, social connection, and poverty reduction.

[9] https://www.cdc.gov/training/publichealth101/public-health.html
[10] https://www.canada.ca/en/public-health/corporate/publications/chief-public-health-officer-reports-state-public-health-canada/report-on-state-public-health-canada-2008/chapter-2a.html

It is useful to contrast public health with health care. Public health is intended to improve the health of the entire population, while health care addresses health at the level of individuals. Public health focuses on prevention, while health care uses diagnosis and treatment to address existing issues. Public health makes use of several disciplines in addition to clinical practice, while health care primarily utilizes clinical practice disciplines.

The public health approach to well-being across the population not only minimizes the effects of disease outbreaks in the form of epidemics and pandemics but is also concerned with the broad range of continuing conditions and diseases that affect population health, from obesity to the opioid crisis to clean water. That is, public health is an ongoing responsibility, not just a function that applies to public health emergencies, even though our interest here is the public health emergency response to the COVID-19 pandemic.[11]

It has long been understood that social conditions have a significant effect on the overall health of a population. Social connections, income, housing, nutrition, education, and being part of a population more likely to be severely affected by disease—whether as an Indigenous person, member of a racialized group, or person with a disability, for example—all affect health outcomes.

As a result, public health is interested not only in specific diseases but also in these factors as it seeks to address the overall health of the population. This has implications for the approach to a public health emergency like this pandemic. An integral part of the public health response is to consider not only the effect of the response measures on the health harm done by the virus but also the harm done in terms of economic effects that reduce incomes and social effects, all of which are part of overall population health. This is sometimes referred to as balancing harms, or the least-harm approach, and is the "art" part of public health.

The types of public health tools used in response to a pandemic respiratory illness like the current pandemic focus on managing the likelihood of transmission of infection. They include both measures implemented by individuals changing their behaviour and measures taken by public health authorities. Not all of the tools listed were used in B.C. during the pandemic. The list is presented in no particular order:

- hand washing and covering coughs and sneezes
- use of facemasks
- cleaning and disinfection
- physical screens and barriers
- enhanced ventilation
- physical distancing
- reduced contacts
- identification of essential services

[11] As further context, according to Oxford Reference, "epidemic" means a sudden outbreak of infectious disease that spreads rapidly through the population, affecting a large proportion of people; "pandemic" means an epidemic that spreads through human populations over a very wide area, crossing international boundaries and usually affecting a large number of people. (https://www.oxfordreference.com)

- gathering limits, event cancellations, and facility closures
- capacity limits
- testing for infection management and surveillance purposes
- isolation when ill, whether self-isolation or ordered quarantine
- case and contact management
- lockdowns, stay-at-home orders, curfews, and travel restrictions, including border closures
- therapeutic medications and treatments
- vaccinations
- requirements for workers to be vaccinated
- limits on activities for those not vaccinated (vaccine card or passport)

All except vaccines and medications are referred to as non-pharmaceutical interventions and are typically intended to create stronger, but not fail-safe, layered protection. Several of these approaches were used concurrently in B.C. during the COVID-19 pandemic.

There are many ways in which these measures can be introduced by public health authorities. They can be implemented in the form of voluntary guidance or education that seeks to convince people that by adopting certain behaviours they will protect themselves and others. That includes guidance that individuals should wear masks in public, maintain a two-metre physical distance, wash hands and block coughs and sneezes, reduce contact, self-isolate when ill or others you have contact with are ill, and open windows to increase ventilation. Businesses can also be asked to voluntarily reduce capacity, install barriers, and encourage social distancing, use of facemasks, and staying home when ill.

Alternatively, the Provincial Health Officer can, by legal order, require people and businesses to comply with restrictions, including not allowing some business to open, requiring others to reduce capacity, imposing mask mandates in certain public places, setting up contact tracing, and requiring people who have the virus or have been exposed to quarantine, and so on.

How are decisions made about what measures to take and the specific design details of the measure? In general, the intention is to impose the fewest restrictions necessary at any given time for the shortest period of time. A key principle underlying public health is doing the least harm overall, including considering the harm caused by the disease together with the economic and the social effects of restricting activities.

Science informs public health decisions but does not dictate the decisions. It may be useful to briefly discuss what science is and is not. Some perceive science to be a set of immutable facts that explain what we know of the world and beyond. In fact, science is a process (the scientific method) that provides a rigorous approach to continuously learning. Science generates knowledge that can be used in practice to guide areas like health care, but very little in science is absolute or fully determined. As new knowledge is developed and tested, it creates new questions, often about ideas that many have taken for granted. In the case of the COVID-19 pandemic, since the SARS-COV-2 virus had not previously been seen in humans, very little was known about it. Over the past two years, scientific knowledge about the virus and its variants has multiplied at a tremendous rate and will continue to grow. And, as a result, the best practices based on today's knowledge may change quickly and significantly as knowledge grows and, of course, as the virus evolves.

Further, science cannot drive public policy decisions alone. Scientific evidence is very helpful in assessing the risks and harms associated with a disease and the effectiveness of the available public health measures. But

other important considerations, like social and economic implications of public health measures, as well as their health effects for different groups within the population, all bear on the choice of measures put in place at a given time. In B.C., the COVID-19 Ethical Decision-Making Framework describes the process and considerations for making public health emergency response decision-making.[12]

Circumstances constantly change during a pandemic. Scientific knowledge about the disease changes, sometimes very quickly, requiring guidance and orders to change. The disease itself changes as it evolves and as waves come and go. Treatments and vaccines affect the level of risk. People's behaviours and reactions to public health measures change. All these things affect what public health tools are used and the details of their design and implementation.

Inevitably, public health emergency response decisions are complex, high-stakes judgment calls informed by available information, which will change as circumstances change. Some of these decisions must be taken quickly and with incomplete information, even when the public demands certainty and consistency to help allay their fears.

Emergency management

Before the pandemic, the British Columbia Pandemic Provincial Coordination Plan and the All Hazard Plan were based on the premise that the government response to a province-wide emergency would be coordinated using an emergency management approach. The role of Emergency Management BC is one of the issues we deal with in this report. This section provides context on emergency management, including a brief description of the emergency management function of governments generally and the B.C. government in particular.

What is "emergency management?"

"Emergency management" means how a government organizes itself to mitigate risks, prepare for and respond to emergencies, and recover from an emergency. In general, an emergency is a situation that puts people and property in danger, but there are rarely objective criteria to determine whether a particular event is or is not an emergency. Legally, in most jurisdictions an emergency is an event that government declares to be an emergency. The declaration of an emergency provides the legal authority for government to act in response, including authority to restrict people's freedoms in some way and authority to spend money to respond to the emergency.

There are many kinds of events that can give rise to an emergency being declared, with many different characteristics. Many are local events. In B.C. we are familiar with urban interface wildfires and floods that

[12] http://www.bccdc.ca/Health-Professionals-Site/Documents/COVID-19_Ethical_Decision_Making_Framework.pdf

threaten people and property. Some of these events are declared to be emergencies by local governments or First Nations, and some are declared by some combination of the provincial government, First Nations, and local governments. These tend to be restricted geographically, to happen quickly and to have a duration measured in weeks or a few months. In contrast, the pandemic was a province-wide emergency, with a slow onset and a duration measured in years. There are many other hazards that could give rise to declared emergencies, such as acts of war, radiation exposure, major accidents, earthquakes, tsunamis, and various kinds of public health events.

Emergency management approach

The approach to the government emergency management function has evolved over time and converged into the form of the Sendai Framework for Disaster Risk Reduction, established by the United Nations Office for Disaster Risk Reduction in 2015, and has been adopted by the B.C. government.[13] The framework is intended to "apply to the risk of small-scale and large-scale, frequent and infrequent, sudden and slow-onset disasters, caused by natural or manmade hazards as well as related environmental, technological and biological hazards and risks."

There are four standard phases of emergency management: Mitigation, Preparedness, Response, and Recovery. Mitigation refers to actions that prevent future emergencies or minimize their effects, and can happen before, during, and after an emergency event. Preparedness includes everything necessary to prepare to handle an emergency, including assessing and monitoring risk of emergency events (some consider this a separate phase), planning for the emergency response, and ensuring that the goods and materials needed for the response will be available when needed. Preparedness takes place before an emergency, but plans may need to change during an emergency. Response refers to the set of actions taken during an emergency to minimize harm to people and property caused by the emergency event. Recovery actions generally take place after an emergency to facilitate the return to normal.

The description of the phases of emergency management implies that they don't need to be, and usually are not, sequential. Preparation happens before an event, but planning continues during the event, because the response changes to match the circumstances at the time. Response happens after the event starts, but mitigation can happen before an event (like dikes to prevent floods), as well as during and after an event. Recovery also happens after an event starts but can happen at the same time as response and mitigation activities.

The ICS structure

There is a structural approach that has been widely adopted for managing the response phase of emergency management, known as the Incident Command System (ICS). ICS is actually more a structure for decision-making than a system. It is based on a command-and-control approach, such as is used in military, law enforcement, and first response organizations, where it is important to be clear about who is in charge. ICS

[13] https://www.undrr.org/publication/sendai-framework-disaster-risk-reduction-2015-2030

applies the command-and-control approach across a set of agencies to ensure that they coordinate and collaborate their emergency response activities. There are inevitably several groups involved in the response to any emergency event, often including multiple governments and levels of government, businesses, and social service agencies.

There are five standard functions within an ICS structure: command, operations, planning, logistics, and administration/finance. The structure is intended to be flexible so that whatever functions are required can be placed within one of these areas. It is also intended to be replicable at various levels, with the possibility of multiple ICS units (operations centres) being activated. For example, in B.C. emergencies, local governments involved often have an operations centre, and provincial ministries may have an operations centre, as may health authorities and other agencies, reporting to provincial regional operations centres and ultimately to a provincial operations centre.

The ICS command-and-control approach coordinates the activities of many agencies, by including representatives of those agencies within the structure filling roles in the operations centres. Emergency Management BC is responsible for providing expertise in the use of the ICS and creation of the operations centres and some of the functions like administration/finance, but not for subject matter expertise about emergency response actions. It works by gathering issues that need to be addressed from all of the agencies participating in the response through their representatives within the operations centre and then escalating those issues up through the hierarchy to the level at which the issue can be resolved.

In practice, for physical events like wildfires and floods, a major focus of the operations centres is allocating human and physical resources to the emergency response so that available resources are used as efficiently and effectively as possible and are facilitated by coordinated internal and external communications. Because of the urgency of many emergencies, acting quickly is crucial, leading to the command-and-control approach.

How ICS differs from government management

The ICS approach is significantly different from the usual government decision-making approach.

ICS is a scalable, hierarchical set of governance structures for the purpose of coordinating resources by collecting resource needs from the front lines of service delivery and funnelling those requests up to the level at which a decision-maker has the authority to resolve them. Ultimately, there is one person in control, focused on using available resources as effectively as possible to respond to the emergency.

Government decision-making is also about allocating resources, but across many competing objectives being addressed by many different means and programs. Operational management has responsibility and accountability for operating their own programs. Fundamental changes to government programs do not usually come from the front line but are motivated by changes in government priorities set at the Cabinet or ministerial level. While ICS is employed for certain functions in government, such as paramilitary functions, and in certain situations, such as local emergency response, it is not an approach that government elected and public service government leaders are either familiar with or are likely to be comfortable with, even in a province-wide emergency.

Business continuity

There is another type of management approach that is often used in an emergency but that differs from the emergency management approach: business continuity. Many organizations plan for disruptions in their activities and how to restore operations. In government, ministries and agencies are required to have business continuity plans. When operations are disrupted, the situation is usually managed by making restoration of operations the priority for the organization, which is managed using the organization's normal management structure, adapted as needed to respond to the disruption. Many organizations in government and beyond took a business continuity approach to managing disruptions to operations caused by the pandemic.

Emergency Management BC

In the public sector there are two primary emergency management organizations: Emergency Management BC (EMBC) and Health Emergency Management BC (HEMBC).[14] In this section we focus on EMBC.

EMBC is the part of public service responsible for the emergency management function, reporting to the Minister of Provincial Safety and Solicitor General. EMBC's mandate involves all four phases of emergency management: mitigation, preparedness, response, and recovery. In terms of preparedness, EMBC is responsible for provincial emergency plans, described below, and for provincial training and exercises based on plans. EMBC has an annual mitigation budget but is not responsible for all mitigation activities across government, such seismic upgrades or maintaining dikes. For response, EMBC is the agency responsible for coordination though the B.C. Emergency Management System, discussed below. For recovery, EMBC has a defined role that was an important part of the pandemic recovery actions, but just one of several recovery actions that may be taken across government, depending on the event. EMBC's Disaster Financial Assistance program provides reimbursement to individuals, First Nations, and local governments of costs associated with eligible disasters. For the pandemic, expenses were reimbursed only to First Nations and local governments from the program, not individuals. EMBC also has responsibility for business continuity planning across government.

Pandemic plan

BC has provincial-level emergency plans that focus on the coordination of government functions in the event of a provincial emergency. Lead ministries are responsible for their own emergency plans related to emergencies where they are the designated lead agency, such as the Ministry of Health for pandemics.

The All Hazard Plan, last updated in 2012, sets out the major hazards that may affect B.C., assigns lead ministries for each, describes roles and responsibilities across the public sector during a provincial

[14] HEMBC is an agency within the Provincial Health Services Authority responsible for coordinating emergency response across the health-care system. It was presumed that HEMBC would coordinate the health-care system response to the pandemic, but except for the initial phase of the pandemic, a different approach was adopted by the Ministry of Health.

emergency, and sets out the ICS structures and other committees that may be activated during a provincial emergency. Under the All Hazards Plan are several hazard-specific annexes related to earthquake, tsunami, flood, heat event, urban interface fire, and pandemic. Each of these focuses on the provincial coordination responsibility of EMBC, leaving the response details to the lead ministry. The pandemic annex, the British Columbia Pandemic Provincial Coordination Plan, was updated in February 2020. It envisions response activities, policy decision making, communications, and business continuity activities across government as coordinated during a pandemic using the B.C. Emergency Management System.

There is also the Ministry of Health's "British Columbia's Pandemic Influenza Response Plan," last updated in 2012 that sets out how the health-care system plans to respond to a respiratory illness pandemic, specifically influenza. The plan focuses on the use of an ICS approach to coordinate health-care system responses to a pandemic, including public health actions to reduce transmission, treatment of those infected and maintaining essential services.

BC Emergency Management System

As discussed throughout this report, from the start of the pandemic, ICS approaches were not used as the primary approaches to decision making and coordination of the pandemic response and business continuity activity across the B.C. government. As suggested in Appendix B, similar adjustments to the planned use of emergency management approaches in general and ICS structures in particular took place in many jurisdictions. There has been a debate since early in the pandemic about the applicability of emergency management to pandemics and similar emergencies and its alternatives.

BC Emergency Management System (BCEMS) is an emergency management structure intended to adapt the ICS approach to a provincial government coordination context. Within BCEMS, ICS structures are used for local and provincial operations centres needed to coordinate the physical resources associated with an emergency, as described earlier. In addition, BCEMS envisions cross-government coordination based on a committee structure involving assistant deputy ministers, deputy ministers, and ministers facilitated by EMBC to coordinate the policy response across government. Like ICS, BCEMS is intended to be scalable to react to any emergency that involves multiple government agencies, regardless of its characteristics.

The British Columbia Pandemic Provincial Coordination Plan is based on using BCEMS during a pandemic, and its committee structure was activated at the start of the pandemic. Elements of BCEMS were employed throughout the pandemic in support some of the pandemic response roles taken on by EMBC.

Pandemic implications

The context provided in this chapter on what government is and what it does, how public health works, and how emergencies are managed has some notable implications for the pandemic response.

First, in an unusual situation, like the pandemic, government's ability to direct and utilize organizations that are part of the public sector, or to which government has some sort of funding connection, varies considerably with the authorities and governance of the organization, and the nature of government's relationship with it. Having a good understanding of this complexity across the whole landscape is essential for designing effective government responses to a province-wide emergency like a pandemic.

Second, the public health response to a public health emergency is the most direct way that health effects for citizens can be addressed, but the tools for doing so are restrictions on people's behaviour. That means that it is important that the effects of those restrictions on society and the economy be considered, an underlying principle of the public health discipline. It also means that public health measures, coupled with people's reaction to the risk posed by the emergency, are bound to disrupt society considerably, requiring an all-of-government response. In an emergency, it is important for both elected and statutory decision-makers to clearly demonstrate that they are making informed decisions, based on available information, to maintain accountability and public trust.

Finally, the emergency management approach is widely considered to be the best practice for managing emergency response. That is largely because it is designed to be scalable, making it suitable for local, regional, and jurisdiction-wide emergencies—in theory. In practice, emergency management was not used in most places, including B.C., to manage the overall government response to the pandemic, although it was used by some agencies and for some province-wide purposes. The questions of why and what that means for the future are important questions for us to address.

3. What Happened

In this chapter, we provide some additional background in the form of an abridged event timeline from January 2020 to July 2022, a narrative summary of how the pandemic response unfolded over that period, and a comparison of results across select Canadian jurisdictions, including Canada as a whole, Quebec, Ontario, Alberta, and B.C. The purpose of this chapter is to provide objective background information rather than to reflect our opinions.

Timeline of events

Table 1 is a list of some of the events that took place during the pandemic that helps to illustrate the context for and nature of the B.C. government's pandemic response. It is an abridged version of a more comprehensive event tracker database we complied as a way to better understand the pandemic's ebbs and flows and the Government of British Columbia's response in the broader context of some relevant international and Canadian developments. The event timeline database can be found on the Provincial Emergency Management Reports webpage on the Government of B.C.'s website. Although it is not exhaustive, the roughly 1,000 events listed provide a relatively detailed look at what took place in B.C. and how the nature of the pandemic and government's response changed over time.

Table 1: Select pandemic timeline events, January 2020 to May 2022

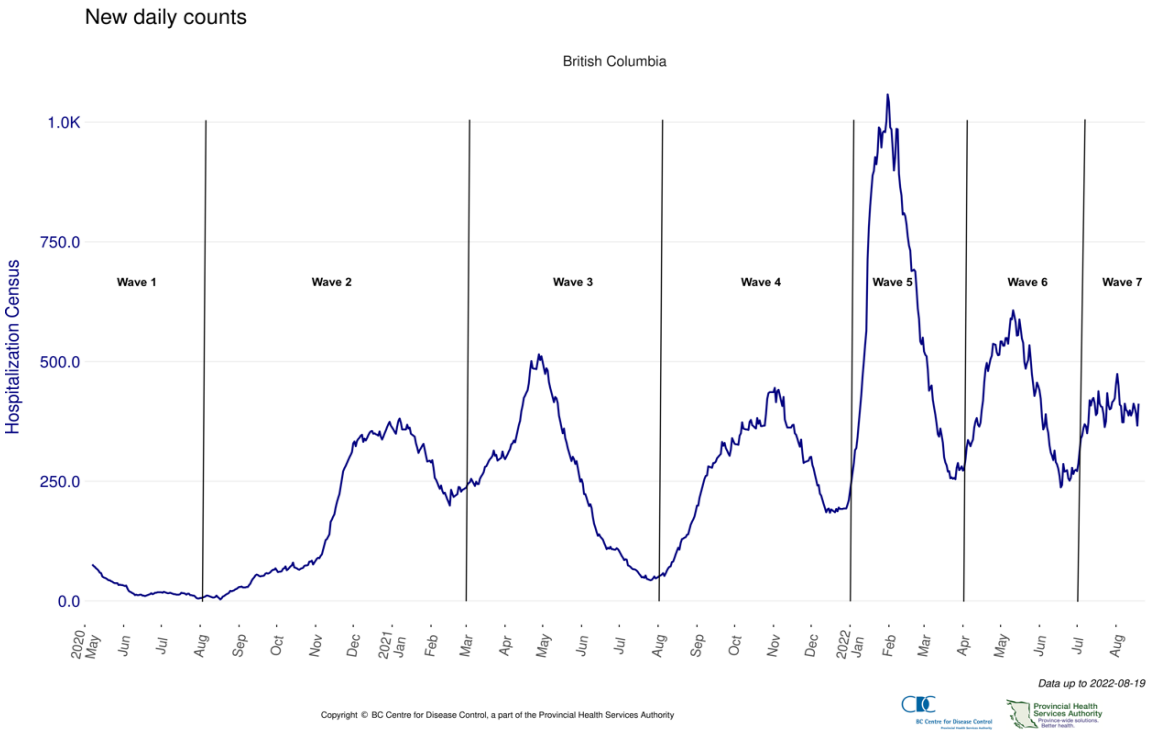
COVID-19 Wave	Date of Event	Event Description
Pre-pandemic	31-Dec-19	BCCDC issues Emerging Respiratory Virus Bulletin
	09-Jan-20	WHO announces mysterious coronavirus-related pneumonia in Wuhan
	28-Jan-20	First presumptive case of COVID-19 in BC
	15-Feb-20	BC Pandemic Provincial Coordination Plan updated Internally
	19-Feb-20	Global COVID-19 deaths surpass 2,000
	28-Feb-20	News conferences begin initially 6 days a week featuring the PHO and Minister of Health
	01-Mar-20	Joint Information Centre (JIC) for the COVID-19 pandemic was created under EMBC
	05-Mar-20	BC Pandemic Provincial Coordination Plan update signed-off
	06-Mar-20	Stores across BC begin to run out of toilet paper, face masks and hand sanitizer
	09-Mar-20	First COVID-19 death in Canada occurs in BC
Wave 1: Initial Variant	11-Mar-20	WHO announces COVID-19 can be characterized as a pandemic
	11-Mar-20	Provincial Emergency Coordination Centre activated
	12-Mar-20	PHO recommends two-week quarantine for international travelers
	12-Mar-20	PHO recommends against all non-essential travel outside of Canada
	12-Mar-20	PHO directs indoor and outdoor gatherings larger than 250 people be cancelled
	16-Mar-20	Elective (non-urgent) scheduled surgeries postponed
	16-Mar-20	Visitors to long term care facilities restricted
	16-Mar-20	Public Health Order regarding Mass Gatherings (#1); Restricting gatherings in excess of 50 people
	17-Mar-20	Public Health Emergency declared in BC
	17-Mar-20	Minister of Education directs schools to temporarily suspend in-class instruction, on PHO advice
	18-Mar-20	BC State of Provincial Emergency (COVID-19)
	18-Mar-20	Canada and U.S. suspend non-essential travel between the two countries
	20-Mar-20	Public Health Order restricts food and liquor serving premises; closes liquor primary establishments
	21-Mar-20	PHO oral order to close personal service establishments until further notice
	23-Mar-20	COVID-19 Action Plan providing $5 billion pandemic support announced
	25-Mar-20	Canada Emergency Response Benefit (CERB) and Canada Student Loans repayment freeze announced
	26-Mar-20	EPA Order made to enable Bylaw Officers to enforce COVID-19 restrictions
	28-Mar-20	BC implements broad essential services list to encourage businesses and services to open
	29-Mar-20	Widespread reports of 'critical shortage' for masks and PPE equipment for healthcare workers
	31-Mar-20	Unpaid COVID-19 sick leave benefit created plus permanent sick leave and domestic violence leave
	01-Apr-20	Premier's Economic Recovery Task Force established
	01-Apr-20	COVID-19 Supply Hub launched, coordinated by EMBC with CITZ
	01-Apr-20	COVID-19 Crisis Supplement created for income assistance recipients - $300 per month
	08-Apr-20	BC closes all provincial parks
	10-Apr-20	COVID-19 Border Measures Program created using public service employees at borders
	10-Apr-20	EPA order limiting workers in long-term care and other health facilities to working at a single site
	16-Apr-20	Public Health Order confirming oral order regarding Personal Service Establishments (#1)
	19-Apr-20	Ticketing to enforce *Emergency Program Act* orders introduced
	24-Apr-20	Encampment Health and Safety (COVID-19) Order restricts homeless camping in designated areas
	01-May-20	Hotel purchases for permanent housing of homeless people begins
	06-May-20	BC Restart Plan announced to facilitate the safe reopening of businesses voluntarily closed
	14-May-20	BC Parks begin gradual reopening
	15-May-20	JIC stood down and cross-ministry communications transitioned GCPE HQ to lead
	31-May-20	K-12 Education Restart Steering Committee established

COVID-19 Wave	Date of Event	Event Description
	01-Jun-20	In-class instruction resumes for K-12 students for the remainder of 2019/20 school year
	01-Jun-20	COVID-19 Response and Health Emergency Management Division established in the Ministry of Health
	19-Jun-20	Government of BC ends provincially-led border check points
	24-Jun-20	Travel within BC encouraged and hotels, movie theatres, parks and the film industry gradually re-open
	08-Jul-20	*COVID-19 Related Measures Act* enacted
	13-Jul-20	Some west coast First Nations close territories to tourists and non-residents
	22-Jul-20	BC government announce it is matching $1 billion federal funding for response and recovery
Wave 2: Wild-types	21-Aug-20	Province of BC introduces violations tickets to enforce PHO orders
	09-Oct-20	Public Health Order regarding Food and Liquor Serving Premises (#9) -nightclubs closed
	24-Oct-20	Election Day in British Columbia
	26-Oct-20	Oral order limits in-home visits to 6 guests and announces masking guidance
	01-Nov-20	Stronger BC Recovery Programming implemented (Nov 2020 - Feb 2021)
	09-Nov-20	Prohibition on all outdoor social gatherings and indoor group fitness announced
	11-Nov-20	Public Health Order regarding Prevention Regional Measures (#2) - travel for sport prohibited
	24-Nov-20	BC mask mandate now backed by provincial enforcement; $230 fines
	30-Nov-20	PPE portal for physician ordering of PPE established, replacing the Supply Hub
	01-Dec-20	Cross-government COVID-19 communications coordination transitioned to the Ministry of Health
	09-Dec-20	Health Canada authorizes Pfizer-BioNTech's COVID-19 vaccine
	15-Dec-20	First doses of vaccine arrive in BC; PHO says "we're bending the curve"
	31-Jan-21	Immunize BC established to manage the vaccine roll-out
	05-Feb-21	BC indefinitely extends the ban on social gatherings and events
Wave 3: Alpha/Gamma	08-Mar-21	PHO recommends that PSIs return to in person learning for Fall 2021
	01-Apr-21	TACS created the Tourism Sector Recovery Roundtable, consisting of 22 stakeholder organizations
	21-Apr-21	Travel Restrictions (COVID-19) Order is made, restricting non-essential travel in BC
	30-Apr-21	Travel Restrictions (COVID-19) Order No. 2 restricts travel between health authority regions
	05-May-21	Health Canada authorizes COVID-19 vaccine for youth 12-15 years
	06-May-21	43% of British Columbians 18+ are vaccinated with at least one dose
	26-May-21	Public Health Order regarding Variance: Indoor Worship Services (#1) reduces restrictions
	27-May-21	~66% of British Columbians 18+ are vaccinated with at least one dose
	25-Jun-21	Heat dome event in British Columbia
	30-Jun-21	BC State of Provincial Emergency ends
	20-Jul-21	BC State of Provincial Emergency declared (Wildfires)
	28-Jul-21	Public Health Order mandates vaccination of healthcare facility staff
Wave 4: Delta	03-Aug-21	PHO announces no intention to introduce vaccine card at this time
	10-Aug-21	Quebec announces vaccine cards required starting September 1, 2021
	23-Aug-21	PHO announces vaccine card required September 13, 2021 for certain activities
	24-Aug-21	PHO makes oral order for mandatory masks in indoor public spaces
	01-Sep-21	Anti-vaccine card protests begin across BC
	02-Sep-21	Public Health order regarding Face Coverings (COVID-19) (#1) confirms oral order
	13-Sep-21	BC Vaccine Card required for certain indoor settings: one dose
	21-Oct-21	83.8% of British Columbians 12+ are vaccinated with second dose
	30-Oct-21	Government of Canada requires passengers on federally regulated transport to be vaccinated
	09-Nov-21	Health Canada authorizes COVID-19 boosters for adults
	17-Nov-21	BC State of Provincial Emergency declared (Atmospheric River)

COVID-19 Wave	Date of Event	Event Description
	19-Nov-21	Health Canada authorizes COVID-19 vaccine for children 5 to 11 years
	25-Nov-21	Legislation to protect access to healthcare services from being disrupted by protesters takes effect
	12-Dec-21	Public Health Order allowing liquor primary food and liquor serving premises to reopen
	21-Dec-21	Provincial announcement of 500,000 rapid antigen tests committed to post-secondary institutions
	22-Dec-21	Public Health Order requiring liquor primary food and liquor serving premises to close
	31-Dec-21	Public Health Order delays return to school until January 9, 2022
Wave 5: Omicron	22-Jan-22	Freedom Convoy protests against COVID-19 vaccine mandates and restrictions begin
	11-Feb-22	Government of Ontario declares state of emergency due to protests
	22-Feb-22	The United Kingdom announces its "Living with COVID" plan relaxing restrictions & providing testing
	10-Mar-22	Public Health Order regarding Gatherings and Events (#36) relaxes restrictions
	10-Mar-22	Public Health Order regarding Food and Liquor Serving Premises (#24) relaxes restrictions
	14-Mar-22	Freedom Convoy protests cause disruptions in the Victoria Legislative precinct for a few weeks
	17-Mar-22	Canada scales back its travel restrictions for fully vaccinated travelers
Wave 6: Omicron Variants	04-Apr-22	91.1% of eligible British Columbians are vaccinated with second dose
	07-Apr-22	COVID-19 data now reported weekly, with changes to hospitalization and death reporting
	07-Apr-22	BC relaxes most remaining restrictions and provides free access to rapid antigen tests
	08-Apr-22	Public Health Order regarding BC Vaccine Card (no longer required)
	05-May-22	WHO estimates the total COVID-19 death toll at ~15 million, 2.5 x reported deaths
	18-May-22	WHO reports that the world is no better prepared for pandemics than it was in 2019

In Table 1 we have grouped events into six waves of the pandemic, named for the variants that have given rise to each wave. The timing of the waves was determined by changes in the number of people in hospital with COVID-19 at any given time, with each wave considered to start in the first month that the hospitalization census was increasing following a reduction from the previous wave. Hospitalization was used as a reasonable reflection of the impact the pandemic was having at any given time on society, as suggested by the impact on the health-care system. Figure 1 plots the daily hospitalization census and indicates the months that we have assigned to each wave of the pandemic.

Figure 1: Daily hospitalization census, B.C.



Source: Produced using the BCCDC Epidemiology App https://bccdc.shinyapps.io/covid19_global_epi_app/

How the response unfolded

In this section we summarize the story of the B.C. government's response to the pandemic, supported by key illustrative events listed in Table 1. We are mindful in telling this story that we are conducting an operational review rather than one assessing the public policy decisions that were made. Nevertheless, the key decisions highlighted in the summary timeline provide important context.

We have broken this narrative into phases of the response that differ from the waves of the pandemic. The waves of the pandemic are based on the increasing and decreasing rates of hospitalization as different variants of the virus take hold in the BC population. The pandemic response phases are based on significant changes in the way the response was being managed over the 30-month duration of the pandemic to date. But, during each of these phases there were frequent changes to public health measures in response to changes in circumstances.

In hindsight, the signs of the coming pandemic were obvious, but at the time no one could have predicted what was to come and no one had ever had to deal with a prolonged all-of-society event like this. No one knew how deadly the disease would be, how to control and treat the disease, and how disruptive the pandemic and the public health response would be to government, social services, communities, and the economy.

Pre-pandemic: January 2020 to February 2020

Before COVID-19 was declared a pandemic, there was a period when the risk of a major crisis was becoming increasingly clear. It started in late 2019 with news of a pneumonia outbreak in Wuhan, China, suspected to be caused by a novel pathogen, the subject of a BC Centre for Disease Control bulletin on December 31, 2019.[15] Through the first two months of 2020 awareness of this disease proceeded inexorably as the SARS-COV-2 virus, a coronavirus not previously encountered in humans, was identified.

The Provincial Health Officer (PHO) was aware of the novel pathogen well in advance of official WHO declarations through established relationships with epidemiologists and public health experts around the world. During the pre-pandemic period, senior officials and Cabinet were briefed on the potential for a pandemic and the public health response to it, based on experience with other respiratory pandemics, like H1N1 influenza, SARS, and MERS. Emergency Management BC (EMBC) led work to update the B.C. Pandemic Provincial Coordination Plan.

By late February 2020, reports of cases and deaths increasing at exponential rates in a few countries and outbreaks throughout Asia, Europe, and North America started to significantly influence government guidance and people's behaviour globally. In B.C., daily press conferences featuring the PHO and the Minister of Health began on February 28, 2020. Shortages of toilet paper and other goods began to be noticed the following week.

Still, the realization that this was a pandemic with significant consequences for all of government and all of society largely came as a shock to governments and the public alike. B.C. was no exception. Many expected that a public health emergency due to a pandemic would be dealt with mostly through a response from the health-care system, especially the acute-care system, but that assumption was quickly proven wrong.

As more cases and outbreaks were observed around the world, the World Health Organization (WHO) declared a pandemic on March 11, 2020.

The early government response: March 2020 to June 2020

Initial response actions

The first phase of the pandemic response began in early March 2020 with the provincial government activating emergency response structures, beginning with the Joint Information Centre on March 1, 2020. Public health and provincial states of emergency were declared on March 17 and 18, respectively, less than a week after the WHO pandemic declaration, and public schools suspended in-class instruction. Around that

[15] http://www.bccdc.ca/resource-gallery/Documents/Statistics%20and%20Research/Statistics%20and%20Reports/Epid/Influenza%20and%20Respiratory/ERV/ERV_Bulletin_31Dec19.pdf

time, B.C.'s health authorities began preparations to free up hospital capacity to ensure that the system was not overwhelmed by pandemic patients.

Almost immediately, the B.C. government response divided into four streams that continue to the present: the public health response, the health-care system response to the disease, the government response to mitigate the effect of the pandemic on citizens, and government as a service provider responding to disruptions caused by the pandemic.

This period was characterized by uncertainty, urgency, high stakes, and fear.

Emergency management response

While the recently updated British Columbia Pandemic Provincial Coordination Plan began to be implemented just before provincial and public health emergencies were declared, the approach changed as the pandemic began to disrupt everything. Government decision-making was managed using a crisis management rather than an emergency management approach, initially by a small group of ministers, deputy ministers, and the PHO. That small group expanded quickly to add Cabinet and deputy minister committees, but throughout the initial phase, the small group continued to play an important role.

An emergency management approach using the B.C. Emergency Management System was applied by EMBC to the coordination of some activities, including coordinating the emergency response with First Nations, communications through the Joint Information Centre, provincial enforcement of boarder security measures for international travellers entering the province, and a supply hub initiative focused on sourcing the personal protective equipment (PPE) needed to deliver public services outside the health-care sector. Health Emergency Management BC (HEMBC), an emergency management organization focused on health-care, was also activated to manage the health response.

Several of the emergency management functions were short-lived. The border enforcement function was disbanded when it was no longer needed. The Ministry of Health assumed responsibility for communications coordination and supply of PPE for government programs, in addition to their role supplying health-care system PPE, in summer 2020. The HEMBC pandemic management function was replaced by a new division that was created within the ministry, and vice-presidents responsible for managing pandemic effects were appointed by each health authority. In contrast, EMBC continued its role coordinating with First Nations for most of the pandemic.

Public health response

The initial guidance from the PHO focused on restricting gatherings, restricting visitors to long term care facilities, limiting travel, and requiring quarantine when returning from abroad. The first orders limited mass gatherings, closed bars, and restricted restaurants. Verbal orders were followed up with written orders that in some cases came out several weeks later. But, despite B.C. never imposing the type of lockdowns experienced in other jurisdictions, many businesses and social services closed as customers and staff stayed home. Government services were similarly disrupted. It was at that point that the "all of government/all of society" nature of the pandemic began to become clear.

The public health response during this phase relied on voluntary compliance, which was effective due to the level of fear about the pandemic and the high level of trust in government. In addition to the guidance and

orders noted above, the Public Health Officer ordered personal service establishments like hair salons and spas to close. Since many outbreaks and deaths were occurring at long-term care facilities, the single-site order prevented workers from attending more than facility to reduce spread among facilities.

Health-care system response

A major concern was that the health-care system would be overwhelmed by COVID-19 patients. Measures were taken throughout the system to free-up capacity, including the cancellation of elective surgeries and taking additional measures to reduce the number of patients in health-care facilities.

Maintaining services

To respond to the disruption of government services, ministries and agencies almost immediately focused on keeping services operating. The public service was responsive and motivated in shifting to work from home facilitated by quick implementation of needed infrastructure, implementing safety measures where in-person service was needed, and rapidly implementing digital access to many programs, resulting in a limited loss of public services.

The Legislative Assembly also adopted new operating approaches and the opposition parties supported government initiatives to manage the pandemic during the early days of the pandemic.

Mitigating impacts

The pandemic had significant effects on populations likely to be severely affected by COVID-19, which disrupted both government support programs and many social services not funded directly by government. This revealed how little social service ministries understood or had relationships with the unfunded social sector. Measures were taken to address the homeless population by purchasing hotels and developing other safe areas of shelter, and by using public health orders to shut down homeless encampments to reduce transmission.

There were several responses to the economic disruption caused by the reactive shutdown of much of the economy. They included publishing a broad list of essential services on March 28, making it clear that most businesses and social services were expected to open with appropriate safety precautions. The government introduced unpaid sick leave to encourage workers to stay home when ill. Provincial financial assistance for individuals and businesses, together with federal programs, including the Canada Emergency Response Benefit, student loans being frozen, and a crisis supplement for income assistance recipients helped to reduce concerns about loss of income.

Several actions were taken in the first four months to help reopen, including announcing a restart plan, reopening B.C. Parks, and reopening schools for in-class instruction, as the first wave of the pandemic abated.

Managing the pandemic: July 2020 to December 2020

We consider the second phase of the pandemic to be the period after the first wave subsided and the lessons learned from the initial response could be consolidated and applied to managing the response over subsequent waves. During this phase public health restrictions were increased and decreased to a degree as hospitalizations increased and decreased through the different waves. The specific measures used were

adjusted frequently in response to changes in circumstances, applying the experience gained in the first wave.

In retrospect, the first wave of the pandemic was mild in terms of cases, hospitalizations, and deaths compared with subsequent waves. But it provided an opportunity to learn many things about how to manage the pandemic, which have been and continue to be applied. Among those lessons was the value of enforceable public health orders, with appropriate enforcement resources, to take strong action quickly when a new wave starts building. Many organizations were also quick to develop safe operating policies and plans once they understood the PHO's requirements.

Government also learned during the first phase the importance of communications with their existing stakeholder groups. New ministry stakeholder tables were established, and existing tables expanded.

The importance of working with Indigenous governments who have the jurisdiction and responsibility to their communities for managing the pandemic response on their lands was another learning in the early phases of the pandemic.

For subsequent waves, public health orders became more targeted at specific activities that were identified as causing transmission of the new variants associated with the waves. In fall 2020, guidance that people should wear masks in public indoor spaces was replaced with an enforceable order and public health orders related to gatherings, liquor and food servicing premises, and sports and recreation all imposed targeted restrictions on specific activities. There was also increased use of orders that applied in specific locations, recognizing regional differences in the pandemic and seeking to reduce local outbreaks. While many of these orders were adjusted over the subsequent six months, public health restrictions did not start to be relaxed generally until May 2021, when the third wave began to recede.

During this period, although the number of cases and hospitalizations associated with the second and third waves were much higher than during the first wave, the overall level of disruption to government services, the economy and social programs was significantly reduced from the initial phase of the pandemic. The K–12 education system fully returned to in-person teaching in September 2020 and, except for a short delay in returning to school in January 2022, remained open. Existing and new stakeholder tables across government met frequently to deal with the ongoing stream of public health orders. The tables also discussed recovery, especially of hard-hit sectors, such as the tourism and arts and culture sectors, which were affected by a combination of public health restrictions and lack of demand.

Government felt comfortable enough that the pandemic was under control to call a provincial election in the fall of 2020.

The vaccine campaign: January 2021 to July 2021

In the third phase of the pandemic response, there was only one significant change to the government response approach, which was rolling out vaccinations and encouraging as many of those eligible for vaccination as possible to be vaccinated. Other than the vaccine rollout, the approach to the response continued in the same vein as in the previous phase. It continued to use increasingly targeted public health measures, maintained health-care system capacity, and focused on maintaining service delivery and providing support to those affected by the pandemic.

At the start of the pandemic, many experts suggested that a vaccine for the SARS-COV-2 virus was likely possible, but estimates of how long it would take to develop, test for safety and efficacy, and gain regulatory approval varied from at least one year to possibly much longer. Traditionally, new vaccines have taken years to be approved. By using new mRNA technology, the first COVID-19 vaccine was approved for use in Canada on December 9, 2020, just eight months after the pandemic was declared, and the first doses of the vaccine arrived in B.C. a week later.

A new agency, Immunize B.C., was created in January 2021 to manage the vaccination campaign. The vaccine rollout utilizes a rapidly developed information technology system. The functionality of that system will be used to manage immunization on an ongoing basis, something that was missing from the health-care system before the pandemic. By early May 2021, over 40 percent of those eligible had received one dose, which increased to over 65 percent two weeks later. After some initial delays due to vaccine supply, the rollout has gone smoothly since it started, although uptake has fallen off as subsequent doses have been offered and younger age groups have been included.

While government was responding to the pandemic, three additional significant emergency events occurred: during this phase of the pandemic response: the heat dome in late June 2021, a wildfire emergency with serious urban interface fires in late July 2021, and the atmospheric river event in November 2021. Some suggest that the atmospheric river event, and in particular the supply chain and recovery efforts to reopen major highways, benefited from the government's pandemic response experience. The pandemic experience prepared government to react in a more nimble and timely way to the atmospheric river disruptions. But after 12 to 18 months of managing the COVID-19 response, these additional emergencies put significant additional pressure on the provincial government.

Vaccine mandates: August 2021 to March 2022

Another significant change in the pandemic response occurred in September 2021, as vaccination rates in B.C. and across Canada approached 80 percent of those eligible being fully in vaccinated. Requirements to show proof of vaccination for some activities, known as vaccine cards or vaccine passports, began to be debated during the summer. Quebec was the first province to announce that vaccine cards would be required for many activities, such as attending events, eating in restaurants, and going to the gym. Although B.C. initially suggested it would not follow suit, within three weeks vaccine cards were announced for B.C. and protests against requiring a vaccine card to access services quickly began. A federal requirement to be vaccinated in order to travel by air or other federally regulated transport took effect in late October 2021.

Vaccine mandates for workers were another mandatory restriction that began to be announced in July 2021, requiring workers to be vaccinated in order to work or to keep their employment. The mandates were imposed in different ways for different groups or workers. For example, vaccine mandates were imposed by the PHO for health-care facility staff, by the B.C. government for public service employees, and by different public and private sector organizations for their employees, with the details varying depending on the employer.

Protests against restrictive public health measures were a feature of the pandemic that began with the first enforceable public health orders. However, the protests really gained momentum and started to receive considerable media attention in B.C. with the confluence of an enforceable mask mandate, vaccine mandates for workers, and vaccine cards all being introduced in August and September 2021. Protests in fall 2021

occurred at health-care facilities, disrupting workers and patients, so bubble zone legislation was enacted in November 2021. The self-named Freedom Convoy movement grew through fall 2021, resulting in a weeks-long occupation and disruption of downtown Ottawa starting January 2022, and continued with significant protests in Victoria's Legislative Precinct in March 2022.

When it seemed that the Delta wave was slowing down in December 2021, a public health order relaxed restrictions on bars, clubs, and restaurants on December 12 in time for the Christmas season and New Year's Eve. However, the virus did not co-operate, as a new variant, Omicron, started to become dominant and case counts spiked rapidly. On December 22 the relaxed rules were reversed, leaving many with food and other supplies that could not be used, at a time when loss of business in the food and hospitality sector had already been significant for a long period of time. This contributed to the growing annoyance about public health restrictions.

Variants: March 2022 onward

The most recent phase of the pandemic response started in March 2022 with a significant relaxation of most restrictions.

Each wave of the pandemic has been associated with different predominant variants of the virus. The variants associated with the second wave had similar characteristics to the first in terms of transmissibility and severity, but the Alpha and Gamma variants associated with the third wave were more transmissible, and the fourth-wave Delta variant was both more transmissible and more severe than the previous variants. We heard comments that we were lucky the pandemic did not start with the Delta variant because by the time it hit, vaccination rates were already high, and it still had significant effects. By the time hospitalizations were starting to climb in September 2021, almost 80 percent of those eligible (aged 12+ at that time) were vaccinated with two doses, and even so, hospitalizations reached a level of over 400.

The Omicron wave reflected another significant change in the characteristics of the pandemic, as it became even more transmissible but with a significant drop in severity. Hospitalizations quickly spiked, with over 1,000 in hospital at the peak, over twice the previous high during the Alpha/Gamma wave. Deaths also increased but remained low in comparison with the extreme case counts in January 2022. Through February and March 2022, testing was unable to keep up with the number of cases being observed, but due to high vaccination rates, most people except the elderly and immunocompromised fared well.

The result was a change in the way the pandemic was managed in almost every province. PCR testing, the basis for case counts throughout the pandemic, could not keep up with the number of cases and, because most cases were mild, that testing was reserved for those needing clinical treatment. Instead, rapid tests were made widely and freely available in April 2022 to help people decide how to manage their personal health and the health of their families and contacts, after controversy when other provinces made rapid tests available much earlier than B.C. After over two years, there was growing fatigue with public health measures, exacerbated by the vocal, ongoing Freedom Convoy movement protests, but the immunocompromised and others susceptible to severe illness did not want restrictions to change. Despite greater than ever transmissibility, relatively high ongoing hospital census numbers, and significant numbers of weekly deaths, in April 2022 almost all public health measures were relaxed. That included eliminating the need to show a vaccine card for any events and activities, limits on gatherings, and masking guidance. Instead, people are

now expected to use their experience over the course of the pandemic to assess their own risk and to decide what is best for them.

Comparison of results for select Canadian jurisdictions

There has been considerable discussion over the course of the pandemic about how well B.C. has done in comparison with other provinces. Throughout the pandemic, many indicated that B.C. had done better than other provinces during the pandemic. On the other hand, some indicated publicly, and to us, that suggestions that B.C. had done better were overstated. Some of this debate is quantitative, as people compare various indicators such as case levels and COVID-19 death data, or economic indicators. Many comments in the public survey also suggested that B.C. outcomes were either better or worse than other jurisdictions depending on their sources of information or personal experiences.

We feel that it is important to provide an objective quantitative comparison of outcomes as part of the context for the review. In choosing indicators to compare, we have followed Razak et al.,[16] who recently conducted an international comparison of Canada's pandemic response with peer G10 countries using COVID-19 case and death data, vaccination rates, restrictions imposed, and fiscal and economic indicators. Our indicators are similar to those used by Razak et al., but we have chosen somewhat different ways of reporting them. Since much of what we have heard distinguishes between B.C.'s performance in the initial phase of the pandemic from later phases, with the general point made that B.C. seemed to do better early in the pandemic than later, we have reported results for early and late time periods.

We have also added one additional type of indicator. The level of trust in government is an important factor because, without public support and acceptance, government's ability to effectively implement response measures will be limited. We used a time series of public opinion research results that repeatedly asked the same question to a sample constructed using the same methodology throughout the pandemic.

In Table 2 we report results for seven indicators covering four provinces and Canada as a whole. The provinces are the four most populous provinces, which are most often the subject of comparisons with B.C. The indicators are reported in three groups: government pandemic response indicators, COVID-19 outcome indicators, and economic outcome indicators. The response indicators are the Stringency Index, a measure of how restrictive public health measures were, developed by Oxford University and reported by the Bank of Canada, and program spending per capita, a comparable measure of provincial government spending on service delivery. The COVID-19 outcome indicators are total cases and deaths per 100,000 population. Economic outcome indicators are the percentage change in employment from the December 2019 level at various points in time, and the annual percentage change in real (inflation adjusted) gross domestic product

[16] Fahad Razak, Saeha Shin, C. David Naylor, Arthur S. Slutsky, "Canada's response to the initial 2 years of the COVID-19 pandemic: a comparison with peer countries," CMAJ 2022 June 27;194:E870-7. doi: 10.1503/cmaj.220316; https://www.cmaj.ca/content/cmaj/194/25/E870.full.pdf

(GDP). A detailed description of the sources for the data and how it has been presented for comparability purposes is provided in Appendix D.

We are aware that not only did the pandemic and its response have economic effects but the social impacts of the pandemic were of equal or greater importance. The B.C. Centre for Disease Control is in the process of conducting a comprehensive review of these effects using 52 social indicators, a few of which have now been published for B.C.[17] However, unlike economic effects, many social effects are not routinely measured in a comparable way across Canada, and even those that are will not show the full effect of the pandemic and its response for several years. We have therefore not included any social indicators.

For all the indicators except the Stringency Index we have highlighted the results that represent the least harm/most protection and most harm/least protection. We have not done so for the Stringency Index because it represents a balance of using restrictive measures to protect against the virus that impose harms by restricting behaviour and activity. It would not be appropriate to suggest that either more stringent or less stringent restrictions are always to be preferred, but this indicator does provide useful information about the pandemic response approach taken by different jurisdictions.

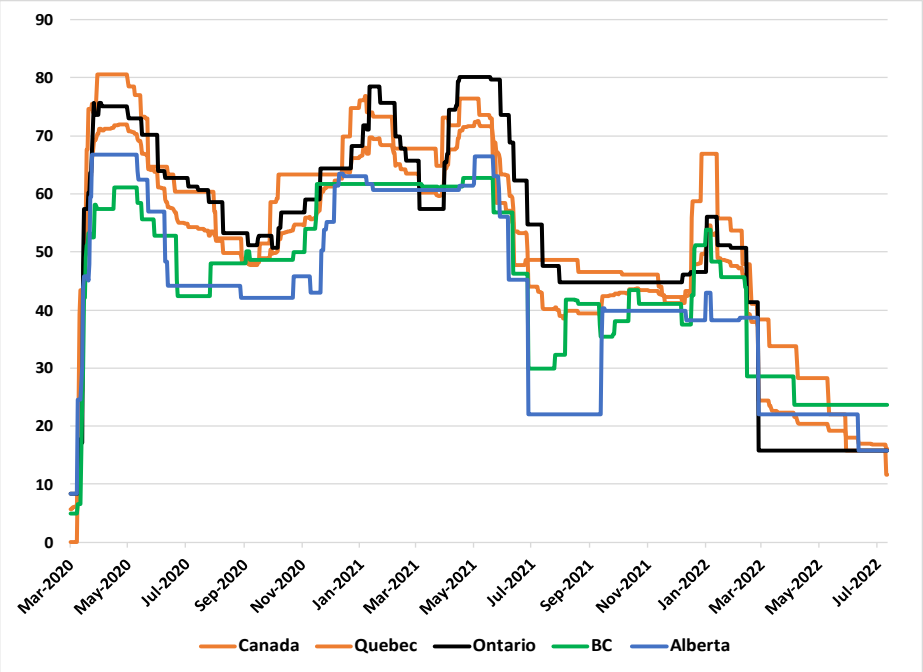
In summary, the data presented show the following:

- BC had the lowest maximum level of restriction as measured by the Stringency Index in the first and second years, with Quebec and Ontario having the most stringent maximum levels of restriction. On average, though, the levels of stringency were quite similar, with Alberta showing the lowest average level of stringency. Stringency varied the most in Ontario, followed closely by Quebec, and the least in B.C. Figure 2 shows the stringency index for each of the provinces, providing a visual sense of the degree to which restrictions changed.
- Program spending in B.C. increased by significantly more than the other provinces, and spending increased the least in Alberta. It is noted that the increase in Government of Canada program spending was much higher than any of the provinces, reflecting CERB and other federal government transfers to individuals and organizations, with the amount of the increase cut in half in the second year of the pandemic.
- Alberta has the lowest vaccination rate. Although B.C. has the highest rate, it is not materially different from the rate in Ontario, Quebec, or Canada as a whole.
- Alberta and Quebec had the highest reported cases per 100,000 population during both reporting periods and B.C. the lowest. With the more transmissible Delta and Omicron variants in the second year, reported cases are higher in every jurisdiction.
- In the first year of the pandemic, Quebec had a much higher death rate than the other jurisdictions as a result of serious long-term care outbreaks, while in the second year Alberta had slightly higher deaths than other provinces. In both cases, B.C. had the lowest death rate, and the rates were quite similar in both years.

[17] http://www.bccdc.ca/health-professionals/data-reports/societal-consequences-covid-19

- In the first six months, B.C., Alberta, and Ontario all lost about 10 percent of jobs, while Quebec lost the least, at 7.4 percent. All jurisdictions recovered after that, with B.C. being back to its pre-pandemic employment level first by June 2021 and all provinces except Quebec showing a more than 3 percent increase from December 2019 employment in June 2022. Despite suffering the largest percentage job loss initially and being relatively slow to recover employment, Alberta had the largest increase above the pre-pandemic level in June 2022 due to the increase in the price of oil.
- GDP shrank in every jurisdiction in Canada for the first year of the pandemic but recovered in the second year. B.C. suffered the least reduction in GDP during the first year and attained the highest rebound in the second year. Alberta shrank the most in 2020 and Ontario had the slowest growth in 2021.

Figure 2: BoC stringency index



Source: Bank of Canada https://www.bankofcanada.ca/markets/market-operations-liquidity-provision/covid-19-actions-support-economy-financial-system/covid-19-stringency-index/

This data provides some evidence for the assertion that B.C. fared generally quite well throughout the pandemic, and it suggests that B.C.'s performance in terms of these indicators was no worse in the latter part of the pandemic than in its initial phase. B.C. restrictions during the various pandemic waves were not as stringent as some other provinces and were more stable over time. B.C. increased program spending more than other provinces and achieved a slightly higher vaccination rate. It did relatively well in terms of the number of cases and death per 100,000 of population, and employment and GDP recovered relatively quickly.

Table 2: Comparison of COVID-19 indicators for select Canadian jurisdictions

	BC	Alberta	Ontario	Quebec	Canada
Pandemic response indicators					
Stringency index					
Maximum in 2020	61.7	66.7	75.7	80.6	72.0
Maximum in 2021	62.7	66.5	80.1	76.9	72.5
Maximum in 2022	53.9	43.0	56.1	66.9	54.5
Average in 2020 after March 1	42.3	41.1	50.6	51.1	47.1
Average in 2021	49.2	45.8	58.4	57.5	53.6
Average in 2022 to July 15	30.6	26.1	26.0	34.3	28.1
Volatility (standard deviation)	13.4	15.8	19.4	17.1	16.4
Program spending per capita		% change from fiscal 2019-20			
Fiscal 2020-21	13.9%	1.3%	9.5%	10.1%	77.7%
Fiscal 2021-22	16.5%	9.3%	12.2%	12.3%	37.4%
COVID vaccination rate		% of population receiving at least 2 doses			
To 19/06/22	83.6%	76.6%	81.8%	83.3%	83.1%
COVID outcome indicators					
COVID cases		per 100,000 population			
To 03/4/21	1,976	3,407	2,418	3,660	2,515
04/04/21 to 02/04/22	4,875	8,764	5,469	7,624	6,644
COVID deaths		per 100,000 population			
To 03/4/21	28.0	45.0	49.0	124.0	60.0
04/04/21 to 02/04/22	30.0	47.0	35.0	43.0	39.0
Economic outcome indicators					
Employment		% change from level in December 2019			
Jun-20	-9.5%	-10.0%	-9.8%	-7.4%	-8.8%
Dec-20	-1.9%	-4.8%	-3.2%	-2.8%	-3.1%
Jun-21	0.4%	-2.5%	-2.2%	-0.9%	-1.5%
Dec-21	2.0%	1.0%	2.2%	0.8%	1.5%
Jun-22	3.7%	4.0%	3.2%	0.7%	2.7%
Gross domstic product		annual % change in GDP			
2020	-3.4%	-8.0%	-5.0%	-5.4%	-5.1%
2021	6.2%	5.1%	4.6%	5.6%	4.8%

Least Harm/Most Protection

Most Harm/Least Protection

There are two points that we would like to emphasize:

- These are objective, verified, factual data that indicate that B.C. at least did no worse than the rest of Canada in its response or the COVID-19 and economic outcomes during the past two-plus years. This

is unlikely to change the minds of those who do not trust such information. Nevertheless, it indicates to us that, while there is undoubtedly room for improvement, overall B.C. has done relatively well.

- Care should be taken in interpreting these results. It may be tempting to say that the economic and COVID-19 indicator outcomes were caused by the B.C. government's response, and it is indeed likely that they played a role, but there are other factors that also influence the indicators, and those factors may differ significantly across provinces.

Trust indicator

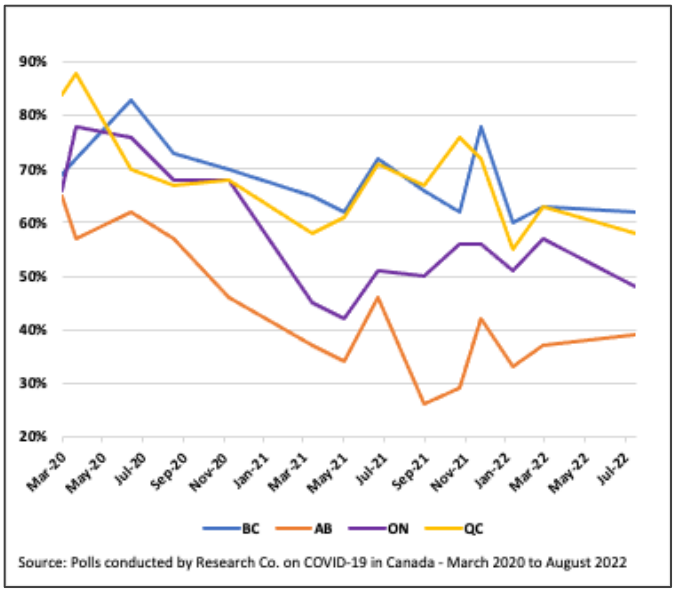
Fourteen times over the course of the pandemic, beginning in March 2020 and ending in August 2022, Research Co. has conducted representative polls of Canadians asking a variety of questions. One question that remained constant across the period was "All things considered, are you satisfied or dissatisfied with the way (your provincial government) dealt with the COVID-19 outbreak?" Participants were offered five choices: very satisfied, moderately satisfied, moderately dissatisfied, very dissatisfied, and not sure.

The methodology used throughout this research was to use online studies with a sample size of 1,000 Canadians. The data has been statistically weighted according to Canadian census figures for age, gender, and region, making these representative results.

Figure 3 shows the proportion of participants who answered very or moderately satisfied to the survey question. All provinces show some loss of satisfaction with provincial governments' pandemic response over time. Two provinces, Quebec and B.C., had the highest satisfaction ratings for most of the pandemic, and Alberta consistently had the lowest rating.

For B.C., satisfaction initially rose from about 70 percent before falling to about 60 percent for the period since January 2022. It is notable that satisfaction with the provincial governments' responses increased when new waves, and associated concern, emerged in summer 2020 (Wave 2), summer 2021 (Wave 3), and late 2021 (Wave 5).

Figure 3: Proportion answering very satisfied or moderately satisfied



PART 2: WHAT WE HEARD

As discussed earlier, an important part of our process was to seek input from those who implemented the government response as well as from those affected by it. In all of these engagements, except the internal assessments prepared by ministries and agencies, we indicated to the participants that our discussions and their submissions would be on a “not for attribution” basis to encourage maximum candour. As such, we have been careful both not to attribute comments to individuals or organizations and not to inadvertently reveal who said what through the context of the comment.

This part of the report summarizes input gathered from the public through a survey, from government through written internal assessments prepared by ministries and agencies as well as interviews with senior public service officials, and from input gathered from stakeholders through interviews and written submissions. We also engaged with Indigenous individuals and organizations, as reported in Chapter 13. There is a certain amount of overlap and repetition in what we heard from these different groups, which is reflected in the following summaries to show the similarities and differences among what the groups told us.

4. From the Public

We engaged with the public through an online survey hosted on our behalf on govTogetherBC, the government citizen engagement site. The survey was available in multiple languages and was open from March 16 to April 20, 2022.

Our survey asked participants whether they agreed with each of six statements, using a five-point scale: strongly disagree/disagree/neither disagree nor agree/agree/strongly agree. For presentation purposes below, we have combined the two disagree categories and the two agree categories, and we have not reported the "neutral" scores.

Respondents also had an open-ended opportunity to provide comments for each statement, and to provide any additional comments at the end. We provided more space for comments than is typically the case in government engagements to ensure that respondents had ample opportunity to express their views.

This survey is not representative of the population as a whole. Participation was self-selected unlike public opinion research which ensures that samples are representative. The level of dissatisfaction shown by these results is significantly greater than the dissatisfaction demonstrated by the Research Co. COVID-19 public opinion research discussed in Chapter 3. In those representative results, 60 percent to 70 percent of British Columbians were satisfied with the B.C. government's pandemic response. In our survey, less than 20 percent agreed government had done a good job.

Despite not providing representative results, the over 15,000 people who chose to respond and the over 3,000 pages of their comments provide a useful perspective from those who chose to participate and helped us understand the concerns of those unhappy with the government pandemic response.

The pandemic was very personal for people and individual circumstances had a big impact on how people responded. Most respondents, including both those who supported government actions and those who opposed what government did, felt that the government failed in its pandemic response—but for very different reasons. Some wanted government to impose more restrictions for longer while others wanted fewer restrictions for shorter times, with both groups disagreeing with the statement that overall, the B.C. government managed the pandemic well (Statement 6).

It would be impossible to capture every comment made, so we have attempted to highlight the issues that surfaced most often in the responses. Two general themes showed up that are worth flagging:

- A vast majority of respondents want a review of the actual decisions made to respond to the pandemic, which is beyond the scope of this review.
- The extreme level of vitriol directed at decision-makers by many respondents was shocking.

Lastly, the comments in the survey included many theories about the role of the World Economic Forum, large pharmaceutical companies, and secret government agendas in dealing with the pandemic. These are often tied to strong views about individual freedom and Charter rights that were affected by government action to deal with the pandemic.

Statement 1: It was easy to find government's COVID-19 information.

Disagree: 36% (Strongly: 22%)
Agree: 41% (Strongly: 22%)

Responses split between agree and disagree on this statement. For those disagreeing, concerns expressed included that information was too simplistic or too detailed, incomplete, too difficult to find, and not timely. There were also concerns that scientific evidence underlying decisions was not disclosed and that while the information was easy to find, it was not trustworthy. Those agreeing with the statement appreciated the tone and content of communications by the Provincial Health Officer (PHO) and the Minister of Health. Some would have appreciated access to the press conferences and notification of announcements on more media platforms. Issues with access to information by those without internet access were identified. Many appreciated that the government, especially early in the pandemic, flooded the public with information and updates.

Quotes

Lots of information was available

The website was hard to navigate. Not user friendly

Outdated and/or rapidly changing information was hard to follow

Statement 2: Government's COVID-19 information was clear and easily understood.

Disagree: 57% (Strongly: 41%)
Agree: 23% (Strongly: 9%)

The level of disagreement with this statement was based on several things:

- lags between public health order announcements and written orders
- changes in direction that were not explained
- information on official websites that contradicted each other
- complex language

On the other hand, a number of people who felt that government information was not accurate still said that it was clear and easily understood. Other comments included the following:

- Some wanted more balance in the communications.
- Inconsistency in information provided by B.C., the federal government, and other provinces caused uncertainty.
- There were many calls for more granular information, but at the same time many expressed satisfaction with the level of detail.
- Many felt that the decisions were based entirely on health outcomes, and many felt they were solely based on economic considerations. Few recognized any balancing of different concerns.

Survey Quotes

The rate of information change made comprehension challenging

Information was too complex, or used complex terminology

Hard to get timely sector specific details following announcements

Statement 3: Government Services that are important to me have continued to be provided during the COVID-19 19 pandemic up to now.

Disagree: 52% (Strongly: 40%)
Agree: 20% (Strongly: 9%)

The two areas of government services cited most often by the majority who disagreed with this statement were health care and recreation. Delays in surgeries and lack of in-person doctor visits frustrated many. Changes in or cancellation of in-person mental health programs and services for persons with disabilities early in the pandemic caused problems. A number of people also identified problems with services offered by the federal government, like passport renewals, Nexus, CRA, and border restrictions.

The provincial government's shift to online services was generally viewed as positive, although some found it difficult to access, especially seniors and other individuals who did not have internet access or the necessary technical proficiency. Problems were also raised related to:

- accessing ICBC driver tests
- accessing courts
- delays in responding to inquiries

Access to services for unvaccinated individuals was also cited as a problem.

Survey Quotes

Library was inaccessible. Affected me and others, particularly for internet access

Closure of rec centers, gyms and pools affected health and wellbeing

Denied government services that required vaccinations

Statement 4: I trusted COVID-19 information provided by government.

Disagree: 74% (Strongly: 66%)
Agree: 19% (Strongly: 11%)

This question provoked a strong reaction, with almost three-quarters of respondents disagreeing. Many respondents indicated that their level of trust has eroded over time. Many said their trust declined when vaccine passports were introduced after saying they would not be used in British Columbia. Other reasons for loss of trust most often cited included:

- the changing story on mask effectiveness

- unwillingness to consider alternative treatments or preventive measures
- failure to admit aerosol transmission of COVID
- failure to disclose vaccine risks
- inadequate testing levels and unreliable case numbers
- demonization of critics and firing of unvaccinated health-care workers
- inconsistencies between B.C. positions and other jurisdictions without explanation
- unwillingness to talk about natural immunity
- unwillingness to release more about local case numbers and distinguish between people were dying from COVID-19 and those who had COVID-19 but died from another cause
- unwillingness to debate alternatives, which did not fit with concept of evolving science

Most of those agreeing with this statement found that the demeanour of the PHO was calming, and they felt she had the best interests of British Columbians in mind when she made her decisions. The calm and open approach she used, and the knowledge level of the Minister of Health, were appreciated. People in this group expressed frustration that the government did not "take on" critics of government information.

Survey Quotes

I'd rather have questions that can't be answered than answers that can't be questioned

The information was not fake, just dishonest by omission

Trusted government used the best information available at the time

BC didn't provide the public data as transparently as other provinces did

Statement 5: The B.C. Government responded quickly and effectively to each wave of the pandemic.

Disagree: 64% (Strongly: 52%)
Agree: 18% (Strongly: 8%)

About half of the respondents strongly disagreed with this statement but cited a wide range of reasons for their answers, based on whether they thought government had done too much or too little:

- Many felt government responded too quickly and should have done nothing because the risks were low, while others criticized the government for not responding quickly enough with a complete lockdown and then for removing restrictions prematurely. Many responses on both sides complained that there was insufficient explanation of changes in direction.
- Many people expressed concerns about what they saw as inconsistencies in government's response. One example cited repeatedly was that big box retailers were allowed to open but churches closed.
- Many concerns were expressed about the consequences of government actions on mental health, drug use. and social connection. The lack of preventive measure promotion was questioned.
- While many expressed the view that the actions of government "destroyed the economy," others noted that B.C. had relatively fewer restrictions in place than other jurisdictions. Many others felt that decisions were made to allow the economy to stay open at the expense of individual people's health.

- A significant number of responses were critical of the lack of preparation for COVID-19 and wondered why successive waves "were surprises."
- The low mortality rate for COVID-19 was a reason why many people felt that the government actions were unnecessary. These respondents often argued that developing natural herd immunity while putting in place measures to protect the most likely to be severely affected by COVID-19 would have been a better approach.
- Concerns about how the K–12 education system was managed were raised by a large number of people. While some felt it should not have opened, more people commented on the lack of concrete actions to make it safe for children and educators, and the impact of masks on children.

Immunocompromised individuals as well as those unwilling to be vaccinated due to health or personal beliefs expressed dissatisfaction with the government response. The first group did not feel that government took strong enough measures to protect them, while the latter group felt there was government overreach.

Mostly among those agreeing with the statement, some recognized the uncertain decision-making environment and believed that in a rapidly changing environment B.C. fared better than many provinces.

Survey Quotes

Responded quickly but not effectively (e.g., rapid testing)

Every instance of B.C.'s response has been too little, too late, and too much, too early

Can it (vaccine) be effective if we all got COVID-19 anyway?

Basically, anything that pushed services online was the bane of my existence

Statement 6: Overall the B.C. Government managed the pandemic well.

Disagree: 74% (Strongly 64%)
Agree - 18% (Strongly: 9%)

This statement was criticized for being in the past tense while COVID-19 is clearly still with us.

The strong disagreement with this statement had two components, those critical of the management from the beginning and those whose position changed over time as the government made decisions to deal with the various waves. Many felt that the government response was inappropriate for a "flu" and that if anything was done it should have focused on those most likely to be severely affected by COVID-19, while others were critical of the government response because they wanted measures to be more restrictive and to be in place for longer.

Some specific points were made frequently by people critical of government, including the following:

- Communication was not transparent. The reasons for decisions were not disclosed. Measures were not based on science.
- Communication was based on creating fear.
- The vaccine passport infringed on people's rights, created second-class citizens with fewer rights, and divided families.

- Mental health consequences were not considered in government's response and were substantial. Human's basic need for socialization was raised frequently.
- Measures put in place "crushed the economy."
- The rules were arbitrary and inconsistent. Examples given were churches versus large retailers and bubble sizes.
- Why were health-care workers fired when there were labour shortages?
- Government was too slow to close borders.
- There was a lack of comprehensive testing.
- Rapid tests should have been released sooner.
- Government messaging shifted from "Be kind" to demonizing those who did not want to be vaccinated.
- Isolating seniors in long-term care was too harsh.
- The government was not willing to admit that it had made mistakes.
- Government did not promote healthy living to build immune systems.
- The risks of vaccination were not disclosed. Many respondents had personal experience of side effects.

There were also a number of people who provided examples of things the government got right. Mentioned most frequently were the following:

- The vaccine rollout was successful.
- Schools were kept open.
- BC had fewer restrictions than rest of country.
- BC had the most balanced and measured response of all provinces.
- The tone of communications was effective.
- Decisions were science-based.
- The rate of deaths was minimized.

Masking rules, the changes in direction, and their efficacy were commented on frequently from vastly different perspectives. Some respondents cited studies saying they did not work, some were critical of the shift in government's position on masking, and some were concerned about the developmental consequences of children having to wear masks. Many also criticized government for removing mask mandates too soon, with public transit raised frequently as an example of where continued mask mandate made sense.

The introduction of the vaccine card was highlighted as being divisive by both those who agreed and disagreed with the measure.

A relatively small number of people commented on the enforcement of provincial orders and felt that government should have been more assertive.

Survey Quotes

Well managed, especially in the beginning. No full lockdown.

Our population has never been so divided or hateful

Dr. Henry and her team were fabulous. Minister Dix was steady and calm.

Language was used very irresponsibly. 'Follow the science' became a political slogan.

Additional comment: Please share any additional feedback about the B.C. government's response to the pandemic.

There was a lot of overlap between comments provided here and in response to the previous six statements. However, there were also some new perspectives and issues identified, including:

- the need for more open and transparent debate on data, implications, and solutions
- accountability—while many were thankful that public health professionals led the response in B.C., others saw this as an abdication of responsibility by elected officials
- priorities—there was a striking range of responses, from those who felt that the economy was crushed by a single-minded focus on health care to those who felt that the government actions had sacrificed lives by being unwilling to protect those most likely to be severely affected by COVID-19
- how under-resourced the health-care system is
- failure of government to "admit" that COVID-19 is transmitted by aerosol
- personal risk management—this would have been a preferred approach for many, but it would have required more granular data
- conflicting positions on whether the decisions were based on science or political science.

Survey Quotes

By never saying they got something wrong before, made government look untrustworthy

Nobody was trying to score cheap points over the pandemic

The pandemic once brought us all together, until the actions of our government ripped us apart

5. From the Government of British Columbia

In order to review the Government of British Columbia's response to the pandemic, we needed to hear directly from government about what had happened during the pandemic, and how government responded. But Canadian provincial governments are complex institutions, and the entire government was involved. To understand the full scope of the B.C. government's response and how government assessed itself on that response, we used three different approaches:

- We asked all ministries and several government agencies to prepare a written, internal assessment report on their role in the government's pandemic response in accordance with a guidance document we provided to them.
- We interviewed every deputy minister and other key public service leaders about their views on the pandemic response. This included former deputy ministers who had played an important role during the pandemic but had since retired or moved on before our review began.
- We spoke with a significant number of current and former senior government officials and academic experts in relevant fields to better understand particular aspects of the pandemic response, including people in the Office of the Provincial Health Officer, the B.C. Centre for Disease Control, the health authorities, the Ministry of Health, Emergency Management BC, and WorkSafeBC.

Our engagement with government revealed a surprising variety of perspectives, and we learned something new from every interview and written submission. We appreciated the open engagement of the public service.

General comments

There were two important general comments that came up many times.

The first was that the pandemic response had several phases and the nature of the response changed fundamentally at least twice and maybe up to four times, depending on the perception of the person making the comment. This is an important lesson for future events because it implies changing circumstances should be identified and careful consideration given to how the government response should evolve when the pandemic's characteristics fundamentally change.

Response phases suggested to us included the initial, highly uncertain phase, with high public trust; a phase with increased information available about the disease, during which the effectiveness of various public health measures increased; a phase when variants raised uncertainty again but increasing vaccination rates combined with the introduction of the vaccine passport reduced the level of concern; and ultimately a phase when the virus evolved to be so transmissible that it could no longer be controlled, but a combination of lower severity and even higher vaccination rates reduced overall harm. We have defined our own response phases in Chapter 3 to help explain what happened during the pandemic, partly based on what we had heard about this.

The second general comment was that everyone was surprised by the duration of the pandemic and of the sustained government response. That is important because the high level of effort that went into the response was unsustainable for a long duration. There have reportedly been consequences in terms of

exhaustion, and recruitment and retention challenges. That has implications in terms of preparing for future events. Most said they would have managed the pandemic differently if they had known the response would be multiple years in duration.

What went well

Many of the more detailed comments summarized below suggest things that were challenges or that could have been (and often were) improved. That is, of course, the source for many of the lessons that will help government be better prepared next time, which is the purpose of this review. But we also heard throughout our government engagement about things that went very well across government, and it is important that we highlight those successes.

We heard from across government that the public service was resilient, willing to do what needed to be done, collaborative, and innovative. We were told that positive attitude contributed significantly to the effectiveness of the government response and enabled the continuity of government services. Examples included the many people who willingly contributed to border control efforts when the federal government was unable to enforce quarantine requirements early in the pandemic, and income assistance workers who delivered cheques in the Downtown Eastside when Canada Post suspended mail delivery, affecting many income assistance recipients.

People across all parts of government told us that issues were addressed at a pace that seemed impossible in pre-pandemic times, representing a nimbleness that most said government should try to maintain. That included new government programs that were designed and implemented in record time, such as recovery benefits for individuals and businesses, and measures to house homeless people.

We heard about the success of the vaccine rollout as a particular example of the rapid and effective creation and operation of a complex new program. It required a major new information system that was quickly created using private-sector expertise and resources. That system provides the public with a user-friendly way to register for the vaccine and book appointments. It is also a central system for managing immunization data of all kinds on an ongoing basis, which B.C. did not previously have. The use of laid-off hospitality industry employees to staff vaccination facilities was also praised.

There was virtually universal praise from public service leaders for the communications approach of having the Provincial Health Officer (PHO) as the primary public health spokesperson supported by the Minister of Health regarding health-care system matters, and with the Premier appearing infrequently. We heard that this approach worked well because it de-emphasized politics by focusing on science-informed decisions made and communicated by a recognized and trusted public health expert. It was also noted that the PHO had the clear support of elected officials, reinforced by support from opposition MLAs, which contributed significantly to public trust.

Public service leaders were also proud of the fact that B.C. imposed fewer restrictions than most other provinces and was able to keep important services available in person more than others. We were told about the importance of never having a full lockdown and of quickly establishing an expansive list of essential services to ensure that businesses and services people need were continuously available. The continuous provision of K–12 and post-secondary education from the beginning, initially online and then more quickly in person than other Canadian jurisdictions, was another success.

Areas for improvement

Preparation

There was a general sense that B.C. was not prepared for the pandemic, although most noted that no other Canadian jurisdiction was prepared either. People were surprised when it became obvious that what they first viewed as a health-care emergency was revealed to be an all-of-government response to an all-of-society challenge. They realized that ministries and agencies across government would be involved because they would have to respond to the effects of the pandemic and public health decisions both on their ability to deliver services and on those relying on their services.

We heard that several ministries used an emergency management plan and an emergency management approach internally, activating a Ministry Operations Centre (MOC), while others focused their response on restoring service delivery, or business continuity. The vast majority of internal assessments indicated that they had a plan. Most indicated that they used their plan but only a handful made changes to it during the pandemic. Of those with a plan, almost all had a business continuity plan and a few also had a pandemic plan or other emergency response plan.

We heard that while the structures in the B.C. Pandemic Provincial Coordination Plan were activated, initial decision-making was undertaken from the start by a small core group of ministers supported by their deputy ministers and the PHO, without effective cross-government coordination. We were told that by June 2020, the Ministry of Health had deactivated their MOC and instead created a pandemic response division headed by an assistant deputy minister to manage their response instead of continuing the emergency management approach. This was mirrored in health authorities, with specific vice-presidents given responsibility for the pandemic response. Several health authorities used emergency operations centres as well, either just during the initial phases or, like Vancouver Coastal Health Authority, throughout the pandemic (until recently).

We heard that it was unclear what EMBC's role would be, given the differences between the B.C. Pandemic Provincial Coordination Plan and how the pandemic response was actually managed. EMBC roles during the pandemic that we heard about were the Joint Information Committee (JIC), coordination of the border enforcement initiative and the supply hub initiative, coordination of the emergency response with First Nations, and emergency funding to reimburse local governments and First Nations for pandemic-related costs.

We heard from several people that the JIC was a successful mechanism to coordinate communications through the early part of the pandemic. However, the JIC was replaced by a central communications function in the Ministry of Health that was not very effective, according to some. Several thought this change limited other ministries' access to information.

The supply hub initiative was a cross-government initiative coordinated by EMBC in partnership with the Ministry of Citizen Services to centralize procurement of personal protective equipment (PPE) for

government programs[18] and to provide it to those delivering government services. It was not a success, according to many, because it did not have the necessary expertise and did not initially, as is usual practice, seek expertise from outside. It also lacked legal authority to procure and supply goods to those outside the public service but came to that realization belatedly. EMBC was criticized by many for this initiative's deficiencies, although they were not solely responsible for all of the initiative's shortcomings. The Ministry of Health and the Provincial Health Services Authority assumed responsibility for supplying PPE for all government services in early 2021, in addition to their earlier responsibility for health-care sector medical supplies, including PPE.

In terms of cost reimbursement, EMBC created and implemented policies that extended the existing local government emergency funding program to allow for reimbursement of pandemic-related expenses. Some noted delays in defining eligible expenses and processing reimbursements.

We heard that both the border enforcement initiative and the coordination of the emergency response with First Nations were generally successful.

We also heard several times that central decision-makers did not fully understand how certain ministry programs worked. As a result, some decisions that were necessarily taken quickly were impractical from an implementation perspective and had to be revisited. An example related to infrastructure provided to government by the Ministry of Citizen Services, where a decision made requiring upgraded telecommunications and systems information infrastructure without consulting the ministry caused delays in implementation.

Communications

We heard more about communications than any other topic, and we heard several contradictory views.

We heard almost universal support for the daily press conferences led by the PHO as something that went well. Most went further to express strong support for the PHO, whose experience, skills, and personality all contributed to effective public health decision-making and the communications of those decisions. We heard that this was an important factor in the high level of public trust that made the B.C. government response, especially initially, so well accepted.

Beyond that widely shared view, our government engagement revealed significant issues associated with communications. Many suggested that the approach to communications should have but didn't adjust as the pandemic's characteristics changed.

Two aspects of communications were raised related to PHO guidance and orders: the lack of notice to ministries about announcements that would affect them and their stakeholders, and the lack of written materials to support the announcements when they were made, with the supporting written material often available only after a significant delay. Most said that was acceptable and appropriate in the initial phase of

[18] The Provincial Health Services Authority was responsible for coordinating PPE supply across the health-care sector.

the pandemic, but many thought it should have changed as uncertainty and urgency decreased over time. We heard that measures often needed to be amended as their practical effects were recognized, which could have been avoided by taking a slightly slower approach to get ministry and stakeholder input. Similar comments were heard from many stakeholder groups, as discussed in the next chapter, along with comments about the difficulty in seeing what had changed when orders were amended and in understanding the legal language used in the orders.

The fact that these comments were heard from so many government and stakeholder participants in our engagement led us to ask some individuals in the Office of the Provincial Health Officer and communications specialists to explain their approach.

We were told that this communications approach was intended to give the public and affected sectors a "heads-up" through the announcements and to provide time to gather the input to get the details right. But we only heard one participant say they interpreted the announcements that way. In addition, we heard that the process of vetting orders from a legal perspective, necessary as the orders had the force of law, took time and delayed getting the details to ministries and to stakeholders. We were told that expectations of immediate response with appropriately vetted legal orders were unrealistic, and that announcements had immediate behavioural effects, even without enforceable details. Thus, getting the announcements out quickly, even without details, was better than waiting for the final written order.

We also heard about internal communications and the ability of ministries to provide input to the PHO and the "centre" generally during the pandemic. A majority of internal assessments commented on how difficult it was to provide input to the PHO or to other ministries about implications for them of policy decisions. In answer to a specific question about this, a majority indicated that it was difficult and only a few indicated that it was easy. A theme among those who had difficulty making implications known was that there was no channel to the PHO or to other decision-makers.

Relationships

The importance of relationships, both those in place before the pandemic and those created during the pandemic, was a strong recurring theme. Many indicated that existing relationships were strengthened and that maintaining both pre-existing and new relationships is important. These relationships with stakeholders eventually spanned the activities of virtually every ministry and included all economic sectors, as well as the full range of social service and community agencies. Almost every internal assessment indicated that they used a stakeholder table during the pandemic as a way of managing the pandemic response. Of those, about half indicated that they created a table specifically for the pandemic, but these were generally in addition to pre-existing tables that they also used during the pandemic.

We heard that in many cases there was a high level of trust with the members of existing tables and that these were very successful in terms of two-way communications. New tables required some time to build trust.

There were some sectors of society where there was no ministry with a natural connection to the sector, such as the religious and faith-based sector. In that case the Office of the Premier and Office of the Provincial Health Officer worked together to create the table, but it was disbanded once the immediate objective of safely reopening religious gatherings was resolved.

We heard most often that stakeholder tables were an effective way to get information about pandemic response measures to the people who needed it in specific sectors because their business or the services they provide would be affected. However, some indicated that tables were less useful as a conduit for stakeholders to advise government about the implications of proposed or implemented measures, such as PHO restrictions.

Service delivery

As indicated earlier, almost all noted the speed with which the entire government shifted service delivery processes and leveraged technology to maintain existing services while complying with guidance and orders from the PHO, including working from home, moving many services online, and the rapid development of new programs throughout the pandemic. These and other programs were developed and implemented much faster than would have been possible pre-pandemic. In some cases, especially in social ministries, policy changes that were in development were accelerated and implemented, including improved supports for young adults aging out of care. We also heard that there was a personal price paid over the unexpected long duration of the event in terms of staff burnout and exhaustion. We heard that getting public service employees to return to working in the office has been challenging.

While most of government was focused on remaining open for business and continuing service delivery, the health-care system needed to move in the opposite direction, reducing services provided in hospitals and other facilities to ensure that the system had available surge capacity so that it was not overwhelmed by COVID-19 patients.

Gaps

The government response to the pandemic revealed several gaps in knowledge and services provided by government that we were told about. Perhaps the most significant one was the lack of government understanding of, and connection with, social service providers that are not funded by government or connected with government social programs. We heard from a number of social ministries and senior leaders about this important gap, which we refer to as the “social supply chain.” We called it that because, like supply chains for goods, social supply chains were shown by the pandemic to also be susceptible to disruption. These unfunded social services are important links in the social supply chain that are well understood by government. The gap in understanding was revealed in the initial stages of the pandemic, when many social support services not funded by government programs closed because of restrictions on gatherings. That loss of services had unanticipated ripple effects throughout government social support programs. The pandemic seriously affected both essential goods and social supply chains, creating gaps that, in hindsight, we think could have been prevented.

Some social services weren’t included when essential services were declared and when stakeholder tables were formed or expanded. That includes services to populations likely to be severely affected by COVID-19 provided by faith-based groups and not-for-profit community agencies that either receive no government funding or provide a mix of government-funded and self-funded services.

A related issue is the gap in understanding about interactions among social programs that we heard about. This includes initially not understanding the importance of the K–12 education system as a hub for the

delivery of many social programs to children and families, disrupted when schools were shut down, and the implications of decisions related to K–12 education on child-care delivery.

We also heard about other gaps, most of which were addressed during the pandemic, including:

- the need for the Ministry of Agriculture and Food to take on an enhanced food supply security focus in another essential goods supply chain implication
- limits on government's ability to direct the actions of those who deliver government programs depending on the funding relationship and governance structure of the service provider—examples where governments have limited control include universities, which have a high degree of autonomy; school districts, which are governed by elected school boards; contracted service delivery agencies, which are independent contractors; and child-care agencies, which are funded largely by subsidies to their clients and thus have a very tenuous link to government
- lack of existing legal authority for government to act, including the ability to purchase and resell PPE and the initial limits on the enforceability of public health orders, addressed initially by using *Emergency Program Act* orders instead of *Public Health Act* orders

There were also several gaps in the health-care system. Health-care system funding of and attention paid to public health compared with acute care, where public health only accounts for 2 percent to 3 percent of spending. We heard that the Office of the Provincial Health Officer did not have enough capacity, especially public policy expertise, with most of the policy work to support orders done by the PHO and one deputy PHO. Connected with this were comments about the public health function being fragmented across the Ministry of Health (Office of the Provincial Health Officer), the Provincial Health Service Authority (BC Centre for Disease Control), and regional health authorities that employ the medical health officers and public health regulatory staff.

We also heard about the health-care system lacking surge capacity, as there has long been an emphasis on minimizing excess capacity to manage ever-rising health-care costs. Finally, we heard about the difficulty in collecting needed data about cases, hospitalizations, medical supplies inventory, and other information from the multitude of different information technology systems used by the different health authorities and hospitals, together with national data gaps.

We were surprised at how many senior people in government did not have a detailed understanding of the breadth of activities within government or about how programs outside their ministry were structured or worked.

Consequences

We heard that much of what government did was to respond to the expected and necessary consequences of public health orders by mitigating their effects on the public and adjusting government service delivery disrupted by the measures. But often ministry response actions also had consequences for other government programs. One example we heard several times related to pandemic pay, which was a temporary increase to the hourly rate paid to certain front-line health-care workers. It had unintended consequences for workers doing similar work, such as caregivers employed in non-acute-care roles who did not qualify for pandemic pay.

This was particularly troubling for agencies that had some workers who qualified and others that did not, which was usually a result of multiple service delivery contracts with different government programs (such as long-term care and youth-in-care group homes), or the provision of services not funded by government. A related consequence we heard about was recruitment efforts for acute-care workers, especially nurses, such as higher rates of pay, signing bonuses, or more attractive shift schedules, making it difficult to recruit and retain workers in other social service delivery areas. The acknowledgements given frequently (and deservedly) to health-care workers seldom extended to other essential front-line workers to the same extent.

We also heard about government actions that conflicted with the overall priority appropriately placed on the pandemic response. Several areas of government that were less directly affected by the pandemic maintained their focus on pre-existing policy processes, especially those set out in pre-pandemic ministerial mandate letters. This continuing pursuit of “regular business” by some had the effect of putting strains on other government programs that were expected to participate, as well as on stakeholders, who focused on the pandemic response.

6. From Government Stakeholders

We have spoken to over 200 people representing about 145 groups and organizations in over 70 engagement sessions and have received 13 written submissions**.** We also provided an online survey with open-ended questions for local governments to provide input and received 15 responses to that survey. Appendix E provides a list of the groups and organizations that engaged with us. Note that many additional organizations declined the opportunity to participate.

By "government stakeholders" we mean the groups and associations that provided connections between their members and government, ideally serving as a communications channel to sector members and providing government with impact and implementation feedback on policy proposals. That includes, for example, organizations representing many segments of the private sector, from heavy industry to small business, and from manufacturing to retail. It also includes many aspects of the social services and community sectors, from child care to long-term care to faith-based groups and social service providers who do not deliver programs. We also consider local governments, the K–12 education sector, the post-secondary education sector, health authorities, MLAs, and the Legislative Press Gallery to be government stakeholders for this purpose, as well as former public service leaders and academics who engaged with us.

Summarizing the input was a daunting task because we learned something new or were exposed to a different perspective in every single engagement session and written submission. That tells us something important about the pandemic and the government response to it—that everyone, every organization, and every part of society experienced the pandemic differently.

Overall performance

We start with what we heard about how well the Government of British Columbia did in terms of responding to the pandemic based in its overall approach, stance, and tone. We heard about government's overall performance in almost every engagement session and submission. Several of the points in this section are echoed and amplified later as we report on more specific themes.

More often than not, we heard that B.C. did a better job in its pandemic response than the rest of Canada or that stakeholders were glad they were working in B.C. and not another province, with several calling B.C. "a beacon of sanity." This sentiment was often attributed to B.C. largely avoiding issues arising from partisan political polarization and to stronger relationships with stakeholders, either initially or developed during the pandemic. Some linked this assessment of the response to a belief that B.C.'s outcomes, in terms of the disease and its impacts on society and the economy, were exceptional, while others said this narrative was not supported by the facts. These opposing views about outcomes and whether B.C. did better early in the pandemic contributed to our decision to undertake our own assessment of comparative outcomes reported in Chapter 3.

There were a variety of views expressed about the response over the full timeline of the pandemic, with many breaking the period down into phases. Some suggested three phases: initial high uncertainty; next, managing the pandemic; and finally, living with the pandemic. We heard most often that B.C. did best during the initial phase and that B.C.'s response was less exceptional later in the pandemic.

There was near universal support expressed for the approach, established at the beginning of the pandemic, of using the Provincial Health Officer (PHO) and the Minister of Health as the spokespeople for the government response, with the Premier consciously taking a step back. We heard that in the daily, comprehensive broadcast briefings they presented a united front. That, coupled with the emphasis on scientific evidence rather than political considerations underlying decisions, was important for building public trust and allaying fears. Several stakeholders indicated that this approach resulted in less polarization in the B.C. public as partisan political differences were relatively muted compared with most other jurisdictions. We also heard that this approach ultimately contributed to issues later in the pandemic, including issues with communications and decision-making that are discussed below, and that public polarization eventually emerged in B.C. as it had elsewhere.

Another point made often was that the B.C. government was not prepared for the pandemic, although this was always accompanied by the comment that no other government seemed to be prepared either. We heard that there are some aspects of preparation, like development of an overall communications strategy or approach, that cannot be done effectively while also managing the response. But we also heard that it is important not to waste the opportunity to deal with these issues before the next emergency event, including avoiding shortages of essential goods like personal protective equipment (PPE).

We were told several specific things, including the following:

- Government decision-making and implementation were unusually nimble and timely during the pandemic, and ways should be found to *bake that in* to improve non-crisis decision-making and operations.
- BC imposed fewer restrictions than other provinces (such as keeping schools physically open more and never imposing a general lockdown), but some told us that certain restrictions were excessive, especially after the initial phase, such as visitor access restrictions in long-term and other residential care.
- The vaccine rollout was very successful once supply became consistent, including the innovative use of private sector resources in system development and the use of idled hospitality workers in vaccination facilities.
- Financial recovery supports were generally viewed positively by affected stakeholders, but we also heard that some other provinces' processes were more streamlined, organized, and easier to access.
- Some associations that lost income from members but increased services in support of response measures would have done more if they'd had temporary financial support.
- The business sector was overwhelmingly supportive of the overall response, crediting it with resetting relations with government, which some indicated may now be slipping.

Communications were also discussed by almost everyone. Several specific aspects of communications are discussed below, but in terms of general performance we heard the following:

- There was no change in communications tactics as the nature of the pandemic changed.
- Many felt that more emphasis on communicating uncertainty and identifying objectives, including non-health objectives, underlying specific decisions would have been useful.
- Initially there was a lack of communication in languages other than English.

- Government focused communications too specifically on print and television media without sufficient focus on social media and changing communications tactics.
- Government communications resources were not able to keep up with the demands for information after the function was centralized in the Ministry of Health.
- After the initial phase, there was strict central control of the messaging, including actively discouraging any questioning or challenging of the PHO.
- There was a lack of timely written materials (discussed later, under "Directions and orders") that was unnecessary after the initial phase of the pandemic and served to undermine credibility and trust.
- After the initial phase, use of other spokespeople, at least sometimes, would have been an improvement, to share the burden of being decision-maker and spokesperson, and to distinguish between announcements that were updates of information and those that signalled policy changes.
- The abrupt reduction in volume and frequency of communications once most restrictions were relaxed in April 2022 caused confusion and diminished trust.

There were several other aspects of performance that we heard needed improvement:

- Federal and provincial programs could have been better coordinated in their design and implementation.
- Government needed a better understanding of what many sectors do and how they do it to improve the ability of private, social services, arts and culture, sports, faith-based and other groups to implement government response measures.
- Access to and distribution of rapid antigen tests was limited in fall 2021 by the PHO and Ministry of Health. In early 2022, the Province changed its position, long after other provinces had made their supplies widely available.

Inconsistency

Inconsistency was the theme of many concerns raised with us. We heard about three types of inconsistency: inconsistent treatment of similar activities, inconsistent application of provincial direction by different regulators, and changes in government direction.

Several stakeholders noted that in the initial phase of the pandemic, when uncertainty was high and detailed understanding of the nature of the virus was low, guidance and restrictions were quite general in nature, with little room for, or concern about, inconsistencies. They suggested that that changed and more inconsistencies arose as the response became more nuanced and targeted based on improving levels of understanding about the disease and how to respond to it.

Whatever the source of the inconsistency, people told us that the effect of inconsistencies was to reduce confidence in the government response and to erode trust in government. Inconsistent treatment led to a sense of unfairness that was expressed to us by a vast majority of those we heard from, even those with the most glowing overall assessments of government's response.

Inconsistent treatment

Of the three types of inconsistency, we heard the most about inconsistent treatment of activities that were perceived to be similar or to have a similar level of risk. This was especially concerning as some restrictions

were adjusted after the initial phase of the pandemic response. Most examples related to orders about closures or gatherings, such as closing gyms but allowing recreational facilities to remain open, closing religious spaces but allowing restaurants to open early in the pandemic, and keeping arts and culture venues closed but allowing religious spaces to open later in the pandemic. We also heard about inconsistency in access by visitors to different types of government-funded residential facilities, such as long-term care and community living.

Where there are multiple types of organizations within a sector, like the colleges, institutes, teaching universities, and research universities that make up the post-secondary sector, we heard that differences in how PHO guidance was implemented were seen by all parts of the sector to be problematic. There were several examples brought to our attention of public health orders that applied specifically to health care, such as mask and vaccine mandates, that did not apply to other parts of the public sector where at least some in the sector would have welcomed such an order. Examples include the K–12 education, post-secondary education, and some residential care sectors.

Inconsistent application

Inconsistent application of restrictions related to that fact that there were at least three groups regulating activities during the pandemic: the PHO, the medical health officers in the regional health authorities, and WorkSafeBC. All of them played a role in interpreting pandemic response measures, especially orders and guidelines that restricted behaviour. We were told that even small differences among these groups in how a given restriction was applied on the ground caused considerable disruption for some who were faced with inconsistent requirements in different locations. We also heard that most of these issues were remedied relatively quickly and arose less frequently as the pandemic progressed.

Examples included the application of rules related to operating work camps, recreational facilities, and gathering restrictions. In some cases, this resulted in “interpretation shopping” by those affected, seeking the interpretation that worked best for their business or activity. We heard from those charged with enforcement that inconsistent application of restrictions made their job more difficult.

Changes in direction

Inconsistencies in government direction over time was the third type of inconsistency that we heard about. This type of inconsistency was somewhat different, in the sense that we were told these inconsistencies affected overall credibility and trust rather than affecting specific activities and sectors. The most significant example was related to masking, where guidance changed from initially indicating that masks were ineffective, to guidance to wear masks in indoor public places, to a requirement to wear masks in certain places, to a relaxation of those rules, to renewed guidance to use masks, to asking people to make their own decisions. The other common example was that initially the PHO indicated that there were no plans to implement a vaccine card in B.C., and it was implemented just a few weeks later. Despite an understanding among many that we heard from that such changes were supported by changing knowledge or the evolution of the virus, several indicated that changes in rules and guidance over time that were not adequately explained undermined public trust.

Guidance and orders

A key part of the government's pandemic response consisted of guidance and orders made by the PHO under the *Public Health Act*, along with public health-related guidance and orders put in place by other regulators, such as medical health officers in regional health authorities and WorkSafeBC, and by Cabinet under the *Emergency Program Act*. We heard contradictory views about the degree of certainty or flexibility that should be contained in the orders.

Certainty

One thing that struck us in this area was the contradiction between a desire for certainty and the desire for flexibility to find the best way for a given sector to achieve a stated objective. Of those who commented, most said they wanted certainty in the form of clear, universally applicable rules, and in hindsight some would have preferred less relaxation and reimposition of restrictions as pandemic waves came and went. Many said that enforceable rules were preferable to guidance. They just wanted someone to tell them what to do. At the same time as supporting certainty, many stakeholders appreciated being able to develop specific plans that recognized the unique characteristics of their business or service, which broad restrictions did not allow. On the other hand, there was some support for orders that set out principle-based guidance and left it up to sectors to figure out how best to implement them.

Communication of guidance and orders

Virtually every group commented on how orders and guidance were communicated from the podium, in press conferences with the PHO and the Minister of Health. Four issues were commonly discussed:

- The most common point raised was the delay between an announcement from the podium and issuance of the order or other document setting out the details of the measure, whether that was an official verbal order, the announcement of an order or the announcement of guidance. We were told that associations were immediately called upon by their members for details that they did not have, and the final order details often differed from the podium statement.
- Stakeholders from many sectors said they did not get routine advance notice of measures. That was generally acceptable in the initial phase, when information and circumstances changed rapidly. Over the course of the pandemic, some indicated that they began to get routine "heads-up" notices, while other sectors struggled to be included and some said they never got advance notice. Even those who receiving routine advance notice were sometimes surprised about announcements with big impacts, the most cited example being the closures for New Year's Eve in December 2021, which came only hours ahead of time, with no advance notice.
- Stakeholders from multiple sectors pointed out that many announcements of new measures or changes to existing measures were often made late Thursday or Friday and were effective immediately, forcing associations to scramble over the weekend to prepare material to help their sector understand the implications of the change for them.
- The legal status of podium announcements was often unclear to many affected organizations across all sectors. One example cited was a mask mandate imposed by PHO order, which was rescinded, with guidance subsequently issued to again use masks in public indoor spaces. This was not an order

but was widely perceived to be legally enforceable. Many announcements of orders were perceived to be verbal orders, we were told, because the announcement said they took effective immediately.

In a similar vein, we heard from several groups how difficult it was, once a written order became available, to know exactly what had changed. It was noted that government usually explains exactly what is being changed by legislative amendments in background materials, which they suggested would have been useful. Also noted by several was the absence of sector-specific guidelines or delays in the availability of such guidelines, which many felt were needed to implement orders because of the legalistic language used in the orders. Some produced their own sector-specific guidelines but encountered delays in verifying that their guidelines were accurate.

Another general sentiment held by many of those we spoke to was that it is more difficult to relax or eliminate restrictions than to impose them. We heard that that is because pandemic measures are imposed in response to a threat where risks are hard to gauge but stakes are very high, with fear motivating acceptance. But, they said, as the risk is reduced over time, many continue to be very concerned and are reluctant to accept the relaxation of restrictions. We heard that this was particularly evident when almost all restrictions were eliminated in April 2022 and people were told that they should take appropriate precautions of their own, in a manner that was perceived by many groups as abrupt.

Enforcement

Enforcement of public health orders required the use of a variety of enforcement agencies. We were told that it took several months to establish specific roles and mechanisms for coordinating enforcement because so many different agencies were involved. The need for legislative change to provide authority for enforceable orders and for officials to enforce the orders contributed to the delay. Some indicated that enforcement seemed to be an afterthought. Other related comments include the following:

- There was limited bylaw officer capacity especially in more rural areas.
- There was not sufficient authority to force businesses in violation of closure orders to close.
- There were differences in approach across enforcement agencies in the balance between education/influence and imposing penalties.
- Not all information necessary for enforcement was available from the Ministry of Health or the B.C. Centre for Disease Control.
- Small businesses were unfairly required to enforce measures such as mask mandates and vaccine passports with their customers.
- Fines later being dropped set a bad precedent for any future enforcement.

We also heard that there was confusion related to the requirement to have a workplace/worksite COVID-19 safety plan and confusion about WorkSafeBC's enforcement role, which was resolved over time.

Relationships

The importance of relationships with government during the pandemic was also mentioned by almost every stakeholder. We heard this equally from those with close relationships before the pandemic, those who developed those relationships during the pandemic, and those who had difficulty establishing relationships. A relationship with a ministry was usually needed in order to have a channel to and from the Office of the

Provincial Health Officer. At the beginning of the pandemic, groups with no previous relationships felt disconnected, but by the end of the first year most groups had a seat at one or more government tables to exchange information and provide input.

Sectors that felt initially ignored by the Office of the Provincial Health Officer included agricultural producers, health and safety associations, arts and culture, sport, child care, community living and long-term care service providers, religious groups, and social service providers that are not funded by government. A characteristic of many of those with initially no government relationship is that they do not deliver a government program. For example, we heard that many groups, including religious groups and independent not-for-profit organizations, provide social supports without government funding and thus have no ongoing reason to have relationships with government officials.

Government engaged with most sectors about the COVID-19 response through existing or newly established "sectoral tables" that typically were convened by one or more ministries with relationships with the sector. After the initial phase, representation from the Office of the Provincial Health Officer, usually a deputy PHO, participated in some of the meetings.

We heard a variety of comments about these processes:

- There was near universal praise for the roles played by the PHO and deputy PHOs.
- Relationships were strengthened during the pandemic and are continuing to be maintained in many cases.
- While many viewed engagement processes as collaborative and mutually respectful, some felt they were just being talked at and not engaged, largely depending on whether there was an opportunity to ask questions and raise issues at the table.
- As mentioned earlier, advance notice of announcements through the tables was mixed.
- Some tables brought together coalitions of groups with little history of collaboration that have spawned ongoing beneficial connections.
- Insufficient engagement of ethnic communities was identified by some as a gap.

Several groups suggested that these enhanced relationships created opportunities that were missed. One example cited by several groups was that their members had the skills, resources, and desire to contribute to the response effort but had difficulty finding a channel through which to work with government on specific issues. Another was that, with some financial support and advance notice, many stakeholder groups felt they could have been much more effective in delivering government's message to their sector.

Another thing we heard about relationships applies specifically to the social services sector. We heard that two important insights were revealed by the pandemic:

- The K–12 education system is a crucial hub for the provision of services to children and families that extend well beyond education and that are disrupted when schools are closed or operating under restrictions.
- There are a significant number of social services provided by agencies and organizations that are not providing services under government programs, without government funding, and with no ongoing relationship with government, including both secular and faith-based services, which can easily be

inadvertently disrupted by public health measures unless they are included in tables and have a channel through which to identify and mitigate implications.

The why

A recurring theme in our discussions was people expressing the desire to know more about the reasons why decisions were taken. “The why” is partly about understanding the objectives and considerations underlying decisions, and partly about what new information or change in circumstances motivated a decision.

We heard that, especially as the pandemic progressed from the initial phase and orders became more targeted and nuanced, people felt that communication was less effective. Many associations indicated that if they had understood the why better they could have more effectively prepared their members for how a decision would affect them and what they should do in response.

There is some confusion about the decision-making framework used by the PHO. Many that we talked to understood that the PHO uses a decision-making framework that balances the need to take action to achieve health-focused objectives like reducing severe illness and death, and to limit the social and economic harms caused by imposing restrictions. Others thought that decisions had a singular focus—for example, on health-care system protection or limiting economic impacts—to the exclusion of all other considerations.

All said they want to better understand what the objective and other considerations were. They also want to know whether and how the science has changed to prompt decisions. Several groups noted that Ontario put an independent scientific advisory panel in place to support the PHO, and that had the effect of providing more information about the underlying science.

A consistent comment was that B.C. provided less detailed local data on pandemic indicators than some other provinces and felt that granular local data was needed to support decisions.

A key point, made by the K–12 education sector, was the value of having a clear, shared objective in understanding and implementing decisions: their “North Star” was keeping schools open safely. Several other groups indicated that the lack of such a common purpose made their pandemic response work more challenging.

Barriers and burdens

In this section we discuss comments from stakeholders about how government went about its response organizationally and operationally, primarily about organizational barriers to government responding more effectively and how government operational activities during the pandemic placed unnecessary additional burdens on those already under stress due to the pandemic.

Fragmentation

We heard that the public health function in government is fragmented, and that this negatively affects effectiveness, especially during a province-wide public health emergency. The Office of the Provincial Health Officer is in the Ministry of Health, while the B.C. Centre for Disease Control is part of the Provincial Health Services Authority, as is Health Emergency Management BC, and each regional health authority has a chief medical health officer, medical health officers, and public health regulatory resources, known as

environmental health officers. We heard that this organizational structure, coupled with independent statutory decision-making authority and the academic/scientific consensus-based culture of public health professionals, contributed to some of the inconsistencies discussed earlier and lack of clarity about "the why" in some cases.

We also heard that Emergency Management BC (EMBC) struggled with providing effective service in some areas during the pandemic. Local governments and some others with a strong ongoing relationship with EMBC told us that EMBC was not the definitive, timely source of information they had come to expect from interactions related to local emergencies. EMBC most often learned new information at the same time as everyone else, and ministry-led round tables were more often able to provide some advance notice and to be a channel through which to provide feedback. Local governments also told us that there were long delays in EMBC approval and payment of reimbursements for response costs incurred, a significant EMBC function that required retooling to determine which pandemic costs to reimburse.

On the other hand, we heard that EMBC did a good job of coordinating government-wide response communications in the first several months of the pandemic, using the Joint Information Centre, structure, compared with a more strictly health-related communications approach when the Ministry of Health assumed central pandemic communications responsibility later in the pandemic. Examples were ministries having to refer media questions about their own programs to the Ministry of Health and lack of access for regional media to ask about local issues.

Operational burdens

We also heard from a variety of stakeholders that, while some ministries established the pandemic response as the primary ministry priority, other ministries or parts of ministries continued pursuing priorities established before the pandemic and set out in ministerial mandate letters. One specific example raised by several associations was the implementation of *Lobbyist Registry Act* changes that placed added burdens on associations that were focused on managing their sector's compliance with pandemic response measures. Some also indicated that the fall 2020 general election delayed some important B.C. government recovery initiatives being developed prior to the election call.

In a similar vein, several stakeholders told us that they were subject to new and often redundant inquiries for information and data that negatively affected their ability to deliver essential services, which was frustrating when it was unclear why the information was needed. The child-care sector was one example.

Shared objectives

We heard about a few cases where implementing the government response was significantly enhanced by all those agencies involved having a "North Star" in the form of a shared objective. The most prominent example was the K–12 education sector, where government, school districts, principals, teachers, and other workers all wanted to get children back to classrooms safely and quickly, their shared objective. There was also the ability to debate how best to do that. Although not without challenges, the outcome was that B.C. reopened schools earlier than any other jurisdiction in North America, we heard.

We also heard that the post-secondary education sector was notably different. There, objectives were more likely to be set for individual institutions in the context of the three subsectors—colleges, institutes and teaching universities, and research universities—and in the context of other provinces, than on a provincial

basis. Groups involved in determining how best to return to class also differed across subsectors. The result was less coordination and more vocal disagreement about whether to return to campus, and how to do it, than in the K–12 sector.

Consequences

Every government pandemic response action has consequences as people react to the pandemic itself and to government's response. Sometimes the consequences are intended as part of the response, sometimes the consequences are unintended and unpredicted, and sometimes consequences are expected but accepted, in a balance of harms assessment, as necessary to achieve a given objective. In this section, we discuss what we heard about the consequences of the government response and about mitigating those consequences in some cases.

One area we heard about from several groups was one of the first government responses to the pandemic, the creation of an essential services list, which was needed to ensure that businesses and service providers that are essential did not shut themselves down because of fear about COVID-19. The overall reaction of virtually everyone who mentioned this was positive, as it helped ensure that society could continue to operate. That in itself mitigated significant social and economic implications that came with the more extensive lockdowns imposed by some other jurisdictions.

An unintended consequence cited by several groups was that having been designated essential, they did not feel that their value was appropriately recognized in other ways. One way was simply being thanked for maintaining their essential services in the same way that (also essential) front-line health-care workers were constantly being recognized. In addition, workers in several essential areas were disappointed that they were not given preferential access to PPE as it became more readily available after initial global shortages, and preferential access to vaccines, since most essential workers provided front-line services to the public.

A related issue we heard about from several groups providing essential health and residential care services was that government action to compensate health-care workers for their efforts during the pandemic and to deal with labour shortages had unintended consequences. We heard that the so-called "pandemic pay" supplement had unintended consequences for employers who had both government-funded employees who qualified and other employees who provided similar services without a government contract who did not qualify. Unfunded social service providers were also affected by the existence of pandemic pay elsewhere in the sector, which affected recruitment and retention.

Efforts to recruit health professions, including nurses, to the acute-care system and to health authority–owned long-term care facilities also had untended consequences, we heard, because signing bonuses, increased pay rates, and fewer night shifts resulted in recruitment of community living, long-term care, and other residential care facilities to acute care. These facilities already face labour shortages in a tight market for skilled and professional employees but are unable to match the compensation and scheduling offered by acute care. We also heard that the single-site order, which was effective and necessary for much of the pandemic in preventing transmission, exacerbated that shortage late in the pandemic without reducing transmission as much due to the high vaccination rate.

Other comments we heard about consequences included the following:

- The pandemic had varied impacts on workers both in the public service and for stakeholders, with some workers idled while others were overworked, but burnout and mental health challenges will have ongoing effects.
- Access restrictions in hospitals were a barrier to access for people with physical disabilities and developmental issues, who needed to be accompanied by caregivers or advocates.
- Some sectors faced significant cost increases and demands for additional services as a result of the pandemic, which were either not compensated or not fully compensated, with examples such as residential care providers, who had increased costs to accommodate staff.
- There was potential for liability related to disease outbreaks among workers, customers, and individuals to whom services were being provided in several sectors, but especially in long-term care where insurance companies excluded such liability. The issue was ultimately addressed through government legislation.
- A missed opportunity that we were told about involved not better utilizing existing health and safety infrastructure rather than developing new, often equivalent pandemic response requirements—for example, existing joint health and safety committees in unionized sectors; communicable disease management practices already in place in some facilities, such as work camps or as part of WorkSafeBC compliance; and infection control practices established by health profession colleges.

PART 3: WHAT WE FOUND

The next five chapters present our findings, based on our research, our experience, and what we heard.

We start in the next chapter by discussing trust and continue with chapters devoted to pandemic preparation, decision-making, communications, and implementation. In addition, Part 4 addresses how the pandemic affected Indigenous Peoples and includes findings and conclusions.

The approach taken to addressing matters related to the impact of the government response on Indigenous people differs somewhat from the other findings. As we have pointed out, everyone had their own unique pandemic experience, as did every community. It was important to us that our process identify and respect the unique history and circumstances of Indigenous Peoples and communities, and the effects of the pandemic on them. That is reflected in the way we have chosen to report on these matters. Part 4 integrates a chapter describing the context within which the pandemic response affected Indigenous people and communities, a chapter on what we heard from Indigenous Peoples, and a findings chapter. This makes it clear how the context and what we heard directly leads to the findings.

Assessing the policy decisions made either by the Provincial Health Officer or the provincial government is beyond the scope of this review. In our findings we make no comment on any public policy decisions related to the pandemic. But our terms of reference do require us to review government's preparation, decision-making, communications, and operational response to the COVID-19 pandemic and, based on our assessment, to develop findings that will help government be better prepared for another pandemic or major event.

To be able to assess these four elements of the government's response, it was necessary to first give some thought to what we would expect of government preparation, decision-making, communications, and implementation. The chapters related to each describe the standard we have adopted and start with a general finding about how closely the response aligned with the relevant standard.

Our findings and conclusions

We were asked not to make specific recommendations. Nevertheless, we feel that it is important to be clear about what our findings imply for areas that government needs to consider in order to be better prepared for the next event. Each finding is accompanied by a conclusion that suggests where government effort is needed, without being prescriptive about what changes should be made. We have given each finding a title that reflects the essence of the conclusion.

Throughout our findings, we use the term "province-wide emergency" to refer to events similar to the COVID-19 pandemic and to which our findings and conclusions may also apply. A "province-wide emergency" is an event that causes significant province-wide disruptions to people's lives, the economy, and social services and that lasts for a period of months or longer. Such emergencies could arise from a number of risks, not just public health risks.

7. Public Trust of Government

There is one overarching theme that that permeates all parts of this report—the importance in an emergency like a pandemic of having a high level of public trust to support the government response. Public acceptability is a key determinant of government's success in everything it does. But voluntary compliance is crucial in the case of a crisis like this pandemic, where there is a high level of uncertainty, where events are moving very rapidly, where the stakes in terms of individual health and welfare are extreme, and where the measures required to reduce the effects of the pandemic are mostly restrictions and limitations on what people and organizations are free to do. People will only be willing to limit themselves and to accept limitations imposed by government if they trust that what government is asking of them is squarely in both the public interest and their personal interest.

Finding 1: Rebuild trust

As discussed in Chapter 3, according to public opinion research, public support for the B.C. government's pandemic response peaked at over 80 percent in the summer of 2020 and was close to 60 percent in August 2022. Although all provinces have seen a decline in support, British Columbians have been consistently more satisfied with the performance of their provincial government than residents of other provinces over the past 30 months.

One particular approach that served to build and maintain trust, especially early in the pandemic, was the decision to make it clear right from the start that the Provincial Health Officer was leading the public health response, with the direct support of the Minister of Health and the implicit support of the Premier.

The emergence of public protests nationally and in B.C. in early 2022 as the pandemic approached its second anniversary is very real evidence of an erosion in trust levels. Our public survey revealed just how upset many people are about their freedoms being affected, especially for such a long period of time. Everyone is tired of the pandemic and how it continues to affect their lives. The measures that seem to have caused the greatest anger were mask mandates, introduction of the vaccine card, and vaccine mandates for many workers.

In our communications findings in Chapter 10, we also identify a number of ways that communications affect trust.

Finding

The level of trust in the B.C. government's response to the pandemic was very high in the initial stages but has eroded. There are many reasons for this, some of which we touch on in other findings, but we are concerned that eroding trust may translate into more resistance to restrictions necessitated by the next province-wide emergency.

Conclusion

Government should identify opportunities to rebuild the trust that existed early in the pandemic to support high levels of compliance should new restrictions be required.

8. Preparation

Finding 2: Improve preparation

Our standard for emergency preparation for province-wide emergency events is that major vulnerabilities are identified prior to an event and contingency plans to deal with them are in place. It would not be reasonable to expect all vulnerabilities to be identified, but at least impacts associated with the specific findings in this chapter should be anticipated.

Overall, the Government of British Columbia's response to the pandemic was generally effective. The strong public health response continually balanced the harm caused by the pandemic with the social and economic harms caused by restrictions. The public service and those delivering essential government services pulled together to do what needed to be done.

In hindsight, it is clear from our work that this success came even though the B.C. government was not prepared for a pandemic. However, B.C. was not alone. Even though experts had been warning for years that it was a matter of when, not if, there would be a pandemic like this one or one caused by influenza, virtually no jurisdiction was fully prepared. There was a certain amount of complacency which resulted in reductions in support for public health, including a lack of disease surveillance programs and domestic vaccine production capacity. Additionally, the fact that a pandemic is not just a health-centric event, but that it will disrupt all of society, requiring an all-of-government response, was not anticipated. The planning associated with government coordination during a pandemic was almost immediately abandoned because those who needed to act quickly as the pandemic took hold were not familiar or comfortable with the emergency management approach underlying the plan. Rather than fundamentally changing how they operated on a daily basis, those in charge adapted their traditional approach to an effective crisis management and business continuity approach.

The experience with COVID-19 raises questions about how prepared B.C. and Canada are for other province-wide (or Canada-wide) emergencies.

Finding

BC's pandemic response was effective, despite government not being well prepared for the pandemic. The public health function was well prepared to respond, with a good understanding of the tools at their disposal and with a decision-making framework that supported taking the least restrictive measures. The acute-care part of the health-care system was prepared to do what was necessary to keep the system functioning, but

there were issues, which are discussed in other findings.[19] The rest of government was not prepared for the all-of-government implications and the need to respond, although it was nimble and resilient in adapting. The remaining findings in this chapter speak to several aspects of preparation that we think need to be addressed for all types of major event and will have the additional benefit of improving how government works in general.

Conclusion

Government could improve preparation for a future pandemic or other major event by setting a principle-based standard for province-wide emergency preparation. Given the uncertainty and evolving nature of a major event, a principle-based approach would offer guidance but recognize the need for flexibility.

Such a standard could create a shared understanding across government about:

- risks and hazards
- available response tools
- expected effects and implications across society
- the required ongoing relationships
- the physical and human resources required to respond
- the approach to communications
- the organizational structures that can be used to manage the response, and when they should be used

The standard would address both a plan and the planning regimen needed to continually practice, test and develop the plan as well as the essential goods, services, and infrastructure needed to execute the plan.

Finding 3: Improve planning

As described in Chapter 2, B.C. has a plan for provincial emergencies that is made up of the All Hazards Plan and hazard-specific annexes. The British Columbia Pandemic Provincial Coordination Plan is one such annex. In addition, the Ministry of Health, as the lead agency for pandemics designated under the All Hazards Plan, had a plan for its pandemic response.

The coordination plan is in essence a checklist and a detailed description of the committee structure (roles and responsibilities) that would be used to coordinate government activities, communications, and decision-making during a pandemic using the B.C. Emergency Management System. The Ministry of Health plan also included use of an emergency management approach.

[19] These include the lack of PPE and the inventory control to manage it, lack of surge capacity, and issues with the collection of data in the health-care system.

The emergency management approach was abandoned very early in the pandemic for government coordination and for the health-care system. It was replaced by an executive decision-making model more familiar to senior government leaders, as happened in many other jurisdictions (see Appendix C). The result was effective crisis decision-making but not effective cross-government response coordination, as discussed in more detail below. Key elements of the pandemic response were not part of either of the plans, including the importance of increased transparency of decisions in a pandemic, established stakeholder groups, strengthened communications capacity, and mitigating the consequences of the response. There was also no recognition that a pandemic can be expected to evolve as the virus evolves, as more is learned about its nature and how to treat it, and that its duration may be considerable.

Finding

The B.C. government did not have the pandemic plan or the planning ethic needed to be prepared for a pandemic. Plans in place before the pandemic dealt only with coordination and were mostly not followed. There was also limited planning structure in place to test the plans and continue the planning and training work needed to ensure that those expected to use the plan understood the challenges presented by a pandemic or other province-wide emergency.

Conclusion

Government should consider developing a planning approach for province-wide emergencies that includes much more than a plan for how government will be coordinated, including risk identification, developing, practising, and continuously improving plans for major emergencies in accordance with the standard suggested in the previous finding.

Finding 4: Enhance the ability to respond

When early guidance was issued for the pandemic by the Provincial Health Officer (PHO), it was characterized as “Two weeks to flatten the curve.” Many people took this literally and did not understand that the focus of this two weeks was to ensure that acute care hospital capacity would be available to handle an uncertain number of cases, not to stop the pandemic. Almost everyone we spoke to outside public health was astonished by the duration of the pandemic, which has had significant effects on those in the public sector and beyond who have been delivering the government response for more than two years and counting.

A focus on making the health-care system as efficient as possible over decades also eliminated excess capacity across the system. COVID-19 highlighted the consequence of this as needed surge capacity was created by cancelling elective surgeries and discouraging people from coming into emergency departments.

Capacity was also an issue for many aspects of the pandemic response, including enforcement resources, government communications resources, front-line staff, and policy and planning capacity in the Office of the Public Health Officer and across government. The response was generally managed is if it were a sprint, with insufficient attention paid to building the capacity needed for a marathon response. For example, the approach used in intense longer-duration situations like fighting wildfires or warfare, of rotating personnel in and out of the front lines to prevent burnout, does not seem to have been considered. The potential to utilize

non-government resources, discussed in Finding 23: Leverage Non-Government Resources, was largely untapped.

One particular example of a limitation on government's ability to respond is related to the organization of the public health function in government. The public health response to the pandemic was a success, largely due to the efforts of the PHO and the PHO's office, which is considered by several public health experts to be under-resourced. The PHO and one deputy did almost all of the extensive public policy analysis work required by the pandemic, and there seems to have been effective but under-resourced legal support. In addition, the public health function is fragmented between the PHO's office in the Ministry of Health, public health staff in each regional health authority, and the B.C. Centre for Disease Control (BCCDC) in the Provincial Health Services Authority.

Finding

The pandemic exposed a capacity risk for government in the event of a province-wide emergency. It is entirely appropriate for government through its budgeting process to seek to be efficient in its use of taxpayer resources, but the pandemic has exposed the risk of being unable to respond with surge capacity essential in emergency situations. In particular, the public health function seems to be under-resourced, and its fragmentation makes effective management of the function a challenge.

Conclusion

As part of the preparation for province-wide emergencies government could assess the capacity available for emergency response to various hazard scenarios and develop ways to address gaps in anticipated surge capacity needs, including assessing whether changes are needed to the resourcing and structure of the public health function.

Finding 5: Maintain relationships

As noted in Chapters 5 and 6, government and stakeholder participants emphasized repeatedly how important relationships were in managing the government pandemic response. New tables brought together some groups (e.g., faith leaders) who had previously had very little to do with the government. Some new and expanded tables were created as government understood the breadth of pandemic implications, and others arose because of demand from some stakeholder groups.

Stakeholder tables were useful for communication both from and to government and for problem-solving, even though the scope of what they did varied. While some tables provided government with useful advice about the implications of response measures, other tables where no previous relationship existed struggled to find a role or have their concerns heard and addressed, as discussed later in Finding 11: Learn from unintended consequences. Stakeholders and government both said that relationships were improved, and many of the new relationships created for the pandemic response are continuing to be useful beyond pandemic purposes.

The tables were generally associated with one or more specific ministries, with the exception being the faith leaders' group and the Premier's Economic Recovery Task Force, which were linked to the Office of the

Premier. Attendance of the PHO or deputy PHOs at stakeholder meetings was a key success factor, although the frequency of that occurring varied somewhat across ministries.

Finding

Stakeholder relationships were strengthened by the pandemic, and some new relationships have become permanent. Stakeholders with strong pre-pandemic relationships with government had more success in communicating with government and getting the consequences of the pandemic and public health restrictions for their sector mitigated. Several ministries were unable to provide us with a list of stakeholders to consult with, and government has no overall list of stakeholders.

Conclusion

Government did a good job of using and building relationships, but this could be extended by finding ways to engage new participants and new tables more consistently. Government should consider reviewing membership in the tables it used (and continues to use) to see if there are any gaps, finding reasons to engage with tables that have been dropped—even if just to practice using emergency plans—and maintaining a central stakeholder database. This would both prepare for future province-wide emergencies and facilitate the business of government more generally.

Finding 6: Mitigate supply chain disruption

COVID-19 exposed supply chain vulnerabilities for personal protective equipment (PPE) and vaccine manufacturing capacity across the globe, highlighting how the supply of essential goods will be disrupted in any all-of-society disruption. The atmospheric river event that hit B.C. in fall 2021 re-emphasized the importance of supply chains for essential goods and having inventories of critical supplies in place to deal with disruptions. This vulnerability is largely due to a reliance on “just in time” inventory management often using offshore product suppliers, which was disrupted by the events. While there is little B.C. can do about globalization and standard supply chain business practices, it would be a missed opportunity if B.C. did not learn important lessons from these events.

In addition to competing for PPE during the global supply shortage caused by the pandemic, the government supply chain response included an important shift in the government’s role. It became clear that when the supply of essential goods is disrupted, government could and did play a valuable role in helping to manage supply rather than leaving that primarily to the market, as happens in more normal circumstances. The Ministry of Agriculture took on an important role related to food supply during the pandemic and atmospheric river events, and several ministries were involved in managing fuel and other supplies during the atmospheric river events. But the health-care system’s management of PPE supplies was hindered by a lack of system-wide administrative data, an issue addressed specifically in Finding 13: Improve health data collection.

Finding

Beyond the global difficulty in sourcing PPE due to supply chain disruptions caused by the pandemic, two issues concerning essential goods were made evident by the pandemic: there was no easily accessible

information on inventory levels of essential goods across the health system, and government has a role to play in broader supply chain issues in society and the economy.

Conclusion

To be better prepared for future provincial emergency events, the B.C. government could gain a better understanding what goods are essential and the supply chain risks associated with those goods in the event of major disruptions. This would allow it to identify mitigation opportunities both prior to and during an emergency, such as determining whether stockpiles are the best approach to managing essential goods and establishing appropriate structures for managing essential goods. Supply chain issues should be a focus of planning for province-wide emergencies.

Finding 7: Recognize social supply chain importance

Analogous to essential goods supply chains, there is a social services supply chain. For those needing social support, there are many government social programs directed at specific needs that are not part of a managed "system" but, as with the private sector supply chains for goods, users must choose and access the services they need. Government-funded social services important to many citizens include subsidized housing, addiction programs, child-care subsidies, income and disability assistance, and respite services for families supporting challenged dependents. These are just some examples of the wide range of services delivered either directly by government or through funded agencies.

The social supply chain also includes many support services not directly funded by government that are an important part of the system (and society) but, because of a lack of formal relationships, are not well understood by government. Community organizations, volunteer groups, and faith-based institutions deliver services that support the needs of people.

Initially, the pandemic disrupted the whole social supply chain as workers and clients alike stayed home to avoid COVID-19. Part of the social supply chain recovered relatively quickly as government took action to re-establish and maintain its services. But the part of the supply chain not funded by government was particularly vulnerable to ongoing disruption because it was not well-understood by government. Government's lack of connection meant that it did not move quickly to mitigate the issue.

In addition, there were some unintended consequences as particular social programs adapted to pandemic disruption with changes that affected other social programs because of the lack of a systemic approach within government.

Finding

Government has limited insight into unfunded social service delivery entities and their services, or the interactions among government social support programs. The restrictions imposed during the pandemic did not adequately consider the consequences for all social service program providers. Decisions on gatherings, for example, had an impact on organizations like Alcoholics Anonymous and community food banks, and

some organizations with government funding for some clients but not others found it difficult to absorb the implications of salary top-ups for their funded programs.

Conclusion

Government could develop a better understanding of the broader social supply chain and consider viewing the set of government and unfunded social support services as a system, so that the implications of government decisions on all of the services people rely on are better understood before those decisions are made. To be clear, we are not suggesting that government control or further regulate social services that are not government funded or part of a government program. Rather, we are suggesting that government fully consider the effects of changes to government public policy on the whole social support services environment, including all of the government programs and unfunded social services.

9. Decision-Making

Finding 8: Improve decision-making

Our standard for the decision-making process is that the process should enable decision-makers to make "informed decisions." Decisions should be informed by good information, but that is not the same as complete information when dealing with uncertainty, which has been high during the pandemic. Informed decisions must be based on a clear understanding of what government is trying to achieve (the objective) and what considerations need to be addressed. Decisions should be made in the context of options, and their implications. Informed decisions balance competing objectives and considerations by applying the best available information about implications, given the time available to make the decision in the situation at the time.

Decisions made during the pandemic fall into two broad categories: public health restrictions intended to reduce the spread of COVID-19, and mitigation decisions made by government to soften the impacts of the pandemic and the associated public health restrictions.

Public health decisions were better informed than many people thought they were. In particular, contrary to the impression of supporters and detractors alike, the public health decision-making process[20] does explicitly take economic and social implications into account, as well as population health effects. Early on, the Provincial Health Officer (PHO) appropriately put little emphasis on inconsistencies and implications for specific sectors because it was important to have universal measures implemented quickly. Later, measures became more targeted, creating more opportunity for inconsistencies and for implications that depend on the business models of those businesses or others being targeted. But, despite less urgency and more opportunity for unintended consequences, throughout the pandemic little notice or opportunity to point out implications was given to those affected.

Finding

Public health decisions used an informed decision-making process and appropriately did not delay decisions early in the pandemic to consult with those affected. This approach did not change as the level of urgency decreased, later in the pandemic. Government public policy decisions about mitigation were timely and had clear objectives, consistent with our standard, but there has been some confusion about roles during the

[20] As set out in the COVID-19 Ethical Decision-Making Framework: https://www2.gov.bc.ca/assets/gov/health/about-bc-s-health-care-system/office-of-the-provincial-health-officer/covid-19/ethics_framework_for_covid_march_28_2020.pdf

pandemic ,which affected decision-making, especially in the early stages. Government could also have done better at identifying unintended consequences in advance.

Conclusion

We believe there are some improvements that could make decision-making in emergencies better aligned with our standard, which are discussed in the following more detailed findings.

Finding 9: Respond with suitable approaches

As noted in Chapter 2, the British Columbia Pandemic Provincial Coordination Plan was premised on the use of an emergency management approach based on the B.C. Emergency Management System, with the Ministry of Health playing a lead role and Emergency Management BC playing a coordinating role. The Ministry of Health plan was also premised on emergency management.

In fact, a combination of structures using three different approaches was utilized across government and the public sector.

While EMBC immediately established the committees and structures required by the pandemic coordination plan, it was not, and in hindsight couldn't have been, the approach used to manage the initial response. Rather, a crisis management approach was adopted, under which a small inner group of Cabinet ministers, deputy ministers and the PHO managed the response. Over time, the overall management of the pandemic response was expanded to include all of Cabinet and all deputy ministers, with the Ministry of Health, including the PHO, playing the central role. The crisis management approach is an adaptation of the executive management approach usually employed by government.

At the same time, an emergency management approach was used for some specific functions at the government level and was used by some ministries and government agencies, such as health authorities and local governments. That included using EMBC emergency management structures for coordination of cross-government efforts, such as communications, border enforcement, coordination with First Nations, and the supply hub. Ultimately, the Ministry of Health took responsibility for all pandemic-related communications and for PPE supply management, reducing EMBC's coordination role.

A third approach employed by many organizations during the pandemic was a business continuity approach. Under that approach, a unit of government focuses, through its normal executive process, on restarting and maintaining service delivery disrupted by the pandemic. Most ministries, other public sector agencies, and local governments used a business continuity approach to deal with service disruptions caused by the pandemic or public health measures.

Finding

Despite the focus in emergency response plans created before the pandemic on using an emergency management approach to manage the B.C. government's pandemic response, government actually used its usual executive management structures modified for crisis response in the initial phases, with emergency

response structures and business continuity approaches used for specific purposes and by different units within the public sector.

Conclusion

The pandemic has revealed that all three approaches (crisis management, emergency management, and business continuity) need to be available and used in the event of a province-wide emergency. Government should consider building this understanding into its emergency planning and ensuring that there is a shared understanding of how these approaches work and to what circumstances each is best suited.

Finding 10: Redefine Emergency Management BC's role for province-wide emergencies

Emergency Management BC is widely respected as an effective emergency management agency for the local, short-duration emergencies that occur frequently in B.C., such as urban interface wildfires and floods. It is important to maintain these roles, structures, and relationships.

However, the planned use of an emergency management approach for the overall coordination of the government's pandemic response was quickly abandoned when the pandemic started in B.C. As a result, EMBC's role in the pandemic was unclear both to EMBC and to the rest of government, and EMBC's reputation within government was damaged.

The PHO managed the public health response, and the Ministry of Health managed the health-care system response to the pandemic; cross-government coordination of communications and PPE supply management were transferred from EMBC to the Ministry of Health after just a few months. Other ministries largely focused on how to maintain operations usually based on business continuity processes and structures, developing new programs as part of the response where required, and using their relationships to be a conduit to government stakeholders affected by the public health response. Early in the pandemic, EMBC's coordinating role was limited to some specific functions, including its emergency financial assistance role for First Nations and local governments.

Finding

There was a lack of a coordinated response across government, evident in what we heard from government and stakeholder participants. Coordination gaps included the lack of a channel for certain ministries to make implications known to the PHO, lack of a forum to coordinate implications of actions in one program on other programs, lack of coordination of input received by ministries from stakeholder groups, and, once communications were centralized in the Ministry of Health, gaps in internal communications coordination. While consistent with EMBC's coordination mandate, it was not tasked with filling these gaps, perhaps because of lack of clarity about its role, or confidence in the emergency management approach and the B.C. Emergency Management System for these purposes.

Conclusion

Government should consider redefining EMBC's role and approach during a province-wide emergency, without affecting its role related to local emergencies. A redefined role could make EMBC responsible and accountable for cross-government coordination and communication. EMBC's legitimacy and clout would need to be enhanced by giving it the authority and accountability of a central agency and taking steps to increase the value afforded to emergency management preparation in the culture of the public service. The coordination function could include responsibility for comprehensive cross-government planning for province-wide emergencies, as discussed earlier. Coordination could also include providing channels to resolve implications of one program's actions on other programs and to bring stakeholder implications to the attention of the lead agency.

Finding 11: Learn from unintended consequences

Government ministries have roles defined in legislation and through ministry mandate letters issued by the Premier. To prevent ministries from focusing too much on their specific responsibilities and ignoring consequences of their decisions on other ministries, government uses committee decision-making structures and a variety of cross-ministry working groups as part of the public policy development process. An example is the Deputy Ministers Committee on Disaster Risk Emergency Management.

As ministries grappled with the implications of the pandemic, many decisions were made that had consequences for other programs, which seemed to catch the other programs by surprise, perhaps due to the urgency of the situation and the lack of time, or lack of functioning coordination mechanisms through which to take these unintended consequences into consideration. For example, decisions by B.C. Corrections to release some prisoners to prevent COVID-19 spread increased demand for social services. Decisions to shift to at-home schooling in the early phases of the pandemic had consequences for essential services workers' ability to go to work, which was quickly addressed by making reopening schools safely a priority. Decisions to ask work camps to house COVID-19-positive individuals created mental health and substance abuse issues.

One particular example relates to health human resources. Government adopted a number of policies to protect the availability of human resources in the long-term and acute-care sectors, and reward those individuals for putting themselves at risk by treating COVID-19 patients—for example, the single-site order for long-term care, which was intended to reduce the risk to patients of being exposed to care providers who worked in multiple locations; "pandemic pay," which temporarily topped up the hourly rate for qualifying front-line workers; and recruitment and retention incentives in the acute-care sector.

These actions had unintended consequences for workers and agencies in related fields, which were not mitigated. For example, pandemic pay did not apply to all workers in a particular occupation or delivering a defined service, but rather to workers funded under certain government programs. That caused difficulties for contractors who provided identical front-line services but were either not funded by government or were funded under a program not covered by pandemic pay. Some contractors had workers who were covered and others who were not, while providing the same service. This caused recruitment and retention problems for those not covered, affecting their ability to deliver needed services and reducing the level of care.

Recruitment incentives for acute-care nurses reduced the ability of residential care providers, who have regulatory requirements related to nursing staff, to continue to provide the same level of service in some cases. Options to mitigate the issue suggested by sector representatives included changing professional staffing requirements for facilities and relaxing the single-site order.

Finding

The pandemic provided great examples of how public health measures and decisions made by ministries have unidentified consequences that impact other programs or other ministries' stakeholder groups. It also provided examples of these unintended consequences being identified and addressed. Despite efforts over many years to educate government's executive on how programs work and the interconnectedness of decision-making consequences, there is still a notable lack of knowledge about what we refer to in Chapter 2 as Government 101, crucial to effective cross-government coordination.

Conclusion

Government should consider preparing case studies of unintended consequences caused by one program for another program or another ministry's stakeholders during the pandemic and using them to educate both senior and new public servants to improve decision-making, and to design the coordination role for EMBC discussed in the previous finding.

Finding 12: Build public health knowledge

As we have noted several times in this report, the public health decision-making process balances trade-offs between population health, mental health, social health, and economic well-being in making decisions about imposing restrictions, using an ethical decision-making framework. The PHO makes decisions after getting input from a wide range of sources, including scientific experts. Decisions must necessarily be made with imperfect information about the virus and the behaviour of individuals in reaction to public health measures, and this uncertainty played a role as measures had to change as either the level of knowledge increased or the virus evolved.

Finding

Despite ongoing communication efforts, our observation is that the public, the public service, and government stakeholders all had generally low levels of understanding about public health decision-making considerations, the expert input that contributed to the decisions, and the role of uncertainty in generating continuous change to public health measures as knowledge and circumstances change. This contributed to a loss of trust, as changes were often interpreted as corrections of previous errors rather than as improvements based on better understanding and changes in circumstances.

Conclusion

Government should consider making public health decisions and decision-making processes more transparent so that the kinds of trade-offs being made are better understood. This would include establishing one or more formal advisory groups that the PHO could rely on when making decisions, including expertise

from a range of disciplines such as scientific, social science, economic, and behavioural science expertise. Efforts could also be considered to better educate senior government leaders in the function and role of public health.

Finding 13: Improve health data collection

During a public health emergency like the COVID-19 pandemic, accurate and timely information about what is happening is one of the most important inputs to public health response decisions and health-care system management decisions, as well as to effective communications. There are several sources for relevant information, but one of the most important is administrative data collected by the health-care system from the interactions of individuals with the system. Examples of this type of data are test results, hospitalization data, deaths, vaccinations, other treatments, and inventories of essential supplies.

It is obvious that while this sort of data is crucial in an emergency, it is also important and useful for the efficient and effective management of the system on an ongoing basis. It would not be unreasonable to expect that the information technology (IT) systems used by the health-care system would enable the system-wide automated collection of data from across the system. Three things would be necessary for that to happen: interoperability for automated data collection (i.e., systems that can "talk" to each other), consistent data definitions for data accuracy, and consistent data collection practices. None of this is currently in place.

In fact, there are 37 different administrative IT systems in hospitals and health authorities across the province, many of which are not interoperable with each other or with central systems, such as those used by the B.C. Centre for Disease Control to support the PHO. In addition to issues within B.C., there is no national public health system. This is not a new problem, and it is not just a B.C. problem. It is a complex issue that has defied resolution for decades, for reasons that are beyond the scope of this review.

Several issues related to this have come to our attention. First, during the early part of the pandemic, access to personal protective equipment (PPE) was a major issue across society, but especially for the health-care system and the social services sector. To manage that issue, central information was needed about stocks of PPE and their location, but a new system had to be created to manage PPE inventory across the health-care system. Second, one of the major pandemic indicators of effects of the pandemic is hospitalizations, but collection of that information was hampered by lack of consistent data definitions and collection practices, together with lack of IT system interoperability. As a result, data collection was a laborious daily manual exercise, affecting timeliness and accuracy. Third, there was no ability to automatically track vaccinations on a province-wide basis, functionality that was crucial for the efficient rollout of COVID-19 vaccinations. That was solved in record time with a new system that not only provides the data but allows users to manage their own vaccinations, and that will be utilized to manage all vaccinations across the province on an ongoing basis.

Finding

There is a lack of province-wide health-care data collection infrastructure, which was problematic in several ways during the pandemic, highlighting a long-standing issue for health-care system management and public health.

Conclusion

Government should consider how best to deal with the disparate set of IT systems, data definitions, and data collection practices to ensure that the health-care system is able to assemble needed data that is timely and accurate.

10. Communications

Finding 14: Improve communications

Our standard for effective communications from government is that the communications are unambiguous, clear, culturally appropriate, timely, and transparent.

By "unambiguous" we mean that communications from different parts of government at a particular point in time are aligned. By "clarity" we mean that the communications are understood by recipients. By "culturally appropriate" we mean respectful of the culture of recipients. By "timely" we mean that people affected have time to act, and by "transparent" we mean that the reasons for decisions are explained.

Communications to government, and its openness in hearing from those who may be or have been affected by its actions, are both important because understanding implications is part of informed decision-making and effective operationalization and implementation.

Finding

Overall, despite significant deficiencies in pandemic communications after the initial phase of the pandemic compared with our standard, the approach taken during the initial phase—to be calm, competent, and apolitical—was very effective in assuaging the fears of the public. The later communications breakdowns contributed to an erosion of trust. There was a need for a communications strategy[21] and clarity in the roles of the Provincial Health Officer (PHO), ministries, and Government Communications and Public Engagement (GCPE). The decision to eliminate the communications coordination role initially played by Emergency Management BC (EMBC) seems to have reduced overall communications effectiveness. In part, Finding 12: Build public health K]knowledge is about understanding how the public health function applies to communications as well as decision-making.

Conclusion

Government should consider developing a communications strategy and clarifying roles among the PHO, EMBC, ministries, and GCPE in province-wide emergencies. We have more to say about this in the subsequent findings in this chapter.

[21] By "communications strategy" we mean a clear, high-level approach to communications that includes regular reviews and adjustments of the approach as circumstances change.

Finding 15: Build tolerance for uncertainty

Epidemiologists knew that SARS-COV-2 would evolve over time. That is the nature of viruses. At the same time, the public wanted certainty about what they could do to prevent the spread and what treatment options were available. The tension between the constancy of change and the desire for certainty created a communications challenge.

As time passed, new information became available, and new pandemic waves emerged, it was important to communicate that circumstances were changing. The efficacy of masks, safe practices for schools, the protection offered by vaccines (and their risks), and social distancing are all examples where government advice and direction has shifted over the past two-plus years. While much of the early communications messaging was hopeful and community-oriented, over time it became more prescriptive as government imposed mask mandates, vaccine mandates for workers, and vaccine cards.

Many responses to our public survey, even those that were supportive of the pandemic response, were critical of government for constantly changing direction. This highlighted the importance of conditioning citizens to expect change. Finding an appropriate balance in avoiding panic due to uncertainty while building an expectation and acceptance of change is a challenge but an important consideration for managing a future pandemic and maintaining public trust.

Finding

During the pandemic, the calm competence evoked through daily PHO press briefings was interpreted by many as certainty that the guidance provided would be the solution to the pandemic, leading to enhanced public trust and compliance. Over time, changes in public health guidance and orders were interpreted by many as evidence of incompetence or lack of trustworthiness. The number of people interpreting the messaging this way might have been reduced if there had been ongoing communication about the inevitability of change as circumstances change during a pandemic.

Conclusion

Government should consider building the need to condition the public to expect change into planning for pandemics and other province-wide emergencies, and into the communications strategy (discussed in Finding 14: Improve communications), as an important element of maintaining public trust.

Finding 16: Explain decisions

Government does a good job of communicating the “what” of decisions, but from what we heard, across the board, its explanation of why decisions are made was lacking. That applies equally to decisions made to introduce new restrictions and roll back restrictions, and to the reasons for treating similar situations differently. One example was the lack of explanation of changes in how testing was used at different points during the pandemic response.

This is disturbing. The comments we heard were not about understanding what orders do but rather reflect a desire for plain language explanations that would allow people to better understand the reasons for orders—as many put it, "the why."

Underlying much of the communication about the public health response was the mantra "follow the science." This was meant to convey that decisions were being made based not political considerations but on the best available information. However, government was often criticized for saying that it was "following the science" but not offering evidence to support a decision or an explanation of how the evidence contributed to the decision. Others complained that decisions were inconsistent with what they had heard about the science through the news media or social media.

In fact, public health decisions are not driven solely by changes in scientific knowledge, but complaints about lack of scientific transparency reflect a larger issue: people want to be clear about what has changed to necessitate a change in the public health response. Even some people inside the health-care system told us that they did not understand why some decisions had been made.

Other jurisdictions, notably Ontario, established science tables that published projections of possible COVID-19 outcomes, which were then considered in making decisions. In B.C., the modelling that the PHO relied on was done by BC Centre for Disease Control without full transparency. This frustrated outside academic modellers who did not have access to all of the relevant data but published their own analyses based on the available data anyway. Part of the issue there was data privacy, discussed in the next finding.

Many were also confused by what they saw as similar circumstances being treated differently. "Why can large retail stores open and not churches?" and "Where is the science on closing gyms?" were two recurring comments. These types of questions highlighted the need for more robust explanations and better communications. Where apparently inconsistent treatment is needed, that should be explained. If there is no good reason for the inconsistency, erosion of public trust can be avoided by treating the circumstances consistently.

Finding

Despite efforts to explain why public health decisions were made, based on the large number of those seeking to better understand the decisions, those explanations were insufficient. There was little effort to explain apparently inconsistent public health measures.

Conclusion

The Public Health Officer should consider ways to better explain why decisions are being made, possibly including stating what the objectives are for restrictions being put in place or removed, addressing any apparent inconsistencies, and discussing the evidence underlying the decisions. Increased transparency about public health decision-making and establishment of expert advisory panels (suggested in Finding 12: Build public health knowledge) would also contribute to better explanations.

Finding 17: Explain the transparency/privacy trade-off

In our stakeholder meetings and in the public survey there were many calls for disclosure of more detailed data related to the pandemic. We also heard concerns about lack of available case data for First Nations and surrounding areas, and outbreak information related to specific schools and school districts.

For much of the pandemic, B.C. provided data about the pandemic that was aggregated at the level of relatively large geographical areas (health authority regions) and included fewer pandemic indicators than in other provinces, notably Alberta and Ontario. Information for smaller geographical areas and specific locations began to be made available much later than in the other provinces. Case counts, testing data, hospitalization census, and the number of deaths were initially available only for the five regional health authorities and was eventually expanded to the 16 Health Service Delivery Areas.

This left many feeling that they did not have the information they needed to decide how to protect themselves and their families, and it affected government credibility and public trust. However, there is an inherent trade-off between data transparency and privacy.

Especially early in the pandemic, there were valid concerns about detailed data potentially resulting in the identification of individuals or groups when coupled with other available information. We are not referring here to direct release of personal information, which is protected by statute—there was never any reason why personal information would have been directly released as part of the pandemic response. Rather, we refer to the risk of loss of privacy due to detailed COVID-19 information being combined with other information to allow individuals or groups to be identified by inference. The issue is that people could be stigmatized if their privacy were compromised. Cowichan Tribes and other First Nations experienced this with racist attacks following disclosure of outbreaks in their communities.

The privacy risk associated with pandemic indicators changes with the circumstances at any given time. When there are few confirmed cases, the risk of violating a person's or group's right to privacy is high. As case levels increase, aggregate data even for smaller geographic areas makes it increasingly difficult to breach the privacy of an individual. For communities like First Nations, data-sharing agreements like those implemented during the pandemic can provide the detail the community needs to make its own decisions and give BCCDC access to the First Nation's data as well, while protecting privacy at the individual and community level.

There are several advantages of transparency. It allows individuals to better assess their personal risk and make decisions about how they are going to behave. It provides independent experts with data needed to model potential outcomes to complement the work done by BCCDC. It provides a basis for different levels and types of restrictions to impose when appropriate in different communities and areas, and to explain why those differences are needed to help control the pandemic.

The data collection issue discussed earlier (Finding 13: Remove data collection barriers) also contributed to the data transparency issue, since accurate, timely hospitalization data was not available. Gaps in transparency, especially in comparison with other provinces with large populations, will be noticed and serve to erode public trust. But the right to privacy also must be respected.

Finding

It was necessary and appropriate to ensure that public data disclosure did not violate privacy rights and expectations throughout the pandemic. However, as the risk of breaching privacy declined over time with rising case levels, the level of detailed pandemic data did not seem to be adjusted as quickly as it could have been, given the level of transparency in other jurisdictions.

Conclusion

The balance between privacy and transparency could be more regularly examined and clearly communicated, as necessary to maintain public trust. Government should review its policies to make sure that in principle the balance between privacy and transparency during a public health emergency is reasonable, that the level of data made public is adjusted as the privacy risk changes, and that the need to be prepared to communicate the reasons for such changes is included in the communications strategy discussed in Finding 14: Improve communications.

11. Implementation

Finding 18: Improve implementation

When we talk about implementation, we are referring to two different types of government activity: operating existing programs, including adjusting programs to deal with disruption, and putting new programs in place by implementing public policy decisions. Implementation applies equally to service delivery programs and regulatory requirements.

Our standard for implementation is that the authority for government to act is in place, sufficient resources are available (including funding, people with the right skills, enforcement resources, and physical facilities), goods and services essential to delivering programs are available, and performance in relation to objectives can be assessed.

The initial health-care response to the pandemic was focused on freeing up capacity in hospitals to deal with the risk of an onslaught of COVID-19 patients. The cancellation of elective surgeries and the shift to remote doctor visits were frustrations for many survey respondents.

Direct government services were initially disrupted, and then adjusted, as employees shifted to remote work where possible and protocols to provide essential in-person services safely were put in place. Some public service employees were reassigned to support response programs like border protection. Many ministries quickly implemented online service delivery for services that were previously delivered in person where possible. These changes were not without some challenges for those who lacked internet access.

Across government there was a focus on maintaining existing services and providing necessary new services to those most likely to be severely affected by COVID-19, the groups who suffered the greatest negative effects from both the pandemic and public health restrictions.

This task was undertaken very rapidly, in days or weeks making changes that normally would take months or years to design and implement. That was largely due to everyone pulling together to do what needed to be done in the public interest. This sense of working together extended beyond the public service to co-operation between all political parties, which contributed significantly. Many industry stakeholders applauded what they characterized as a nimbler public service but were concerned that post-pandemic government would go back to its “old ways.”

Finding

Across government, ministries did a good job of operationalizing the changes to program delivery needed to continue to deliver services during the pandemic and, developing and implementing new programs. Implementation issues that arose were generally quickly addressed when encountered.

There were some exceptions to this general statement:

- Some populations, including seniors, struggled to adapt to online service delivery due to lack of access.
- Public health orders, the primary tool used to put restrictions in place, were criticized for the way they were released, causing confusion (see Finding 19: Improve public health order rollout).
- Enforcement of orders did not initially have the necessary legal authority, which was remedied, and required significant coordination and reallocation of existing regulatory resources (see Finding 21: Be prepared to enforce).

Conclusion

The findings in this chapter can help to improve implementation in future provincial emergencies. In addition, consideration should be given to improving access to online government services for those without internet access or the capacity to access services online.

Finding 19: Improve public health order rollout

As discussed in Chapter 2, in a public health emergency the public health response seeks to change people's behaviour to reduce the risk to population health. This is done through guidance, voluntary suggestions about behavioural changes, or orders under the *Public Health Act*, mandatory regulatory requirements that limit people's behaviour. The Act makes provision for verbal orders to be issued by the Provincial Health Officer in a public health emergency, a power that was used only three times.

Guidance and orders are implemented by communicating what is expected of people. In the case of orders, implementation also includes determining how the orders will be enforced, which is discussed in Finding 21.

Several concerns were raised with us about the communication of public health orders by Indigenous, public sector, and stakeholder participants in our engagement process. Because orders are enforceable, the detail of exactly what behaviour is permitted and what is not becomes very important as people try to comply. [22] Concerns included the following:

- New or changed public health orders were frequently announced, but a written order was not made available for several days, and sometimes weeks.
- In many cases, the written order differed from the announcement.
- It was not always clear whether the announcement constituted a legally binding verbal order, or notice of a pending written order (most were the latter).

[22] There were no similar concerns about guidance, because not having the force of law, they could be general in nature.

- Many orders were amended multiple times, but to understand what had changed, one had to manually identify how the wording on the new order had changed from the previous order and legally interpret the effect of the new wording.

Usually, government announcements about new laws are accompanied by detailed background briefings and a raft of information, including backgrounders, press releases, and Q and A's. In part, this information seeks to explain what the legal language of the law means in practice. Often the legislation is available when it is announced, such as a bill being introduced in the Legislature, or a regulation being passed by Cabinet. When future legislation is announced to give people a chance to have input, that is made clear, along with details of the consultation process.

The lack of written explanatory materials, clarity about when the change would take effect, how to provide input, and easy access to exactly what had changed all made it difficult for stakeholder groups to give their members the information they needed to understand, prepare for, and respond to the change. As a result, some people started to rely on other, often less reliable, sources of information. Finding 16: Explain decisions will improve public health order rollout through the inclusion of explanations in accompanying written material.

Finding

The practices used by the Provincial Health Officer (PHO) in announcing and releasing orders were understandable at the beginning of the pandemic. But as the pandemic changed and orders became more targeted and technical, those practices caused confusion. The practices also represented a lost opportunity to recruit stakeholder groups to quickly communicate the intent of the change to those who would often be most affected by the order, or who were being relied on to encourage their customers or clients to comply. Lack of sufficient public policy capacity in the Office of the Provincial Health Officer and access to sufficient legal resources may have contributed to the delays in releasing orders and associated materials.

Conclusion

The Office of the Provincial Health Officer should review its order rollout practices and seek additional public policy and legal resources if needed.

Finding 20: Refine the use of public health tools

As discussed in Chapter 2, a number of tools are commonly used as public health measures to reduce infection, including quarantine, hand washing and disinfection, masking, physical distancing, and vaccination. Public health officials have the choice of seeking behavioural change through voluntary guidance or mandatory, enforceable orders. The PHO's approach is to use the least restriction possible in the circumstances to minimize overall harm.

Throughout the pandemic, a large number of measures were implemented that applied these tools to different specific circumstances and targeted different specific groups or activities, often in combination with other measures. Restrictions were increased, for some of the tools, several times. The details of exactly how restrictions applied and to whom they applied changed frequently.

We have neither the expertise nor the mandate to determine how well all of these different public measures achieved their population health objectives while minimizing social and economic disruption. And there is no benefit to questioning public health decisions made in an environment where uncertainly is high, information is scarce, and stakes are enormous. But there may be lessons to be learned for future pandemics about how well these measures worked and why.

Finding

The large number of different public health measures applied during the pandemic provides an opportunity to review, with hindsight, how effective those measures were given the circumstances in which they were applied. It is challenging given the combinations of tools used to tease apart the effectiveness of each, but a better understanding of that would be beneficial for future public health emergencies.

Conclusion

The Office of the Provincial Health Officer should consider undertaking a review of public health measures utilized during the pandemic to learn what works best in different circumstances.

Finding 21: Be prepared to enforce

Public health officials usually undertake ongoing activities related to food safety, clean water, and many other ongoing prevention activities. Medical health officers and environmental health officers issue guidance and enforceable orders as required in carrying out these functions, but most are very local in nature, applying to a specific restaurant, food processing plant, water system, or septic system. The guidance often applies at the level of individual businesses, households, and communities. Compliance is based on trust and transparency. Orders do need to be enforced as part of these activities, but there is relatively little day-to-day public health enforcement capacity available.

Before the pandemic, PHO powers to make province-wide orders in a public health emergency had never been used. Once these orders began to be made, it became important to find the resources needed to enforce compliance. In addition to public health enforcement resources being limited at the best of times, most environmental health officers were not available for enforcement during the pandemic because they were fully occupied with testing and contact tracing/case management, both important, human-resources-intensive public health activities.

Several other regulatory and law enforcement agencies were recruited to the enforcement task. Initially the legal authority to do so was not in place, but that was remedied in July 2020 with the *COVID-19 Related Measures Act*. The agencies involved included WorkSafeBC, the Gaming Policy and Enforcement Branch, the Liquor and Cannabis Regulation Branch**,** RCMP, municipal police, and local government bylaw enforcement officers. That provided a significant workforce, but each has ongoing responsibilities, its own operating approach and practices, and limitations on its powers. The Ministry of Public Safety and Solicitor General established an interagency working group to coordinate these enforcement resources.

Finding

Enforcement was mostly a success, with operating issues resolved through the interagency working group once it was established. However, before the pandemic, insufficient attention had been given to how and by whom public health orders would be enforced and to understand the various agencies involved. Even with the interagency working group there were challenges in some cases. For example, some local bylaw officers had insufficient capacity, and some local police were reluctant participants. In other cases, limitations on WorkSafeBC were not recognized by other agencies, or WorkSafeBC approvals of pandemic safety plans were not accepted by public health officials in a health authority. Local relationships between the regional health authorities and various enforcement officials were a critical success factor.

Conclusion

To be better prepared for future province-wide emergencies, government could ensure that all necessary enforcement resources and coordination structures are in place and ready to be deployed quickly in a coordinated fashion that recognizes the strengths and limitations of all agencies.

Finding 22: Share goals to collaborate on means

In the K–12 sector, the working group established by the Ministry of Education operated with a shared objective of keeping the school system open. It provided an overarching objective that everyone supported. The discussions and decisions focused on *how* to accomplish that rather than debating the goal or not having a clear purpose. There were still disagreements on the best way to keep staff and students safe, but the shared objective helped to focus decision-making. As more information became available, differences arose, particularly between the BC Teachers' Federation and the Ministry of Education on what best practices should be, but the objective did not change. Another example of a shared objective helping to focus attention on the "how" was the coordinated action by the acute health-care sector to create the capacity needed to be ready for a potentially overwhelming surge of patients with COVID-19.

In contrast, post-secondary education institutions in the same city were making different decisions about whether to return to in-person classes, and there were different views by institutions about whether the B.C. post-secondary system or the set of Canadian research universities were the most appropriate reference group. The result was confusion and disruption in the return to on-campus learning. Access for visitors to long-term care facilities was another example where different groups had different objectives and did not work effectively together to achieve a shared objective.

Finding

In some cases during the pandemic, having a shared objective provided government agencies and stakeholders with a solid foundation for collaborative action in implementing response measures, but this was not common, resulting in confusion as different decisions were made in similar situations. To be effective and broadly accepted, the means to achieving the shared objective must be open to debate and discussion.

Conclusion

The lesson about the value of having shared objectives, together with robust discussion about the best way of operationalizing the objectives, could be emphasized as a fundamental principle underlying government's approach to implementing major changes.

Finding 23: Leverage non-government resources

Canadians are proud of our universal public health-care system, which protects access to health care in part by utilizing public sector health authority employees to deliver much of the service. During the pandemic, government took advantage of some non-traditional approaches involving private sector resources to deliver some specific health related services. The newly created vaccine registration system is an example of a successful project that used private sector resources, as was tapping into laid-off hospitality and tourism sector workers to help deliver vaccination clinics and using the private sector to distribute rapid tests.

There were also instances where government missed opportunities to utilize a willing private/not-for-profit sector to support the pandemic response—for example, not using stakeholder associations to their full potential in communicating and explaining COVID-19 orders because written orders and explanatory materials were delayed, as discussed earlier, and an unwillingness to use work camp resources to support vaccination in remote communities.

There are barriers to utilizing non-government resources that are challenging to overcome in the heat of a developing province-wide emergency, when that emergency is disrupting the economy and straining limited government resources. But identifying and addressing those barriers when there is no raging province-wide emergency should be easier.

Finding

During an emergency, the community pulls together and everyone wants to help. There were some notable examples of government using outside resources, but there were also missed opportunities for government to use private/not-for-profit sector expertise, human resources, and facilities to help deliver the government's pandemic response.

Conclusion

Preparations for future province-wide emergencies could include preparing to call upon and utilize private/not-for-profit sector expertise and resources where appropriate to support the government response, including having the legal authority and liability protection in place to do so.

Part 4: INDIGENOUS IMPACTS

The distinct historical, cultural, social, and jurisdictional context within which Indigenous Peoples exist contributed to more severe effects of the COVID-19 pandemic on the Indigenous population than the B.C. population as a whole. Addressing many of the findings and conclusions discussed in the previous part will benefit all British Columbians, including Indigenous Peoples, by enhancing the provincial government's ability to respond to future province-wide emergencies. But there are aspects of the pandemic experience and issues that are unique to Indigenous Peoples. For that reason, in this part we address the effect of the government response on B.C.'s Indigenous Peoples, highlighting their unique perspectives, experiences, interests, and concerns. The placement of the part at the end of the report allows the earlier, more general parts to provide context and contrast to inform this discussion focused on the Indigenous Peoples of B.C. The part's structure mirrors the structure of the report as a whole, including chapters on context, what we heard, and findings and conclusions.

We note that the focus of our report is on the pandemic response of the provincial government, not other governments, and nothing we say should be taken as comment on the pandemic response of First Nations or any other non-public sector organizations.

12. Context

Indigenous Peoples of British Columbia

The Indigenous population of British Columbia is made up of First Nations, Métis, and Inuit Peoples, as recognized by section 35 of the Canadian Constitution. There are approximately 232,000 Indigenous residents in B.C., representing nearly 5 percent of the B.C. population (StatsCan 2016). About 80 percent of Indigenous people live in places other than treaty settlement or reserve lands, with about one in four of them living in Vancouver.

Indigenous people have lived in British Columbia for millennia. Since arriving, settlers have brought racism, disease, and death and have forced Indigenous people out of their communities. In the name of assimilation, Indigenous Peoples were cut off from their traditional culture, languages, spirituality, economies, and systems of governance and subjected instead to laws that marginalized and victimized them throughout a history that we feel is important to acknowledge, even if we are unable to do it justice in this report.

The Indigenous population of B.C. experiences poorer health, lower levels of education, and higher rates of unemployment, mortality from toxic street drugs, incarceration, youth suicide, and domestic abuse than the population as a whole, as well as poorer family crisis outcomes. Persistent racism in the treatment of Indigenous Peoples by B.C.'s health-care system has contributed to these outcomes, as documented in Mary Ellen Turpel-Lafond's November 2020 report, *In Plain Sight*.[23] It includes instances where the Indigenous population was used to test medications, which led many to be distrustful of vaccines during the pandemic.

It is only in recent years that B.C. has begun to come to grips with its mistreatment of Indigenous Peoples and embarked on a journey of reconciliation.

Declaration on the Rights of Indigenous Peoples Act

In November 2019, the B.C. Legislature passed the *Declaration on the Rights of Indigenous Peoples Act* (DRIPA). This legislation, developed in collaboration with the First Nations Leadership Council, established a process to implement the United Nations Declaration on the Rights of Indigenous Peoples and provides the province's framework for reconciliation as called for in the Truth and Reconciliation Commission's *Calls to Action*.

DRIPA states that "the government must take all measures necessary to ensure the laws of British Columbia are consistent with" the United Nations Declaration. When announced, government stated that its intent is to bring laws into alignment with the declaration over time as they are modified or developed.

Articles 23 and 24 of the declaration speak to the rights of Indigenous Peoples to determine health programs and their equal right to health care. The recent enactment of DRIPA provides the framework for the B.C.'s

[23] https://engage.gov.bc.ca/app/uploads/sites/613/2020/11/In-Plain-Sight-Summary-Report.pdf

government's interactions with all Indigenous Peoples, including Indigenous governments and Indigenous-led service providers, as part of the pandemic response.

At present, services are provided to Indigenous Peoples by their governments, Indigenous-led service providers like the First Nations Health Authority (FNHA) discussed below, the federal government, the B.C. government, and, for the many living off reserve, by not-for-profit organizations. This patchwork of support creates service and funding gaps that were highlighted by the pandemic, with the consequence that the services available to an individual often depended on where they lived.

Jurisdiction and governance are complex and underlie all of the interactions among the federal government, provincial government, and Indigenous Peoples. There are differences between Indigenous people with status under the *Indian Act*, members of Treaty Nations, members of Métis Nation British Columbia, Inuit and others who identify as Indigenous, which affect how they are treated and how they are represented.

The *Indian Act* is the primary federal law used to administer Indigenous status, First Nations governments, and reserve lands. It also contains the federal government's obligations to Indigenous Peoples. First Nations governments provide services to their members living on reserve and in some cases away from home. Treaty Nations are governments within Canada that have law-making powers in a number of areas and provide services to their members, whether living in communities on treaty settlement lands or living away from home. Métis Nation British Columbia advocates for and provides services to Métis people living in B.C., largely through Chartered Communities. Inuit living in B.C. do not have a representative government or organization that provides services similar to those provided to other Indigenous Peoples in B.C.

First Nations and Treaty Nations are governments with inherent jurisdiction. As discussed in Chapter 2, wildfire and flooding emergencies have been responded to through the government's Emergency Management BC (EMBC) program. While EMBC has long had working relationships with many First Nations to help with such events, that level of engagement does not yet fully meet the co-development, joint decision-making, and government-to-government relationship set out in DRIPA. For some time now, EMBC has been working with Indigenous governments and Indigenous-led service organizations to co-develop policies, procedures, and practices that align with DRIPA. Finding 24 discusses the modernization of emergency management legislation in alignment with DRIPA.

First Nations Health Authority

In 2013, a First Nations–governed entity unique within Canada, the First Nations Health Authority (FNHA) was created to assume the programs, services, and responsibilities formerly handled by the First Nations and Inuit Health Branch – Pacific Region of Indigenous Services Canada. FNHA works in partnership with B.C. First Nations to improve the health and well-being of First Nations people, including those living off reserve and away from home. Approximately 90 percent of FNHA's funding comes from the federal government, with most of the remainder provided by the provincial government.

FNHA plans, designs, manages, and funds the delivery of First Nations health programs and services in British Columbia, a mandate that extends beyond the former programs and services of Indigenous Services Canada. While it is a health authority, it should not be confused with the six provincial health authorities. Although FNHA works closely with the B.C. Ministry of Health and the health authorities, it neither replaces the services they provide nor is subject to their direction, as it is a fully Indigenous-governed organization.

13. What We Heard from Indigenous Peoples

Our Indigenous engagement process

It was important to us from the start of our engagement process that we give Indigenous Peoples and the governments and Indigenous-governed organizations that represent and provide services to them every opportunity to provide input to our review. At the same time, the already high level of demand for participation in consultation and co-development processes from the federal and provincial governments has increased significantly due to the enactment of DRIPA and a backlog of issues that could not be addressed during the pandemic. Our approach was to provide the opportunity to participate but to respect the other demands on people's time and attention.

Based on these principles, our Indigenous engagement process included the following elements:

- Prior to the public announcement of the review, the Minister of Public Safety and Solicitor General gave notice to the First Nations Leadership Council (FNLC), the Alliance of Modern Treaty Nations (AMTN), and Métis Nation British Columbia (MNBC) and indicated that we would follow up directly with them.
- We met with all three groups to seek their advice on how best to carry out our Indigenous engagements.
- We added an Indigenous liaison person to our team to advise us and participate in our process.
- We invited the following groups to engage with us: FNLC and the three organizations it comprises, AMTN, MNBC, FNHA, the Association of B.C. Friendship Centres, and the First Nations Emergency Services Society, all of whom met with us.
- Invitations to participate were extended by email to all 204 First Nations as well as through presentations at a FNHA all-chiefs meeting and at the B.C. First Nations Emergency Management Forum put on by the FNLC. Invitations provided a number of options for engagement, including in-person or video-conferencing meetings, written submissions, or completion of an online survey (open from May 19 to July 31, 2022). Few First Nations chose to engage with us.
- First Nations that are members of regional districts also received invitations to participate through our outreach to local governments, and that was how one First Nation came to meet with us.

In addition, we have analyzed the 600 responses to the public online survey described in Chapter 4 from respondents self-identifying as Indigenous.

Public survey results

Just over 4 percent of respondents to our survey self-identified as Indigenous. Although this was a self-selected survey and may not be representative of the overall views of Indigenous people, the vast majority of Indigenous respondents had negative views about the government response.

The written comments from Indigenous respondents were generally consistent with those of all respondents reported in Chapter 4 except in the following three areas, with many indicating the following:

- Their communities had less access to online information and resources than non-Indigenous people in less remote areas, who have better internet access.
- Considerable fear was created by offering vaccines first to Indigenous communities because of the history of government experimental vaccination and drug testing programs, which harmed Indigenous Peoples.
- Restrictions associated with the vaccine passport were seen by a few as tantamount to taking away rights that had only just been won.

The striking thing about the survey responses was not the written comments but the answers indicating agreement or disagreement with the statements. Indigenous respondents held more negative views on government's performance than others, with almost 90 percent disagreeing with the statement "The B.C. Government managed the pandemic well," compared with 74 percent overall. A comparison of the Indigenous responses with the overall responses is presented in Table 3.

Table 3: Comparison of Indigenous and overall survey responses

Statement	Indigenous Respondents		Overall	
	Disagree	Agree	Disagree	Agree
It was easy to find govt's COVID-19 information	43%	34%	36%	41%
Govt's information was clear and easily understood	66%	18%	52%	20%
Govt services … continued to be provided …	64%	20%	52%	12%
I trusted information provided by the govt.	87%	8%	74%	19%
The govt responded quickly and effectively …	74%	10%	64%	18%
Overall the B.C. govt managed the pandemic well	87%	8%	74%	18%

Note: "Disagree" is the proportion responding "Strongly Disagree" or "Disagree," and "Agree" is the proportion responding "Agree" or "Strongly Agree." Those with a neutral response are not reported.

What we heard from Indigenous organizations

We received frank, insightful, and valuable input from our engagement with the Indigenous organizations that participated. We have organized these comments by themes that emerged from the input received.

Overall

For Indigenous people, we heard there were three ongoing public health emergencies: COVID-19, toxic drugs, and racism in the health-care system. We were told that, because First Nations communities live so closely together and depend on each other so much, it is important that there be a "whole-community approach" to health care and public health that honours the determinants of health. We heard that the *Rural, Remote,*

First Nations and Indigenous COVID-19 Response Framework,[24] which was co-developed with the Ministry of Health, FNHA, and First Nations, was important as an approach to the pandemic and as a model for the ongoing delivery of health services to Indigenous communities across the province. The framework has not yet been fully implemented, and work is continuing to address remaining gaps.

We heard from most organizations that government's overall response performance was generally good, with particular mention of the vaccine rollout, provision of access to personal protective equipment (PPE), and personal outreach from the PHO on calls and in town-hall information sessions. The FNHA received universal praise for its leadership and service. The regional health authorities were also recognized for their work to establish effective coordination, communication, and service responses. However, others noted that some communities were not supplied with hand sanitizer and PPE, even when shortages ended.

We also heard the following concerns:

- In the vaccine rollout, the whole-community approach would have been to vaccinate whole communities at the same time, not by age, as elsewhere, but the approach to initial shortages was to stratify by age anyway.
- Sometimes it was difficult to determine whether decisions were being made on the basis of evidence or were being made for operational reasons (like immediate supply limitations).
- The federal government provided more funding for Indigenous people in response to the pandemic and other emergencies like the atmospheric river emergency than B.C. did, and the funding was more flexible in terms of what it could be used for.
- Enforcement of orders was an issue due to capacity and community enforcement officers not being given authority under emergency orders.
- There was disappointment about the lack of a ramp-down of orders when they were removed in April 2022, rather than abrupt cessation.

Many First Nations communities were greatly concerned about protecting their members and took steps to establish perimeter security to isolate their communities, and sometimes their traditional territories, from outsiders. The provincial government worked collaboratively with the Nations to assist them in this means of limiting transmission of the virus within their communities.

In keeping with their duties to protect their members, leaders of First Nations reached out to the PHO to secure personal health information for their members so they could better manage their own pandemic responses. Three Nations worked with the PHO to establish a landmark protocol to allow their receipt of health information while ensuring personal privacy protections.

[24] https://www2.gov.bc.ca/assets/gov/public-safety-and-emergency-services/emergency-preparedness-response-recovery/gdx/rural-and-remote-covid-19-response-framework.pdf

We heard that, while there were occasional stumbles, gaps, and blind spots, issues were addressed promptly, and many acknowledged that the overall provincial government response improved over time as valuable lessons were learned.

Communications

Communications from Indigenous communities to the provincial government about the issues and impacts that were affecting the community were a challenge. We heard that there was no channel for these communications.

Comments about overall government communications were mixed. Some characterized them as clear, transparent, trustworthy, and timely, while others raised concerns about components of communications, including the following:

- Delays in providing information and lack of prior notice hampered Chiefs and Councils in their duty to communicate with their members.
- There was insufficient explanation of "the why" of orders.
- Communications became less effective as restrictions began to be rescinded.
- Changes in orders/direction were very difficult to understand and deal with.
- The government website could have been clearer and more easily accessible, especially for people with technical challenges.
- Because communications didn't take Indigenous historical enforced drug-testing trauma into account, the communications were not as effective for Indigenous communities.

The abrupt removal of most restrictions in April 2022 left most First Nations with no time to react to the changes in areas surrounding their communities and lands.

Support for Off-Reserve Indigenous People

Eighty percent of Indigenous people in B.C. live off reserve, but most federal and provincial funding and services are limited to people living on reserve, and that continued during the pandemic. We were told that there was some COVID-19 funding for off-reserve First Nations people by both the federal and provincial governments and that First Nations themselves often supported off-reserve members from own-source revenues, creating fiscal strains for some First Nation governments. Nevertheless, we were told, off-reserve Indigenous people are generally poorly served by government-funded programs. For example, we heard that the initial vaccine rollout targeting on-reserve residents ignored the at-risk off-reserve population. This shortcoming was addressed over time.

It was suggested that a whole-community approach implies that services to urban, away-from-home people should be funded to the same level as services provided to the on-reserve population.

Racism

As noted earlier, the racism inherent in the health-care system has been well documented by Mary Ellen Turpel-Lafond. During the pandemic, we heard of another manifestation of racism, with reports of racist responses to news of COVID-19 cases within Indigenous communities, which led to harassment and exclusion from local businesses in a number of communities.

Relationships

A recurring theme in this report is the importance of relationships in supporting the B.C. government's ability to effectively respond to the pandemic. That theme was also prominent in what we heard during our engagement with Indigenous people and organizations. We heard the following:

- Several groups indicated support for the PHO and her interactions with Indigenous governments and organizations.
- An Indigenous deputy PHO played an important role in supporting communication between the various Indigenous governments and organizations and the Office of the Provincial Health Officer and building understanding on both sides.
- Indigenous organizations were not sufficiently represented in stakeholder round tables across government, especially initially. Some were not included until 2022, and capacity funding to allow participation remains an issue.
- Several useful Indigenous leadership tables were created related to the pandemic health-care response.

Consequences

We heard about several consequences of the pandemic that are similar to what were heard from stakeholders, but which particularly affected Indigenous people:

- Service sector layoffs related to what we refer to as the "social supply chain" early in the pandemic were particularly hard on off-reserve Indigenous people.
- There is ongoing concern about long COVID for Indigenous people.
- There were psychological impacts of mask and vaccine mandates for those unable to comply (e.g., some sexual assault victims), including some who were ostracized because they couldn't comply.
- Hospital visitor access restrictions were an especially significant issue for Indigenous people, as it impeded community well-being and cultural healing, which should be balanced against needs to protect staff and patients.
- More consideration should have been given to the impacts of removing almost all restrictions in April 2022 on rural, remote, and small communities with significant tourism.

14. Findings

For Indigenous people, COVID-19 brought all the same worries, uncertainties, and fears that other British Columbians experienced, but it also triggered historical trauma responses for some, including those with memories of smallpox pandemics. For many, the discovery of unmarked graves at the Kamloops Residential School in May 2021 re-ignited personal memories of neglect, disease, and abuse. The medical response to the pandemic also created chilling echoes of medical experiments in residential schools, where scientists exploited children's malnutrition for their studies and tested unproven medicines on them.

Based on what we heard from Indigenous respondents to our public survey and discussions with Indigenous organizations, many of our report's earlier findings will benefit Indigenous and non-Indigenous British Columbians alike to the extent that the B.C. government is better prepared to respond to the next province-wide emergency. However, the unique circumstances of Indigenous Peoples, B.C.'s evolving government-to-government relationship with First Nations, and the implications of DRIPA for all Indigenous Peoples in B.C. merit some specific focus and comment.

Finding 24: Co-develop Indigenous preparedness role

In Chapter 8 we discussed several ways in which the lessons from the COVID-19 pandemic can be applied to improve preparation for future province-wide major emergencies. All of the changes that arise from that will serve to better prepare the B.C. government to respond to the effects of future emergencies on Indigenous Peoples by enhancing their level of preparedness generally. Under DRIPA, government has committed to co-development, a commitment that will apply fully to the process of becoming better prepared for the next province-wide emergency event. The intention is that DRIPA will facilitate new and better ways for the Province and Indigenous Peoples to work together.

Before the pandemic, the assumption was that the emergency response to a pandemic would be managed much like the response to a local, short-duration emergency like a wildfire. That assumption extended to the role of Indigenous Peoples in both preparation and event management. Circumstances quickly overtook these assumptions and the role of Indigenous governments and Indigenous-governed organizations evolved quickly during the pandemic. We heard some positive comments about those evolving relationships and how that may contribute to learning how to work together under DRIPA, especially the role played by FNHA in coordinating the health-care response and much of the social response to the pandemic for First Nations.

Finding

As with preparation in general, the B.C. government was not ready for the pandemic in terms of how it would work with Indigenous governments and Indigenous-governed organizations in developing and implementing its pandemic response. Roles and relationships did evolve, and FNHA played an important and effective part in the response.

Conclusion

Under DRIPA, government has a commitment to co-develop its structure and plans with Indigenous governments and Indigenous-governed organizations. We expect that the lessons learned from roles and relationships evolved during the pandemic will inform both the co-development of preparations and the plans that emerge. It will be vital for the planning process to be collaborative, co-operative, and consistent with government-to-government relationships.

More specifically, consideration should be given to:

- supporting logistical planning and capacity to ensure access to essential goods if supply chains are disrupted, especially in remote and isolated communities
- specifically preparing to mitigate social service delivery disruptions to urban Indigenous populations, in the context of social supply chain preparedness discussed in Finding 7: Recognize social supply chain importance

Finding 25: Respect Indigenous jurisdiction

The evolving government-to-government relationships between the B.C. government and Indigenous governments over many years and the enactment of DRIPA in 2019 have put a focus on Indigenous jurisdiction. Events rapidly brought matters of jurisdiction to the fore during the pandemic. This first arose when First Nations were concerned about the growing spread of infections within B.C. and, to protect their communities, erected perimeter security at the boundaries of reserve lands and in some cases traditional territories. The brief reopening of tourism in July 2020 sparked concerns among First Nations as vacationing outsiders returned to travelling through First Nations territories.

The provincial government also received requests to provide detailed information on disease incidence to First Nations governments so that Indigenous leadership could exercise their responsibilities and accountabilities for protecting the health and welfare of those in their communities. In early 2021, the PHO and senior government officials sat down with leaders from the Heiltsuk Nation, Tsilquot'in National Government, and member nations of the Nuu-chah-nulth Tribal Council to develop an information-sharing agreement, which was signed in early February of that year.

Finding

Issues involving First Nations' governance responsibilities, including their ability to close off lands to non-residents and to receive personal health data on their members arose quickly and were addressed jointly and promptly, but not necessarily comprehensively. The need for joint planning consistent with the DRIPA principles must also be followed by operational approaches and protocols that respect Nations' territorial rights and jurisdiction.

Conclusion

Canada's Constitution recognizes the sovereignty and right to self-determination of Indigenous Peoples. Consistent with that, as part of the ongoing joint work of DRIPA, implementation related to emergency

preparedness and response, new joint decision making, communications protocols and coordination between First Nations and ministries should be addressed in a manner that respects the inherent jurisdiction of First Nations and recognizes that lack of trust can cause barriers.

Finding 26: Address pandemic overlaps and gaps

British Columbia's and Canada's shared and occasionally overlapping responsibilities related to health services for Indigenous Peoples highlighted issues as the pandemic unfolded. The provincial health system provides a full range of acute and other types of health care and supports for all provincial residents, including urban Indigenous people. Canada has primary responsibility to fund most of the services provided by Treaty Nations and First Nations governments, and for providing extended health-care services to Indigenous people. In B.C., the federal government's extended health care responsibility for First Nations individuals is largely fulfilled through funding to FNHA, an Indigenous-governed organization that provides some services directly to individuals and others through Treaty Nations and First Nations governments.

The pandemic revealed some important gaps that had significant effects on Indigenous Peoples. One was the substantial logistical challenges faced by rural and remote Indigenous communities when physical supply chains for essential goods were disrupted. Access to masks and other PPE and food security were issues for some communities. Another was the effect of the social supply chain disruption, which had the greatest effect on those people most likely to be severely affected by COVID-19. We understand that it had a particularly significant impact on urban Indigenous people living away from home because much of the social support provided to them falls into the category of social supports that are not provided under provincial government programs, so addressing their disruption was not initially part of the government pandemic response. Both the federal and provincial governments provided specific funding to address this issue, including a $7.8 million one-time grant from the Province to the B.C. Association of Aboriginal Friendship Centres in December 2020.

Finding

The pandemic highlighted the confusing complexity of health-care service delivery responsibilities on the ground. This complexity made coordination more difficult and created uncertainty, gaps and overlaps, inefficiencies, inconsistencies in the types of supplies made available, differences in the flexibilities attached to funding for First Nations, and inconsistent levels of support for First Nations members living away from home in urban environments.

Conclusion

Better coordination is needed among the provincial government, federal government, and B.C.'s First Nations to address gaps and challenges. This work should be carried out on a tripartite basis in preparation for future province-wide emergencies. Co-developed protocols and agreements establishing more clarity, consistency, comprehensiveness, and certainty in the delivery of assistance and services to all Indigenous Peoples, resolving overlaps and gaps revealed by the pandemic response, would be a significant improvement.

CONCLUSION

Overall, B.C. mounted a strong and generally successful response to the pandemic that bodes well for its ability to respond to the next province-wide event. That success came despite B.C. not being prepared for the pandemic, which gives rise the many lessons documented in our findings that the B.C. can apply to be better prepared in future.

Everyone and every group experienced the pandemic differently, and those unique experiences colour reactions to the government response. Most expected the Government of British Columbia's response to be a health-care response, an assumption proven wrong immediately when all of society was disrupted by the fear of getting COVID-19 and by the measures taken to control its spread. Government responded with:

- public health measures to reduce transmission
- health-care responses to protect and manage the health-care system
- actions to continue government service delivery
- measures to reduce the impact of the pandemic and public health restrictions on society, including supporting recovery

Public health, its focus on the population as opposed to the individual, and its approach of balancing the harm caused by the disease with social and economic consequences were not well understood. The long duration of the event surprised everyone.

Beyond the public service doing what needed to be done quickly and effectively on a daily basis, every sector of society stepped up to work with government to support its response, and there was strong support from and collaboration among all provincial political parties through the initial phases of the pandemic. There is every reason to be optimistic that the same spirit will be available to be called upon the next time. Many of the improvements we suggest are intended to bolster that spirit and facilitate management of the response to future province-wide emergencies.

There are several key themes in the lessons that can be learned from the pandemic response, which are reflected in our findings. They include the need for public trust of government, the importance of preparation, the value of good two-way communication, and the need to be organized in advance to mount an effective response.

Trust

High levels of public trust supported the B.C. government pandemic response. That trust was built on avoiding the extreme political divisions observed in some other jurisdictions. Trust was enhanced by a balanced public health response, which in turn supported the effectiveness of the public health measures, as well as by quick and effective action to keep government services operating and to provide needed supports to those affected by the pandemic and by the public health measures. As in other jurisdictions, that trust has been eroded somewhat over time, but to a lesser degree than most. Divisive mandatory requirements related to masking and vaccination, and emerging communications issues contributed to a reduction in trust. It is important that the reservoir of trust be refilled in order for government to be prepared for the next province-wide emergency.

Preparation

Preparation encompasses many things, almost all of which were not in place prior to the pandemic. That meant that more issues had to be addressed on the fly than necessary. Better preparation next time may not change the overall outcome but should improve the ability to manage the response. A commitment to rigorous ongoing planning is essential, but preparation extends well beyond that. Defining organizational structures to be utilized ahead of time and identifying and implementing ways to mitigate anticipated disruptions in advance would also pay dividends in terms of improving government's business-as-usual operations. This theme is evident throughout our findings.

The fact that pre-pandemic emergency planning and the structures it established were not utilized suggests that Emergency Management BC's role related to province-wide emergencies could be reconsidered and redefined to provide effective cross-government coordination. The pandemic (and the atmospheric river event during the pandemic) revealed the importance of the availability of essential goods like food, fuel, and medical supplies, and the susceptibility to disruption of the supply chains. It is crucial that ways to mitigate those risks for a variety of hazards be developed. It should not have been necessary to manually collect hospitalization numbers and information about what medical supplies were on hand and where they were because of inadequate systems.

Communications

The initial Provincial Health Officer–led communication approach was effective but over time could have been improved. The approach taken by the Provincial Health Officer and the Minister of Health in daily press briefings established a foundation for public trust that was unmatched in Canada. The importance of that to the overall response, especially during the early stages of the pandemic, cannot be overstated.

But as the pandemic dragged on, several communication cracks appeared, providing important lessons for the next time. More closely following standard government practice for major announcements—having written explanatory materials available at the time of announcement—would be an improvement. More transparency about uncertainty would also have been helpful. In addition, being clear about how stakeholders can provide input, coupled with more emphasis on explaining why changes are being made and why apparent inconsistencies in treatment are required, would be significant improvements, to the extent allowed by circumstances.

Relationships were important for communications during the pandemic for two key reasons: stakeholders were key to government communicating and implementing public health response measures; and, especially as those measures became more targeted, stakeholders were a source of input on how best to design the measures. The B.C. government has long been committed to and practised consultation, largely for these same reasons, but the importance of getting the public health response right and doing it quickly completely changed how stakeholders were used.

Government did a good job of strengthening existing relationships and building new relationships during the pandemic, which benefited both the public health and service delivery response by government. But it could have been improved. Those stakeholders with long-standing and trusted relationships were better able to get advance notice of coming changes and to have an opportunity to provide input to improve the design of specific changes to public health restrictions. It is important both that trusted stakeholder relationships

continue to be built and maintained, and that government be better prepared next time to fully utilize those relationships to support its messaging and to gather stakeholder input.

Implementation

The pandemic revealed gaps in government's understanding, programs, and surge capacity during a province-wide emergency, several of which were effectively addressed during the pandemic. Perhaps the most important is what we call the social supply chain. The interconnectedness of the web of social services that support so many in our communities is not something government understood very well before the pandemic, especially the importance of services provided by a large number of agencies without government funding. These supports were particularly subject to disruption, with significant effects on those who relied on them. Interactions among government social support programs were also not well understood. Improving that is one of the areas where preparing for future provincial emergencies has the potential to significantly enhance business-as-usual service delivery.

Another organizational issue is related to the capacity needed over a long duration to maintain an effective, all-of-government response to a province-wide emergency. Government's relatively effective overall response came at a price in terms of fatigue, burnout, and risk to ongoing service delivery. In part, that is due to the long duration of the pandemic coming as a surprise to the world. Many in the public sector and among government stakeholders told us they would have managed differently if they had known. Since we all now understand that province-wide emergencies can have a long duration, this is the time to prepare to quickly enhance surge capacity next time, and to better manage human resources throughout the next event. Utilizing non-government resources, rotating people through high-intensity positions, and making sure that crucial functions are not under-resourced on an ongoing basis are three of the points made in our findings.

Indigenous Impacts

Two hundred years of colonial history and a history of racism, including in the health-care sector, have left the Indigenous Peoples of B.C. more likely to be severely affected by a public health emergency like the COVID-19 pandemic or other province-wide emergency. The complexity of federal, provincial, and First Nations jurisdictions increased the challenges faced by the B.C. government in responding appropriately. The commitment to reconciliation and co-developing a new way of relating to Indigenous Peoples embodied by the *Declaration on the Rights of Indigenous Peoples Act* (DRIPA), enacted in late 2019, put even higher expectations on the provincial government's pandemic response. The First Nations Health Authority, a First Nations–governed organization providing health-care and wellness services to First Nations and off-reserve Indigenous people, was widely recognized for its success in working with First Nations, the federal and provincial governments, and the health-care system. This contributed to a B.C. government response that was generally effective and moved the implementation of DRIPA forward.

In addition to our general findings and conclusions, which should improve responses in future to benefit Indigenous and non-Indigenous British Columbians alike, there are lessons about improvements specific to Indigenous Peoples. Efforts should continue in the co-development of an Indigenous role in preparation for a province-wide emergency, tripartite emergency planning, and better service delivery, particularly for Indigenous people living in urban environments.

Summary

In summary, the pandemic has provided some key lessons that can be applied to ensure that B.C. is better prepared for the next province-wide emergency. We have identified several areas where improvements can be made by being better prepared, improving communications, better incorporating input into decision-making, and addressing organizational issues, including Emergency Management BC's role.

Overall, the B.C. government mounted an effective response to the pandemic, demonstrating a balanced public health response based on the principle of minimizing restrictions, and a nimbleness and resiliency that surprised many. There is an opportunity now to build on that response.

APPENDICES

Appendix A: Terms of reference

1

COVID-19 Lessons Learned

Terms of Reference

The COVID-19 pandemic has affected all aspects of the BC government and the broad BC public sector throughout 2020, 2021 and into 2022. The provincial government intends to undertake a review of government's operational response to the pandemic to capture lessons learned to date. Not only will this help to inform preparations for and the response to the next pandemic, which will inevitably occur in the future, but also contribute to planning and operational readiness for responses to the full range of risks of disasters and emergencies, which include earthquakes, climate change-induced extreme weather and wildfires, and many other situations that may affect large areas of the province.

Scope

The objective of this review is to improve the provincial government's ability to respond to future emergencies of all kinds.

This review is focussed on operational response to the pandemic by the BC government since January 2020. The term "operational response" is chosen to focus the review on cross-government efforts to identify the implications of the pandemic, to make timely and informed decisions, and to implement those decisions in accordance with public health guidance and government policy direction.

The scope of the review excludes an assessment of economic recovery and public policy decisions made by government to deal with the consequences of the pandemic and decisions made by the independent Provincial Health Officer. The review will, however, look at how these decisions were made.

The review seeks to find what can be learned from how provincial government agencies responded and worked together to directly address the effects of a public health emergency that affected everything, changed rapidly, and created a high level of uncertainty. And what aspects of preparedness, engagement, communication, and execution worked well, what changes were made to enhance operational effectiveness as the pandemic evolved, and what improvements can be made to be better prepared for the next emergency.

Structure

The review is a cross-government initiative. A senior external project team will conduct the review and prepare the public report. They have extensive experience in government operational management and knowledge of how public sector service delivery is structured in BC. The client for the report is the Deputy Minister to the Premier. The consultants will be supported by Emergency Management BC, which will be the lead agency in government for this initiative.

There are three aspects to the review:

- How were the implications of the pandemic identified?
- How timely and informed were decisions made in response to the pandemic?
- How were those decisions communicated and implemented, consistent with public health guidance and government policy?

FINAL

The project team will research best practises and engage extensively, including:

- Reviewing internal assessments of the operational response undertaken by all ministries and select provincial government agencies. These will build upon any lessons-learned reviews already completed to avoid duplication of effort and be guided by a common statement of scope, objective, and questions to be addressed.
- Engaging First Nations, Indigenous organizations, external stakeholders, partners, and independent regulators that played a role in delivering the response or were affected by the response. These engagements will ensure input on the operational response by government agencies is considered in identifying lessons learned. Appendix A is an initial list of groups that will be engaged, with additional groups added as necessary during the process. MLAs from all parties will also be engaged.
- Engaging the public through an online portal where individuals and organizations will have the opportunity to submit written input.

Other Reviews

Given the scope of the COVID-19 response, and the number of public organizations and agencies that contributed to the overall response, there will likely be a variety of reviews undertaken by independent entities. The report will be informed by these reviews and best efforts made to avoid duplication and overlap.

Timing and Report

The final report to be submitted to government by September 30, 2022.

The final report will be a comprehensive summary of findings developed from best practices research, the internal operational assessments and stakeholder/public input and is intended for public release. It will not make recommendations.

3

Appendix A

Groups to be engaged by the project team are:

- Indigenous representative and service delivery organizations
- Health authorities and health service delivery providers
- Social service providers, including those for vulnerable populations and childcare providers
- Education providers and representative organizations in both the K-12 and post-secondary sectors
- Public sector unions and employee representative organizations
- Industry associations and representative organizations across the full range of economic sectors
- Provincial Crown corporations, public sector service providers and regulatory organizations
- Local governments and representative organizations

Additional groups to be engaged will be identified as the review proceeds.

Appendix B: Annotated bibliography

Abrams, Zara. (2021). Controlling the Spread of Misinformation: Psychologists' research on misinformation may help in the fight to debunk the myths surrounding COVID-19. American Psychological Association, Vol 52, No2.

Key points for COVID-19 Lessons Learned Review:

- although there are other factors contributing to public uncertainty and skepticism in the current COVID-19 pandemic, among some of the population there is a direct link between misinformation and behaviour resulting in adverse impacts
- remedies for countering misinformation are the subject of research but addressing its spread, particularly through social media, will require concerted and co-operative effort and partnerships between government, researchers, and social media platforms.

Ahern, Susannah and Erwin Loh. (2021). Leadership during the COVID-19 pandemic: building and sustaining trust in times of uncertainty. *BMJ Leader*, Vol 5. doi:10.1136/leader-2020-000271.

Key points for COVID-19 Lessons Learned Review:

- To instil trust in citizens required for an effective pandemic response, leaders must take appropriate actions to prepare and plan; seek out information and intelligence; adapt and ensure coordinated responses; and to sustain trust, be responsible, accountable and maintain close connections with those their decisions impact.

Alami, Hassane, Pascale Lehour, Richard Fleet, Jean-Paul Fortin, Joanne Liu, Randa Attleh, Stephanie Bernadette Mafalda Cadeddu, Mamane Abdoulaye Samri, Mathilde Savoldelli and Mohamed Ali Ag Ahmed. (2021). How Can Health Systems Better Prepare for the Next Pandemic? Lessons Learned From the Management of COVI-19 in Quebec (Canada). Frontiers in Public Health, Vol 9, Article 671833. doi: 10.3389/pubh.2021.671833

Key points for COVID-19 Lessons Learned Review:

- Many governments were unprepared for the COVID-19 pandemic which challenged the health and public health sectors and revealed systemic weaknesses in responding to the crisis
- Countries must learn from COVID-19 and identify capacities and conditions to create a resilient and sustainable system including investing in and strengthening social policies; strengthening the health-care and public health sectors; and improving communication and trust in government and institutions through promoting a high degree of transparency with and involvement of the public.

Auditor General of British Columbia. (2014). Catastrophic Earthquake Preparedness. Government of British Columbia.

Key points for COVID-19 Lessons Learned Review:

- preparing for catastrophic event(s) requires long-term view and commitment

- government needs to establish goals and then provide direction to emergency management organization regarding achievement of goals
- need for ongoing monitoring and review of goals, plans and level of preparedness
- government must ensure that emergency management organization has necessary capacity to plan, prepare and respond.

Auditor General of Ontario. (2020). COVID-19 Preparedness and Management: Special Report on Emergency Management in Ontario – Pandemic Response. Government of Ontario

Key points for COVID-19 Lessons Learned Review:

- the emergency management structure in Ontario was not ready for a province-wide emergency such as the pandemic because of deficiencies in its system related to out-of-date response plans, lack of practice testing, inadequate leadership and staffing and no continuous learning
- new ad hoc structures put in place to respond to the pandemic were not aligned with known emergency management principles and were cumbersome and confusing
- the Province needs to undertake a lessons learned review and make changes to ensure the structure is as effective as possible in responding to a province-wide emergency.

Auditor General of Ontario. (2020). COVID-19 Preparedness and Management: Special Report on Outbreak Planning and Decision-Making. Government of Ontario

Key points for COVID-19 Lessons Learned Review:

- ineffective systems and procedures were in place in the Ontario Ministry of Health to identify and respond to the COVID-19 pandemic in a timely and organized way
- action is needed to update and make changes to response plans, systems, and processes to clarify roles and responsibilities, include leadership of public health experts in decision-making, enhance communications, and build on lessons learned.

Baubion, C. (2013). OECD Risk Management: Strategic Crisis Management. OECD Working Papers on Public Governance, No 23 OECD Publishing.

Key points for COVID-19 Lessons Learned Review:

- Governments, while retaining their approach to preparing for classic crises through standard operating procedures and pre-defined plans, must also invest in the development of adaptable and flexible processes and capacities to effectively prepare for the unknown, respond to the complexity of novel crises and meet the needs and expectations of citizens.

Bell, Jessica A., and Jennifer B. Nuzzo (2021). Advancing Collective Action and Accountability Amid Global Crisis. Global Health Security Index. Available: www.GHSIindex.org

Key points for COVID-19 Lessons Learned Review:

- despite significant steps made by countries to respond to the COVID-19 pandemic, countries remain dangerously unprepared to meet future epidemic and pandemic threats

- investing in long-term sustained capacities is needed to maximize preparedness; this must be supported by political will and government readiness and flexibility to use available capacities in a way that aligns with evolving evidence-based public health recommendations.

Berger, Loic, Nicolas Berger, Valentina Bosetti, Itzhak Gilboa, Lars Peter Hansen, Christopher Jarvis, Massimo Marinacci and Richard D. Smith. (2021). Rational Policymaking During a Pandemic. PNAS—Proceedings of the National Academy of Sciences of the United States of America, edited by Ariel S. Pakes. Vol 118, No 4.

Key points for COVID-19 Lessons Learned Review:

- decision-making during the COVID-19 pandemic is very challenging given that it is a new disease with unprecedented global impacts in a highly uncertain, complex, and rapidly changing environment
- modern decision theory, even informally, can help policymakers to make more rational decisions, and promote transparency around decision-making, during the COVID-19 pandemic and the highly uncertain, complex, and rapidly changing environment it presents.

Bernheim, Ruth Gaare. (2016). Public Engagement in Emergency Preparedness and Response: Ethical Perspectives in Public Health Practice. Emergency Ethics: Public Health and Preparedness Response, edited by Bruce Jennings, John D. Arras, Drue H. Barrett, and Barbara Ellis. Oxford University Press.

Key points for COVID-19 Lessons Learned Review:

- from an ethical perspective, public engagement is a necessary feature of emergency preparedness and public health governance
- public engagement has two dimensions: the political, and the need for public health governance to deliberate about societal values and ethical tensions; and the social, and the need to consult about the ethical aspects of specific emergency preparedness programs and activities.

Bradley, Declan Terence, Mariam Abdulmonem Mansouri, Frank Kee, and Leandro Martin Totaro Garcia. (2020). A Systems approach to preventing and responding to COVID-19. eClinicalMedicine. Vol 21, No 10000325

Key points for COVID-19 Lessons Learned Review:

- Systems thinking can help policy-makers better understand the multiple implications of decisions and actions/inactions and interconnected factors to develop policies that bring about protective structural system changes to both reduce the risk of transmission of COVID-19, but also create a system that is intrinsically more resilient to new, and established, infectious agents.

Chaudhury, Kumar Surjeet, Arpita Nibedita, and Pradipta Kumar Mishra. (2021). Command and Control in Disaster Management. IJCSI International Journal of Computer Science Issues, Vol. 9, Issue 4

Key points for COVID-19 Lessons Learned Review:

- The intent of detailed command and control systems (C^2) is to impose order, discipline, and coordination to responding to a disaster. A traditional C^2 model emphasizes vertical, linear information flow with information flowing up the chain of command and orders flowing down to minimize uncertainty.
- The traditional command and control approach is poorly equipped to deal with uncertainty, complexity, and variability in a major disaster; decentralized decision-making based on a common mission and effective broadcast and horizontal communication could improve crisis response.

Council on Foreign Relations, Independent Task Force Report No 78. (2020). Improving Pandemic Preparedness: Lessons from COVID-19.

Key points for COVID-19 Lessons Learned Review:

- the United States, and the world, were woefully unprepared for the COVID-19 pandemic and the response was flawed; the United States needs to make the pandemic preparedness a national priority and invest accordingly including in test and tracing capacity and medical supply chains and the Centres for Disease Control and Prevention need to be reformed and roles of federal and state authorities clarified.

COVID-19 National Preparedness Collaborators. (2022). Pandemic preparedness and COVID-19: an exploratory analysis of infection and fatality rates, and contextual factors associated with preparedness in 177 countries, form January 1, 2020 to September 30, 2021. The Lancet. Published online - DOI:https://doi.org/10.1016/S0140-6736(22)00172-6

Key points for COVID-19 Lessons Learned Review:

- Adoption of essential public health measures and change in behaviour by citizens depends on trust in government and inter-personal trust
- Efforts to improve preparedness and response for the next pandemic might benefit from greater investment in risk communication and community engagement strategies to boost the confidence that individuals have in public health guidance.

Cyr, Amelie, Prosanta Mondai, and Gregory Hansen. (2021). An Inconsistent Canadian Provincial and Territorial Response During the Early COVID-19 Pandemic. Frontiers in Public Health, Vol 9, Article 708903

Key points for COVID-19 Lessons Learned Review:

- The type, basis for and timing of implementation of measures to respond to COVID-19 varied greatly across provinces and territories resulting in suboptimal testing, mobilization of the health-care system and disease containment
- it is not clear whether a more coordinated national response would have better outcomes, but a call for greater federal leadership and coordination bears further scrutiny.

Federal Emergency Management Agency (FEMA). (2021). Pandemic Response to Coronavirus Disease 2019 (COVID-19): Initial Assessment Report—FEMA Operations January through September 2020

Key points for COVID-19 Lessons Learned Review:

- Emergency management response to COVID-19 has shown that changes to the current US incident management structure and existing policies, plans and procedures are needed to provide a coordinated response to nation-wide, long-term disasters such as COVID-19.
- Recommendations of the report emphasized the following:
    - importance of relationships, based on trust and partnership, in FEMA's incident management structure, and the need to build on and reinforce partnerships
    - need to update doctrine, guidance, plans, and procedures to reflect the national nature of the COVID-19
    - the critical role of the private sector and non-governmental organizations in readying the nation for disasters and need to invest in capabilities for collaboration and innovative solutions
    - investment in systems to make data actionable and relevant
    - continued investment in training and development of emergency mangers.

Hutchings, S.D., J. Perry, A. Mills, F. Bartley, M. Bartley, and C.J. Park. (2021). Command, Control and Communication During the COVID-19 Pandemic; Adapting a Military Framework to Crisis Response in a Tertiary UK Critical Care Centre. Journal of the Intensive Care Society. Vol 0, No 0.

Key points for COVID-19 Lessons Learned Review:

- the application of a military command and control model to health-care systems to respond to a crisis such as COVID-19 is challenging due to the differing circumstances, culture, and environment
- aspects of the military command and control structure can be used, however, to develop a model for health-care systems to provide effective overall leadership and management to the system in a time of crisis.

Hassan I, F Obaid, R Ahmed, L Abdelrahman, S Adam, O Adam, et al. (2020). A Systems Thinking Approach for Responding to the COVID-19 Pandemic. East Mediterr Health J. Vol 26, No 8.

Key points for COVID-19 Lessons Learned Review:

- This commentary defines a system as an entity with interrelated and interdependent parts at multiple levels that work together to achieve a common purpose—health care is considered a system. Any change into one part of system affects the whole system.
- Systems thinking is a holistic approach to better understanding how system elements interact with each other, the root-cause of system defects and the approach to achieving highly effective problem-solving intervention.
- Use of systems thinking approach based on understanding how elements of a system interact and identifying causes, key leverage points and unintended consequences can help with designing measures to mitigate the effects of COVID-19.

Hyland-Wood, Bernadette, John Gardner, Julie Leask, and Ullrich K. H. Ecker. (2021). Toward Effective Government Communication Strategies in the Era of COVID-19. Humanities & Social Sciences Communications. https://doi.or/10.1057/s41599-020-00701-w.

Key points for COVID-19 Lessons Learned Review:

- effective government crisis communications requires public trust which is built through transparency and civic engagement
- effective communication is a two-way process that involves clear messages, delivered via appropriate platforms, tailored for diverse audiences, and shared by trusted people
- use of digital tools requires careful consideration and communication as they can affect citizen's perceptions of transparency and their trust in government.

Independent Panel for Pandemic Preparedness and Response. (2021). COVID-19: Make it the Last Pandemic. https://theindependentpanel.org/wp-content/uploads/2021/05/COVID-19-Make-it-the-Last-Pandemic_final.pdf

Key points for COVID-19 Lessons Learned Review:

- This WHO independent panel recommended, among other things, that pandemic preparedness and response at the national level must be based on lessons learned and best practice, including building multidisciplinary capacities; conducting simulation exercises; engaging with local communities as promoters of pandemic literacy; increasing investment to build resilient health and social protection systems; and investing in coordinated risk communication strategies to reach all populations including marginalized communities.

Merchant, Raina. M and Nicole Lurie. (2020). Social Media and Emergency Preparedness in Response to Novel Coronavirus. Journal of the American Medical Association. Vol 323, No 20.

Key points for COVID-19 Lessons Learned Review:

- Social media should be leveraged to support emergency response, resilience, and preparedness in the current COVID-19 pandemic and in future public health threats.

Moynihan, Donald P. (2009). The Network Governance of Crisis Response: Case Studies of Incident Command Systems. The Journal of Public Administration Research and Theory. Vol 19.

Key points for COVID-19 Lessons Learned Review:

- application of ICS may not be the most effective approach in providing control in the largest of emergencies
- addition of a network governance perspective, rather than the traditional hierarchical command and control structure, may ensure better co-operation, collaboration, and effective problem solving among multiple agencies.

National Homeland Security Consortium. (2021). COVID-19 After-Action Report

Key points for COVID-19 Lessons Learned Review:

- the scale, impact and complexity of the pandemic truly tested the operational coordination concepts of the Incident Command System (ICS)
- standard incident response approaches and existing authorities and systems were insufficient and there is a need to update plans to expand relationships and partnerships and clarify roles and responsibilities in a pandemic response.

OECD. (2020). Combatting COVID-19 disinformation on online platforms. OECD Policy Responses to Coronavirus (COVID-19).

Key points for COVID-19 Lessons Learned Review:

- The spread of COVID-19 disinformation is impacting people's health and the road to recovery; coordination and co-operation by online platform companies, government, health organizations and civil society is needed to combat the spread
- Specific actions on online platforms to counter spread of disinformation include support for independent fact-checking organizations; human moderators; transparency; and improving users' media, digital and health literacy skills.

OECD. (2020). COVID-19 and Global Value Chains: Policy Options to Build More Resilient Production Networks. OECD Policy Responses to Coronavirus. OECD Publishing, Paris.

Key points for COVID-19 Lessons Learned Review:

- COVID- 19 has reignited the debate about supply chains risk; past experience and the COVID-19 pandemic show that global supply chains (GSCs) can be disrupted and that these disruptions play a role in the propagation of economic shocks across industries and nations, but they can also help firms and countries to recover
- The role of government is to support efforts of firms to build more resilient GSCs through
    - collecting and sharing information on potential bottlenecks upstream
    - developing stress tests for essential supply changes, and
    - creating a conducive regulatory environment which is not a source of additional policy-related uncertainty.

OECD. (2022). First lessons from government evaluations of COVID-19 responses: A synthesis. OECD Policy Responses to Coronavirus. OECD Publishing, Paris.

Key points for COVID-19 Lessons Learned Review:

- Countries were generally unprepared for the pandemic but lessons learned to date can inform the continued response to the crisis and future actions to build resiliency
- Key insights included that:
    - existing crisis management plans and standard operating procedures are not enough to manage events such as a pandemic and enhancements to decision-making,
    - communications and messaging could help countries manage their response to such a crisis, and

- trust requires transparency, not only through frequent and targeted crisis communication, but, more importantly, by engaging stakeholders and the public in risk-related decision-making

OECD. (2021). Global Value Chains: Efficiency and Risks in the Context of COVID-19. OECD Policy Responses to Coronavirus. OECD Publishing, Paris.

Key points for COVID-19 Lessons Learned Review:

- The COVID-19 pandemic has intensified the debate about the risks versus the benefits of GVCs prompting some to call for the re-localization of GVCs; an analysis of a re-localized scenario finds that GVCs play an important role in cushioning against shocks and that the case for reshoring is weak but that there is room for international co-operation and joint efforts of government and business to improve risk preparedness.

OECD. (2020). Public servants and the Coronavirus (COVID-19) pandemic: emerging responses and initial recommendations. OECD Policy Responses to Coronavirus (COVID-19).

Key points for COVID-19 Lessons Learned Review:

- Governments' actions to managing their public service during COVID-19 pandemic present longer term opportunities for promoting the agility and productivity of the public service and the normalization of successful innovations.

OECD. (2015). The Changing Face of Strategic Crisis Management. OECD Reviews of Risk Management Policies. OECD Publishing, Paris. http://dx.doi.org/10.1787/9789264249127-en

Key points for COVID-19 Lessons Learned Review:

- traditional approaches based on standard operating procedures and built on experience of past events are no longer sufficient in responding to new and unprecedented events
- need a fundamental shift in crisis management - put in place more responsive and agile systems including engagement of public and private sector in crisis management; accessing multi-disciplinary expertise in decision-making; leveraging social media; and training for professionals and leaders.

Rajan, Dheepa, Kira Koch, Katja Rohrer, Csongor Bajnockzi, Anna Socha, Maike Voss, Marjolaine Nicod, Valery Riddle, Justin Koonin. (2020). Governance of the COVID-19 Response: a call for more inclusive and transparent decision-making. BMJ Global Health, Vol 5, e002655. doi:10.1136/bmjgh-2020-002655

Key points for COVID-19 Lessons Learned Review:

- Governments must recognize the multidimensional effects and needs of society during the COVID-19 pandemic, consult more broadly beyond public health based on a true multi-sectoral paradigm and be more transparent about who decision-making bodies are listening to as a basis of their decisions.

Rose, Dale A., Shivani Murthy, Jennifer Brooks, and Jeffrey Bryant. (2017). The Evolution of Public Health Emergency Management as a Field of Practice. American Journal of Public Health. Vol 107, No S2.

Key points for COVID-19 Lessons Learned Review:

- Public health emergency management is an emergent field of emergency management practice; its continued development depends on political will to invest in public health infrastructure and development of evidence based best practices and growth of a cohort of PHEM practitioners.

Sasangohar, Farzan, Jason Moats, Ranjana Mehta, S. Camille Peres. Disaster Ergonomics: Human Factors in COVID-19 Emergency Management (2020). Human Factors. Vol. 62, No. 7, pp1061-1068. doi:10.1177/0018720820939428.

Key points for COVID-19 Lessons Learned Review:

- the scale and magnitude of the current pandemic has produced a set of conditions and created a challenging environment for even the most seasoned emergency responders and disaster managers;
- preparedness and resilience can be enhanced through human factors and ergonomics (HFE) including interdisciplinary communication and coordination, identifying, and developing training in the specific abilities, skills and knowledge required in a pandemic response; and building capability and capacity to protect the essential workforce.

Schippers, Michaéla and Diana C. Rus. (2021). Optimizing Decision-Making Processes in Times of COVID-19: Using Reflexivity to Counteract Information Processing Failures. Fronters in Psychology. Vol 12, Article 650525.

Key points for COVID-19 Lessons Learned Review:

- group think, a narrow focus on the problem of containing the virus, and escalation of commitment may pose real risk to decision-making during the COVID-19 crisis
- reflexive decision-making including deliberate processes to widen the array of information, perspectives and opinions considered and ongoing reassessment of the situation, new evidence and actions that have been taken could minimize information processing errors and facilitate more holistic approaches that balance a variety of concerns such as physical and mental health, the economy and personal rights.

Summers, Jennifer, Hao-Yuan Cheng, Hsien-Ho Lin, Lucy Telfar Barnard, Amanda Kvalsvig, Nick Wilson, and Michael G. Baker. (2020). Potential Lessons From the Taiwan and New Zealand Health Responses to the COVID-19 Pandemic. The Lancet Regional Health—Western Pacific. No 4.

Key points for COVID-19 Lessons Learned Review:

- effective response to a pandemic requires proactive actions to ensure that the needed infrastructure and systems are in place
- this includes a national public health agency to manage both the prevention and control of public health threats; a general pandemic plan that allows for responses to different diseases;

investment in resources and infrastructure; review of workforce and training needs; audit and evaluation of infectious disease capabilities and responses; and establishing the cultural, societal, and legal acceptability of required pandemic response measures.

Tam, Theresa W. S. (2020) Preparing for uncertainty during public health emergencies: What Canadian health leaders can do now to optimize future emergency response. Healthcare Management Forum. Vol 33, No 4. doi:10.1177/0840470420917172.

Key points for COVID-19 Lessons Learned Review:

- Epidemics will become more frequent, more complex, and harder to prevent and contain, requiring flexible, scalable plans, trained people and resources that are built on lessons learned and evidence-based practices supported by sufficient "upstream" investment in emergency preparedness.

Tubb, Helen. (2020). Crisis Management, Coordination and Capacities. European Commission: European Public Administration Country Knowledge. Publications Office of the European Union. doi:10.2887/476769

Key points for COVID-19 Lessons Learned Review:

- the four key foundations of crisis management are: preparedness; political learning; expertise and crisis communication; and coordination
- in making reforms to improve crisis management systems, government should invest in detection capacities; balance centralized and decentralized responsibilities; be proactive in the politics of crisis management; be self-reflective to ensure flexible adaptation; and based on what was learned from first wave of COVID-19 be prepared for successive waves and learn from current crisis to inform response to future crises.

Turoff, Murray, Starr Roxanne Hiltz, Victor A. Banuls, Gerd Van Den Eede. (2013). Multiple Perspectives on Planning for Emergencies: An Introduction to the Special Issue on Planning and Foresight for Emergency Preparedness and Management. Science Direct - Technological Forecasting and Social Change, Vol 80, Issue 9.

Key points for COVID-19 Lessons Learned Review:

- current emergency planning and preparedness is not operating as intended and much greater effort in planning and foresight for emergencies is required particularly given the potential threats possible in the next decade
- future study is needed on ways to support and integrate citizen participation in all phases of crisis management.

US Department of Energy, Office of Enterprise Assessments. (2020). Lessons Learned: Command, Control and Communication During the COVID-19 Pandemic Response

Key points for COVID-19 Lessons Learned Review:

- The crisis response framework needs a simple direct framework to support agile decision-making, streamlined authority and clear enterprise-wide communication; normal line-management chain of commands and direction should be used wherever feasible.
- Command and control structures in crisis response plans, while entailing a complex arrangement of response organizations and various advisory entities, lacked a simple direct framework for agile decision-making and action.

Van Assche, Ari. (2021). Shortages in Essential Goods: Are Global Value Chains Part of the Problem of the Solution. Canadian Global Affairs Institute. doi.org/10.11575/sppp.v.14i.72574

Key points for COVID-19 Lessons Learned Review:

- Supply chain disruptions did not cause shortages in PPE and other essential goods experienced in early days of pandemic; unprecedented global demand, limited stockpiles and constrained production capacity was responsible for the shortages
- Governments can prepare for the next pandemic by working with essential goods producing industries to conduct stress tests and address any shortcomings through policy tools such as targeted stockpiling and public procurement policies

Vaughan, Elaine and Timothy Tinker. (2009). Effective Health Risk Communication About Pandemic Influenza for Vulnerable Populations. American Journal of Public Health, Vol 99, No. S2.

Key points for COVID-19 Lessons Learned Review:

- communications in an influenza pandemic must include strategies to inform, instruct and motivate *diverse* populations
- life circumstances, cultural values and perspectives on risk must be taken into consideration in addressing communication gaps and developing strategies for vulnerable populations
- communication strategies, within a comprehensive and integrated framework, should include community specific approaches and engagement; be based on trusted and credible sources; and take into consideration the perspectives and be sensitive and relevant to targeted populations.

World Economic Forum. (2013). Building Resilience in Supply Chains: An Initiative of the Risk Response Network in Collaboration with Accenture.

Key points for COVID-19 Lessons Learned Review:

- Risks are inherent and cannot be mitigated by a single actor; a supply chain governance model based on a multi-stakeholder supply chain risk assessment process; common standards; incentives to adopt the standards and expanded information sharing to help identify and respond to risk can make the supply chain more resilient to risk.

World Health Organization. (2021). Considerations for implementing and adjusting public health and social measures in the context of COVID-19. WHO reference number: WHO/2019-nCoV/Adjusting_PH_measures/2021.1

Key points for COVID-19 Lessons Learned Review:

- Decisions on the implementation and adjustment of public health and social measures require agile, coordinated, and coherent decision-making based on evidence, situational assessments and the acceptability, feasibility, and proven effectiveness of the measures.
- Critical to fostering public trust is that any implementation and adjustment of measures be clearly, concisely communicated in advance; this includes an evidence-based rationale for why the measures are being introduced or adjusted.

World Health Organization. (2022). Preparedness, Readiness and Response Plan to End the Global COVID-19 Emergency in 2022. WHO Reference: WHO/WHE/SPP/2022.1

Key points for COVID-19 Lessons Learned Review:

- Significant continued coordinated and planned effort is needed to end the acute phase of the COVID-19 pandemic, but actions can begin now to build on lessons learned to improve future pandemic preparedness and response including updating operational plans, continued investment in research, and rebuilding trust through accessible, evidence-based information and community engagement.

Appendix C: Emergency management and public health research summary

Emergency management and pandemic good/best practices

Area	Good/Best Practice	Sources
Prevention and Mitigation—preventing emergencies and reducing loss		
Prevention	Risk assessment / hazard vulnerability research, analysis, and evaluation - vulnerability, capacity, exposure of persons and assets, hazard characteristics, environment, health threats	Summers; Convention Panel; Tam; Tubb (EU); Turoff;
Mitigation	Mitigation strategies specific to a given risk; continuity planning	
	Building and sustaining community and organizational resiliency	Council; Turoff et al.;
Preparedness—be ready to act; be ready to adapt		
Early warning	Sustained surveillance systems / threat monitoring system / early warning system and information; information sharing nationally and globally	Ahern; Council; Convention Panel; Independent Panel; OECD (2015); Tubb (EU); WHO;
Risk-based emergency plans within integrated framework	Overarching up-to-date emergency/disaster management plan/framework with specific risk-based plan(s) by type of disaster [note: several reports indicated need to refresh and revise existing pandemic framework/plans, based on experience with COVID]	BC Auditor General; Summers NHSC; FEMA; OECD (2022)
	Plans cover novel crises; plans are nimble and adaptable	Baubion; NHSC; OCED (2015); Tam
	Plans regularly reviewed and updated based on lessons learned, developing best practices and trends	BC Auditor General; Convention Panel; Independent Panel; NHSC; Ontario Auditor General; Summers; WHO (2022);
Testing and training	Scenario building and trial runs for All Hazards including novel crises	Convention Panel; Independent Panel; OCED (2015) OCED (2022); Tam
	Tested and trained staff and teams; expertise in Emergency Management and PHEM	OCED (2015); FEMA; Ontario Auditor General; Summers; Tam

Area	Good/Best Practice	Sources
Essential infrastructure/ Supply chains	Critical medical supplies and equipment and essential goods available in a timely way through combination of stockpile and access to agile and responsive supply chains (through conducting risk assessments and stress tests, calibrating stockpiles based on a cost/benefit analysis, incentivizing the repurposing of supply chains when required, prioritizing shipments of essential goods)	Convention Panel; Independent Panel; Gottilieb; Council; various articles cited in Supply Chain overview
	Robust and resilient supply chains maintained and enhanced by firms through risk evaluation, risk mitigation strategies, transparency/visibility across entire supply chain, diversification, agility, and supported by government policy tools such as enhanced transportation network information systems, enhanced infrastructure capacity, conducive regulatory environment, and international coordination	OECD (2020); OECD (2021); Van Assche; WEF; various articles cited in Supply Chain overview
	A sustained and resilient social services system/network [to mitigate impacts on vulnerable populations]	Alami; Council; Convention Panel; Independent Panel
Long-term view and commitment	Emergency management system has required resources and capacity to plan, prepare and respond to all hazards	BC Auditor General; Bell; Council; Ontario Auditor General; Independent Panel; Summers et al.; Tam
	Government commitment and investment to build and sustain system	Alami; B.C. Auditor General; Bell; Council; Convention Panel; Independent Panel; OECD (2022); Rose; Summers; Tam; Turoff et al.
Response		
Emergency Management Structure and Systems	Command, control, and coordination model (Incident Command or Management System—ICS/IMS) a leading practice for emergency management (and for emergent field of PHEM)	Canada, USA, UK, commonwealth countries; Germany; Sweden
	Clear and established governance, leadership, and direction—clear mandate and roles and responsibilities (including broader range of partners in pandemic events)	Baubion; FEMA; KPMG; NHSC; OECD (2015); OECD (2022); Ontario Auditor General; Tubb (EU)USDOE;

Area	Good/Best Practice	Sources
	Pre-existing plans provide guidance but not rigid adherence; emergency systems, processes and capacities are adaptable, flexible, and agile and able to respond to the complexity of novel crises including taking into account real time lessons learned	Alami; Baubion; NHSC; OECD (2015); OECD (2022); Tam; Tubb; USDOE;
	Enhanced systems and structures to promote a collaborative response among multiple agencies in place for complex emergencies (including pandemics as demonstrated by COVID-19) that involve great uncertainty/changing conditions, myriad systems, and with broad, wide-ranging societal impacts	Baubion; Independent Panel; Hutchings; FEMA; KPMG; Moynihan; NHSC; OECD (2022); Sasangohar; Tam; Tubb; USDOE;
	All phases of crisis management support and integrate public/civic and private sector participation	Baubion; OECD (2015); FEMA; Turoff et al.;
	F/P/T coordination to ensure consistency in policy, resources, and implementation	Cyr
Decision-making	Clearly defined decision-making authority and processes	Berger et al.; FEMA; DOE; Ontario Auditor General
	Open and transparent decision-making—explain uncertainty, how decisions are made and how evolving, evidence for actions taken	Ahern; Berger et al.; Hyland-Wood et al.; OECD (2015) (2022); Ontario Auditor General; Rajan; Tam; WHO (2021); WHO (2022)
	Informed decision-making includes consideration of scientific evidence (and in a pandemic public health/epidemiological)	Ahern; Ontario Auditor General; OECD (2015); OECD (2022); Tubb (EU)
	Multi-disciplinary expertise in decision-making - a range of viewpoints and implications and advice from a range of experts/ advisors/civil society/private sector is considered [Note: This requires a balance of need for timely response and quick action with need to avoid group think/lack of broad perspective and may depend on stage of incident or disaster; learn from successive waves.]	Ahern; Alami; Chaudhury; Independent Panel; OECD (2015); OCED (2022); Rajan; Schippers;

Area	Good/Best Practice	Sources
	Holistic viewpoint –- system/program interactions considered (understand interconnected factors and causal connections, unintended consequences and implications of any decision/action related to one system/program on another system/program)	Alami; Bradley et al.; Hassan et al.; Rajan; Schippers; OECD (2022)
Communications—internal and external	Effective communication based on public trust which is built through openness and transparency	Ahern; Alami; Berger; COVID-19 Collaborators; Hyland-Wood et al.; Lancet; OECD (2022); Tam; WHO (2021); WHO (2022)
	Understand audience and tailor and target messages/communications	Hyland-Wood et al.; Independent Panel; OECD (2022); Vaughan
	Communications includes strategies to inform, instruct and motivate diverse populations	Independent Panel; OECD (2022); Vaughan; WHO (2021)
	Public/civic private sector engagement– not just messaging, but a two-way street with an exchange of information and opinion (extent and nature may depend on where in stage of event)	Ahern; Alami; Bernheim; COVID-19 Collaborators; Hyland-Wood et al.; Lancet; OECD (2022)
	All communication channels, including leveraging of social media, are used to reach a variety of audiences	Independent Panel; Merchant; OECD (2015); OECD (2022); Tam
	Combat misinformation and disinformation—including pre-bunking and de-bunking	Abrams; OECD; WHO (2022)
Recovery		
	Critical functions restored as a priority	Council
	Collaboration with community and private sector	Council; Turoff et al.
	Global co-operation—leadership, governance, and financing to create infrastructure to mitigate a future pandemic threat	Convention Panel; Independent Panel
Evaluation		
Inter-action reviews	Over course of pandemic / emergency / disaster response, reassess from one phase to the next	Auditor General Ontario; ECDC; FEMA; NHSC; FEMA; Tubb
Post Action reviews	Organizational learning—continuously build improvements into emergency management program	Auditor General Ontario; OECD Summers; Tam; Tubb; WHO/WHE

Comparison of public health emergency and emergency management in B.C., AB, and ON

This appendix provides a brief overview of the public health emergency provisions in public health legislation and emergency declaration and response provisions in emergency management legislation in the provinces of British Columbia, Alberta, and Ontario.

It is intended to address the following questions:

- Do these jurisdictions have roughly the same model or different models?
- Who is the statutory decision-maker; what powers do they have; is there a role for Cabinet in authorizing actions?
- What is the definition of an emergency, is an emergency declaration required to invoke powers; how long does a declaration last; what is the duration of emergency orders, are there any conditions that must exist to issue an order (if different from or in addition to the definition of emergency?
- What is the emergency management approach? Is it based on concepts of command and control and ICS model? Is there just one model in Canada, based on ICS, are there are any guardrails around the authority of the provincial emergency coordination centre in directing an emergency response?

Public health legislation

In B.C., the *Public Health Act* defines an "emergency" as an event that has immediate and significant risk to public health. There is no explicit provision providing for an order declaring a public health emergency but where the Public Health Officer (PHO) provides *notice* that at least two of four criteria have been met, the PHO may make broad orders respecting preventative measures that must be taken by persons or classes of persons across the province or within a specific region of the province. The four criteria are:

- the regional event could have a serious impact on public health
- the regional event is unusual or unexpected
- there is a significant risk of the spread of an infectious agent or a hazardous agent
- There is a significant risk of travel or trade restrictions as a result of the regional event.

The authority to act ends when the PHO provides notice that the emergency has passed.

The PHO or a health officer may also make orders respecting preventative measures in the case of a localized event where action is immediately necessary to protect public health from significant harm and compliance with this Act, or a regulation made under this Act would hinder that person from acting in a manner that would avoid or mitigate an immediate and significant risk to public health. The authority to act in a localized event ends as soon as reasonably practical after the emergency has passed.

In **Alberta**, the *Public Health Act* provides for the formal declaration of a public health emergency defined as an occurrence or a threat of an illness; a health condition; an epidemic or pandemic disease; a novel or highly infectious agent or biological toxin or presence of a chemical agent or radioactive material that poses a significant risk to public health. On the advice of the Chief Medical Health Officer (CMHO), and if satisfied that a public health emergency exists or may exist, and prompt coordination of action or special regulation of

persons or property is required in order to protect the public health, the LGIC may make an order declaring a public health emergency relating to all or any part of Alberta.

Under a public health emergency order, the minister or regional health authority has broad authority to act for the purpose of preventing, combating, or alleviating the effects of the public health emergency and protecting the public health. An order, unless continued by resolution of legislative assembly, ends at the end or 30 days, or in case of a pandemic disease the end of 90 days or when the order is terminated by the LGIC; where LGIC considers that a public health emergency no longer exists, the LGIC on advice of CMHO make terminate the order.

The CMHO also has broad powers to act where an investigation by the CMHO confirms the presence of a communicable disease or illness in humans that is caused by an organism or micro-organism or its toxic products and is transmitted directly or indirectly from an infected person or animal or the environment. These orders may be issued outside of a public health emergency and are valid for any period that the CMHO considers appropriate.

The **Ontario** *Health Promotion Act* does not have provision for the declaration of a public health emergency (public health emergencies resulting from a situation that could result in serious harm to person caused by a disease or other health risk are covered in Ontario's emergency management legislation—see below).

The Medical Officer of Health (MOH) has broad powers to make orders requiring a person or class of persons to take or to refrain from taking action as specified in the order where in the MOH's opinion:

- a communicable disease exists or may exist or that there is an immediate risk of an outbreak of a communicable disease in the health unit served by the medical officer of health;
- that the communicable disease presents a risk to the health of persons in the health unit served by the medical officer of health; and
- that the requirements specified in the order are necessary in order to decrease or eliminate the risk to health presented by the communicable disease.

An order made by the MOH may specify the time or times when or the period or periods of time within which the person to whom the order is directed must comply with the order.

Emergency management

Legislation

BC, Alberta, and Ontario have similar legislative frameworks respecting emergency management and the declaration of states of emergency. The legislation generally defines emergencies as events, circumstances or disasters caused by accidents, fires, explosions, forces of nature requiring prompt/immediate/special action to protect the health, safety and welfare of citizens and property. Ontario also specifically includes in its definition of emergency "serious harm to persons … caused by disease or health risk."

All provinces provide for the declaration of a state of emergency and on such a declaration provide broad powers to the minister responsible for emergency management to undertake actions and implement processes considered necessary to prevent, respond to and alleviate the effects of the emergency. (In Ontario powers to act in an emergency reside with the LGIC who can delegate to the minister or head of the emergency management agency; current delegation is to the minister).

Authority for who may declare a state of emergency and timelines for the duration of the emergency varies by jurisdiction:

- In B.C., under the *Emergency Program Act*, the minister or LGIC may by order declare a state of emergency for all or part of B.C. An order expires 14 days from the date it is made but may be extended for further periods of 14 days.
- In Alberta, under the *Emergency Management Act,* the LGIC may by order declare a state of emergency for all or part of Alberta. Unless continued by a resolution of the Legislative Assembly, an order expires at the end of 28 days or when terminated by LGIC.
- In Ontario, under the *Emergency Management and Civil Protection Act*, the LGIC, or the Premier if in the Premier's opinion the urgency of the situation requires that an order by made immediately may declare a state of emergency for all or part of Ontario; an order of the Premier must be confirmed by LGIC within 72 hours. An order terminates 14 days after the day it was declared unless revoked or renewed for one further period of no more than 14 days; Legislative Assembly may on recommendation of Premier pass resolution extending an order for a further 28 days.

Provincial legislation also provides for the declaration of emergencies by local authorities or municipalities for their local region or any part of it.

Organizational Frameworks

All provinces have some form of emergency management authority or agency responsible for leading the coordination and co-operation of all organizations involved in emergencies and disasters. This section covers the emergency management structural frameworks in Alberta, Ontario.

In **Alberta**, the Alberta Emergency Management Agency (AEMA) is responsible for leading the coordination and co-operation of all organizations involved in emergencies and disasters in the province including prevention, preparedness, response, and recovery. The AEMA is part of the public service of Alberta with the minister designating an employee as the Managing Director of the Agency. The LGIC may appoint a committee consisting of member of the Executive Council to advise the AEMA on matters relating to emergencies and disasters and may appoint advisory committees. The LGIC may make regulations outlining role and responsibilities of AEMA and requiring departments, boards, commissions, crowns to prepare plans to deal with emergencies.

The Provincial Operations Centre (POC), Alberta's communication and response coordination centre is staffed 24 hours a day, 7 days a week and serves as a central point for the collection, evaluation and dissemination of information concerning single or multiple incidents across the province. It is responsible for coordinating the initial response and maintaining the Government of Alberta's response support for natural or human-induced disasters. The POC follows the principles of the Incident Command System (ICS) to guide the coordinated provincial response to emergencies in Alberta.

In **Ontario**, under the *Emergency Management and Civil Protection Act*, all ministries and municipalities must have an emergency management plan and program. Under the Act, the LGIC appoints the Chief of Emergency Management Ontario (EMO), who under the direction of the Solicitor General, is responsible for coordinating emergency management programs in the province and ensuring the implementation in provincial ministries and all municipalities through the provision of advice, assistance, guidelines, training, and other tools. The

LGIC may also appoint from among the members of the Executive Council a committee to advise the LGIC on matters related to emergencies.

The EMO's provincial emergency operations centre (PEOC), which is staffed at all times, monitors situations inside and outside of Ontario; ensures that decision-makers are able to respond to evolving situations as quickly as possible; coordinates the Ontario government response to major emergencies; is a single point of contact for municipalities and First Nations to request provincial assistance in times of crisis. The EMO and PEOC are directly supported by provincial ministries that are each responsible for developing an emergency management program for specific hazards and during an emergency; the PEOC ensures that the response to any event is coordinated with the lead ministry. Emergency management in Ontario is based on the tenets of ICS.

All provinces have a master or "all hazards" emergency plan; in B.C., Alberta, and Ontario this plan is supplemented by annexes for specific hazards or types of emergencies (Ontario has 37 additional response plans covering identified hazards).

COVID-19 response

British Columbia

At points in the COVID-19 pandemic, B.C. had in place both a public health emergency and provincial state of emergency to support the province-wide response to the COVID-19 pandemic. On March 17, 2020, the PHO declared a public health emergency under the *Public Health Act* and on March 18, 2020 B.C.'s Minister of Public Safety and Solicitor General by order declared a provincial state of emergency under the *Emergency Program Act* to provide support to measures of the PHO and Minister of Health through the implementation of additional measures related to access to land and resource assets and access to essential goods and services.

The provincial state of emergency order was successively renewed until July 1, 2021 when it was lifted. (Under the COVID-19 Related Measures Act, brought into force on July 10, 2020, amendments were made to the Emergency Program Act to allow certain orders made during the state of emergency, which would otherwise end at the conclusion of the provincial state of emergency, to be extended "to help with gradual transition back to normal." The Act also incorporates current ministerial emergency orders to allow the Legislature to pass and formally recognize them and provides for the possibility of further extension of COVID-19 related orders given the possibility of successive waves of the pandemic.)

The public health emergency remains in effect allowing the PHO to make orders under the *Public Health Act*.

Following is a link to all public health orders issued under the COVID-19 pandemic public health emergency -- https://www2.gov.bc.ca/gov/content/health/about-bc-s-health-care-system/office-of-the-provincial-health-officer/current-health-topics/covid-19-novel-coronavirus and a link to all EPA and CRMA orders -- https://www2.gov.bc.ca/gov/content/justice/covid-19).

Alberta

On March 17, 2020, Alberta declared its first provincial public health emergency under the *Public Health Act* by order of the LGIC; this order expired on June 15, 2020 when it was not renewed. A second order declaring

a provincial public health emergency was made of on November 24, 2020 and stayed in place for 90 days, and a third public health emergency order was made on Sept 15, 2021 which expired on December 14, 2021.

No order declaring a provincial state of emergency was made under the *Emergency Management Act*.

Throughout the period of the pandemic, the CMHO has made orders related to COVID-19 pandemic under the CMHO's broad authority and powers to act where the CMHO has investigated and confirmed the presence of a communicable disease.

Following is a link to all COVID-19 Public Health Orders, Ministerial Orders and Public Health Disease Guidelines: active and rescinded - https://www.alberta.ca/covid-19-orders-and-legislation.aspx.

In Alberta, in response to the pandemic, the Province established a new formal response structure to manage decisions and enable a coordinated provincial response. This structure drew on the Province's existing emergency management systems while adding new features in response to the COVID-19 pandemic emergency. Consistent with pre-defined emergency response structures (based on ICS), Alberta Health's Health Emergency Operations Centre working with the AHS Emergency Coordination Centre was responsible for coordinating public health responses but given the nature of the crisis and Alberta Health's lead in responding to the emergency, additional structures were created to respond to the pandemic including the Emergency Management Cabinet Committee responsible for setting policy and making decision rapidly and the Pandemic Response Planning Team[25] to address cross- government planning needs. The COVID-19 Scientific Advisory Group (SAG) supports policy and operations decision-making by making evidence-based recommendations to the AHS Emergency Coordination Centre and a COVID-19 Primary Care Networks Incident Response Task Force was established to ensure a coordinated provincial response to the virus through integrating Primary Care Networks into provincial emergency management efforts.

Ontario

Three provincial states of emergency under the *Emergency Management and Civil Protection Act* have been declared in Ontario in response to the COVID-19 pandemic. The first state of provincial emergency was declared on March 17, 2020, and was in effect until July 24, 2020; the second state of emergency was declared January 12, 2021 and was in place until February 9, 2021 and the third was declared on April 7, 2021 and in place until June 2, 2021. (*The Reopening Ontario (A flexible response to COVID-19) Act* passed in 2020 allows for the continuation of orders made under the *Emergency Management and Civil Protection Act* that would otherwise have expired with the end of the state of emergency; regular, mandated reporting to the Legislative Assembly is required to provide the rationale for the extension of any emergency order—four reports have been issued to date.)

[25] As the state of emergency ended following the first wave, the special emergency structures of the Emergency Management Cabinet Committee and the Pandemic Response Planning Team wound down, with Alberta Health's Health Emergency Operations Centre and the AHS Emergency Coordination Centre continuing to direct the pandemic response. The Priorities Implementation Cabinet Committee took on the policy and decision-making role.

Throughout the period of the pandemic, the MOH has made orders and directives under the MOH's broad authority under the *Health Promotion Act* to act related to a communicable disease focused on enabling Ontario's health-care system to effectively respond to the COVID-19 pandemic.

Following is Link to Ministry of Health Orders and Orders of the MOH: https://www.health.gov.on.ca/en/pro/programs/publichealth/coronavirus/dir_mem_res.aspx and a list of Ontario COVID-19 Related Orders under Emergency Management and *Civil Protection Act* and Reopening Ontario Act -- https://www.ontario.ca/page/emergency-information.

In March 2020, Ontario implemented an enhanced response structure bringing to together a wide range of partners to review, strengthen and implement provincial and regional plans and ensure their responsiveness to the specifics of COVID-19 (see pages 9 and 10). The Auditor General of Ontario noted in his November 2020 report on Ontario's COVID-19 Preparedness and Management that when the pandemic arrived in Ontario, the Province was not in a good position to activate the provincial response structure in its provincial emergency response plan. The Secretary to Cabinet believed that a whole of government approach was needed and an external consultant was hired to create a new structure. This was in contrast to other provinces which activated their existing responses structures and plans.

The new response structure is made up of several tables with specific mandates:

- A new Command Table will be the single point of oversight providing executive leadership and strategic direction to guide Ontario's response to COVID-19. The Command Table reports to the Minister of Health. The table will be chaired by the Deputy Minister of Health, Helen Angus, and include Dr. David Williams, Ontario's Chief Medical Officer of Heath; Matthew Anderson, Ontario Health's President and Chief Executive Officer; with representation from Public Health Ontario, the Ministry of Long-Term Care and Ministry of Labour, Training and Skills Development.
- Five regional planning and implementation tables, led by Ontario Health with support from local public health units, will be responsible for reviewing regional plans to proactively ensure local readiness and implementing provincial strategies in areas such as assessment, testing and care, supplies and equipment, surveillance, and communications.
- The Ministry's Emergency Operations Centre, also known as MEOC, will continue to provide situational awareness and perform an overall coordination function among the components of the response structure.
- A Scientific Table, led by Public Health Ontario, will support the provincial and regional components of the response structure with the provision of evidence, and scientific and technical advice to inform planning and response.
- An Ethics Table, led by the University of Toronto Joint Centre for Bioethics, will assist in providing ethical guidance and representation at both provincial and regional tables to support decision-making throughout the response.
- Sector or Issues Specific Tables, which would have a specific focus like supporting the coordination of repatriated Canadians or local case and contact management as well as sector-specific coordination such as paramedic services, First Nations health partners and others as needed.
- A Collaboration Table with members from key health sector organizations which will provide advice to the Command Table.

Resources

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Hyland-Wood, Bernadette, John Gardner, Julie Leask, and Ullrich K. H. Ecker. (2021). Toward Effective Government Communication Strategies in the Era of COVID-19. *Humanities & Social Sciences Communications*. https://doi.or/10.1057/s41599-020-00701-w

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Appendix D: Pandemic performance indicators

This appendix details the sources of data and methodology used in developing comparable performance indicators, reported in Table 2 in Chapter 3.

Government pandemic response indicators

Much of the government response to COVID-19 across Canada consisted of imposing restrictions on behavior to reduce transmission, increasing spending to offset the effects of the pandemic and the government response on people and organizations and providing vaccines to protect against serious illness and death. The following compares these three responses across the provinces.

Stringency index—Source: Bank of Canada.[26] Governments imposed a wide range of measures to limit the spread of the virus. This indicator measures the overall degree of restrictions put in place over time such as restrictions on gatherings, school closures, business closures and mask mandates and is designed to be comparable across jurisdictions. Because these measures both protected the public by reducing transmission and harmed the public by restricting behaviour, decisions about restrictions represent decisions about balancing harms, and neither greater nor less stringency can be considered objectively "better." Thus, this not a measure of success, but is valuable background information.

The Bank of Canada stringency index is based on a methodology developed by the University of Oxford's Blavatnik School of Government to compare restrictions imposed by countries around the world in response to the pandemic. The Bank of Canada version has been adjusted to better allow interprovincial comparisons in Canada. The index has been calculated for every province and territory for every day since January 1, 2020.

We have used this data to find the maximum and average level of restriction for each jurisdiction for each calendar year.

It is also of interest to know how much restrictions changed over time, sometimes referred to as volatility. The standard deviation is a statistical measure of the extent to which the index values changed over time capturing both how often they change and the size of the changes. Higher values represent more change.

Program spending per capita—Source: Royal Bank of Canada.[27] Governments increased spending to offset the effects of the pandemic and restrictions, including providing cash transfers to people, businesses, and social service providers, as well as to pay increased costs of providing government services under COVID-19 restrictions. The change in program spending provides an approximate measure of the amount governments increased spending to mitigate pandemic impacts.

[26] https://www.bankofcanada.ca/markets/market-operations-liquidity-provision/covid-19-actions-support-economy-financial-system/covid-19-stringency-index/
[27] http://www.rbc.com/economics/economic-reports/pdf/canadian-fiscal/prov_fiscal.pdf

"Program spending" refers to spending by governments to deliver the goods and services they provide. It differs from total spending by excluding non-program spending such as interest payments. To ensure this indicator is comparable, we have use per capita spending, and to show how much it changed over time, we have shown the % change from the level in fiscal year 2019/20 (from April 2019 to March 2020).

COVID-19 vaccination (% of population receiving at least 2 doses)—Source: Government of Canada.[28] This indicator has been included because vaccination is an important form of protection against severe illness and death, limiting the effect of the pandemic on population and individual health. It is a measure of government's success in maximizing vaccination rates to maximize protection.

This data is presented as of June 19, 2022 and is presented as a percentage of the entire population for comparability purposes, even though children under 5 years of age had not been approved to receive the vaccine as of that date. Vaccination rates for the adult populations are higher and can be found on the cited website.

COVID-19 outcome measures

The following are indicators that suggest how effective government measures were controlling the pandemic.

COVID-19 Cases per 100,000 of population—Source: Government of Canada.[29] All governments undertook actions to minimize transmission of the disease and this measure provides an indication of success. It is calculated per 100,000 population to make it comparable across different sized jurisdictions

We have presented this data as the number of cases reported in the first year from early March 2020 to March 2021, and the number of cases reported during the second year, up to March 2022.

COVID-19 Deaths per 100,000 of population—Source: Government of Canada.[30] While cases are a measure of the transmission of the disease, deaths are a measure of its severity, also calculated per 100,000 of population for comparability. Mortality is one indicator of government's success in controlling the impact of the virus on population health. Deaths have been reported for the same periods as cases. I

Economic outcome indicators

The pandemic and the government response to it had immediate economic effects which receded over time. These indicators measure the extent of those effects in the different provinces.

Employment—Source: Statistics Canada.[31] The change in employment is a simple but powerful measure of the effect of the pandemic on the economy of a jurisdiction, since one of the most important effects was that

[28] https://health-infobase.canada.ca/covid-19/vaccination-coverage/#a5;%20https://health-infobase.canada.ca/covid-19/vaccination-coverage/#a3
[29] https://www.canada.ca/en/public-health/services/diseases/2019-novel-coronavirus-infection.html#a1
[30] https://www.canada.ca/en/public-health/services/diseases/2019-novel-coronavirus-infection.html#a1
[31] https://www150.statcan.gc.ca/t1/tbl1/en/tv.action?pid=1410028703

many people lost their jobs in the initial phase. It avoids the complications associated with the unemployment rate, which changes both due to people becoming employed and people choosing to leave the workforce.

We have measured this using the percentage change in employment from the level in December 2019, which is comparable across the provinces, and we present the results for each 6 month period to June 2022.

GDP—Source: Statistics Canada.[32] Another indicator of the effect of the pandemic on the economy is Gross Domestic Product (GDP), a measure of the size of the economy. For comparability, we have reported the annual percentage change in real GDP (i.e., adjusted for inflation) for both 2020 and 2021.

[32] https://www150.statcan.gc.ca/t1/tbl1/en/tv.action?pid=3610040201

Appendix E: Participating groups

The following is a list of the government stakeholders, as defined in Chapter 6, that participated in our engagement process together with Indigenous organizations as described in Chapter 13. In many cases we engaged with the organization itself and some of its members. Those members have not been listed separately unless we engaged them in another context as well. There were many additional groups who were invited to participate and declined.

Alliance of Beverage Licensees
Alliance of Modern Treaty Nations
Association of Mineral Exploration B.C.
BC Aboriginal Child Care Society
BC Association of Aboriginal Friendship Centres
BC Association of Institutes and Universities
BC Association of School Business Officials
BC Business Council
BC Care Providers Association
BC Centre for Disease Control
BC CEO Network
BC Colleges
BC Confederation of Parent Advisory Councils
BC Construction Association
BC Economic Development Association
BC Federation of Labour
BC Federation of Students
BC General Employees' Union
BC Green Party Legislative Caucus
BC Institute of Technology
BC Museums Association
BC Non-Profit Housing Association
BC Principals' & Vice-Principals' Association
BC Restaurant and Food Services Assn
BC School Superintendents Association
BC Teachers Federation
BC Trucking Association
Bulkley Nechako RD
Canadian Association of Exposition Management
Canadian Association of Petroleum Producers
Canadian Centre for Policy Alternatives
Canadian Disaster Animal Response Team
Canadian Federation of Independent Business

Canadian Taxpayers Federation
Canadian Union of Postal Workers
Canadian Union of Public Employees
City of Dawson Creek
City of Vancouver
Coastal Gas Link
Commercial Bear Viewing Association
Community Living B.C.
Compensation Employees' Union
Confederation of University Faculty Associations of B.C.
Core Education & Fine Arts
Council of Forest Industries
Denominational Health Association
Destination Greater Victoria
DestinationBC
Early Childhood Educators of B.C.
Faith and Spiritual Leaders Dialogue Series
Federation of Community Social Services of B.C.
Federation of Independent School Associations
Federation of Post-Secondary Educators of B.C.
First Nations Emergency Services Society
First Nations Health Authority
First Nations Leadership Council
Fitness Industry Council of Canada
Fraser Health Authority
Fraser Valley Regional District
Greater Vancouver Board of Trade
Greater Vancouver Professional Theatre Alliance
Hall Printing
Health Sciences Association
Interior Health Authority
Interior Logging Association
International Alliance of Theatrical and Stage Employees
International Brotherhood of Electrical Workers
International Longshore and Warehouse Union
Island Health Authority
Legislative Press Gallery
Live Nation Entertainment
LNG Canada
LPN Council
ɬaʔamɩn (Tla'amin) Nation
Maa-nulth Treaty Society
Manufacturing Safety Alliance of B.C.

Métis Nation British Columbia
Midwives Association of B.C.
Mining Association of B.C.
MoveUP
New Democratic Party Legislative Caucus
Northern Health Authority
Nurses and Nurse Practitioners of B.C.
Pacific Destination Services Inc.
Providence Health
Provincial Association of Residential & Community Agencies
Provincial Health Services Authority
Provincial Health Services Authority
Public Service Alliance of Canada
Qathet Regional District
Research Universities Council of B.C.
Restaurants Canada
Retail Council of Canada
Rio Tinto Alcan
Royal Canadian Mounted Police
Small Business B.C.
Team Rubicon
TIABC Tourism Industry Association of B.C.
Tourism Richmond
Tourism Whistler
Union of B.C. Municipalities
United Food & Commercial Workers
United Steelworkers
United Way B.C.
Vancouver Coastal Health Authority
Vancouver Convention Centre
Vancouver Police Department
Various individuals including academics and former public service officials
VIA Sport
Whitemarsh Enterprises Inc.
WorkSafeBC