File No: AI22-30-09740

QB/PC File No: CI-20-01-29284

IN THE COURT OF APPEAL

BETWEEN:

GATEWAY BIBLE BAPTIST CHURCH, PEMBINA VALLEY BAPTIST CHURCH, REDEEMING GRACE BIBLE CHURCH, THOMAS REMPEL, GRACE COVENANT CHURCH, SLAVIC BAPTIST CHURCH, CHRISTIAN CHURCH OF MORDEN, BIBLE BAPTIST CHURCH, TOBIAS TISSEN and ROSS MACKAY

(Applicants) Appellants

-and-

HER MAJESTY THE QUEEN IN RIGHT OF THE PROVINCE OF MANITOBA, and DR. BRENT ROUSSIN in his capacity as CHIEF PUBLIC HEALTH OFFICER OF MANITOBA, and DR. JAZZ ATWAL in his capacity as ACTING DEPUTY CHIEF OFFICER OF HEALTH MANITOBA

(Respondents) Respondents

APPELLANTS' APPEAL BOOK

VOLUME 9 (Pages AB2156 to AB2430)

May 20, 2022

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INDEX

Tabs

VOLUME 1

VOLUME 2

VOLUME 3

VOLUME 4

VOLUME 5

VOLUME 6

VOLUME 7

VOLUME 8

VOLUME 9

VOLUME 11

File No. CI 20-01-29284

THE QUEEN'S BENCH
Winnipeg Centre

B E T W E E N:

GATEWAY BIBLE BAPTIST CHURCH, PEMBINA VALLEY BAPTIST CHURCH, REDEEMING GRACE BIBLE CHURCH, THOMAS REMPEL, GRACE COVENANT CHURCH, SLAVIC BAPTIST CHURCH, CHRISTIAN CHURCH OF MORDEN, BIBLE BAPTIST CHURCH, TOBIAS TISSEN, ROSS MACKAY

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- and -

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Respondents.

Reply Affidavit of JARED MANLEY PETER BULLARD

Affirmed, April 29, 2021

Manitoba Justice, Legal Services Branch
Constitutional Law Section

Per: Michael Conner
Heather Leonoff
Denis Guénette
Sean Boyd

THE QUEEN'S BENCH
Winnipeg Centre

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Respondents.

AFFIDAVIT

1. I have previously presented an affidavit in this proceeding. I have reviewed the affidavits filed subsequent to my initial affidavit, and present this affidavit in reply.

2. I have personal knowledge of the facts and matters stated in this affidavit – except where they are based upon information and belief, in which case I believe them to be true.

Applicants' Request for Undertakings

3. By letter dated March 19, 2021, legal counsel for the Applicants wrote to legal counsel for the Respondents to request a breakdown of Ct values on all positive tests performed by the lab.

4. Counsel for the Respondents initially refused to provide the documents on the basis that it would require the lab to undertake further analysis. By letter dated April 1, 2021, the Applicants renewed their request for production of information that would show the Ct thresholds for all positive PCR tests. In particular, the Applicants' request was stated as follows:

> Document(s) with CT thresholds by percentages of all positive cases between March 2020-March 2021, and specifically, what percentage of cases per month resulted from a positive PCR test with a CT of 36, 37, 38, 39, 40, 41, 42, 43, 44, 45 (not simply the percentage as a range from 36-40)

5. While Cadham Provincial Laboratory ("Cadham") did not have the breakdown as requested, we confirmed that we could produce a spreadsheet from data in our computer system showing the Ct value of each of the 15,464 positive PCR tests Cadham had performed from March 11, 2020 to March 31, 2021. I understand from the Respondents' counsel that they provided this information to the Applicants' counsel by way of letter dated April 6, 2021.

6. The spreadsheet provided the date the lab received each test sample, the type of PCR test used and the Ct value. However, some of the entries provided a number that differs from the typical range for Ct discussed in my report included in my first affidavit. These are results from a different type of nucleic acid amplification test (PCR_PANTH_COV19) called transcription

mediated amplification that uses a value known as relative light units (RLU) rather than CT. Despite the shortcut name "PCR_PANTH_COV19", it is not a PCR-based assay.

7. I understand that in a letter dated April 13, 2021, Applicants' counsel subsequently raised some questions about the information provided in the spreadsheet as well as statements I made in my original affidavit about statistics regarding the percentage of Ct values within certain ranges. I respond to those questions below.

Breakdown of tests by Ct value

8. In my report, that is attached as Exhibit C to my first affidavit, I indicated the following at lines 193 to 197:

> In December 2020, 5825 Manitoba SARS-CoV-2 positive results were analyzed and categorized by Ct value. Almost 60% had a Ct value less than 25 (~35% <20 and ~23% 20-25) and of the remaining samples, 18% had Ct 25-30, 18% had Ct 30-36 and 7% had Ct 36-40. The large majority (~68%) of these patients would be considered as higher level risk of infectiousness, just based on Ct value alone.

9. First, I would like to correct a typographical error in this passage. My reference to "~68%" in the last sentence of this passage above should have been "~76%".

10. Counsel for the Applicants suggests that there is a discrepancy because my spreadsheet shows there were only 3,200 positive tests in December with a Ct value, which contradicts the reference to 5,825 tests in lines 193-197 of my report. However, as stated in my report, the analysis of test results was conducted in December, 2020. It was not conducted only on

tests that were done in December. I have asked the scientist who prepared this information and they do not remember precisely what query or criteria was used to run the analysis (it was done through a computer/spreadsheet query). In any event, I asked them to perform the same breakdown with respect to all of the PCR tests performed from 2020 in the spreadsheet (excluding those tests that do not use a Ct value). The result was quite similar to the result in the December analysis of the 5,825 tests:

CT	# of tests	% from all 2020 tests	% from the 5825 tests
<19.99	3039	33%	~35%
20-24.99	2135	23%	~23%
25-29.99	1725	19%	18%
30-35.99	1713	19%	18%
>36	582	6%	7%
total	9194		

Number of Positive PCR tests in Manitoba

11. I understand Applicants' counsel suggests there is a discrepancy between the total number of reported COVID-19 cases in Manitoba and the number of tests Cadham has performed. Applicants' counsel points to Dr. Loeppky's affidavit (Exhibit B, p. 7) which identified 26,785 lab confirmed COVID-19 cases, whereas she said the spreadsheet I provided only showed 15,466 positive test results. There is no discrepancy. Cadham is one of a few laboratories that conducts PCR testing for COVID-19 in Manitoba. Shared Health Inc. conducts PCR testing, primarily for samples taken in hospital settings, and a private laboratory service provider, Dynacare,

conducts many of the community tests for Winnipeg based public testing centres. I provided information that is in the possession of Cadham about the tests it had performed. The balance of the positive tests were performed by these other agencies.

World Health Organization Recommendations for PCR testing Guidelines

12. In Dr. Warren's discussion of my report on page 3 of Exhibit B of his affidavit (sworn March 30, 2021), he asserts that "The World Health Organization (WHO) recognizes the limitations of PCR and advises that 'health care providers must consider any result in combination with timing of sampling, specimen type, assay specifics, clinical observations, patient history, confirmed status of any contacts, and epidemiological information'." Dr. Warren takes this quote from a January 13, 2021 notice to laboratory professionals published by the WHO entitled "Information Notice for IVD Users 2020/05". A copy of the January 13, 2021 Notice is attached as **Exhibit A**.

13. Dr. Bhattacharya, in his discussion of my report and the Ct values of PCR tests generally on page 14 of Exhibit "A" to his second affidavit (sworn March 31, 2021), also refers to the January 13, 2021 WHO "Information Notice for IVD Users 2020/05" (**Exhibit A**).

14. I can confirm that I am aware of the WHO guidance around the use of PCR tests and agree that an in-vitro diagnostic medical device (IVD) user must be aware of the limitations of the PCR tests in diagnosing and treating a particular patient. Cadham performs the lab test, but interpretation in the context of clinical and epidemiological information must also be made.

15. WHO guidance on the use of PCR tests includes both the document that Dr. Warren and Dr. Bhattacharya reference, which is a reminder to laboratory professionals to ensure they follow the instructions for the PCR test they are administering, as well as a more comprehensive guidance document entitled "Interim Guidance on Diagnostic Testing for SARS-CoV-2" issued by the WHO on September 11, 2020. A copy of the Interim Guidance document is attached as **Exhibit B.**

16. A number of elements of the September 11, 2020 Interim Guidance (**Exhibit B**) are salient in responding to Dr. Warren's comments, and also the comments of Dr. Kettner in his report at p. 8 of Exhibit B to his affidavit (sworn April 1, 2021). In particularly Dr. Kettner suggests that viral culture is the "gold standard" for determining infectivity. While the ability to culture virus does confirm infectiousness in cells and thus likely in humans, the converse is not true, as discussed in my report. However, the Interim Guidance document provides some helpful context for understanding the role of the PCR test and viral culture in the pandemic response. The WHO advises that viral isolation (culturing virus) is not recommended in the diagnostic process due to the biosafety level required to safety do the tests (BSL-3 or what we call containment laboratory 3/CL3 in Canada). That is, very few labs in Canada are capable of safely culturing the virus. The WHO also suggests that rapid testing is required for planning and design of public health and outbreak control, with approximately 24 hours being the maximum recommended in most settings. Cell culture cannot achieve this.

17. The January 13, 2021 WHO Notice also observes "that the probability that a person who has a positive result (SARS-CoV-2 detected) is truly infected with SARS-CoV-2 decreases as prevalence decreases".

18. It is certainly true that disease prevalence has an effect on false positives. For example, in the middle of the summer 2020, when there were few confirmed cases of COVID-19 in Manitoba, the likelihood of a false positive may have been expected to be marginally higher. This would not be the case in the fall and winter of 2020 when community transmission of the virus was widespread. Cadham also follows the WHO's recommendation to perform repeat confirmatory testing on tests with a Ct value of 36.5 or greater.

19. The WHO Notice also goes on to recommend providing the Ct value of a test to the requesting health care provider.

20. Shortly after this recommendation was issued by the WHO, the same subject was considered by the Canadian Public Health Laboratory Network ("CPHLN"). CPHLN is a national association of public health laboratory professionals which acts as a unified voice for federal and provincial member laboratories. CPHLN is composed of provincial public health laboratories and the National Microbiology Laboratory. It provides guidance to Canadian public health laboratories and facilitates collaboration.

21. The CPHLN prepared a FAQ which addresses a number of questions about PCR tests, Ct values and their use. Despite the recommendation in the WHO's January 13, 2021 Notice, the CPHLN reaffirmed the practice of not routinely reporting Ct values with PCR results, and concludes with similar recommendations as the United States Centers for Disease Control and Prevention, the (American) Association of Public Health Laboratories, and the Ontario Ministry of Health. As indicated in the FAQ document this is due to the concern that the Ct value should not be used alone to make clinical or

public health judgements. Not all PCR or alternate nucleic acid amplification assays produce Ct values or an equivalent proxy measure of viral load. Further, while Ct values can provide an indication that someone is more or less likely to be infectious, a Ct value cannot be used to determine infectiousness definitively. However, Ct values may be provided to physicians upon request and the lab will consult to assist interpreting the test results. I can confirm that Cadham also does on occasion provide Ct values on request to Medical Officers of Health and institutional infection control practitioners, but only along with a full consultation on the individual's clinical and contact details. It should be noted that consultation with public health professionals is also required as part of good disease control practice. A copy of the FAQ is attached as **Exhibit C.**

22. I make this affidavit *bona fide*.

AFFIRMED BEFORE ME at)
the City of Winnipeg, in)
the Province of Manitoba,)
this 29th day of April, 2021)

Jared Manley Peter Bullard

A Barrister at Law in and for
The Province of Manitoba

This is Exhibit "A" referred to in the Affidavit of Jared Manley Peter Bullard affirmed before me this 29th day of April, 2021.

A Barrister-at-law entitled to practice in and for the Province of Manitoba.

World Health Organization

WHO Information Notice for IVD Users 2020/05

Nucleic acid testing (NAT) technologies that use polymerase chain reaction (PCR) for detection of SARS-CoV-2

20 January 2021 | Medical product alert | Geneva | Reading time:

العربية | 中文 | Français | Русский | Español | Português

Product type: Nucleic acid testing (NAT) technologies that use polymerase chain reaction (PCR) for detection of SARS-CoV-2

Date: 13 January 2021

WHO-identifier: 2020/5, version 2

Target audience: laboratory professionals and users of IVDs.

Purpose of this notice: clarify information previously provided by WHO. This notice supersedes WHO Information Notice for In Vitro Diagnostic Medical Device (IVD) Users 2020/05 version 1, issued 14 December 2020.

Description of the problem: WHO requests users to follow the instructions for use (IFU) when interpreting results for specimens tested using PCR methodology.

Users of IVDs must read and follow the IFU carefully to determine if manual adjustment of the PCR positivity threshold is recommended by the manufacturer.

WHO guidance Diagnostic testing for SARS-CoV-2 states that careful interpretation of weak positive results is needed (*1*). The cycle threshold (Ct) needed to detect virus is inversely proportional to the patient's viral load. Where test results do not correspond with the clinical presentation, a new specimen should be taken and retested using the same or different NAT technology.

WHO reminds IVD users that disease prevalence alters the predictive value of test results; as disease prevalence decreases, the risk of false positive increases (*2*). This means that the probability that a person who has a positive result (SARS-CoV-2 detected) is truly infected with SARS-CoV-2 decreases as prevalence decreases, irrespective of the claimed specificity.

Most PCR assays are indicated as an aid for diagnosis, therefore, health care providers must consider any result in combination with timing of sampling, specimen type, assay specifics, clinical observations, patient history, confirmed status of any contacts, and epidemiological information.

Actions to be taken by IVD users:

1. Please read carefully the IFU in its entirety.
2. Contact your local representative if there is any aspect of the IFU that is unclear to you.
3. Check the IFU for each incoming consignment to detect any changes to the IFU.
4. Provide the Ct value in the report to the requesting health care provider.

Contact person for further information:

Anita SANDS, Regulation and Prequalification, World Health Organization, e-mail: rapidalert@who.int

References:

1. Diagnostic testing for SARS-CoV-2. Geneva: World Health Organization; 2020, WHO reference number WHO/2019-nCoV/laboratory/2020.6.

2. Altman DG, Bland JM. Diagnostic tests 2: Predictive values. BMJ. 1994 Jul 9;309(6947):102. doi: 10.1136/bmj.309.6947.102.

This is Exhibit "B" referred to in the Affidavit of Jared Manley Peter Bullard affirmed before me this 29th day of April, 2021.

A Barrister-at-law entitled to practice in and for the Province of Manitoba.

Diagnostic testing for SARS-CoV-2

Interim guidance

11 September 2020

World Health Organization

Introduction

This document provides interim guidance to laboratories and other stakeholders involved in diagnostics for severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2). It covers the main considerations for specimen collection, nucleic acid amplification testing (NAAT), antigen (Ag), antibody (Ab) detection and quality assurance. This document will be updated as new information becomes available. Feedback can be sent to WHElab@who.int.

Changes from the previous version

The title of this interim guidance has changed from "Laboratory testing for COVID-19 in suspected human cases" to "Diagnostic testing for SARS-CoV-2". Additional relevant background information and a clinical diagnostic algorithm has been added to the document. Furthermore, the guidance has been updated with new findings from the literature and best practices.

Relevant WHO documents

WHO has developed interim guidance and technical briefs to assist policy-makers and laboratories on testing for SARS-CoV-2. These documents cover laboratory testing strategy [1], laboratory assessment tool [2], laboratory biosafety [3], advice on the use of point-of-care immunodiagnostic tests [4], antigen detection in diagnosis of SARS-CoV-2 infection using rapid immunoassays [5], guidance for the investigations of clusters [6], public health surveillance [7] and operational considerations for surveillance using GISRS [8]. In addition, early investigation protocols [9] can be used by countries to implement epidemiological studies and enhance understanding of transmission patterns, disease severity and prevalence, clinical features and risk factors of SARS-CoV-2 infection.

Background on SARS-CoV-2

WHO was first alerted to a cluster of pneumonia of unknown etiology in Wuhan, People's Republic of China on 31 December 2019. The virus was initially tentatively named 2019 novel coronavirus (2019-nCoV).

Subsequently the International Committee of Taxonomy of Viruses (ICTV) named the virus SARS-CoV-2 [10]. COVID-19 is the name of the illness caused by SARS-CoV-2.

SARS-CoV-2 is classified within the genus *Betacoronavirus* (subgenus *Sarbecovirus*) of the family *Coronaviridae* [11]. It is an enveloped, positive sense, single-stranded ribonucleic acid (RNA) virus with a 30-kb genome [10]. The virus has an RNA proofreading mechanism keeping the mutation rate relatively low. The genome encodes for non-structural proteins (some of these are essential in forming the replicase transcriptase complex), four structural proteins (spike (S), envelope (E), membrane (M), nucleocapsid (N)) and putative accessory proteins [12-14]. The virus binds to an angiotensin-converting enzyme 2 (ACE2) receptor for cell entry [15-17].

SARS-CoV-2 is the seventh coronavirus identified that is known to infect humans (HCoV). Four of these viruses, HCoV-229E, HCoV-NL63, HCoV-HKU1 and HCoV-OC43, are endemic, seasonal and tend to cause mild respiratory disease. The other two viruses are the more virulent zoonotic Middle East respiratory syndrome coronavirus (MERS-CoV) and severe acute respiratory syndrome coronavirus type 1 (SARS-CoV-1). SARS-CoV-2 is most genetically similar to SARS-CoV-1, and both of these viruses belong to the subgenus *Sarbecovirus* within the genus *Betacoronavirus* [11]. However, SARS-CoV-1 is currently not known to circulate in the human population.

The clinical presentation of SARS-CoV-2 infection can range from asymptomatic infection to severe disease [18-27]. Mortality rates differ per country [28]. Early laboratory diagnosis of a SARS-CoV-2 infection can aid clinical management and outbreak control. Diagnostic testing can involve detecting the virus itself (viral RNA or antigen) or detecting the human immune response to infection (antibodies or other biomarkers).

While our understanding of SARS-CoV-2 has rapidly expanded, there are still many outstanding questions that need to be addressed. WHO encourages research and the sharing of results that may contribute toward an improved characterization of SARS-CoV-2 [29, 30].

Background information on SARS-CoV-2 RNA detection

Standard confirmation of acute SARS-CoV-2 infections is based on the detection of unique viral sequences by nucleic acid amplification tests (NAATs), such as real-time reverse-transcription polymerase chain reaction (rRT-PCR). The assays' targets include regions on the E, RdRP, N and S genes.

Once an individual has been infected by the virus, the mean time it takes to develop symptoms (incubation period) is 5-6 days, with a range of between 1 and 14 days following exposure [31-35]. The virus may be detectable in the upper respiratory tract (URT) 1-3 days before the onset of symptoms. The concentration of SARS-CoV-2 in the URT is highest around the time of symptom onset, after which it gradually declines [36-42]. Some studies report higher viral loads in the severely ill compared with patients with mild disease, while other studies do not report such differences [36, 43-49]. The presence of viral RNA in the lower respiratory tract (LRT), and for a subset of individuals in the faeces, increases during the second week of illness [38]. In some patients the viral RNA may only be detectable for several days, while in other patients it can be detected for several weeks, possibly months [44, 50-60]. Prolonged presence of viral RNA does not necessarily signify prolonged infectiousness. Several studies describe the correlation between reduced infectiousness and i) increased number of days that have elapsed since symptom onset and resolution, ii) decrease in viral load in respiratory secretions [37, 61-64] and iii) an increase in neutralizing antibodies [37, 61]. More information can be found on this in Criteria to release COVID-19 patients from isolation [65].

Respiratory secretions may be quite variable in composition, and the adequacy of sampling efforts may also vary, which can occasionally result in false-negative PCR results [40, 42, 58, 66-74]. In patients for whom SARS-CoV-2 infection is strongly suspected and URT swabs are negative, viral RNA may be detected in LRT secretions, such as sputum or bronchoalveolar lavage [70, 71, 75, 76]. Faeces or rectal swabs have been shown to be positive for SARS-CoV-2 RNA in a subset of patients, with some studies suggesting that this positivity is prolonged compared to that of respiratory tract specimens [46, 56, 59, 75, 77]. In some patients, SARS-CoV-2 RNA detection in blood samples has been reported and some studies suggest that detection in the blood is associated with disease severity, however, more studies on this potential association are required [75, 78-81]. In oral fluid specimens (e.g. induced saliva) [28, 49, 82-88], reported detection rates compared with URT specimens from the same patient vary widely, and limited data are available on adequacy of SARS-CoV-2 detection in gargling/mouth washes [85]. The striking differences in sensitivity of oral fluids evaluations are potentially due to large differences in collection, transport and storage techniques, as well as the evaluation of different testing populations. Occasionally, SARS-CoV-2 can be detected in ocular fluids in patients with and without signs of conjunctivitis [89-93]. Some studies have not detected SARS-CoV-2 in urine [58, 75, 94], while others were able to detect viral RNA in urine in a limited number of patients [57, 95]. One study reported several patients with positive semen samples [96]. In addition, positive RNA detection for brain tissue [97] and cerebrospinal fluid [98] have been described in case reports. Thus, SARS-CoV-2 can be detected in a wide range of other body fluids and compartments, but it is most frequently detected in respiratory material and, therefore, respiratory samples remain the sample type of choice for diagnostics.

Laboratory testing guiding principles

The decision to test should be based on both clinical and epidemiological factors. See the interim guidance clinical management of COVID-19 [99], investigations of clusters [6] and public health surveillance [7].

Rapid collection of appropriate specimens from and accurate laboratory diagnosis of patients in whom SARS-CoV-2 infection is strongly suspected are the two priorities to support clinical management of patients and infection control measures. Given the complexity of adequate sampling, laboratory analysis, and interpretation of results, collection and laboratory diagnosis should be performed by trained and competent operators.

Individuals infected with SARS-CoV-2 may never develop symptoms (asymptomatic cases), they may have very mild disease (pauci-symptomatic), or they may develop moderate to severe COVID-19 disease [18-26]. The most robust evidence for viral infection comes from the detection of fragments of the virus, such as proteins or nucleic acids, through virological testing. Infected individuals may test positive for viral nucleic acids or viral proteins without symptoms (asymptomatic), or before symptom onset (pre-symptomatic), and throughout a disease episode (symptomatic). For those who develop COVID-19 illness, symptoms can be wide-ranging at initial presentation of disease. Individuals may present with very mild symptoms, with apparent pneumonia, febrile illnesses/sepsis, and less commonly with gastro-enteritis or neurological symptoms [99]. If required for case management, patients should also be tested for other pathogens, as recommended in local clinical management guidelines, but this should never delay testing for SARS-CoV-2 [99, 100]. Co-infections of SARS-CoV-2 with other pathogens have been reported, thus a positive test for another pathogen does not rule out COVID-19 and vice versa [27, 101-109]. Cases of false positive dengue antibody test results using a dengue rapid diagnostic test (RDT) in COVID-19 patients have been reported [110, 111]. There is also a risk of false positive or false negative SARS-CoV-2 results, if testing is not performed with adequate assays or not done under adequate conditions.

Specimen collection, shipment and storage

Safety procedures during specimen collection

Ensure that health workers collecting clinical specimens from suspect cases adhere rigorously to infection prevention and control guidelines (IPC) and wear appropriate personal protective equipment (PPE), see also COVID-19 WHO interim guidance on infection prevention and control during health care [7].

Ensure that adequate standard operating procedures (SOP) are in place and that staff are appropriately trained in specimen collection, packaging, shipment and storage. It should be assumed that all specimens collected for investigations may be infected with SARS-CoV-2 and other pathogens. See also WHO interim guidance on laboratory biosafety for SARS-CoV-2 [3]. Local guidelines, including on informed consent, should be followed for specimen collection, testing, storage and research.

Specimens to be collected

The optimal specimen depends on clinical presentation and time since symptom onset. At minimum, respiratory specimens should be collected.

Respiratory specimens

- **Upper respiratory specimens** are adequate for testing early-stage infections, especially in asymptomatic or mild cases. Testing combined nasopharyngeal and oropharyngeal swabs from one individual has been shown to increase sensitivity for detection of respiratory viruses and improve the reliability of the result [60, 86, 112-114]. Two individual swabs can be combined in one collection tube or a combined nasopharyngeal and oropharyngeal swab can be taken [115]. A few studies have found that individual nasopharyngeal swabs yield a more reliable result than oropharyngeal swabs [40, 75, 76, 114].
- **Lower respiratory specimens** are advised if collected later in the course of the COVID-19 disease or in patients with a negative URT sampling and there is a strong clinical suspicion of COVID-19 [70, 71, 75, 76, 86]. LRT specimens can consist of sputum, if spontaneously produced (induced sputum is not recommended as this poses an increased risk of aerosol transmission [99]) and/or endotracheal aspirate or bronchoalveolar lavage in patients with more severe respiratory disease. Caution should be exercised due to the high risk of aerosolization; therefore strict adherence to IPC procedures during sample collection is required. The indication for an invasive procedure should be evaluated by a physician.

Before implementing other respiratory or oral fluid sampling methods, the sampling method should first pass validation in the laboratory for the intended patient groups.

Simplified and optimized specimen collection

There is a high demand for simplified and optimized specimen collection for SARS-CoV-2 detection. Studies on combined oropharyngeal and nares/nasal swab [116, 117], others on midturbinate [118-120] or lower nasal or nares swabs [120, 121] or tongue swab [120] either by a trained sampler or by self-sampling have been conducted. While some of these studies show that these approaches perform reasonably well, these studies focus mostly on specific patient groups and their sample sizes are limited. Before broad implementation of these alternatives can be recommended, further assessment and validation is needed to determine the indications for which these collection methods serve as appropriate alternatives.

There are specific cases where collecting nasopharyngeal and oropharyngeal swabs can be problematic, such as mass screening in schools or nursing homes, especially when elderly people with dementia or young children are involved. In these scenarios, oral fluids could potentially be a suitable specimen, as the collection methods are less invasive and there is a lower risk of exposure to others upon collection, as compared with the collection of URT specimens.

Oral fluid collection methods vary widely: from posterior oropharyngeal fluids/saliva collected by spitting or drooling, or collection of oral fluid with pipet or special sponges. Gargling with saline solutions is another alternative that has been studied. Sensitivity of these specimens has a wide performance range compared with naso- and/or oropharyngeal sampling [28, 49, 82, 83, 85-88, 122-125]. Due to the large variety of collection methods and processing steps, laboratories must collect their own performance data linked to the local method of collection and in the relevant population for testing. At this time, WHO does not recommend the use of saliva as the sole specimen type for routine clinical diagnostics. If nonstandard collection methods are intended to be used to diagnose other respiratory pathogens, the detection of these pathogens needs to be part of the validation procedure.

Faecal specimens

From the second week after symptom onset and onwards, NAAT can be considered for faecal specimens in cases where URT and LRT are negative and the clinical suspicion of a COVID-19 infection remains [126]. When testing faeces, ensure that the intended extraction method and NAAT has been validated for this type of sample.

Post-mortem specimens

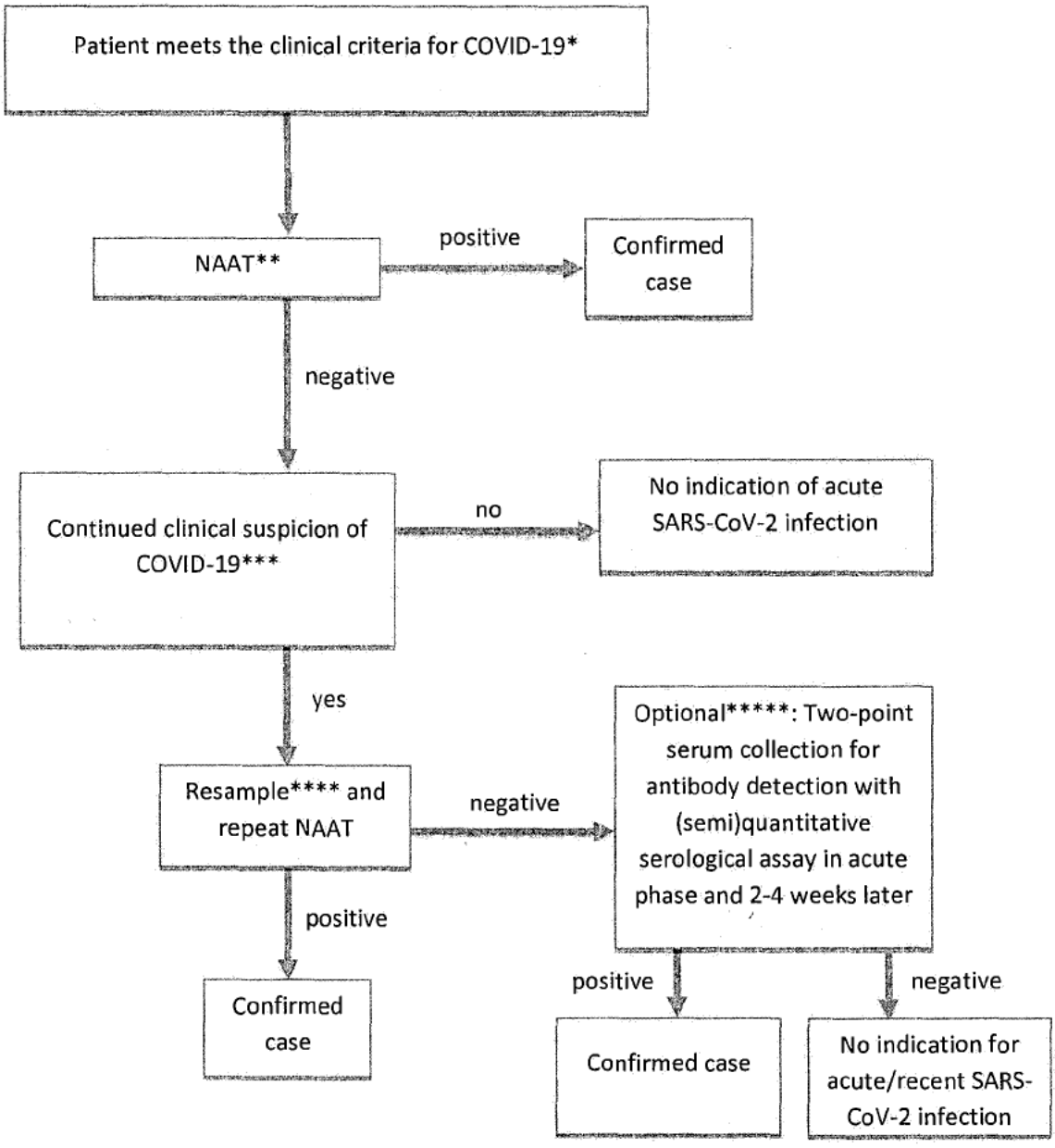
If the person is deceased, consider taking a post-mortem swab, needle biopsy or tissue specimens from the autopsy, including lung tissue for further pathological and microbiological testing [127-133].

Serum specimens

If negative NAAT results are obtained from a patient in whom SARS-CoV-2 infection is strongly suspected, a paired serum specimen could be collected. One specimen taken in the acute phase and one in the convalescent phase 2-4 weeks later can be used to look for seroconversion or a rise in antibody titres. These two samples can be used retrospectively to determine whether the individual has had COVID-19, especially when the infection could not be detected using NAAT.

See Figure 1 for the diagnostic algorithm for cases requiring clinical care and are suspected to have COVID-19.

Figure 1: Diagnostic flow diagram for the detection of acute SARS-CoV-2 infection in individuals with clinical suspicion for COVID-19



* Clinical management of COVID-19 (Interim Guidance), World Health Organization [99].
** If antigen detection would be incorporated into the testing algorithm, how this needs to be done depends on the sensitivity and specificity of the antigen test and on the prevalence of SARS-CoV-2 infection in the intended testing population. For more information see section below on "Rapid diagnostic tests based on antigen detection" and the specific guidance Interim guidance on antigen-detection in diagnosis of SARS-CoV-2 infection using rapid immunoassays [5].
*** Continued clinical suspicion can, for example, be the absence of another obvious etiology, the presence of an epidemiological link, or suggestive clinical finding (e.g. typical radiological signs).
**** The selection of specimen type will depend on the clinical presentation, see section "Specimens to be collected". Increasing the number of samples tested will also increase the sensitivity of testing for COVID-19. More than two samples might be needed on some occasions to detect SARS-CoV-2 [73].
***** For interpretation of serology, see section "Implementation and interpretation of antibody testing in the clinical laboratory". Serology cannot be used as a standalone diagnostic for acute SARS-CoV-2 infections and clinical management.

Packaging and shipment of clinical specimens

Specimens for virus detection should reach the laboratory as soon as possible after collection. Correct handling of specimens during transportation and in the laboratory is essential. For guidance on this see Annex 1.

Transportation of specimens within national borders should comply with the applicable national regulations. International transport of specimens that may contain SARS-CoV-2 should follow the United Nations Model Regulations, Biological Substance, Category B (UN 3373), and any other applicable regulations depending on the mode of transport.

More information may be found in the WHO Guidance on regulations for the transport of infectious substances 2019-2020 [134] and specific SARS-CoV-2 laboratory biosafety guidance [3] and shipment instructions [135].

Maintain open and efficient lines of communication with the laboratory and provide all requested information. Specimens should be correctly labelled and accompanied by a diagnostic request form (see Annex 2 for a request form template, including minimal required clinical information). Alerting the laboratory before sending specimens and providing the essential background information with the diagnostic request allows for the proper and timely processing of specimens and reporting of results.

Biosafety practices in the laboratory

Laboratories undertaking testing for SARS-CoV-2 should adhere strictly to the appropriate biosafety practices. Testing clinical specimens that may contain SARS-CoV-2 should be performed in appropriately equipped laboratories by staff trained in the relevant technical and safety procedures. National guidelines on laboratory biosafety should be followed in all circumstances. Specimen handling for molecular testing using standard rRT-PCR requires biosafety level (BSL) 2 or equivalent facilities with the use of a biosafety cabinet (BSC) or a primary containment device that is recommended for sample manipulation before inactivation.

Attempts to isolate the virus in cell culture require BSL-3 facilities at a minimum. When performing viral culture on potentially SARS-CoV-2 positive clinical specimens for other purposes, a risk assessment needs to be conducted followed by required safety measures and procedures [136].

Specific considerations of biosafety requirements may allow certain point-of-care (POC) or near-patient assays to be performed outside a biosafety cabinet, once local regulations have been reviewed, after performing risk assessment and having put in place adequate risk-mitigation measures. For further details on laboratory biosafety, see specific laboratory biosafety interim guidance [3]. For general laboratory biosafety guidelines, see the WHO Laboratory biosafety manual, 3rd edition [136].

Testing for SARS-CoV-2

Nucleic acid amplification test (NAAT)

Wherever possible, suspected active SARS-CoV-2 infections should be tested with NAAT, such as rRT-PCR. NAAT assays should target the SARS-CoV-2 genome. Since there is currently no known circulation of SARS-CoV-1 globally, a sarbecovirus-specific sequence is also a reasonable target. For commercial assays, interpretation of results should be done according to the instructions for use. Optimal diagnostics consist of a NAAT assay with at least two independent targets on the SARS-CoV-2 genome, however, in areas with widespread transmission of SARS-CoV-2, a simple algorithm might be adopted with one single discriminatory target. When using a one-target assay, it is recommended to have a strategy in place to monitor for mutations that might affect performance. For more details, see section below on "Background information on monitoring for mutations in primer and probe regions".

Background information on monitoring for mutations in primer and probe regions

As SARS-CoV-2 continues to acquire genetic changes over time, mismatches between primers and/or probes, and corresponding binding sites within SARS-CoV-2 genomes may reduce NAAT sensitivity. Where feasible, monitor for primer and probe mismatches due to SARS-CoV-2 mutations, and assess their impact. By routinely testing all specimens with two different primer/probe sets that target different genomic regions it is possible to reduce the risk of false-negative results. Several tools monitoring for relevant mutations are available, including searches done by GISAID (the Global Initiative on Sharing All Influenza Data) and other tools including PrimerCheck (Erasmus Medical Centre), PrimerScan (European Centre for Disease prevention and Control) and CoV-GLUE (COVID-19 UK Genomics Consortium and MRC-University of Glasgow Centre for Virus Research). Primercheck and COV-GLUE allows researchers to use their own sequence data confidentially as input. Not all mutations in primer/probe regions lead to significant changes in performance. *In silico* predictions of binding efficiency are insufficient to quantify the effect of a mismatch on the sensitivity of a NAAT, so it is essential to do an experimental comparison of the assay's sensitivity for both variant and reference virus isolates. For commercial assays, it is vital to keep track of possible incidents of suboptimal performance. Inform the manufacturer of the assay and WHO of any concerns you may experience with a specific assay.

Many in-house and commercial rRT-PCR assays have become available and several have been independently validated [137-143]. Some considerations for selecting the right NAAT for the laboratory are listed in Annex 3. A few of the NAAT systems have the capacity for fully automated testing that integrates sample processing as well as the capacity for RNA extraction, amplification and

reporting. Such systems provide access to testing in locations with limited laboratory capacity and rapid turnaround time when used for near-patient testing. Validation data of some of these assays are now available [144]. When implementing these assays in specific settings, staff performing the test should be appropriately trained, performance should be assessed in those specific settings and a system to monitor quality should be put in place. Additional potentially valuable amplification/detection methods, such as CRISPR (targeting clustered regularly interspaced short palindromic repeats), isothermal nucleic acid amplification technologies (e.g. reverse transcription loop-mediated isothermal amplification (RT-LAMP), and molecular microarray assays are under development or in the process of being commercialized [145-147]. Validation of the analytic and clinical performance of these assays, demonstration of their potential operational utility, rapid sharing of data, as well as emergency regulatory review of manufacturable, well-performing tests are encouraged to increase access to SARS-CoV-2 testing.

Careful interpretation of weak positive NAAT results is needed, as some of the assays have shown to produce false signals at high Ct values. When test results turn out to be invalid or questionable, the patient should be resampled and retested. If additional samples from the patient are not available, RNA should be re-extracted from the original samples and retested by highly experienced staff. Results can be confirmed by an alternative NAAT test or via virus sequencing if the viral load is sufficiently high. Laboratories are urged to seek reference laboratory confirmation of any unexpected results.

One or more negative results do not necessarily rule out the SARS-CoV-2 infection [40, 42, 58, 66-74]. A number of factors could lead to a negative result in an infected individual, including:

- poor quality of the specimen, because it contains too little patient material;
- the specimen was collected late in the course of the disease, or the specimen was taken from a body compartment that did not contain the virus at that given time;
- the specimen was not handled and/or shipped appropriately;
- technical reasons inherent in the test, e.g. PCR inhibition or virus mutation.

For clinical case management a proposed testing algorithm is depicted in Figure 1.

Alternatives to RNA extraction

Most conventional molecular diagnostic workflows require RNA extraction before an rRT-PCR test is conducted. However, there are global shortages of commercial extraction kits due to the COVID-19 pandemic. Direct rRT-PCR from nasopharyngeal swabs may provide an emergency or temporary alternative to RNA extraction, but limitations to the input volume, as well as an increased risk of RNA degradation and PCR inhibition can lead to a loss of sensitivity of the assay [148, 149]. Heat treatment prior to sample processing can affect the RNA quality [149, 150]. Other factors that can affect RNA quality and which should be evaluated before implementation are the addition of detergents, transport media, the volume of the specimen used, and the polymerase enzyme used [148, 151-154]. The biosafety implications of alternative extraction workflows should also be considered. Laboratories considering alternative methods that bypass the need for RNA extraction should validate their protocols thoroughly and conduct a risk assessment that weighs the benefits and risks, before integrating such protocols into a diagnostic workflow.

Pooling of specimens for NAAT

Pooling of samples from multiple individuals can increase the diagnostic capacity for detecting SARS-CoV-2 when the rate of testing does not meet the demand in some settings [155-159]. There are several strategies for pooling specimens. If the pooled result is negative, all individual specimens in the pool are regarded as negative. If the pool tests positive the follow-up steps depend on the strategy, but in general each specimen needs to undergo individual testing (pool deconvolution) to identify the positive specimen(s). Another approach is matrix pooling. This means that pools are made per row and per column, and tested by PCR, the position in the matrix identifies the positive specimen without additional testing if prevalence is sufficiently low. Depending how robust the matrix testing method is in the specific context, it might still be advisable to retest the identified positive samples for confirmation. Pooling of specimens could be considered in population groups with a low/very low expected prevalence of SARS-CoV-2 infection, but not for cases or cohorts that more likely to be infected with SARS-CoV-2. Routine use of the pooling of specimens from multiple individuals in clinical care and for contact tracing purposes is not recommended. Studies have been conducted to determine the optimal sample pooling number and design pooling strategies in different outbreak settings [156, 160-162].

Before any sample pooling protocols can be implemented, they must be validated in the appropriate populations and settings. An inappropriate testing strategy may lead to missed cases or other laboratory errors that may, in turn, negatively affect patient management and public health control measures. In addition, the risk of cross-contamination and the potential increase in workload complexity and volume must be considered. To perform reliable pooling, adequate automation is key (e.g. robotic systems, software supporting the algorithms to identify positive samples, laboratory information systems and middle-ware that can work with sample pooling).

Based on currently available data, intra-individual pooling (multiple specimens from one individual that are pooled and tested as a single sample) from upper respiratory tract samples can be used. Intra-individual pooling of sputum and faeces with URT samples is not recommended because the former may contain compounds that inhibit rRT-PCR.

Rapid diagnostic tests based on antigen detection

Rapid diagnostic tests that detect the presence of SARS-CoV-2 viral proteins (antigens) in respiratory tract specimens are being developed and commercialized. Most of these are lateral flow immunoassays (LFI), which are typically completed within 30 minutes. In contrast to NAATs, there is no amplification of the target that is detected, making antigen tests less sensitive. Additionally, false-positive (indicating that a person is infected when they are not) results may occur if the antibodies on the test strip also recognize antigens of viruses other than SARS-CoV-2, such other human coronaviruses.

The sensitivity of different RDTs compared to rRT-PCR in specimens from URT (nasopharyngeal swabs) appears to be highly variable [144, 163-165], but specificity is consistently reported to be high. Currently, data on antigen performance in the clinical setting is still limited: paired NAAT and antigen validations in clinical studies are encouraged to identify which of the antigen detection tests that are either under development or have already been commercialized demonstrate acceptable performance in representative field studies. When performance is acceptable, antigen RDTs could be implemented in a diagnostic algorithm to reduce the number of molecular tests that need to be performed and to support rapid identification and management of COVID-19 cases. How antigen detection would be incorporated into the testing algorithm depends on the sensitivity and specificity of the antigen test and on the prevalence of SARS-CoV-2 infection in the intended testing population. Higher viral loads are associated with improved antigen test performance; therefore test performance is expected to be best around symptom onset and in the initial phase of a SARS-CoV-2 infection. For specific guidance on antigen detection tests see the WHO Interim guidance on antigen-detection in diagnosis of SARS-CoV-2 infection using rapid immunoassays [5].

Antibody testing

Serological assays that detect antibodies produced by the human body in response to infection with the SARS-CoV-2 can be useful in various settings.

For example, serosurveillance studies can be used to support the investigation of an ongoing outbreak and to support the retrospective assessment of the attack rate or the size of an outbreak [9]. As SARS-CoV-2 is a novel pathogen, our understanding of the antibody responses it engenders is still emerging and therefore antibody detection tests should be used with caution, and not used to determine acute infections.

Non-quantitative assays (e.g. lateral flow assays) cannot detect an increase in antibody titres, in contrast to (semi)quantitative or quantitative assays. Lateral flow antibody detection assays (or other non-quantitative assays) are currently not recommended for acute diagnosis and clinical management and their role in epidemiologic surveys is being studied. For more information on the utility of rapid immunodiagnostic tests, we refer to the WHO scientific brief with advice on the specific SARS-CoV-2 point-of-care immunodiagnostic tests [4].

Serology should not be used as a standalone diagnostic to identify acute cases in clinical care or for contact tracing purposes. Interpretations should be made by an expert and are dependent on several factors including the timing of the disease, clinical morbidity, the epidemiology and prevalence within the setting, the type of test used, the validation method, and the reliability of the results.

Seroconversion (development of measurable antibody response after infection) has been observed to be more robust and faster in patients with severe disease compared to those with milder disease or asymptomatic infections. Antibodies have been detected as early as in the end of the first week of illness in a fraction of patients, but can also take weeks to develop in patients with subclinical/mild infection [37, 166-173]. A reliable diagnosis of COVID-19 infection based on patients' antibody response will often only be possible in the recovery phase, when opportunities for clinical intervention or interruption of disease transmission have passed. Therefore, serology is not a suitable replacement for virological assays to inform contact tracing or clinical management. The duration of the persistence of antibodies generated in response to SARS-CoV-2 is still under study [49, 174]. Furthermore, the presence of antibodies that bind to SARS-CoV-2 does not guarantee that they are neutralizing antibodies, or that they offer protective immunity.

Available serological tests for detecting antibodies

Commercial and non-commercial tests measuring binding antibodies (Total immunoglobulins (Ig), IgG, IgM, and/or IgA in different combinations) utilizing various techniques including LFI, enzyme-linked immunosorbent assay (ELISA) and chemiluminescence immunoassay (CLIA) have become available. A number of validations and systematic reviews on these assays have been published [170, 171, 173, 175-177]. The performance of serologic assays varies widely in different testing groups (such as in patients with mild versus moderate-to-severe disease as well as in young versus old), timing of testing and the target viral protein. Understanding these performance variations will require further study. Antibody detection tests for coronavirus may also cross-react with other pathogens, including other human coronaviruses, [167, 178-180] or with pre-existing conditions (e.g. pregnancy, autoimmune diseases) and thus yield false-positive results.

Virus neutralization assays are considered to be the gold standard test for detecting the presence of functional antibodies. These tests require highly skilled staff and BSL-3 culture facilities and, therefore, are unsuitable for use in routine diagnostic testing.

Implementation and interpretation of antibody testing in the clinical laboratory

When implementing serological assays in the clinical laboratory, an in-house validation or verification of the specific assays is advisable. Even if commercial tests have been authorized for use in emergencies, an in-house verification (or if required by local authorities a validation) is still required. Protocols and examples with suggestions as to how to do this are now available [170, 171, 181].

Each serological test is different. With regard to commercial tests, follow the manufacturer's instructions for use. Studies show that several commercial assays measuring total Ig or IgG have performed well. Most of these studies show no advantage of IgM over IgG, as IgM does not appear much earlier than IgG [173]. The additional role of IgA testing in routine diagnostics has not been established. For confirmation of a recent infection, acute and convalescent sera must be tested using a validated (semi)quantitative or quantitative assay. The first sample should be collected during the acute phase of illness, and the second sample at least 14 days after the initial sera was collected. Maximum antibody levels are expected to occur in the third/fourth week after symptom onset. Seroconversion or a rise in antibody titres in paired sera will help to confirm whether the infection is recent and/or acute. If the initial sample tests positive, this result could be due to a past infection that is not related to the current illness.

The first known case of reinfection with SARS-CoV-2 has been documented [182]. Only limited information is available on the interpretation of SARS-CoV-2 antibody tests after a previous infection with SARS-CoV-2 and on the dynamics of SARS-CoV-2 serology if a subsequent infection with another coronavirus occurs. In these two sets of circumstances interpretation of serology may be extremely challenging.

Viral isolation

Virus isolation is not recommended as a routine diagnostic procedure. All procedures involving viral isolation in cell culture require trained staff and BSL-3 facilities. A thorough risk assessment should be carried out when culturing specimens from potential SARS-CoV-2 patients for other respiratory viruses because SARS-CoV-2 has been shown to grow on a variety of cell lines [183].

Genomic sequencing for SARS-CoV-2

Genomic sequencing for SARS-CoV-2 can be used to investigate the dynamics of the outbreak, including changes in the size of an epidemic over time, its spatiotemporal spread, and testing hypotheses about transmission routes. In addition, genomic sequences can be used to decide which diagnostic assays, drugs and vaccines may be suitable candidates for further exploration. Analysis of SARS-CoV-2 virus genomes can, therefore, complement, augment and support strategies to reduce the disease burden of COVID-19. However, the potentially high cost and volume of the work required for genomic sequencing means that laboratories should have clarity about the expected returns from such investment and what is required to maximize the utility of such genomic sequence data. WHO guidance on SARS-CoV-2 genomic sequencing is currently being developed.

Quality assurance

Before introducing a new testing method, a new assay, new batches of materials, or a new PCR technician into the laboratory, a validation or verification should be carried out, to ensure that the laboratory testing system is performing adequately.

For manual PCR systems, each NAAT sample should include internal controls and ideally a specimen collection control (human gene target). Additionally, external controls are recommended for each test run. Laboratories that order their own primers and probes should carry out entry testing or validation looking at functionality and potential contaminants [184].

Laboratories are encouraged to define their assays' detection limits, and senior staff should recognize how disease prevalence alters the predictive value of their test results. Once the number of cases goes down, the positive predictive value will decrease, therefore the interpretation of tests should continue to be part of a stringent quality assurance scheme, with interpretation based on: timing of sampling, sample type, test specifics, clinical data and epidemiological data.

Laboratories should put measures in place to reduce the potential for false positive rRT-PCR results and have a strategy for the management of equivocal results. See Annex 4 for a checklist.

In general, laboratories should have a quality assurance system in place and are encouraged to participate in external quality assessment (EQA) schemes or perform result comparison between laboratories of a subset of samples.

WHO has previously advised national laboratories to ensure quality performance by confirmation of testing results for the first 5 positive specimens and the first 10 negative specimens (collected from patients that fit the case definition) by referring them to one of the WHO reference laboratories that provide confirmatory testing for SARS-CoV-2. WHO provided support to national laboratories to facilitate specimen shipment to one of the dedicated reference laboratories. For more information, consult the WHO website for the list of reference laboratories [185] and shipment instructions [135]. Strengthened national reference laboratories and growing access to EQA schemes for SARS-CoV-2 reduce the need to use this mechanism. If testing for SARS-CoV-2 is not yet available in a country, efforts should be made to establish national capacity.

Reporting of cases and test results

Rapid communication of test results is important for planning and design of public health and outbreak control interventions. Laboratories should follow national reporting requirements. In general, all test results, positive or negative, should be immediately reported to the national authorities. States Parties to the International Health Regulations (IHR) are reminded of their obligation to share with WHO relevant public health information for events for which they must notify WHO, using the decision instrument in Annex 2 of the IHR (2005) [186].

Regular interaction between public health experts, clinicians and local laboratory experts to discuss strategies, potential problems and solutions, should be considered to be an essential part of an adequate COVID-19 response. This response includes the development of guidance and (clinical-, epidemiological-, and trial) study protocols.

A rapid turnaround time of test results can, in turn, have a positive impact on the outbreak [187, 188]. More studies are needed to fine tune the maximum acceptable time from symptom onset to sample result to have impact on clinical management and outbreak control; currently a maximum of 24 hours is considered reasonable in most settings. As laboratories often have control only over the time between sample arrival and the test result, it is critical to ensure that samples arrive in the laboratory without delay.

Methods

This document was developed in consultation with experts from the SARS-CoV-2 laboratory expert network. Experts in the network completed a confidentiality agreement and declaration of interest. The declaration of interest forms were reviewed, and no conflicts regarding the support of this guidance document were identified. Relevant WHO guidance has been used in this document [136, 185, 189-194]. This is the sixth edition (version 2020.6) and was originally adapted from *Laboratory testing for Middle East Respiratory Syndrome Coronavirus* [189].

A broad spectrum of clinical laboratory experts from different regions were engaged in the development of this document. The internal experts involved in the development include WHO regional laboratory focal points, epidemiologists and clinical experts. This version of the guidance incorporates the novel understanding and characteristics of the virus and addresses questions and issues received from WHO's country and regional offices and other channels.

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WHO continues to monitor the situation closely for any changes that may affect this interim guidance. Should any factors change, WHO will issue a further update. Otherwise, this interim guidance will expire 1 year after the date of publication.

WHO reference number: WHO/2019-nCoV-19/laboratory/2020.6

Annex 1: Specimen collection and storage

Specimen type	Collection materials	Recommended temperature for storage and/or shipment to the laboratory and until testing (from date of specimen collection) #
Nasopharyngeal and oropharyngeal swab	Dacron or polyester flocked swabs with VTM *	2-8 °C if ≤12 days* –70 °C (dry ice) if > 12 days
Bronchoalveolar lavage	Sterile container with viral transport medium **	2-8 °C if ≤ 2 days –70 °C (dry ice) if > 2 days
(Endo)tracheal aspirate, nasopharyngeal or nasal wash/aspirate	Sterile container with viral transport medium**	2-8 °C if ≤2 days –70 °C (dry ice) if > 2 days
Sputum	Sterile container	2-8 °C if ≤ 2 days –70 °C (dry ice) if > 2 days
Tissue from biopsy or autopsy including from lung	Sterile container with saline or VTM	2-8 °C if ≤ 24 hours –70 °C (dry ice) if > 24 hours
Serum	Serum separator tubes (adults: collect 3-5 ml whole blood)	2-8 °C if ≤ 5 days –70 °C (dry ice) if > 5 days
Whole blood	Collection tube	2-8 °C if ≤5 days –70 °C (dry ice) if > 5 days
Stool	Stool container	2-8 °C if ≤5 days –70 °C (dry ice) if > 5 days

Avoid repeated freezing and thawing of specimens. If no access to –70 °C consider storing at -20 °C.

* For transport of specimens for viral detection, use preferentially viral transport medium (VTM) containing antifungal and antibiotic supplements. If VTM is not available, other solutions may be used after validation. Such solution may include phosphate buffered saline (PBS), 0.9% sterile saline, minimum essential medium (with storage at +4C up to 7 to 14 days) [195-197]. In case other viruses such as influenza should also be tested, do not store samples for more than 5 days at 4-8 degrees but –70 °C or dry ice [194],.

** If VTM is not available, sterile saline may be used [198]. Duration of specimen storage at 2-8 °C may be different from what is indicated above.

Apart from specific collection materials indicated in the table, ensure that other materials and equipment are available: e.g. transport containers and specimen collection bags and packaging, coolers, and cold packs or dry ice, sterile blood-drawing equipment (e.g. needles, syringes and tubes), labels and permanent markers, PPE, materials for decontamination of surfaces, etc.

Annex 2: laboratory request form

SARS-CoV-2 LABORATORY TEST REQUEST FORM[1]

Submitter information

NAME OF SUBMITTING HOSPITAL, LABORATORY, or OTHER FACILITY*
Physician
Address
Phone number
Case definition[2]: ☐ Suspected case ☐ Probable case ☐ Other:

Patient info

First name **Last name**
Patient ID number **Date of Birth** **Age:**
Address **Sex** ☐ Male ☐ Female ☐ Unknown
Phone number

Specimen information

Type ☐ Nasopharyngeal and oropharyngeal swab ☐ Bronchoalveolar lavage ☐ Endotracheal aspirate ☐ Nasopharyngeal aspirate ☐ Nasal wash ☐ Sputum ☐ Lung tissue ☐ Serum ☐ Whole blood ☐ Stool ☐ Other: ....

All specimens collected should be regarded as potentially infectious **and you must contact the reference laboratory before sending specimens to them.**
All specimens must be sent in accordance with category B transport requirements.

Please tick the box if your clinical specimen is post mortem ☐
Date of collection **Time of collection**
Priority status

Clinical details

Date of symptom onset:
Has the patient had a recent history of travelling to an affected area? ☐ Yes ☐ No **Country** **Return date**

Has the patient had contact with a confirmed case? ☐ Yes ☐ No ☐ Unknown ☐ Other exposure:
Additional Comments (e.g. antimicrobial treatment, immunosuppressants)

[1] Form in accordance with ISO 15189:2012 requirements
[2] Public health surveillance for COVID-19: interim guidance

Annex 3: Considerations when selecting the optimal NAAT for the use setting

Aspect	Considerations
Manufacturing quality	CE-IVD, WHO EUL, PQ, EU-FDA or other approval. Independent validation data. Manufacture under ISO.
Targets	Number of targets, specificity for SARS-CoV-2 or other sarbecoviruses.
Controls	For manual NAAT testing, a positive template control (PTC) and at least one negative template control (NTC) should be included. Use of an extraction control and an internal human housekeeping gene specimen adequacy control is also recommended.
Instrumentation	Is the assay compatible with available systems in the laboratory or country? Ease of use and operational utility. Opportunity to multiplex with other respiratory pathogens. Costing of platform and maintenance. Ease of access to maintenance provider/troubleshooting.
Workflow	Can the kit be implemented in the existing workflow of the laboratory, while assuring minimal disruption on other diagnostics?
Ease of use	Complexity of assay. Number of steps. Required training and staff.
Storage and shipment requirement	Many kits require cold chain conditions during shipment and storage, in some circumstances this might pose a challenge. Some kits contain lyophilized enzymes that do not require the kit to be shipped and sometimes stored cold. Shelf life: To be prepared for periods of intense testing stocks might be needed, a longer shelf life is needed to ensure adequate use of resources.
Training needs and access	Instructions for use (IFU) available, training available by company or others, troubleshooting options provided and accessible help line in local language.
Need for ancillary reagents	Complete kit for sampling/extraction/amplification or the PCR kit requires additional reagents or tools. Compatibility with laboratories' extraction method. Compatibility with procurable polymerases if needed. Special equipment needed (e.g. calibration panel before running the test, extraction platforms, heat block, vortex, magnetic stand or centrifuge).
Continuity of supply	Long term supply agreement. Secured routes of delivery if lockdowns occur. Assay and ancillary reagents costs.

Annex 4: Suggestions for checklist to reduce possible cases of false positive rRT-PCR results and handling of equivocal results

Laboratories should have a standard operating procedure in place to reduce the possible false positive rRT-PCR results and how to handle equivocal results. This checklist provides the laboratories with suggestions and considerations. The checklist is formulated for manual rRT-PCRs but many aspects can also be used for other NAATs.

CLERICAL

- ❑ Eliminate or reduce transcription
- ❑ If transcribe, method of checking
- ❑ Sorting, aliquoting and labelling
- ❑ Double identifiers
- ❑ Entering results

CROSS CONTAMINATION

- ❑ Preparation area
- ❑ Manipulation of tubes
- ❑ Aerosol generation
- ❑ Nucleic acid concentration and extraction setup
- ❑ PCR format and steps
- ❑ Check other positives in same run
- ❑ Environmental
- ❑ Contaminated reagents
- ❑ Disposal

EQUIPMENT and TEST KITS

- ❑ Calibration method
- ❑ Equipment validated for test kit
- ❑ Assess new equipment for contamination risk

PRACTICE

- ❑ For mass screening, separate high-prevalence from low-prevalence groups.
- ❑ Visual inspection of run
- ❑ Analytical – examination of raw data
- ❑ Extend run when necessary for late Ct

EQUIVOCAL RESULTS

- ❑ Follow manufacturer's instructions
- ❑ Laboratory policy for equivocal results
- ❑ Any additional laboratory criteria for equivocal category
- ❑ Communication of interpretation to users
- ❑ Criteria for repeat testing, if any
- ❑ Use of alternative test or PCR target
- ❑ Communication with clinical and public health staff

This is Exhibit "C" referred to in the Affidavit of Jared Manley Peter Bullard affirmed before me this 29th day of April, 2021.

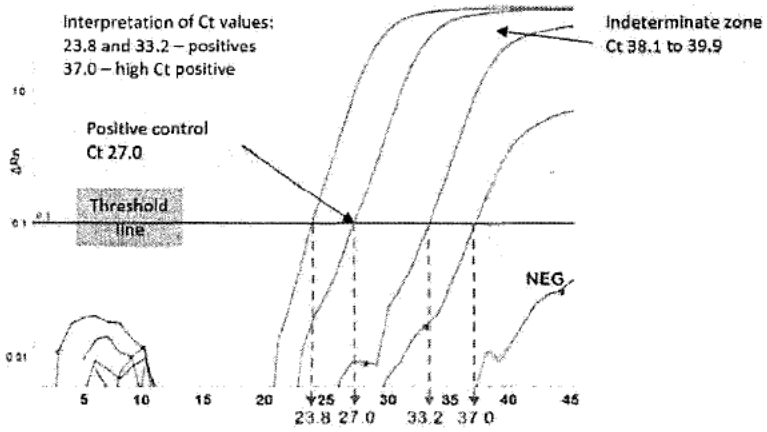
A Barrister-at-law entitled to practice in and for the Province of Manitoba.

PCR and Ct values in COVID-19 testing – Frequently Asked Questions and Important Considerations

Canadian Public Health Laboratory Network (CPHLN)
Respiratory Virus Infections Working Group

What is a cycle threshold (Ct) value? Most tests that detect the RNA or genetic finger print of the virus that causes COVID-19 (e.g. PCR) do so through a process where specific bits of the genetic finger print are amplified using a temperature cycling reaction that repeats up to 45 times (called amplification cycles). The amount of genetic material doubles after each cycle (Figure 1). The number of amplification cycles required to create enough copies of the viral RNA to be detected is called the cycle threshold or Ct value. The more RNA that is present in the patient sample, the fewer cycles are required for the signal to reach the detection threshold (low Ct value). The fewer RNA present in the clinical sample, the more cycles are required. So a low Ct value corresponds to a high viral load, while a high Ct value correspondsto a low viral load.

Figure 1: An Example of a Real-Time PCR Amplification Curve



Note: This amplification curve is presented on a logarithmic scale. Curves can also be viewed on a linear scale, which will look different but does not change the Ct interpretation. Not all commercial real-time PCR assays provide Ct values or amplification curves for viewing by the user. In addition, some molecular assays are based on other technologies (e.g. flow cytometry), and hence, do not provide Ct values.

Source: Public Health Ontario: An Overview of Cycle Threshold Values and their Role in SARS-CoV-2 Real-Time PCR TestInterpretation

How are Ct values used? The fewer amplification cycles it takes to pass this threshold (a low Ct value) the more virus is likely to present in the initial sample. The more cycles required to amplify the viral genes above the threshold (a high Ct value) suggests a lower amount of virus present in the initial sample.There can be up to 45 total number of cycles for many molecular tests. The Ct value is the cut-off that calls a test positive, which is defined by the manufacturer of the test or the laboratory during the validation process to make sure that the PCR test is correctly detecting the presence of the virus and not false signals.

Does a certain Ct value predict who is infectious? This is a complex issue. Higher viral loads among patients admitted to hospital have been linked to a higher 30 day mortality. However, it is not possible to directly translate a Ct value into degree of infectiousness. There is good evidence that when more than 35cycles are required to detect virus, the virus concentration is so low that it is unlikely to grow the virus inthe laboratory. However, the cells used in the laboratory to grow the virus are different from the cells in the back of the throat and nose (nasopharynx) or the lungs in people. So just because one can't grow the virus in a laboratory that does not mean that it won't transmit.

Many believe that with low viral RNA copy numbers (high Ct value) the virus is not likely to be transmitted. A recent study which followed symptomatic patients not requiring hospitalization showed that those with higher viral loads (lower Cts) infected a higher proportion of their immediate contacts. But we do not know how much virus is actually required to cause an infection in someone and there are other important factors that may influence infectiousness, including the health of the person exposed and the type of exposure that has happened.

Important factors to consider in interpreting Ct values:

1) *Ct values will depend on the stage of infection* – Between exposure to the virus and symptom onset (i.e.incubation or pre-symptomatic period), the amount of virus in a person's sample can be initially too low to be detectable (negative). A person with an initially negative result may progress to give a test with a high Ct value i.e. >30 (low viral load), then to a lower Ct value (increased viral load) dramatically within a couple of days. Laboratories across the country have seen many cases where the person is tested early during their course of infection and the initial sample had a very high Ct value ~35 (low virus RNA concentration) and the following day the Ct was ~14 (high virus RNA concentration).

2) *Ct values are affected by the type of the sample taken from the person* - Nasopharyngeal swabs (those that go deep into the nose to swab the back of the upper throat) are the most sensitive specimen type for people who do not need admission to hospital; throat/nasal swabs, and gargles/saliva may not have as much virus in them (so they would give a positive test with a higher Ct value). In people where COVID-19 has infected their lungs, these samples from the nose/throat can be negative and a deeper sample like sputum is needed to detect the virus. In addition, the type of swabs used for collecting samples may also influence the Ct value.

3) *Ct values are affected by the quality of the sample taken from the person* - The quality of the sample collected is very important. If you don't get the best possible sample, less virus will be in it and this can lead to a sample with an artificially high Ct value in a person who could have lots of virus in their system.

4) *Ct values cannot be compared between different PCR tests* - There is no standard yet to be able to compare one test to another so the Ct range can greatly differ by the type of test used, that may use different signal detection methods. In fact, even when testing identical samples using different PCR tests,the results can differ by up to 8 Ct values (e.g. from 22 to 30). This has been observed in the laboratories from different jurisdictions (e.g. ON, BC and SK).

5) *The genetic fingerprint of the virus can be picked up long after the virus is no longer infectious* – PCR can be positive for over 100 days or more after infection, usually with tests that have high Ct values but in most cases are unlikely to transmit to others beyond 10 days post symptom onset. This finding has been considered in the Infection Prevention and Control (IPAC) and public health practice that recommends patient isolation based on symptom onset, disease severity and the presence of any underlying, immunocompromising conditions instead of on PCR results alone both in some healthcare facilities and more so in the community setting.

6) *The impact of new variants on Ct values is not clear* – Our current tests can detect the new COVID-19 variants of concern (VOCs) - B.1.1.7 (first detected in the United Kingdom), B.1.351 (first detected in South Africa) and P.1 (first detected in Brazil). It has been documented that B.1.1.7 and B.1.351 variants are more infectious, and patients with B.1.1.7 infections have lower Ct values (higher viral loads) compared with those infected with the originally circulating (non-variant) SARS-CoV-2 virus. B.1.351 and P.1 are undergoing further study. We are closely following the VOC-positive samples in Canada to better understand the impact of these variants on our laboratory tests.

Key Points and Recommendations:

1. Ct values can sometimes be used by practitioners, in combination with clinical and epidemiologic information, to make judgment-based decisions. Ct values should not be used alone to make concrete clinical or public health decisions.
2. Not all nucleic acid amplification assays produce Ct values or an equivalent proxy measure of viral 'RNA load'.
3. High Ct values are not yet proven to be able to declare someone non-infectious, only that they are less likely to be infectious.
4. As a result, it is not recommended that Ct values be routinely be clinically reported with SARS-CoV-2 RT-PCR results.

5. If a laboratory chooses to routinely report Ct values, it is recommended that clear language regarding uncertainty in interpretation and which authorities may need to be consulted for decision making be included in the report.

References:

1. An Overview of Cycle Threshold Values and their Role in SARS-CoV-2 Real-Time PCR Test Interpretation. https://www.publichealthontario.ca/-/media/documents/ncov/main/2020/09/cycle-threshold-values-sars-cov2-pcr.pdf?la=en

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3. Ct Values: What They Are and How They Can Be Used. *Association of Public Health Laboratories.* 2020, November 9. Retrieved from: https://www.aphl.org/programs/preparedness/Crisis-Management/Documents/APHL-COVID19-Ct-Values.pdf#search=What%20They%20Are%20and%20How%20They%20Can%20be%20Used

4. Frequently Asked Questions about Coronavirus (COVID-19) for Laboratories, *CDC*. Retrieved from:https://www.cdc.gov/coronavirus/2019-ncov/lab/faqs.html#Interpreting-Results-of-Diagnostic- Tests

5. Marks A, Millat-Martinez P, Ouchi D, et al. Transmission of COVID-19 in 282 clusters in Catalonia,Spain: a cohort study - *The Lancet Infectious Diseases* 2021. Published Online February 2, 2021 https://doi.org/10.1016/S1473-3099(20)30985-3

6. Rhoads D, Peaper DR, She RC, Nolte F, Wojewoda C, Anderson N, Pritt BS, College of American Pathologists (CAP) Microbiology Committee Perspective: Caution Must Be Used in Interpretingthe Cycle Threshold (Ct) Value, *Clinical Infectious Diseases*, 2020, ciaa1199, https://doi.org/10.1093/cid/ciaa1199

7. Singanayagam A, Patel M, Charlett A, Lopez Bernal J, Saliba V, Ellis J, Ladhani S, Zambon M, Gopal R .Duration of infectiousness and correlation with RT-PCR cycle threshold values in cases of COVID-19, England, January to May 2020. *Euro Surveill.* 2020 Aug; 25(32):2001483. DOI: https://doi.org/10.2807/1560-7917.ES.2020.25.32.2001483

File No. CI 20-01-29284

THE QUEEN'S BENCH
Winnipeg Centre

APPLICATION UNDER: *The Constitutional Questions Act*, C.C.S.M., c. 180

AND UNDER: The Court of Queen's Bench Rules, M.R. 553-88

IN THE MATTER OF: *The Public Health Act*, C.C.S.M. c. P210

B E T W E E N:

GATEWAY BIBLE BAPTIST CHURCH, PEMBINA VALLEY BAPTIST CHURCH, REDEEMING GRACE BIBLE CHURCH, THOMAS REMPEL, GRACE COVENANT CHURCH, SLAVIC BAPTIST CHURCH, CHRISTIAN CHURCH OF MORDEN, BIBLE BAPTIST CHURCH, TOBIAS TISSEN, ROSS MACKAY,

Applicants,

- and -

HER MAJESTY THE QUEEN IN RIGHT OF THE PROVINCE OF MANITOBA and DR. BRENT ROUSSIN in his capacity as CHIEF PUBLIC HEALTH OFFICER OF MANITOBA, and DR. JAZZ ATWAL in his capacity as ACTING DEPUTY CHIEF OFFICER OF HEALTH OF MANITOBA

Respondents.

AFFIDAVIT OF JASON KINDRACHUK
AFFIRMED: April 19, 2021

DEPARTMENT OF JUSTICE
Constitutional Law Branch
[redacted]

File No. CI 20-01-29284

THE QUEEN'S BENCH
Winnipeg Centre

APPLICATION UNDER: *The Constitutional Questions Act*, C.C.S.M., c. 180

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HER MAJESTY THE QUEEN IN RIGHT OF THE PROVINCE OF MANITOBA and DR. BRENT ROUSSIN in his capacity as CHIEF PUBLIC HEALTH OFFICER OF MANITOBA, and DR. JAZZ ATWAL in his capacity as ACTING DEPUTY CHIEF OFFICER OF HEALTH OF MANITOBA

Respondents.

AFFIDAVIT OF JASON KINDRACHUK

I, JASON KINDRACHUK, of the City of Saskatoon, in the Province of Saskatchewan, **AFFIRM AS FOLLOWS:**

1. I have personal knowledge of the facts and matters hereinafter deposed to by me, except where same are stated to be based upon information and belief, and those I believe to be true.

2. Attached hereto and marked as Exhibit "A" to this my Affidavit is my Reply Report.

3. I make this affidavit bona fide.

AFFIRMED before me in the City of Winnipeg, in the Province of Manitoba, through use of video conferencing as permitted by order under *The Emergency Measures Act*, this 29 day of April, 2021.

A Barrister-at-law entitled to practice in and for the Province of Manitoba

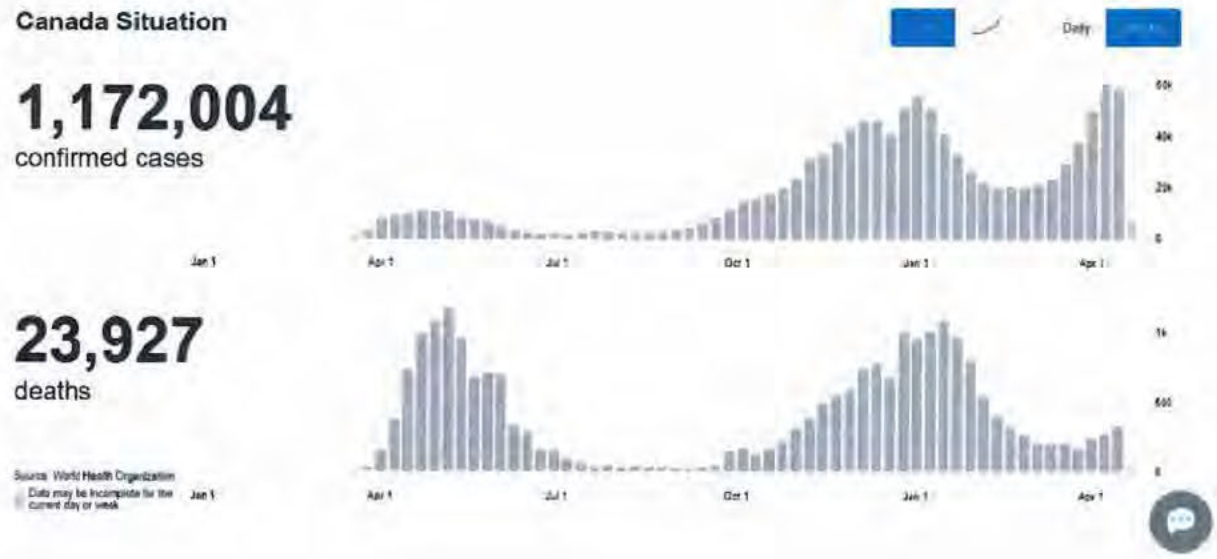
JASON KINDRACHUK

This is Exhibit "A" referred to in the Affidavit of Jason Kindrachuk affirmed before me the 29th day of April, 2021.

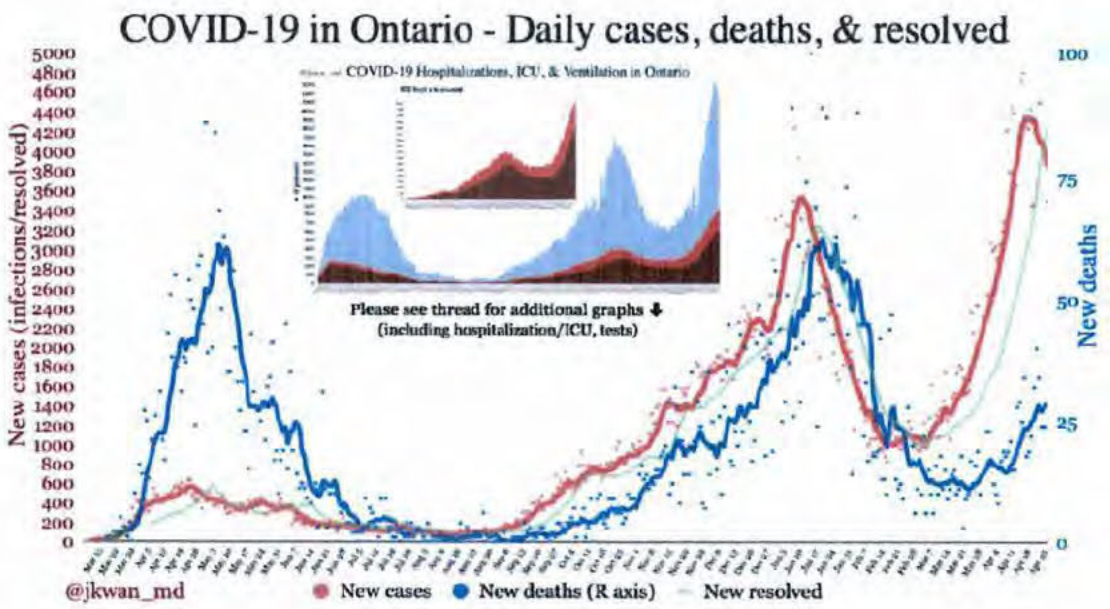
A Barrister at Law in and for the Province of Manitoba.

The resurgence of Covid-19 in Canada.

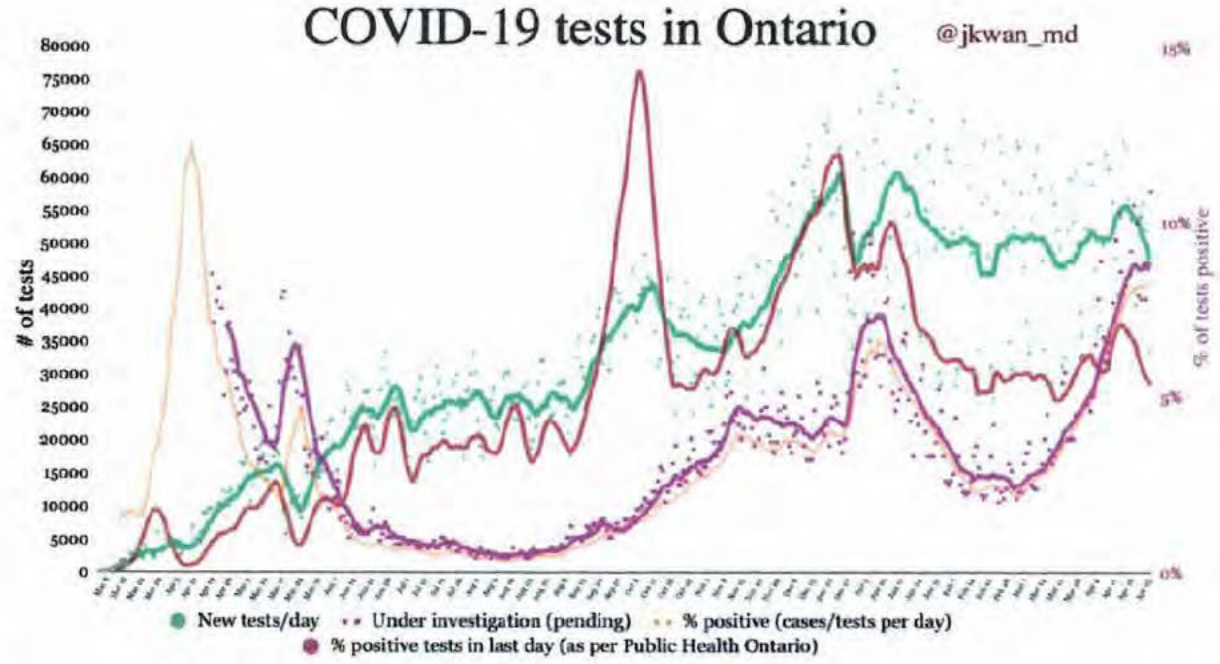
Dr. Bhattacharya asserted in his second report that epidemiological modeling and the voices of infectious disease experts in Canada (myself included) and the Public Health Agency of Canada had gotten it wrong in regards to our concerns regarding the spread of SARS-CoV-2 variants of concern within the country. Dr. Bhattacharya utilized a figure from the Financial Times to show that through March 2021, there had only been a minor increase in cases. Of particular note is that the slope of the graph in the figure provided by Dr. Bhattacharya directly suggested a clearly increasing trend in cases that had begun at a higher baseline of cases than either the first or second waves in Canada and the slope was very similar to that seen in the early stages of the second wave (Sep-Oct 2020). As of today (April 26, 2021), total nationwide cases have reached the same maxima as recorded during the second wave with many regions reporting increasing test positivity rates:



Further, hospitalizations and intensive care unit admissions continue to increase across multiple regions, most notably Ontario where hospitalizations, ICU admissions and patients requiring ventilation have exceeded those seen during the second wave.



Further, it is notable that while this current data plot of cases suggests that overall case numbers are decreasing, the test positivity rate has continued to remain elevated with no obvious decreasing trend. This suggests that many cases of infection are currently undetected and thus widespread community transmission is ongoing.



In addition, variants of concern are now responsible for the majority of reported cases with B.1.1.7 being highly over-represented within these cases (source: Public Health Ontario daily epidemiological summary April 25, 2021).

Figure 5. Number of confirmed COVID-19 cases and percent positive for mutations or VOCs: Ontario, February 7, 2021 to April 25, 2021

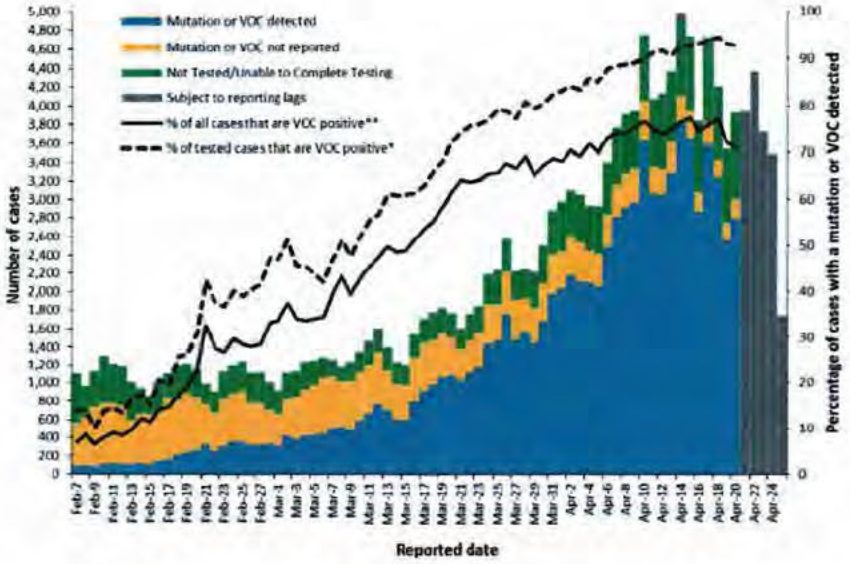


Table 7. Summary of confirmed COVID-19 cases with a mutation or VOC detected: Ontario

	Change in cases April 24, 2021	Change in cases April 25, 2021	Cumulative case count up to April 25, 2021
Variant of Concern			
Lineage B.1.1.7*	2,538	2,028	54,436
Lineage B.1.351	14	-2	162
Lineage P.1	80	4	351
Mutations			
N501Y and E484K	133	165	4,740
N501Y (E484K unknown)**	-105	56	22,794
E484K (N501Y negative)	84	137	1,816
E484K (N501Y unknown)	16	15	420

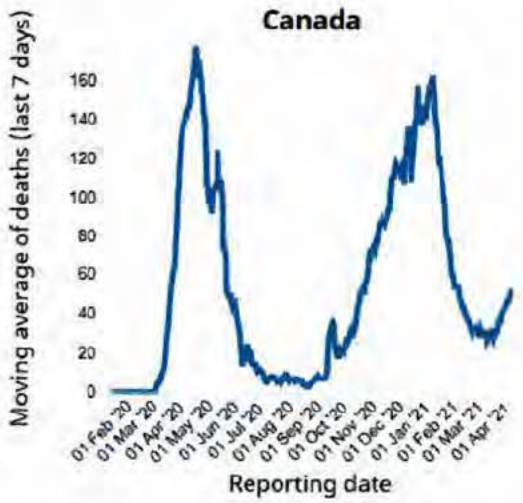
Note: Interpret the VOC and mutation trends with caution due to the varying time required to complete VOC testing and/or genomic analysis following the initial positive test for SARS-CoV-2. Due to the nature of the genomic analysis, test results may be completed in batches. Data corrections or updates can result in case records being removed and/or updated and may result in totals differing from past publicly reported case counts. Data for calculating the change in cases and the cumulative case counts uses data from the Investigation Subtype field only. Changes to the VOC testing algorithm may impact counts and trends. Further details can be found in the data caveats section.

*Includes all confirmed COVID-19 cases where lineage B.1.1.7 was identified by genomic analysis and those presumed to be B.1.1.7 based on positive N501Y and negative E484K mutation in the Investigation Subtype field

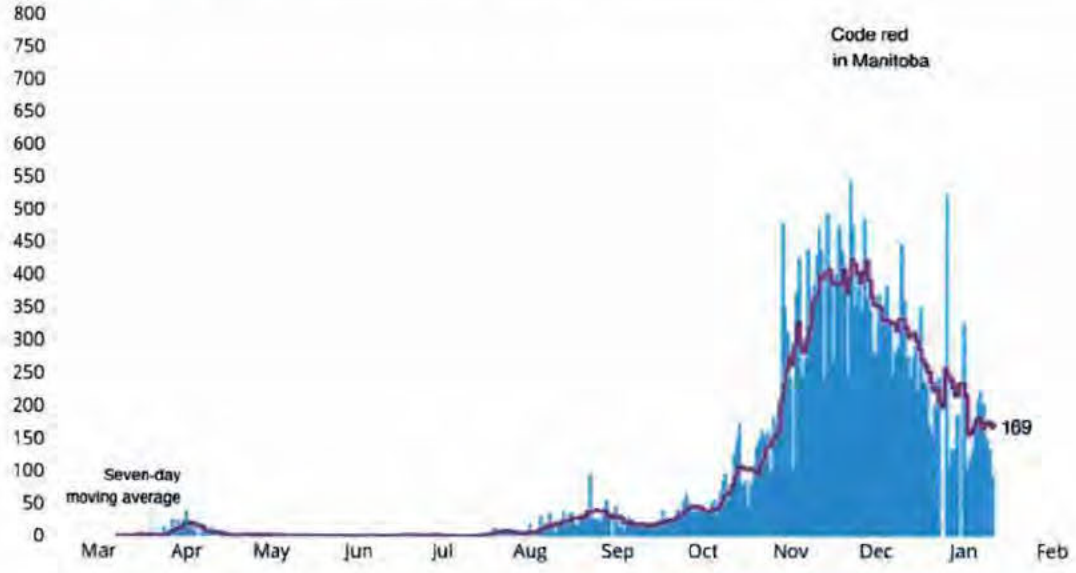
**The category 'N501Y (E484K unknown)' mainly consists of results from before the introduction of the E484K test. Counts will shift from this category into a VOC lineage category as E484K tests or genomic analysis are completed.

In the most recent affidavit response, Dr. Bhattacharya stated that "This means that the presence of a variant circulating in the population poses little additional risk of hospital overcrowding or excess mortality due to viral infection". Increasing hospitalizations across Canada due to variants of concern, and increased presentation of younger age groups requiring hospitalization as compared to prior waves, would argue against this suggestion. Further, Dr. Bhattacharya also suggested that "variants with a small infectivity advantage – but no more lethality – make up a larger fraction of a smaller number of cases is an interesting scientific observation but not important for public health policy". Once again, the nationwide data from Canada would argue that this is not an "interesting scientific observation". This is a public health crisis. Dr.

Bhattacharya further argued that the dissemination of vaccines that protect against hospitalizations and deaths had resulted in no increase in deaths during this most recent wave because of the deployment of vaccine to the vulnerable older population in Canada. This has proved to be an incorrect assumption as deaths are now increasing in Canada once again (source: Government of Canada COVID-19 daily epidemiology update April 26, 2021).

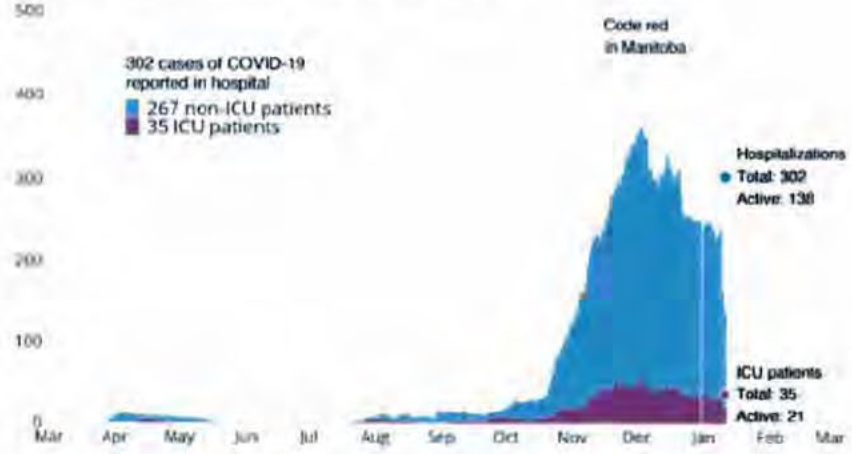


Dr. Bhattacharya also argues that the implementation of harsh lockdowns (while not discussing other non-lockdown NPIs) by Manitoba are unlikely to work to limit Covid-19 infections. Case counts and hospitalizations in Manitoba during the second wave would suggest that implementation of Code Red measures correlated with decreasing trends in both categories (source: Winnipeg Free Press and Manitoba Health)



Hospitalizations and ICU patients for COVID-19 cases in Manitoba

Shared Health counts active and long-term COVID-19 patients, those who are recovered and no longer considered contagious, separately.



WINNIPEG FREE PRESS – SOURCE: MANITOBA HEALTH (2021-01-12)

SARS-CoV-2 Virology – "Lockdowns" did not lead to the development of variants of concern

Genomic surveillance and epidemiological analysis of virus transmission patterns can help facilitate the identification of new variants where mutations have resulted in behavioral changes in the virus (e.g. transmission, virulence, immune evasion). Mutations occur frequently in RNA viruses, including coronaviruses, during the process of viral replication within an infected cell, where new copies of the virus are generated. These mutations are random events that in many cases may have no effect on the behavior of the virus. Mutations must be selectively advantageous for a variant to spread to high frequencies. However, variants can arise where the mutations impart competitive advantages to the virus including enhanced viral replication, transmission or immune evasion. Variants of concern are defined by the US Centers for Disease Control and Prevention as "A variant for which there is evidence of an increase in transmissibility, more severe disease (e.g.increased hospitalizations or deaths), significant reduction in neutralization by antibodies generated during previous infection or vaccination, reduced effectiveness of treatments or vaccines, or diagnostic detection failures". In Canada, we have seen the introduction and community transmission of three variants of concern, B.1.1.7, B.1.351 and P.1.

There has been considerable discussion on what led to the emergence of the variants of concern. It is again imperative to appreciate that RNA virus mutations occur through the process of viral replication, which requires specific machinery found within a host cell (e.g. human, nonhuman animal). Lauring and Hodcroft, experts in viral genomic surveillance, recently postulated that the selection of a variant at the population level was likely not driven by host antibodies because there are not sufficient numbers of immune individuals to push evolution of the virus in a given direction [1]. The authors also postulate that B.1.1.7 may have emerged in a chronically infected

patient due to the accumulation of mutations prior to its initial detection in early September and suggestive of prior evolution. Rambaut and colleagues provided a report on their preliminary genomic characterization of B.1.1.7 in December 2020 [2]. The authors, who are experts in genomic surveillance, highlighted that the accumulation of 14 amino-acid replacements found within B.1.1.7 prior to the initial detection of this variant was thus far unprecedented in the pandemic. In contrast to this, the authors noted that most branches in the global SARS-CoV-2 phylogenetic tree had shown relatively few mutations with a fairly consistent rate of accumulation over time (~1-2 nucleotide changes per month). However, prior studies of chronic SARS-CoV-2 infections in immunodeficient or immunocompromised patients have demonstrated high rates of mutation accumulation over short periods of time [3, 4]. Thus, the evolutionary dynamics and selective pressures exerted upon the virus population within such patients are likely very different from those found during a typical infection. Kemp and colleagues characterized the evolution of SARS-CoV-2 in a chronically-infected immunocompromised patient following multiple therapeutic treatments [5]. Multiple treatment courses with remdesivir during the first 57 days resulted in little change within the viral population; however, convalescent plasma therapy resulted in large population shifts and the emergence of a dominant variant. This demonstrated a strong selection for viral variants with reduced susceptibility to neutralizing antibodies following treatment within an immunosuppressed individual that had a chronic infection and was being treated with convalescent plasma therapy. The authors also clearly state that the "…effects of convalescent plasma on virus evolution found here are unlikely to apply in immunocompetent hosts in whom viral diversity is likely to be lower owing to better immune control". Generally, there is relatively limited within-host variation reported for SARS-CoV-2 over the course of infection [6-8]. However, factors such as prolonged infection and immunodeficiencies could result in selective pressures not encountered within those that are immune-competent. Thus the strongest evidence to date suggests that prolonged infections and compromised immune system functions likely exert selective pressures on SARS-CoV-2 resulting in a more extensive genetic changes than found during typical infections.

Covid-19 clinical symptom onset and diversity

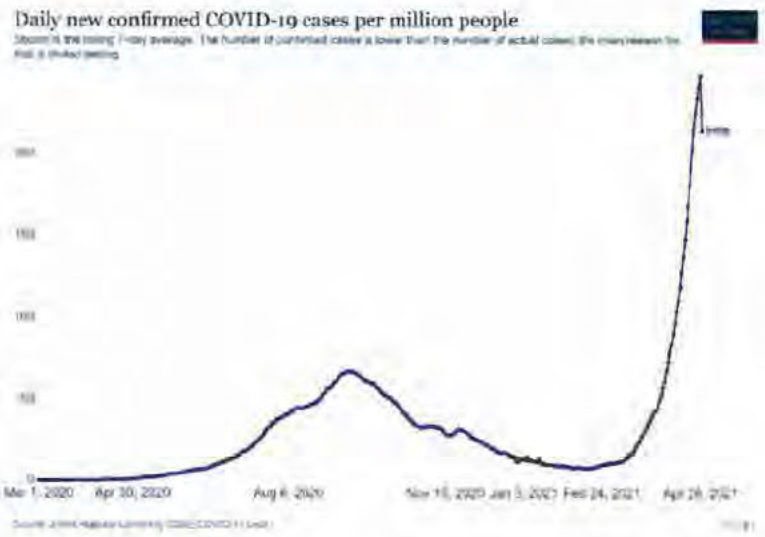
Dr. Bhattacharya argues in his second report that symptom checks are an effective means to prevent the spread of COVID-19.

Covid-19 has a diverse range of clinical presentations that range from asymptomatic infections to severe and fatal disease. The presentation of symptoms is variable within increasing severity of illness associated with older age and/or underlying health complications. Symptom and wellness checks, including temperature screening, to identify have been employed to identify infected individuals. It should be appreciated that pathogenic viruses are often able to evade early innate immune responses, the early warning system arm of our immune system that can broadly recognize different microbes. In regards to viruses, this can take the form of specific viral proteins that can inhibit or dampen these early warning systems through direct interactions. Coronaviruses can dampen the early activation of interferons, defensive molecules in our immune systems which have a central role in antiviral responses. Thus, during the early stages of viral infection, SARS-CoV-2 and other coronaviruses are able to evade early immune system

recognition and enhance infectivity. Malenfant and colleagues reported on the frequency of symptoms associated with Covid-19 in healthcare workers from March to April 2020 [9]. The authors demonstrated that Covid-19 presented with a broad spectrum of mild symptoms. While cough (51%), fever (41%), myalgia (38%) and headache (30%) were the most common initial symptoms reported, one-third of the respondents did not report fever or cough as one of their symptoms and nearly half (49%) continued to work while experiencing symptoms, some for several days. In an investigation of over 1,000 hospitalized patients, 44% of patients had fever upon admission though the half of these patients (22%) had very mild elevations in body temperature (37.6 to 38 °C) [10]. Further, according to the Clinician Guide for Covid-19 signs, symptoms and severity of disease from the Government of Canada, clinical symptoms among older adults (≥65 years old) and those with underlying health conditions may be atypical or subtle [11]. It must therefore be appreciated that symptoms are highly variable in regards to both type and severity across infected individuals and thus screening alone as a measure of case identification would likely lead to many missed cases of infection.

Herd immunity and vaccines

In January 2021, Dr. Bhattacharya co-authored an opinion piece in *The Print* [12] where he and his co-author discussed pre-existing Covid-19 immunity from prior infections within the Indian population.. In this piece Bhattacharya suggests that mathematical modelling demonstrated that "more than 50% of the Indian population may have developed immunity". Further, he states that this is corroborated by serological tests by Thyrocare which suggested that nature had silently immunized 70% of the population. This contrasts with data released on March 30, 2021, that found IgG antibodies against either the N or S1-RBD virus proteins in 26% of samples [13]. Now, it must also be considered that antibody data from Manaus, Brazil, was suggested to have potentially over-estimated seroprevalence in the population and thus arguing that immunity within the population had not actually reached the purported "herd immunity" threshold of 60-70%. If this is the case, seroprevalence data from India could also be over-estimating the actual level of SARS-CoV-2-specific IgG antibodies in the population. Over the past few weeks, India has faced a devastating wave of Covid-19 that includes broad transmission of both B.1.1.7 and a new variant of interest, B.1.617.



The herd immunity threshold (HIT) is calculated as:

$$HIT = 1 - 1/R_0$$

Where R_0 for SARS-CoV-2 has been estimated to be 2-4

Thus, HIT = 50-75%

However, increased transmissibility of variants of concern (e.g. B.1.1.7 where transmissibility is estimated to be ~50% greater) will increase the R_0 and thus drive HIT upwards. Further confounding this concept as explained by Randolph and Barreiro, "It relies on several key assumptions, including homogeneous mixing of individuals within a population and that all individuals develop sterilizing immunity—immunity that confers lifelong protection against reinfection—upon vaccination or natural infection. In real-world situations, these epidemiological and immunological assumptions are often not met, and the magnitude of indirect protection attributed to herd immunity will depend on variations in these assumptions" [14].

Thus, it must be appreciated that even with widespread transmission in regions such as Brazil and India, healthcare systems have become overwhelmed and mortality continues to increase. Randolph and Barreiro also suggested that, "Particularly in the context of attaining herd immunity to SARS-CoV-2, a regard for finite healthcare resources cannot be overstated, as this policy inherently relies on allowing a large fraction of the population to become infected. Unchecked, the spread of SARS-CoV-2 will rapidly overwhelm healthcare systems. A depletion in healthcare resources will lead not only to elevated COVID-19 mortality but also to increased all-cause mortality. This effect will be especially devastating for countries in which hospitals have limited surge capacity, where minimal public health infrastructure exists, and among vulnerable communities, including prison and homeless populations". These comments are particularly prescient given the ongoing healthcare infrastructure and resource limitations that have been encountered in both India and Brazil.

In contrast, use of vaccination and restrictions in areas such as the UK and Israel have resulted in decreasing transmission and hospitalizations, in spite of B.1.1.7 circulation. Krammer and

colleagues recently investigated the effect of vaccines on previously infected individuals [15]. Their study involved 110 participants with or without pre-existing SARS-CoV-2 immunity. Vaccinees with pre-existing immunity developed antibody titers 10-45 times as high as those without pre-existing immunity at the same time point following the first vaccine dose. A second dose of vaccine in the Covid-19 survivors had no further enhancement on antibody titers. While vaccinees with pre-existing immunity had higher frequencies of local and systemic side effects, no severe adverse events were reported.

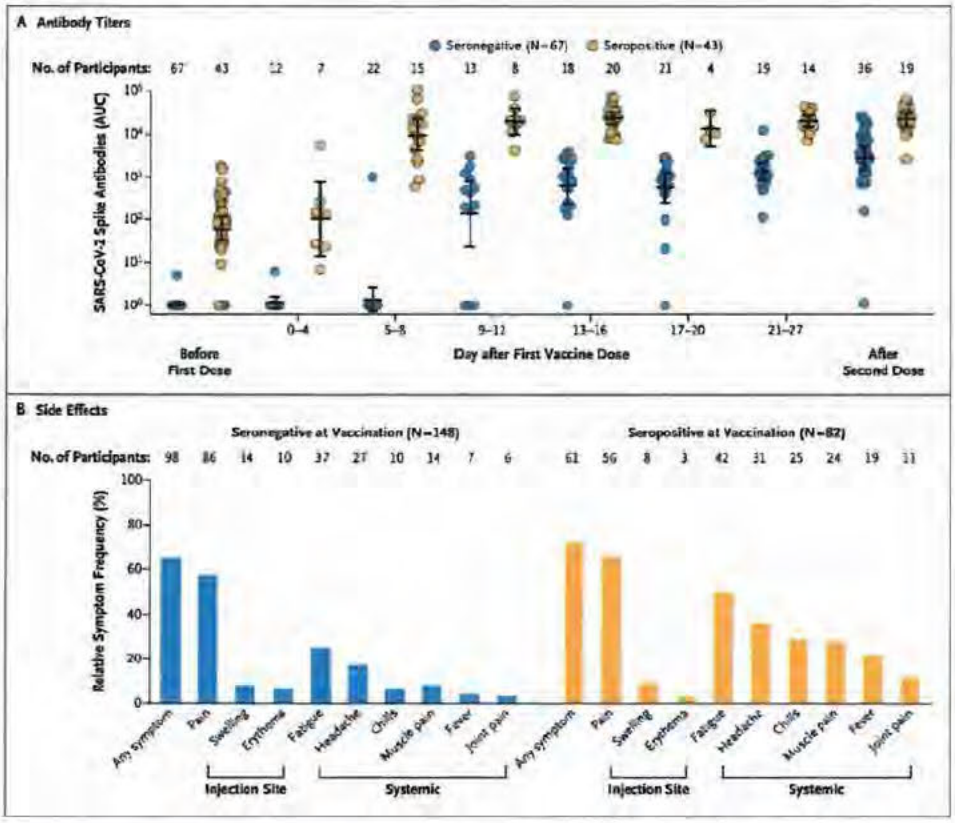


Figure: Immunogenicity and Reactogenicity of SARS-CoV-2 RNA Vaccines. Panel A shows the quantitative SARS-CoV-2 spike antibody titers (assessed by means of enzyme-linked immunosorbent assay and expressed as area under the curve [AUC]) for 110 participants. Some participants with preexisting immunity had antibody titers below detection (AUC of 1) at the time point before vaccination. Geometric means with 95% confidence intervals (not adjusted for multiple testing) are shown. Panel B shows the relative frequency of vaccine-associated side effects after the first vaccine dose (230 participants). The local side effects occurred with similar frequency among participants with preexisting immunity and among those without preexisting immunity, whereas the systemic symptoms were more common among participants with preexisting immunity. The bars represent the relative frequency of each symptom, and the numbers at the top of the graph represent the absolute numbers for a given symptom, with a given participant possibly having more than one symptom (Krammer F. et al. *NEJM.* 384: 1372-1374).

A similar investigation by Saadat et al. noted similar trends in antibody responses within vaccinees with pre-existing immunity as compared to their naïve counterparts [16]. The National Advisory Committee on Immunization (NACI) recommendation on this matter is as follows [17]:

NACI recommends that a complete series with a COVID-19 vaccine may be offered to individuals in the authorized age group without contraindications to the vaccine who have had previously PCR-confirmed SARS-CoV-2 infection. In the context of limited vaccine supply, initial doses may be prioritized for those who have not had a previously PCR-confirmed SARS-CoV-2 infection. (Discretionary NACI Recommendation)

Summary of evidence and rationale:

- Testing for previous SARS-CoV-2 infection is not needed prior to COVID-19 vaccination.
- Currently, there is a lack of evidence on potential differences in vaccine efficacy or safety between those with and without prior evidence of SARS-CoV-2 infection. In COVID-19 vaccine clinical trials to date, individuals with PCR-confirmed SARS-CoV-2 were excluded and there were only a small number of trial participants with serologic evidence of previous infection (IgG+) who had confirmed symptomatic COVID-19 during the trials, therefore efficacy in this population is uncertain.
- The immune response to SARS-CoV-2, including duration of immunity, is not yet well-understood. Reinfections with SARS-CoV-2 have been reported and research to establish the severity, frequency, and risk factors of reinfection with SARS-CoV-2 is ongoing.
- In the context of limited supply, to allow for the protection of a larger number of at-risk individuals, vaccination with a COVID-19 vaccine may be delayed for 3 months following a PCR-confirmed infection, as reinfections reported to date have been rare within the first three months following infection.
- However, if challenging from a feasibility perspective, jurisdictions may elect to disregard prior PCR-confirmed SARS-CoV-2 infection status and vaccinate everyone in a given target group.
- As a precautionary measure and in light of the need to be able to monitor for COVID-19 vaccine adverse events without potential confounding from symptoms of COVID-19 or other co-existing illnesses, and to minimize the risk of transmission of COVID-19 at an immunization venue, NACI recommends that it is prudent to wait until all symptoms of an acute illness are completely resolved before vaccinating with COVID-19 vaccine, as well as ensuring that the individual is no longer considered infectious based on current criteria.
- NACI will continue to monitor the evidence regarding vaccination in those previously infected with SARS-CoV-2 and will update recommendations as needed.

In closing, there are numerous questions that remain regarding the logic and feasibility of a natural infection-based herd immunity approach to ending the Covid-19 pandemic. While herd immunity through means other than vaccination has yet to be demonstrated for any infectious disease, there are additional concerns given our increasing understanding of SARS-CoV-2. In particular, herd immunity is impacted by behavioral, biological and environmental variables and thus should be viewed as a continuous rather

than binary (yes/no) threshold. Lastly, given the complex situations in Brazil and India where morbidity and mortality within the population from the latest pandemic wave have been exacerbated by fragile healthcare infrastructure and limitations to routine supplies (e.g. sedatives, oxygen) that will impact those requiring treatment for Covid-19 as well as other communicable and non-communicable diseases. The success of vaccination programs throughout history that have also employed nonpharmaceutical interventions and mitigation strategies, including those seen recently in the UK and Israel, argue for their use in combatting Covid-19.

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File No. CI 20-01-29284

THE QUEEN'S BENCH
Winnipeg Centre

B E T W E E N:

GATEWAY BIBLE BAPTIST CHURCH, PEMBINA VALLEY BAPTIST CHURCH, REDEEMING GRACE BIBLE CHURCH, THOMAS REMPEL, GRACE COVENANT CHURCH, SLAVIC BAPTIST CHURCH, CHRISTIAN CHURCH OF MORDEN, BIBLE BAPTIST CHURCH, TOBIAS TISSEN, ROSS MACKAY

Applicants,

- and -

HER MAJESTY THE QUEEN IN RIGHT OF THE PROVINCE OF MANITOBA, and DR. BRENT ROUSSIN in his capacity as CHIEF PUBLIC HEALTH OFFICER OF MANITOBA, and DR. JAZZ ATWAL in his capacity as ACTING DEPUTY CHIEF OFFICER OF HEALTH OF MANITOBA

Respondents.

Reply Affidavit of BRENT ROUSSIN

Affirmed, April 30, 2021

Manitoba Justice, Legal Services Branch
Constitutional Law Section

Per: Michael Conner
Heather Leonoff
Denis Guénette
Sean Boyd

[redacted]

THE QUEEN'S BENCH
Winnipeg Centre

B E T W E E N:

GATEWAY BIBLE BAPTIST CHURCH, PEMBINA VALLEY BAPTIST CHURCH, REDEEMING GRACE BIBLE CHURCH, THOMAS REMPEL, GRACE COVENANT CHURCH, SLAVIC BAPTIST CHURCH, CHRISTIAN CHURCH OF MORDEN, BIBLE BAPTIST CHURCH, TOBIAS TISSEN, ROSS MACKAY

Applicants,

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HER MAJESTY THE QUEEN IN RIGHT OF THE PROVINCE OF MANITOBA, and DR. BRENT ROUSSIN in his capacity as CHIEF PUBLIC HEALTH OFFICER OF MANITOBA, and DR. JAZZ ATWAL in his capacity as ACTING DEPUTY CHIEF OFFICER OF HEALTH OF MANITOBA

Respondents.

AFFIDAVIT

1. I have previously presented an affidavit in this proceeding. I have reviewed the affidavits filed subsequent to my initial affidavit, and present this affidavit in reply.

2. I have personal knowledge of the facts and matters stated in this affidavit – except where they are based upon information and belief, in which case I believe them to be true.

A. Applicants' Request for Undertakings, made on March 19, 2021

3. By letter dated March 19, 2021, legal counsel for the applicants wrote to legal counsel for the Government, and made several requests for information in advance of the hearing. Attached as **Exhibit A** is a copy of that letter.

4. By letter dated March 30, 2021, Government legal counsel responded to that letter. Attached as **Exhibit B** is a copy of that letter.

5. Attached as **Exhibit C** is a print-out of the Manitoba Emergency Plan, version 2.3, dated April 18, 2018, which has been retrieved from the Emergency Measures Organization webpage identified at Item 11 of that letter. Also attached are the corresponding schedules to that Plan, also retrieved from the same source, at webpage:

https://www.gov.mb.ca/emo/provincial/mep.html.

6. Attached as **Exhibit D**, is a print-out of the *Federal/Provincial/Territorial Public Response Plan for Ongoing Management of COVID-19*, published on August 19, 2020. Manitoba participated in its development, and gave its approval prior to being formalized. A Second Edition was published on April 18, 2021, and is the version that is now available at this webpage:

https://www.canada.ca/content/dam/phac-aspc/documents/services/diseases/2019-novel-coronavirus-infection/federal-provincial-territorial-public-health-response-plan-ongoing-management-covid-19/fpt-response-plan-en.pdf

B. Communications with these Churches and Individuals

7. In some of the applicants' affidavits, the assertion is made that government officials did not reach out directly to the affiant and their church to discuss the availability of government programming including counselling, to discuss the effects of PHO restrictions on their congregation, to canvass options for working within the PHO restrictions, to apologize for the restrictions that caused churches to be closed, or to inspect the church facility's ventilation system. These assertions appear in the following paragraphs:

a. Tobias Tissen, affidavit of March 24, 2021, paras. 3, 6 and 7.

b. Riley Toews, affidavit of March 24, 2021, paras. 4 and 10.

c. Thomas Rempel, affidavit of March 26, 2021, paras. 3 and 6.

d. Christopher Lowe, affidavit of March 25, 2021, para. 4.

8. Similarly, in his affidavit of April 1, 2021, Ross MacKay says at para. 3 that that government officials did not reach out directly to him to offer counselling or other support.

9. In reply to those allegations, I am prepared to say that all of those assertions are either true, or likely true. It would be impossible for government officials to meet an expectation of individualized contact for communications such as those.

10. I am advised, and I do believe, that several Government Ministers, including the Minister of Health and Seniors' Care, have had engagement with faith-based organizations throughout the pandemic.

11. In the course of making Public Health Orders, I have met with representatives of a variety faith based groups. As a result of virtual meetings that took place on the evenings of December 8, 2020, and March 11, 2021, I have met with representatives of 11 faith-based groups: Ada Yeshurun Herzila, Archdiocese of Winnipeg, Bagot Community Chapel, Free Angelical Church, Hindu Society of Manitoba, Manitoba Islamic Society, Mennonite Church of Manitoba, New Annointing Christian Fellowship, Sikh Society of Manitoba, Springs Church, and Trinity Baptist Church. Feedback has also been received as a result of multiple surveys that have been held through the EngageMB.ca portal.

12. To convey messaging during the pandemic, government has been relying on well-established means for communicating information to Manitobans about programming developments. For example:

a. Government has been issuing a series of news release related to COVID-19. For example, during the three-day period of April 19 to 21, 2021 there was a total of twelve (12) news releases dedicated to different aspects of issues:

i. **Daily Bulletins.** On each of those days, a new daily "*COVID-19 Bulletin*" was issued, numbered 406, 407 and 408. Attached as **Exhibit E** is a copy of those three news releases.

ii. **Vaccines.** On two of those days, April 19 and 21, 2021, a new "*COVID-19 Vaccine Bulletin*" was issued, numbered 66 and 67 – the first of which had a link to background information. Furthermore, on two of those days, April 19 and 20, 2021, a total of three additional news releases were issued

that also related to more specific vaccine-related developments. On the first of those days, one news release was issued entitled "*Manitoba Expanding Eligibility Criteria for AstraZeica/Covishield Vaccine, Continues to Protect Manitobans by Expanding Vaccination Capacity*". And the next day, two news releases were issued. The first was entitled "*North Dakota and Manitoba Announce Joint Initiative to Vaccinate Essential Workers Transporting Goods and Services Across Canada-U.S. Border*", and attached some background information. The second was entitled "*New New Community-Led Clinics Will Support COVID-19 Vaccine Uptake Among Urban Indigenous People*", and attached some background information. Attached as **Exhibit F** is a copy of those five news releases and the related background information.

iii. **Public Health Orders.** On one of those days, April 19, 2021, two news releases were issued in relation to new Public Health Orders having been made. One was entitled "*New Orders Protect Manitobans Against third Wave*" and attached some background information. The other was entitled "*New Public Health Orders in Place for Vaccinated Personal Care Home Staff*". Attached as **Exhibit G** is a copy of those two news releases and the related background information.

iv. **Other Developments.** On two of those days, April 19 and 20, 2021, two news releases were issued in relation to other developments on specific matters in the Government's

response to the COVID-19 pandemic. On the first of those days, a news release was issued entitled "*Province Launching COVID-19 Rapid Testing Asymptomatic Screening Strategy to Protect Manitobans*" and attached some background information. On the second of those days, a news release entitled "*COVID-19 Enforcement Update*" was issued. Attached as **Exhibit H** is a copy of those two news releases and the related background information.

b. In some of the above-referenced news releases, a YouTube link appears. In those instances, that news release is also supplemented by a news conference that was held that day, during which the referenced topic in the news release was discussed.

c. Government has also developed webpages that are specific to COVID-19, all of which are accessible through certain homepages:

   i. The COVID-19 homepage: https://www.gov.mb.ca/covid19/

   ii. The Engage Manitoba homepage: https://engagemb.ca/

   iii. The Protect Manitoba homepage, regarding COVID-19 immunization https://protectmb.ca/

13. With respect to the availability of COVID-related programming, Government has developed a website titled "Safe at Home Manitoba", which is a portal to a variety of information, including discussion about mental health: https://www.safeathomemb.ca/stay-safe/. Attached as **Exhibit I** is a print-out from that website, together with information about Mental Health

Virtual Therapy Program, as well as a News Release from February 22, 2021 which announced an expansion of programming.

14. All of this information is accessible to anyone who searches the Government of Manitoba website. Moreover, anyone who wants to receive government news releases by email can subscribe to automatically receive them as soon as they are posted. Furthermore, news media frequently incorporate information from government news release and the website in their news reports.

C. Focusing on Symptoms

15. In reply to statements made by Jay Bhattacharya, in the document attached as Exhibit A to his second affidavit, of March 31, 2021, on page 11, I can comment on the suggested practice of checking individuals for symptoms of COVID-19, such as a fever or cough, as a measure in helping to identify the people who may have contracted the disease.

16. The symptoms of COVID-19 are broad and non-specific, and do not appear immediately. Many people who have contracted the disease cannot or do not identify that they have the illness, because at early stages the symptoms can be mild and almost non-existent. For example, an individual who has a headache might not realize it is a symptom of the disease, and might think it is for other reasons. But if it is a symptom of COVID-19, they are contagious at this point. In fact, many people who contract the virus will be contagious prior to showing any symptoms.

17. It is for this reason that a policy which relies exclusively on checking for symptoms is ineffective and incomplete in combatting COVID-19. Some sort of screening for symptom is necessary, but it is not sufficient on its own. This point has been discussed on national calls with my counterparts across Canada, and it has been rejected as an exclusive approach to combatting COVID-19.

18. I make this affidavit *bona fide*.

AFFIRMED BEFORE ME at)
the City of Winnipeg, in)
the Province of Manitoba,)
this 30th day of April, 2021)

Brent Roussin

A Barrister at Law in and for
The Province of Manitoba

This is Exhibit "A" referred to in the Affidavit of Brent Roussin affirmed before me this 30th day of April, 2021.

A Barrister-at-law in and for the
Province of Manitoba.

Justice Centre
for Constitutional Freedoms

March 19, 2021

Via e-mail

Department of Justice
Constitutional Law Branch
1205-405 Broadway
Winnipeg, MB R3C 3L6

Attention: Heather Leonoff/Michael Conner/Denis Guenette/Sean Boyd

Dear Madam/Sir:

RE: Gateway Bible Baptist Church et al. v. Manitoba and Dr. Roussin – File No. CI 20-01-29284

Upon review of your filed affidavits in this matter, the Applicants request the following information in advance of the hearing which is relevant to both the Respondents' affidavit evidence and the issues in the proceeding:

Specifically, we request that you provide us with the following (subject to further agreement on medium of production and delivery timeline):

1. Affidavit of Carla Loeppky, Exhibit B, page 17
   For all Manitoba Covid deaths listed:
   a. anonymized lab reports with CT threshold used in achieving the Covid-positive test result, ,
   b. Document(s) identifying whether the deceased was a symptomatic or asymptomatic case,
   c. anonymized death certificates with primary and secondary causes of death

2. Affidavit of Jared Bullard
   Package inserts/manufacturer's instructions from all Covid-19 diagnostic test kits (PCR or otherwise) that Manitoba uses to diagnose Covid-19

[redacted]

3. Affidavit of Jared Bullard, lines 193-199

    a. Document(s) with CT thresholds by percentages of all positive cases between March 2020-March 2021, and specifically, what percentage of cases per month resulted from a positive PCR test with a CT of 36, 37, 38, 39, 40, 40+ (not simply the percentage as a range from 36-40)
    b. for every positive case, the anonymized lab report confirming the CT value used

4. Affidavit of Brent Roussin, para. 70
   Documentation on the contact tracing program:
    a. the proportion of traced contacts that became symptomatic during their quarantine period,
    b. the proportion of traced contacts that tested positive for Covid-19 during their quarantine period,
    c. the proportion of symptomatic contacts that were hospitalized, needed ICU, or died,
    d. estimated number and rate of prevented hospitalizations, ICU admissions, or deaths attributable to contact tracing, quarantine and isolation

5. Affidavit of Carla Loeppky, Exhibit B, pp. 16-33
   Document(s) or policies used to determine whether a death is "related to Covid-19" or is a death "due to Covid-19", and any document(s) outlining any changes in the usual method of death certification (prior to 2020) with respect to Covid-19's designation in Part 1 or Part 2 of the death certificate.

6. Affidavit of Carla Loeppky, Exhibit D, Affidavit of Lanette Siragusa, para. 10
   Document(s) providing the number of total deaths in Manitoba in 2020 due to the following conditions as the primary cause of death:
    a. Malignant neoplasms
    b. Diseases of heart
    c. Cerebrovascular disease
    d. Chronic lower respiratory disease (excluding Covid-19)
    e. Accidents (unintentional injuries)

[redacted]

7. Affidavit of Carla Loeppky, Exhibit F, p. 25
   Document(s) which sets out the 165 parameters in respect of the modelling

8. Affidavit of Carla Loeppky, para. 14
   Document(s) or policies defining a "cluster"

9. Affidavit of Brent Roussin, para. 177
   Document(s) that show:
   a. the total number of ICU beds available in Manitoba for the years 2015-2020
   b. the surge capacity (how many extra beds could be made available for ICU patients) in Manitoba for the years 2015-2020
   c. by month, the highest number of ICU patients in Manitoba for the years 2015-2020 and up to March 2021
   d. how many days per month in the years 2015-2020 and up until March 2021 did ICU patients exceed the number of available ICU beds before and after (if applicable) surge capacity was reached?

10. Documents showing that out of all of the PCR positive cases of Covid-19 in Manitoba, how many of those people were also tested for Influenza within the same time frame as they were tested for Covid-19

11. Please provide Manitoba's Pandemic Response Plan (or similar such emergency plan) for the past 5 years.

We look forward to receiving the foregoing. Please feel free to contact the undersigned should you wish to discuss the method and timeline for delivery. We are content to rely on electronic delivery (i.e. by USB) should that prove more convenient.

Best regards,

A. K. Pejović

Allison Kindle Pejovic
Barrister and Solicitor
Justice Centre for Constitutional Freedoms

cc: Jay Cameron, Litigation Manager, Justice Centre for Constitutional Freedoms,
[redacted]

[redacted]

Jared Brown, Lead Counsel, Brown Litigation, [redacted]

Heather Leonoff, Legal Services Branch, Constitutional Law Section, Manitoba Justice, [redacted]

Denis Guenette, Legal Services Branch, Civil Legal Services, Manitoba Justice, [redacted]

Michael Conner, Legal Services Branch, Constitutional Law Section, Manitoba Justice, [redacted]

Sean Boyd, Legal Services Branch, Civil Legal Services, Manitoba Justice, [redacted]

[redacted]

This is Exhibit "B" referred to in the Affidavit of Brent Roussin affirmed before me this 30th day of April, 2021.

A Barrister-at-law in and for the
Province of Manitoba.

Manitoba

Justice
Constitutional Law Section, Legal Services Branch
Crown Law Division
Room 1230 Woodsworth Building
405 Broadway
Winnipeg MB R3C 3L6

In reply, please refer to:

Michael Conner
General Counsel

[redacted]

March 30, 2021

Justice Centre for Constitutional Freedoms
#253, 7260 Elbow Drive SW
Calgary, AB T2V 1K2

Attention: Allison Kindle Pejovic

Dear Ms Pejovic:

Re: ***Gateway Bible Baptist Church et al. v. Manitoba et al.*** **– File No. CI 20-01-29284**

This is in response to your letter of March 19, 2021, in which you seek undertakings from the Respondents' affiants for the purpose of cross examination.

As you are aware, there is no entitlement to examinations for discovery in an Application. While undertakings can be requested under Rule 39.03.1, the rules contemplate this would occur during the course of cross examination and not as a means of advance discovery. An undertaking can be refused if it does not relate to an important issue, it would be overly onerous or the information would not significantly assist the court in determining the application.

In our view, many of the items requested are of marginal relevance or significance to the ultimate issue to be decided. Nonetheless, in the interest of being cooperative, we will provide the documents requested if they are readily available. Below, we respond to each item.

Item 1: Affidavit of Carla Loeppky

We decline to give this undertaking.

a) The affiant does not have possession of CT values. Further, the lab has no knowledge of whether a particular individual subsequently died of COVID-19 and therefore does not have a record of the CT values used for persons who later died of COVID-19. It would be unduly onerous to try to reconstruct this information.

b) The affiant does not have access to updated medical files of patients indicating whether the deceased was a symptomatic or asymptomatic case of COVID-19 at the time of death.

c) The affiant does not have possession or control over death certificates. Death certificates are prepared by attending physicians and provided to Vital Statistics in accordance with *The Vital Statistics Act*.

Item 2: Affidavit of Jared Bullard

We have attached manufacturers' inserts for PCR tests used by Cadham Provincial Laboratory.

Item 3: Affidavit of Jared Bullard

We decline to provide this undertaking as requested. The lab reports state whether the case is positive for COVID-19 but do not include CT values. The lab would have to undertake further analysis to provide the information requested.

Item 4: Affidavit of Brent Roussin

We decline this undertaking. Available information about the total number of COVID-19 hospitalizations, ICU admissions and deaths has been provided in the affidavit of Carla Loeppky. Specific information about hospitalization, ICU and deaths of individuals who isolated after contact tracing is not readily available.

Item 5: Affidavit of Carla Loeppky

The information requested is not relevant. The Chief Public Health Officers relies on COVID-19 deaths as reported to Epidemiology and Surveillance by hospitals or health officials in the community. Nonetheless, we can provide the following information.

Public Health has published a document for epidemiology and surveillance purposes entitled "COVID-19 Technical Notes", which is part of its Provincial Respiratory Surveillance Report. For reporting COVID-19 deaths, the document follows the "Word Health Organization Guidelines for Certification and Classification (Coding) of COVID-19 as a Cause of Death". These guidelines are consistent with the Public Health Agency of Canada guidelines entitled "National Case Definition".

The Technical Notes can be found here:
https://www.gov.mb.ca/health/publichealth/surveillance/covid-19/resources/Notes.html

The WHO Guidelines can be found here:
https://www.who.int/classifications/icd/Guidelines_Cause_of_Death_COVID-19.pdf

The Public Health Agency of Canada guidelines can be found here:
https://www.canada.ca/en/public-health/services/diseases/2019-novel-coronavirus-infection/health-professionals/national-case-definition.html

The affiant has no role in determining the cause of death. The Government of Manitoba has not issued any changes to how death certificates are prepared with respect to COVID-19. Death

Certificates are prepared in accordance with *The Vital Statistics Act*, which also follows WHO guidelines.

Item 6: Affidavits of Carla Loeppky and Lanette Siragusa

The number of deaths in Manitoba resulting from other non-communicable diseases is irrelevant to this Application. Nonetheless, the 2020 data is published by Statistics Canada.

Table 1: Number of total deaths in Manitoba from December 29, 2019 to November 14, 2020 by primary cause of death

Primary cause of death	Number
Malignant neoplasms	2020
Diseases of heart	1425
Cerebrovascular diseases	385
Chronic lower respiratory diseases	330
Accidents (unintentional injuries)	325

Data source: Statistics Canada. Table 13-10-0810-01 Selected grouped causes of death, by week

Item 7: Affidavit of Carla Loeppky

The list of modelling parameters is attached.

Item 8: Affidavit of Carla Loeppky

The definition of "cluster" is found at Appendix B of the Interim Guidance Public Health Measures. This document is cited at footnote 158 of Dr. Bhattacharya's report. An updated version of this document can be found at:
https://manitoba.ca/asset_library/en/coronavirus/interim_guidance.pdf

Item 9: Affidavit of Brent Roussin

We decline this undertaking. The information requested is not in the possession or control of the affiant. In any event, the historical ICU and surge capacity is not relevant to the Application.

Item 10: How many COVID-19 PCR positive cases were also tested for influenza

The Public Health Agency of Canada's FluWatch Report is attached. At page 2, the report indicates there were 38,500 influenza tests done in Manitoba from August 23, 2020 to March 20, 2021. Only 1 case tested positive for influenza. Since September 1, 2020, all would also have received a test for SARS-CoV-2.

Item 11: Manitoba's Pandemic Response Plan for the past 5 years

A copy of the Manitoba Emergency Plan can be found at:
https://www.gov.mb.ca/emo/pdfs/MEP.pdf

Sincerely,

"Original signed by"

Michael Conner,
General Counsel

c. Jay Cameron and Jared Brown, counsel for the Applicants
Heather Leonoff, Q.C., Denis Guénette and Sean Boyd, counsel for the Respondents

This is Exhibit "C" referred to in the Affidavit of Brent Roussin affirmed before me this 30th day of April, 2021.

A Barrister-at-law in and for the
Province of Manitoba.

Manitoba Emergency Plan

v. 2.3

April, 2018

Table of Contents

SCHEDULES

ANNEXES

FOREWORD

Manitoba has experienced a number of natural and human-caused events, including as examples floods, forest fires, severe weather, epidemics, and dangerous goods spills. These, and other high-impact hazards, can cause loss of life, injury, danger to health and safety, damage to property and the environment, and economic loss.

Depending on their scale and scope, emergencies can vary from "routine emergencies" to disasters. In describing some emergencies as "routine," that in no way is intended to minimize the impact or suffering of those affected - simply that in scale and scope they are the types of events that local first responders usually resolve. Most traffic accidents, single structure fires, and individual illness and injury are examples of routine emergencies.

Major emergencies are typically larger in scale, whereas disasters are always larger both in scale and scope. If the demands of an event exceed a local authority's available resources, nearby communities can usually lend support and provide additional resources or responders through mutual aid. Occasionally, an event is so large that even these additional resources are overwhelmed, and by some definitions the emergency then becomes a disaster. This is particularly the case where an event has led to a cascade in which critical telecommunication, transportation, and other critical infrastructure has been damaged or destroyed.

In events where local resources are overwhelmed, or where specialist resources are required, the Province of Manitoba is able to assist. Additional resources can be obtained through the Manitoba Emergency Measures Organization (Manitoba EMO) from the federal government or various non-government organizations (NGOs).

Ownership or control over immediately available resources and familiarity with the local environment generally means the local authority is best able to manage an emergency or disaster within its jurisdiction. Except in very specific or unusual circumstances, the local authority continues to hold that responsibility even when the provincial and federal governments provide assistance.

In Manitoba we have frequently demonstrated that we help one another in times of need. This is particularly the case in major emergencies and disasters.

Minister Responsible for the Administration of
The Emergency Measures Act

ACRONYMS

Use of acronyms should be limited so as to avoid confusion and miscommunication; however, there are some common acronyms which are in general use and are included below.

ARES	Amateur Radio Emergency Services
ADM	Assistant Deputy Minister
CSM	Communications Services Manitoba
DM	Deputy Minister
EMCC	Emergency Mobile Command Centre
EMA	Emergency Management Advisor
Manitoba EMO	Manitoba Emergency Measures Organization
ECC	Emergency Coordination Centre
EMPS	Emergency Management and Public Safety
EOC	Emergency Operations Centre
GOC	Government Operations Centre (Federal)
ICS	Incident Command System
IEPC	Interagency Emergency Preparedness Committee
MECC	Manitoba Emergency Coordination Centre (Provincial EOC)
MEMS	Manitoba Emergency Management System
MEP	Manitoba Emergency Plan
MOU	Memorandum of Understanding
NGO	Non-Governmental Organization
PAD	Priority Access to Dialing
PSoE	Provincial State of Emergency
PS Canada	Public Safety Canada
SoLE	State of Local Emergency
UC	Unified Command

DEFINITIONS

All terms used in the MEP have the same definition and meaning as in *The Emergency Measures Act* (the Act). The following additional terms are defined as follows:

"command post" is the location occupied by the command element or the head(s) of any responding agency. This may be a vehicle designed for that purpose (i.e. Emergency Mobile Command Centre) or any vehicle or structure which meets the needs of the noted individuals.

"coordinating department" is a department that is responsible for bringing together and engaging relevant departments, agencies and other organizations to plan, prepare for, respond to and recover from a major emergency or disaster.

"dangerous goods" include any product, substance, or organism designated in *The Dangerous Goods Handling and Transportation Act* or conforming with the criteria set out in the regulations, or in any regulation adopted in accordance with that Act and includes hazardous waste.

"Director of Operations" is an officer of the Manitoba Emergency Measures Organization (Manitoba EMO) who the EMAs report to, and who is responsible for managing emergency operations.

"Emergency Mobile Command Centre" (EMCC) is the EMO mobile command post. It includes meeting areas, maps, communications equipment, heat, lighting, and generator.

"environmental accident" refers to a release, leakage, or spillage of a product which is subject to the provisions of *The Dangerous Goods Handling and Transportation Act* or *The Environment Act*, which may create a hazard to human life or health, to other living organisms, or to the physical environment.

"Executive Director" is the senior officer of Manitoba EMO responsible for its general management. [Due to structural changes at Manitoba EMO, where an Executive Director has not been appointed, all references to the Executive Director are deemed to be to the Assistant Deputy Minister responsible for the Emergency Measures and Public Safety Division of Manitoba Infrastructure, or such officer of the Emergency Measures Organization directed by the ADM to temporarily act as Executive Director.]

"incident commander" is the person designated by the appropriate authority to provide the control and coordination of the on-site emergency response team.

"primary department" is a department with a legislated responsibility to perform certain functions in an emergency. Depending on the nature of the emergency, there may be multiple primary departments, each with specific responsibilities.

"Emergency Management Advisors" (EMAs) are members of Manitoba EMO that are assigned to a specific region of the Province to provide advise and assistance to the municipalities in that region regarding all aspects of emergency management.

"supporting department" is a department that does not have specific responsibilities in an emergency, but provides assistance to a primary department.

"unified command" (UC) consists of the appointed representatives of departments each with a legislated authority or responsibility for some portion of the event, which are collectively responsible for on-site management of an emergency. The UC is essentially a collective incident commander in the ICS with the same roles and responsibilities.

Although defined in the Act, we have included the following definitions for ease of reference:

"emergency" means a present or imminent situation or condition that requires prompt action to prevent or limit

(a) the loss of life; or

(b) harm or damage to the safety, health or welfare of people; or

(c) damage to property or the environment;

"routine emergency" means an emergency that

(a) can be effectively resolved

(i) by local police, fire and emergency medical services, working independently or together with public works and utilities personnel, and

(ii) without requiring additional resources from a local authority not directly affected by the emergency, the Government of Manitoba or the Government of Canada,

(b) does not require evacuation of persons out of the geographic area over which a local authority has jurisdiction, and

(c) does not require the declaration of a state of emergency or a state of local emergency.

"major emergency" means an emergency that is not a routine emergency;

"disaster" means a calamity, however caused, which has resulted in or may result in

(a) the loss of life; or

(b) serious harm or damage to the safety, health or welfare of people; or

(c) wide-spread damage to property or the environment;

1. INTRODUCTION

1.1 BASIC DOCTRINE AND CONCEPTS

1.1.1 The Canadian Framework

Emergency management in Manitoba is guided by the federal/provincial/territorial (F/P/T) document titled *An Emergency Management Framework for Canada*. This framework describes the major components of emergency management, common definitions, and principles on which emergency management programs in Canada are based.

1.1.2 The Four Pillars of Emergency Management

There are four major components or phases in emergency management:

- **PREVENTION AND MITIGATION** – to reduce the impact or risks of hazards through pro-active measures taken before an event occurs, e.g. through land use management, public education, or by building protective structures such as dykes. The terms are frequently used interchangeably.

- **PREPAREDNESS** – to make ready to respond to a disaster and manage its consequences through measures taken prior to an event, for example emergency response plans, mutual assistance agreements, resource inventories and training, equipment, and exercise programs.

- **RESPONSE** – to act during or immediately after a disaster to manage its consequences through, for example, emergency public communication, search and rescue, emergency medical assistance and evacuation to minimize suffering and losses associated with disasters.

- **RECOVERY** – to repair or restore conditions to an acceptable level through measures taken after a disaster, for example return of evacuees, trauma counselling, reconstruction, economic impact studies, and financial assistance. There is a strong relationship between long-term recovery and prevention and mitigation of future disasters.

1.1.3 Vulnerability and Resiliency

Both prevention/mitigation and preparedness efforts are directed to reducing vulnerability and increase resiliency.

- **VULNERABILITY** can be described as the conditions determined by physical, social, economic, and environmental factors or processes, which increase the susceptibility of a community to the impact of hazards.

- **RESILIENCE** is the capacity of a system, community or society to cope with, adapt to, respond to, and recover from disasters, and maintain an acceptable level of function. It includes strengthening social and physical capacity in the human and built-environment

Well prepared communities are typically less vulnerable and more resilient than unprepared communities.

1.1.4 Other General Principles

Some of the general principles that are important to effective emergency management are as follows.

- Emergency management roles and activities are carried out in a responsible manner at all levels of Manitoba society.

- Emergency management is based on partnerships that include effective collaboration, coordination, and communication. When organizations function in isolation from one another, in so-called silos, critical information is not shared and lives can be placed at risk.

- Emergency management is comprehensive. It is proactive and balances efforts across the prevention/mitigation, preparedness, response, and recovery functions.

- Emergency management requires an understanding of the roles, responsibilities, authorities, and capacities of the emergency management partners.

- Emergency management decision-making is evidence-based and includes an understanding and evaluation of the hazards, risks and vulnerabilities. Employing appropriate mitigation strategies is a sustainable way to reduce risk and lessen the socio-economic cost of disasters.

- Emergency management gains efficiencies and improves coordination by taking an all-hazards approach to assessing risk and impact. In doing so it focuses on the consequence and seeks to mitigate those consequences howsoever caused.

- Emergency management can only be achieved through a continuous process of open, honest and accurate communication between emergency management agencies and with the public that starts long before an event, and continues during response and recovery. It may include providing information in the forms of public education, alerting, and guidance.

- Emergency management learns from exercises and events and actively engages in the process of continuous quality improvement. It willingly shares lessons learned and promotes the appropriate exchange of information.

- Emergency management includes business continuity planning to ensure availability of critical services.

1.2 SCOPE

1.2.1 Basic All-Hazards Plan

The Manitoba Emergency Plan (MEP) is the basic all-hazards coordination plan for an "all of government" response to major emergencies and disasters within the Province regardless of the cause or hazard.

It describes emergency response concepts and structure, and explains the respective roles and responsibilities of the Province and its departments.

Although the MEP is primarily directed to provincial departments, it also contains information which will be important to non-governmental organizations (NGOs), local authorities and federal agencies that have roles and responsibilities that need to be coordinated with provincial departments.

1.2.2 Schedules

The schedules refer to policies and operational processes that may be amended more frequently.

The following is a list of the current schedules; however, these may be added to or deleted as required:

- Schedule 1: Manitoba Emergency Management System (MEMS)
- Schedule 2: Provincial Government Departmental Emergency Roles and Responsibilities
- Schedule 3: Non-Governmental Organizations
- Schedule 4: Template for Declaration of a State of Local Emergency
- Schedule 5: Evacuations
- Schedule 6: Telecommunications

1.2.3 Annexes

There are additional plans for major emergencies or disasters caused by specific hazards. These are annexes to the MEP. They usually contain more detailed operational processes specific to the hazard.

The following is a list of the Annexes which either exist or are under development. Again, these may he added to or deleted as required.

Where there is a contradiction between the MEP and an Annex, the more specific guidance set out in the annex shall prevail in a situation to which the annex applies.

- Flood Coordination Annex
- Wildland Urban Interface Fire Coordination Annex
- Environmental Emergency Coordination Annex
- Severe Weather Annex
- Avian Influenza Coordination Annex
- Influenza Pandemic Coordination Annex

1.3 Objectives

The objectives of the MEP are to coordinate the Provincial response in a major emergency or disaster so as to prevent or limit:

- loss of life,
- injury to persons,
- damage to property or the environment, and
- significant economic loss or disruption

1.4 Cooperation and Coordination

To accomplish these objectives, the MEP requires and directs that there be:

- cooperative planning and coordination between neighbouring municipalities; and local, provincial, and federal authorities; non-government agencies, and the private sector; and
- a prompt and coordinated response by the Province to any major emergency or disaster within provincial jurisdiction or in support of a local authority that has requested provincial assistance.

1.5 Authority

The MEP is approved and ordered by the Lieutenant Governor-in-Council in accordance with the provisions of Section 6 of *The Emergency Measures Act*.

1.6 Implementation

The Minister responsible for administration of *The Emergency Measures Act* (the Minister) is the senior elected official responsible for ensuring that the provincial response to a major emergency or disaster is appropriate in the circumstances, and coordinated between all departments.

The Minister may authorize the implementation of the MEP usually on the advice of the Executive Director or, in the absence of either one or both of them, by anyone authorized to act on behalf of the Minister or the Executive Director.

Implementation does not require a provincial state of emergency or state of local emergency be declared; but, where a provincial state of emergency has been declared, implementation shall be deemed to have been authorized.

1.7 Termination

The provincial emergency response may be terminated by the Minister usually on the advice of the Executive Director, or in the absence of either one or both of them, by anyone authorized to act on behalf of the Minister or the Executive Director.

Terminating a provincial emergency response does not prevent individual departments from continuing with response activities within the scope of their respective roles and responsibilities.

1.8 Review and Amendment

Manitoba EMO will conduct an annual review of the MEP in consultation with the appropriate departments. Proposed amendments to the MEP may be submitted to the Executive Director for consideration and appropriate action.

The Lieutenant Governor-in-Council approves amendments to the MEP as required under *The Emergency Measures Act*.

Due to the evolving and tactical nature of the content, the Executive Director shall review and approve amendments to the schedules and annexes.

2. PREPAREDNESS

2.1 EMERGENCY MEASURES ORGANIZATION

2.1.1 Provincial Emergency Preparedness Program

Pursuant to s. 2.2 of the Act, Manitoba EMO is required to

- prepare a provincial emergency preparedness program designed to achieve a state of readiness for major emergencies and disasters, including a provincial emergency plan, and
- conduct regular reviews and revisions of the program and plan.

2.1.2 Registry

Manitoba EMO shall establish and maintain a registry containing a current copy of every municipal and departmental emergency plan in effect in the province.

2.2 ALL OTHER DEPARTMENTS

2.2.1 Departmental Emergency Management Program

Pursuant to s. 8.1 of the Act, every department is required to prepare a departmental emergency management program that includes

- identification of the essential services the department will provide in an emergency or disaster;
- identification of the resources the department requires to provide those essential services;
- an assessment of the risks posed by identified hazards and how those risks might affect the department's ability to provide those essential services;
- a plan for how the department would continue to provide or resume provision of those essential services in an emergency or disaster.

2.2.2 Periodic review

Each department shall review and revise its emergency management program

- annually, or
- when otherwise directed to do so by the Minister.

2.2.3 Provide Copy

Each department shall provide Manitoba EMO with the most recent version of its emergency management program.

3. EMERGENCY NOTIFICATION

3.1 NOTIFY MANITOBA EMO

In any emergency initial requests for assistance from the public are usually directed to emergency responders, i.e. police, fire or EMS providers, through 9-1-1 or a local emergency telephone number.

Local authorities, or provincial or federal departments and agencies (including 9-1-1 centres and first responders) which become aware of an event that either has, or could, result in a major emergency or disaster, shall notify the EMO as soon as possible, by calling the **Manitoba EMO Duty Officer 24/7 at 945-5555** or by email at **emodutyofficer@gov.mb.ca**

Note: When notifying the EMO Duty Officer of a serious event for the first time, it is best to telephone or otherwise confirm receipt of email rather than rely on email alone.

Any emergency that has resulted, or may result, in

- death or injury to multiple persons,
- significant damage to
  - multiple properties,
  - critical infrastructure,
  - the environment, or
  - the economy, or
- any emergency which is likely to overwhelm local resources,
- any emergency which will require evacuation of people out of a community; or
- any emergency which may require Provincial or Federal assistance (other than specialist resources that are provided in the ordinary course)

shall, for purposes of Manitoba EMO notification, be considered to be a major emergency or disaster.

Some examples may include:

- community evacuations
- dangerous goods incident
- environmental accident
- forest fire
- flood
- ground search and rescue
- human or animal health emergency
- radiological incident
- mine incident
- heavy urban search and rescue
- significant utility disruptions
- structural collapse
- transportation incident (air, highway rail or marine)
- severe weather
- industrial accident

Note: Its is preferred that information be "pushed to" rather than "pulled by" Manitoba EMO.

This will ensure early situational awareness and a more rapid coordinated response. If any doubt notify EMO Duty Officer.

3.2 Further Notification By Manitoba EMO

On receipt of notification, Manitoba EMO will then assess and notify the appropriate provincial and federal departments, local authorities, and other agencies, usually through their respective departmental emergency coordinators. [see also 4.1.3(a)(ii) Activation of the Manitoba Emergency Coordination Centre]

The Executive Director will also notify the Minister and provide such advice as may be required.

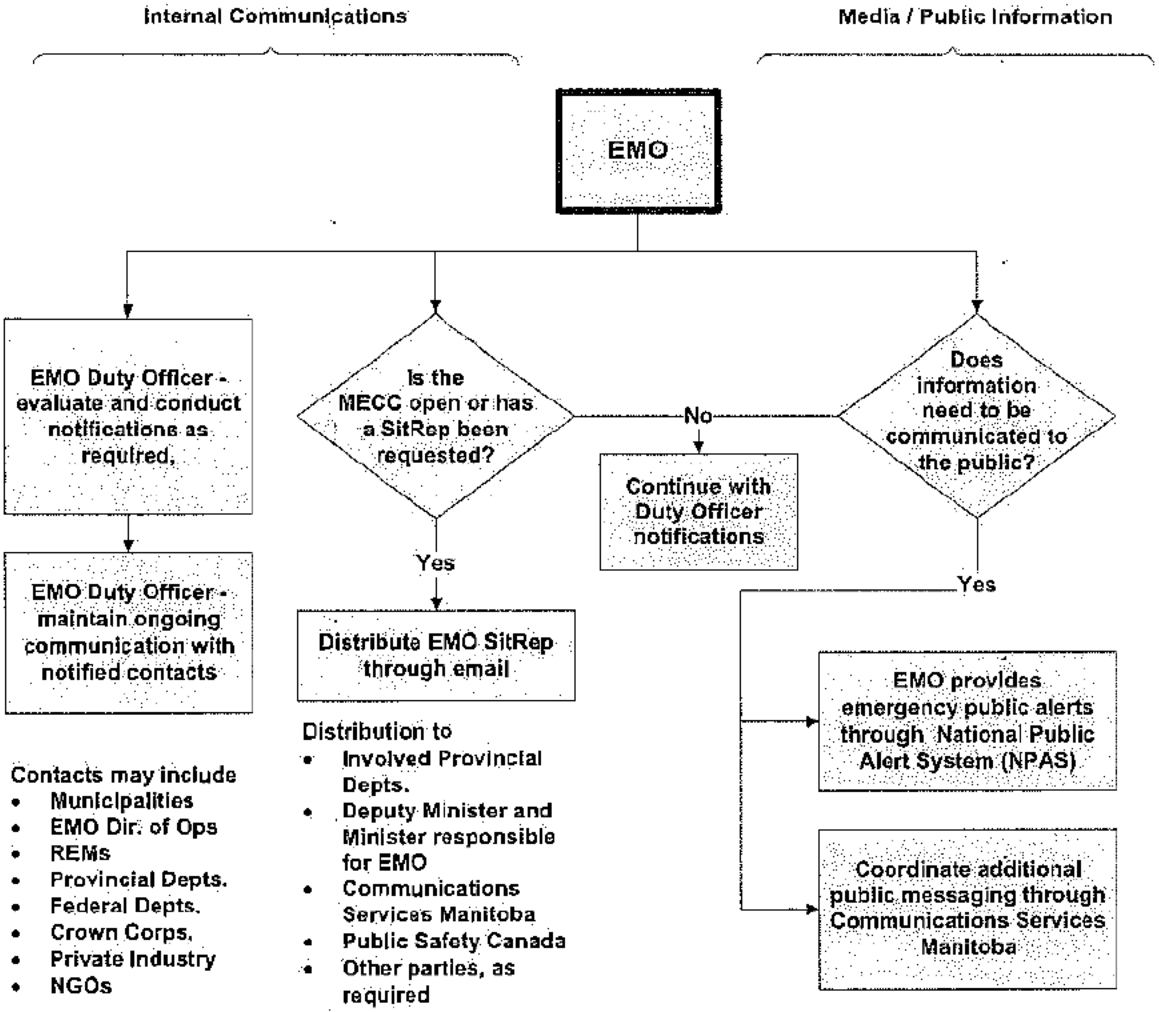
During the course of the emergency, Manitoba EMO will continue to provide written situation reports and any required updates to the Minister, with copies to Communications Services Manitoba (CSM), involved departments and local authorities, to Public Safety Canada (PS Canada), and to such other parties as may be required.

3.3 Other Departments and Agencies

On receipt of notification, the department emergency coordinator or other departmental official will then make any other notifications that may be required. This would typically include other departmental personnel, including senior management, and may include critical suppliers or service providers, and outside contractors.

In the event of a major emergency or disaster it may be necessary to activate the department's emergency plan.

3.3.1 Notification Model



4. RESPONSE

4.1 INDIVIDUAL AND GOVERNMENT

4.1.1 Individual

In a major emergency or disaster there may be temporary interruption of the services provided by local government. It may take some time for these services to be restored, and other or additional resources may have to be brought into the area.

Individuals should prepare for and initially deal with potential emergencies or disasters that impact themselves and those under their care, particularly for the first **72 hours**. This may include ensuring initial supplies, food and water are on hand, and providing initial first aid.

4.1.2 Local Authority

In the model of emergency management that has been used in Canada since the late 1960s, the local authority has the primary responsibility for managing an emergency that occurs within its territory. Local first responders usually manage routine emergencies using their own, available resources.

Primary responsibility does not mean the only responsibility. Other levels of government may have statutory responsibilities that must be taken into account when managing an emergency. For the most part, the on-site responsibilities of different disciplines and different levels of government can be dealt with at the site using Unified Command.

Although most routine emergencies can be managed by the on-site responders, major emergencies and disasters are by definition larger in scale and in scope. Managing the consequences of a major emergency or disaster usually requires additional resources, expenditure of sums, or other decisions that are beyond the authority of first responders.

In a major emergency or disaster, the coordination of further assistance and support to the site manager or incident commander, as well as escalated decision-making is usually facilitated off-site through the municipal EOC. A municipal EOC will be activated in accordance with the triggers set out in the municipal emergency plan, or whenever the local emergency coordinator deems it appropriate in the circumstances.

4.1.3 Provincial

(a) Coordination

(i) General

Manitoba EMO is the Provincial emergency management coordinating department, and is responsible for implementing plans and procedures for a

coordinated provincial response to a major emergency or disaster, including

- oversight and coordination of all aspects of emergency preparedness in the province, and
- management, direction, and coordination of the response of all departments to an emergency or disaster.

This includes coordination between departments, with other levels of government, with non-governmental organizations, and with the private sector.

The specific roles and responsibilities of provincial departments are outlined in **Schedule 2 – Provincial Government Departmental Emergency Roles and Responsibilities.**

(ii) Activation of the Manitoba Emergency Coordination Centre (MECC)

If the Manitoba Emergency Coordination Centre is activated, the Director of Operations shall determine whether a department or agency is required to provide a liaison officer to the MECC, and shall advise accordingly.

The department shall then assign an appropriate person(s) to the MECC. Department liaison officers assigned to the MECC should be either the department's emergency officer, or another representative who is appropriately knowledgeable and experienced in the department's primary roles and responsibilities, and capable of providing advice on such matters to the Director of Operations.

(iii) Local Support

Manitoba EMO will support a local authority engaged in emergency operations, by providing advice and assistance in implementing local emergency response plans, including evacuation and re-entry, and integrating the Provincial and municipal response.

Other departments will also provide services as appropriate in accordance with their roles and responsibilities.

(iv) Federal Coordination

Manitoba EMO will also coordinate the Provincial response with the Government of Canada's departmental emergency response operations, as well as operations in National Parks, First Nations Communities or other properties within federal jurisdictions.

(b) Clarification of the Provincial Role

Although it is traditionally suggested that provincial government resources are only brought to bear when local resources and mutual aid are no longer sufficient, this can be misleading.

Certainly when the local authority's capacity to deal with an emergency using its own resources or mutual aid from nearby municipalities is or is likely to be exceeded the local authority may request assistance from the Province.

However there are some circumstances in which the Province will respond early in an emergency

- where service is routinely provided by a regional authority or the Province rather than the local government, e.g. Regional Health Authorities, EMS, RCMP pursuant to the provincial policing contract;
- as part of the routine delivery of specialist services that is part of our modern response environment, e.g. Office of the Fire Commissioner; or
- as part of a statutory or regulatory function, e.g. Workplace Safety and Health, Chief Provincial Public Health Officer, or Chief Veterinary Officer.

There may also be unusual circumstances where the Province may assume primary responsibility, such as where

- no local government exists,
- the local government no longer has the capacity to respond, or
- the local government is unable to implement an appropriate on-site system of emergency management.

(c) General Departmental Response

During major emergencies or disasters, all departments shall

- implement departmental emergency plans and procedures, including maintenance and delivery of all emergency response and other critical departmental functions,
- notify Manitoba EMO of all municipal requests for assistance made directly to the department, other than routine assistance provided as part of daily operations,
- if required, provide departmental representatives to the Manitoba Emergency Coordination Centre (MECC). Departmental representatives should be
  - knowledgeable, experienced supervisors who are able to function effectively in an emergency environment,
  - trained in emergency management processes, procedures, and plans, including the use of the MECC information management systems,

- able to maintain contact with departmental staff, acquire and maintain knowledge of their departments' capacity and current operations, and succinctly communicate this information to other MECC staff,
- able to coordinate information and quickly and accurately perform various tasks, including maintaining appropriate logs and records,

- if required, provide a senior representative to participate in the event specific Steering Committee. The Steering Committee is responsible for escalated decision-making across provincial departments and federal agencies. Escalated Provincial decisions which cannot be made by the Steering Committee are escalated to the Deputy Ministers' Committee on Emergency Management and Public Safety,

- if required, provide such further and other assistance as may be necessary, coordinate public messaging related to the emergency with Manitoba EMO and Communications Services Manitoba,

- protect assets, financial records, and other records maintained by the department, and

- maintain financial administration over, including appropriate records of, departmental expenditures related to the emergency.

4.1.4 Assistance from Non-Government Organizations

(a) Incorporation in Emergency Plans

The effectiveness of our emergency response and recovery will depend to a large extent on the use of all available community resources. Most communities have a number of non-governmental organizations (NGOs), including church or faith-based groups, service clubs, volunteer groups and agencies. These organizations can provide a wide range of skills, manpower, and equipment. They may also have extensive expertise and connections with vulnerable populations.

Local authorities often incorporate NGOs in their emergency plans, particularly in the recovery phase. This is also the case at the provincial and federal levels. A number of NGOs that have established roles and responsibilities under the MEP or its annexes are set out in **SCHEDULE 3 – Non-Governmental Organizations**.

Note: Although many NGOs, service clubs, and volunteer groups and agencies provide their services free of charge that is not always the case. Some organizations charge fees for their services, and others require that volunteers' be reimbursed for their out of pocket expenses.

(b) Workers' Compensation Coverage

Volunteers for a specific emergency or disaster who have registered with the local authority or with the Province who are injured while providing volunteer services may

be eligible to receive Workers' Compensation benefits. Therefore, agencies employing the volunteers should first register them by obtaining the volunteer's name and address.

In the event of injury, the agency employing the volunteer will require additional information such as the volunteer's social insurance number. It shall complete all the appropriate Employers Report of Injury documents on behalf of the volunteer, just as it would for an ordinary employee.

4.1.5 Federal Assistance

When the Province's capacity to deal with an emergency using existing resources is or is likely to be exceeded, or where specialized resources are required, the Province may request assistance from the Government of Canada.

Again, there may be circumstances where federal agencies are engaged very early in an event due to their statutory responsibilities. Avian influenza and other animal disease outbreaks are examples of early federal involvement, as are air and railway accidents.

In most circumstances, even where the federal government has a statutory mandate to investigate a particular hazard, consequence management including protection of life and property remains a local/provincial responsibility.

Notes:

1. There can be significant cost implications depending on the procedure used to access federal assistance, therefore all requests for emergency assistance from either a local authority or the Province to the Government of Canada, including from the Department of National Defense, will only be made through the ADM of EMPS.

2. This does not apply to federal resources that are provided in the course of day to day operations, as part of an existing program, e.g. RCMP, search and rescue.

4.2 Response Summary

For ease of reference we refer in the following tables to three levels of emergency that typically increase in scale and scope. The table provides a synopsis of the anticipated response and may be of some guidance.

It should be understood that a routine emergency in a large community with greater resources may be a major emergency in a smaller community with limited resources.

4.2.1 Routine Emergency

Impact	Low to moderate societal impact (see Note).
Length	Generally, but not always, of short duration (hours or days, not weeks, months or years).
Local Authority Response	Usually resolved by traditional first responders, i.e. police, fire and EMS, perhaps with some specialized assistance. In smaller communities mutual aid may be required.
On-site Command Post	Responders will establish appropriate on-site management in accordance with their established procedures. Appropriate telecommunications will be established.
EOC	Decisions within authority of responders can be made on-site. EOC usually not activated.
EMO staff	Usually does not meet EMO notification criteria. If any doubt notify EMO Duty Officer at 945-5555.
Other Provincial staff	Sometimes an individual department may respond to provide specialized resources or to ensure compliance with regulatory requirements, e.g. Manitoba Hydro, OFC, Workplace Safety and Health.
MECC	Not activated for routine emergency.

4.2.2 Major Emergency

Impact	Moderate to high societal impact (see Note).
Length	May be extended duration, particularly recovery phase (weeks or months, usually not years).
Local Authority Response	First responders, other available community resources engaged, including specialized assistance. Municipal emergency plan will be activated. Mutual aid and provincial assistance likely required.
On-site Command Post	Responders will establish appropriate on-site management. This should include Incident Command or Unified Command, and require that an on-site command post(s) be established. Appropriate telecommunications will be established.
EOC	Municipal EOC likely activated. Departments and involved industry may also activate EOCs.
EMO staff	Director of Emergency Operations (DEO) will be notified by the Duty Officer, DEO may dispatch Emergency Management Advisors to attend to site or municipal EOC to provide information and coordinate provincial and federal assistance, as required. EMO HQ staff may be assigned operational duties.
Other Provincial staff	Departments may respond to provide specialized resources or to ensure compliance with regulatory requirements, e.g. Manitoba Hydro, OFC, Workplace Safety and Health. Additional departments, equipment and staff may be required and assigned response or recovery tasks commensurate with the extent of the emergency. Liaison officers may be called into the MECC.
MECC / EMCC	The MECC may be activated. The Emergency Mobile Command Center (EMCC) may be dispatched to the emergency site in order to

	provide a suitable facility. Appropriate telecommunications links with municipal EOCs will be established.

4.2.3 Disaster

Impact	High to extreme societal impact (see Note). May impact a large area or multiple communities.
Length	Will likely be extended duration and prolonged recovery (months, even years).
Local Authority Response	First responders, other available community resources engaged, including specialized assistance. Municipal emergency plan will be activated. Local authority's ability to respond may be compromised by the impact. Mutual aid and provincial assistance likely required. May involve multiple sites and communities.
On-site Command Post	Responders will establish appropriate on-site management. This should include Incident Command or Unified Command, and require that an on-site command post(s) be established. May be multiple sites and communities. Appropriate telecommunications will be established.
EOC	Municipal EOC activated. May be multiple communities impacted. Departments and involved industry may also activate EOCs.
EMO staff	DEO will be notified by the Duty Officer, DEO will likely dispatch an EMA to attend to site(s) or municipal EOC(s) to provide information and coordinate provincial and federal assistance, as required. EMAs from other regions may be dispatched to assist in affected area. EMO HQ staff will be assigned operational duties. The DEO will activate the MECC and request liaison officers from other departments and agencies as required.
Other Provincial staff	Departments will respond to provide specialized resources or to ensure compliance with regulatory requirements, e.g. Hydro, OFC, Workplace Safety and Health. Additional departments, equipment and staff may be required and assigned response or recovery tasks commensurate with the extent of the disaster. Liaison officers may be called into the MECC. Additional resources may be requested from other Provinces and the Government of Canada.
MECC / EMCC	The MECC will be activated. The Emergency Mobile Command Center may be dispatched to the emergency site in order to provide a suitable facility. Appropriate telecommunications links with municipal EOCs will be established.
Escalated Decisions	Are inevitable. Will be referred from the MECC to the Steering Committee, Deputy Ministers' Committee on Emergency Management and Public Safety, and Cabinet, as appropriate.

Note: Reference to societal impact does not imply that a low or moderate impact does not severely impact those immediately affected, their family, friends or community. Nor is it intended to minimize the impact that the loss of an individual or some properties can have on a community.

4.3 EMERGENCY MANAGEMENT SYSTEM

When multiple emergency response agencies are required to work together the most frequently used incident management system is the Incident Command System. Incident Command is the standardized on-scene emergency management system that is specifically designed to allow responders to adopt an integrated organizational structure equal to the complexity and demands of single or multiple incidents.

In most circumstances where a single agency or a number of agencies from the same discipline are involved, Incident Command with a single Incident Commander is usually appropriate. Where a number of agencies from different disciplines are involved, the appropriate incident management system is the Unified Command System (hereinafter both Incident Command and Unified Command will be referred to as Incident Command or ICS).

Although ICS is a fairly standard system with common features, there are several inter-jurisdictional variants, including a common healthcare variant, used in Manitoba. For the most part the variations are minor and do not detract from the implementation of ICS in a given emergency.

ICS does not replace the proper function of government, nor create a structure that supersedes Constitutional, legislative or regulatory authority, but seeks to minimize organizational conflicts and encourage cooperation and action toward achievement of a common set of objectives compatible with the participants' responsibilities.

To the greatest extent possible existing government structure will be used to facilitate escalated decision-making processes across provincial departments during an emergency.

Provincial and federal government decision-making is unified through the formation of an event-specific Steering Committee, usually co-chaired by the Executive Director of Manitoba EMO and a senior representative of a primary responding department, and consisting of senior representatives of provincial and federal departments that have significant involvement in the event.

Additional information on the structures used to support an integrated response to major emergencies and disasters may be found in **SCHEDULE 1 - Manitoba Emergency Management System (MEMS)**

4.4 EMERGENCY OPERATIONS CENTRES

An EOC, sometimes referred to as an Emergency Coordination Centre (ECC), referenced in tables 4.2.1 and 4.2.2, is a predetermined physical location away from the site from which some municipalities, departments or agencies provide direction, support and coordination. An alternative or back-up facility should also be identified.

Although the Province operates the Manitoba ECC (MECC) for purposes of government-wide and inter-jurisdictional coordination, an individual department may require its own EOC to coordinate its departmental response. This is particularly true for large departments with multiple branches.

A functional description of a department's EOC operations should be set out in its emergency plan. The opening and closing of an EOC by a department will be triggered by the nature and scope of the event, and the department's requirements.

Note: Although department EOCs can be very useful, they can also impede the flow of critical information and foster the creation of operational "silos." To help avoid this, departmental EOCs must be able to effectively communicate with the MECC either directly, or if the organization is one that has been asked to provide a liaison officer in the MECC, with its liaison officer.

4.5 Emergency Communications

4.5.1 Accurate, Timely Communications

Complete, accurate, and timely communication must be maintained between all departments, all levels of government, and all response elements. This is essential to the development of the common operating picture and objectives necessary to the effective management and coordination of emergency operations.

4.5.2 Media/ Public Information

The provision of timely and accurate emergency information to the public is also vital to the success of emergency operations. CSM will coordinate the distribution of emergency public information on behalf of the province, with the assistance and cooperation of involved departments. It will also provide assistance to municipalities who request provincial support to distribute emergency information.

Where other levels of government or NGOs are involved in responding to an emergency, public messaging should be coordinated among all of the participants.

Manitoba EMO may also provide immediate public alerts through the National Public Alert System (NPAS).

For a diagram showing how Manitoba EMO provides information to the public during a major emergency or disaster refer to **3.3.1 Manitoba EMO Notifications Model**.

4.5.3 Telecommunications

In an emergency, effective telecommunications is critical to

- the efficient exchange of information
- coordination,
- command and control, and
- responder safety.

A variety of technologies can be used to provide telecommunications on site, between the site and agencies' EOCs, and between EOCs, including

- two-way radio,
- facsimile,
- email and other intra or internet-based services
- telephone (cellular and landline), and
- satellite communication systems.

As soon as practicable after impact, a quick survey should be made to determine which technologies are still available, and a tactical telecommunications plan should be prepared around the use of the surviving technologies.

All personnel operating telecommunications equipment in a common environment with other departments or agencies (interoperating) shall use plain language and avoid the use of slang or other terminology that may cause unnecessary confusion, including the use of so-called 10 codes.

In circumstances where commercial telecommunications systems have failed or are likely to fail, or where supplementary telecommunications may be required, the Manitoba EMO Duty Officer may request assistance from the Amateur Radio Emergency Service (ARES).

Additional information on basic technological and operating considerations regarding these technologies, including considerations for temporary repair or replacement may be found in **SCHEDULE 6 – Telecommunications**.

5. EMERGENCY AUTHORITY AND POWERS

5.1 STATES OF EMERGENCY

A declaration of a provincial state of emergency may be issued by the Minister, or a state of local emergency may be issued by a local authority pursuant to s. 12 of *The Emergency Measures Act* to acquire and exercise the powers set out in the *Act*.

A state of emergency (sometimes referred to as a provincial state of emergency (PSoE) to distinguish it from a state of local emergency) or a state of local emergency (SoLE) may be geographically limited to part of the jurisdiction, in which case the limitation should be included in the declaration.

Note: The provisions concerning so-called "Prevention Orders" were repealed and are no longer in effect.

5.1.1 Powers under a Provincial State of Emergency or State of Local Emergency

S. 12 of the *Act* provides:

> **Upon the declaration of, and during a state of emergency or a state of local emergency, the Minister may, in respect of the province or any area thereof, or the local authority may, in respect of the municipality or other area within its jurisdiction, or an area thereof, issue an order to any party to do everything necessary to prevent or limit loss of life and damage to property or the environment, including any one or more of the following things:**
>
> **(a) cause emergency plans to be implemented;**
>
> **(b) utilize any real or personal property considered necessary to prevent, combat or alleviate the effects of any emergency or disaster;**
>
> **(c) authorize or require any qualified person to render aid of such type as that person may be qualified to provide;**
>
> **(d) control, permit or prohibit travel to or from any area or on any road, street or highway;**
>
> **(e) cause the evacuation of persons and the removal of livestock and personal property and make arrangements for the adequate care and protection thereof;**
>
> **(f) control or prevent the movement of people and the removal of livestock from any designated area that may have a contaminating disease;**
>
> **(g) authorize the entry into any building, or upon any land without warrant;**

(h) cause the demolition or removal of any trees, structure or crops in order to prevent, combat or alleviate the effects of an emergency or a disaster;

(i) authorize the procurement and distribution of essential resources and the provision of essential services;

(i.1) regulate the distribution and availability of essential goods, services and resources;

(j) provide for the restoration of essential facilities, the distribution of essential supplies and the maintenance and co-ordination of emergency medical, social, and other essential services;

(k) expend such sums as are necessary to pay expenses caused by the emergency or disaster.

A PSoE or SoLE may intrude on individual and property owner's rights, and therefore the actions undertaken under an SoLE should be

- permitted under the Act,
- reasonably necessary in the face of an emergency or disaster, and
- proportional to the loss or damage that the action seeks to prevent.

5.1.2 Declaration of a State of Local Emergency

(a) State of Local Emergency (SoLE)

A local authority must complete the following steps to declare a SoLE for all or part of the municipality:

- The local authority must pass a council resolution to declare a state of local emergency. Where a local authority is unable to act quickly, such as where a quorum cannot be brought together to pass a resolution, the appropriate mayor or reeve may make a declaration.

The Act stipulates that:

11(3) A declaration of a state of local emergency

(a) must describe the major emergency or disaster that is the subject of the declaration;

(b) must state whether the declaration applies to all or a part of the municipality or other area within the jurisdiction of the local authority, as the case may be;

(c) must, if the declaration applies to a part of the municipality or other area, describe the affected area; and

(d) must, if the duration of the declaration is to be less than 30 days, state its duration.

- The declaration and resolution from the local authority must be forwarded by the most effective means to the Minister through Manitoba EMO. A template is available in **SCHEDULE 4 – Template for Declaration of a State of Local Emergency**).

- Following the declaration the local authority must communicate the details of the state of emergency to residents of the affected area by the most appropriate means available.

A declaration is valid for a period of 30 days beginning on the day the declaration is made, unless a shorter period is stated in the declaration in accordance with paragraph 11(3)(d) above. All days are full days, regardless what time the declaration was made on the first day.

(b) Extension

The local authority may make application to the Minister for an extension of the SoLE, and the Minister may approve its extension for further periods of 30 days each. **Requests for an extension are not automatically approved and require some explanation.**

To obtain an extension the local authority must complete the following steps:

- It must pass a council resolution requesting an extension of the SoLE.

- The resolution must be forwarded to the Minister through Manitoba EMO along with any relevant information in support of the extension by the most effective means. Manitoba EMO will forward the extension request to the Minister along with a recommendation from the Executive Director.

- Once the Minister has approved or declined the request for an extension, Manitoba EMO will then forward the decision to the local authority, who will then communicate the details of the SoLE to residents of the affected area by the most appropriate means available.

The two most common problems seen with applications for extension of a SoLE are

- That they are not made prior to the expiration of the Order.

- That insufficient information is provided as to the reasons that an extension is required.

(c) Termination

When an emergency no longer exists in any area of the municipality for which a declaration of a state of local emergency was made, the local authority may terminate the declared state of local emergency. The local authority must inform the residents of the affected area of the termination and send a copy of the declaration with resolution to Manitoba EMO.

In addition the Act provides:

15(2) The minister may terminate a state of local emergency, when, in the opinion of the minister,

(a) the major emergency or disaster no longer exists;

(b) the state of local emergency was declared in contravention of subsection 11(5.1);

(c) the local authority has not satisfactorily provided the information requested by the co-ordinator under subsection 11(6); or

(d) the information provided in response to a request made under subsection 11(6) does not demonstrate a need for the local authority to have powers under subsection 12(1) to resolve the major emergency or disaster.

Upon terminating the state of local emergency, the minister must cause the details of the termination to be communicated by the most appropriate means to the local authority and residents of the affected area.

5.1.3 Declaration of a Provincial State of Emergency

(a) Provincial State of Emergency

In the event of an imminent or occurring emergency or disaster, the Minister

- may declare a State of Emergency in respect to all or any part of Manitoba, and
- shall communicate the details of the state of emergency to residents of the affected area, using the most appropriate means available.

(b) Extension

A declaration of a State of Emergency by the Minister is valid for a period of 30 days. The Lieutenant Governor in Council may, if necessary, extend the length of the declaration for further periods of 30 days each.

(c) Termination

When an emergency no longer exists in any area of the province for which a declaration of a state of emergency was made, the Minister

- may terminate the declared state of emergency and
- must inform the residents of the affected area of the termination.

Further information on the process of issuing a declaration for a provincial state of emergency may be found in Schedule 5 – Provincial States of Emergency.

6. EMERGENCY EXPENDITURES AND COST RECOVERY

6.1 DISASTER FINANCIAL ASSISTANCE

6.1.1 Unanticipated Incremental Expense

Local authorities and provincial departments are expected to take appropriate measures to protect lives and limit property damage prior to and during a major emergency or disaster. Such measures can require substantial financial expenditures that are largely unanticipated in the budget process.

Accordingly, provincial Disaster Financial Assistance (DFA) funding may be made available after the fact to offset the incremental expenses relating to the emergency.

It is intended to assist provincial departments, local governments, individuals, farms, businesses, and non-profit organizations with recovery from a disaster.

6.1.2 Record of Expenses/Audit Trail

To support the possibility of reimbursement, expenses relating to the emergency must be tracked.

For audit purposes provincial departments are required to complete, maintain and as requested provide the following documentation:

- detailed damage reports completed by site by a relevant expert
- site reports by a relevant expert confirming repairs are complete and are limited to restoration or to pre-disaster functionality
- contracts, invoices and financial records for all claimed costs

6.1.3 Submission to Manitoba EMO

In addition to the above required records provincial departments requesting funding assistance must complete, maintain and submit the following documentation to Manitoba EMO:

- SAP reports detailing the individual eligible costs identified by cost element, posting date, document date and the text details for the line item with attached excel version
- spreadsheet summarizing the incurred expenses by the following categories:
  - personnel
  - materials
  - equipment
  - contracts
  - mitigative enhancements
  - other

- Inter Business Area Journal (IBAJ)

6.2 FEDERAL COST SHARING

In certain circumstances federal funding contribution is made available to the Province through the Disaster Financial Assistance Arrangements (DFAA). The DFAA is intended to provide federal assistance for emergency expenditures exceeding certain *per capita* thresholds.

All applications for funding under the DFA are subject to limitations respecting the expenditures that are or are not eligible.

Questions pertaining to DFA or DFAA should be directed to Manitoba EMO to the attention of the Director of Recovery at 945-4772.

7. PROVINCIAL POST EMERGENCY REVIEW

When appropriate, the ADM of EMPS will initiate a post-emergency review.

7.1 PURPOSE

The review is essentially no different from the gap analysis conducted at the conclusion of any exercise. Its purpose is to

- learn from the experience,
- confirm best practices, and
- identify appropriate areas for improvement.

7.2 PROCESS

The post-emergency review will consist of several activities or parts:

7.2.1 Debriefing

- Provincial debriefing meetings will be held as soon as possible after the termination of the emergency. Separate debriefings will be held with
  - the Steering Committee,
  - the on-site emergency response personnel, and
  - MECC personnel..

7.2.2 Departmental Reports

- The emergency coordinators from each department involved in an emergency will prepare a report on the department's including any recommendations for further consideration. A copy of the report should be provided to the Executive Director.

- Manitoba EMO will encourage the submission of reports from federal departments, municipalities, and/or NGOs that participated in the emergency.

- All departmental reports should include the following information:
  - An executive summary
  - A description of the department's response including duration of response, description of response and activity. Other details including personnel and major pieces of equipment or apparatus would be helpful.
  - All known or anticipated costs incurred.
  - A brief analysis of the department's emergency response effectiveness.
  - Recommendations for improvement or enhancement of the department's response.

7.2.3 Provincial Report

- Manitoba EMO will be responsible for the preparation of a provincial report, which may include:
  - An executive summary.
  - Provincial Emergency Response (including local response).
  - Chronological sequence of significant events.
  - Overall emergency costs on a departmental basis.
  - Projections for ongoing recovery efforts including estimates of time, costs, and involved agencies.
  - The overall comments and recommendations (from debriefing meetings, departmental/municipal reports).
  - Departmental/agency/municipal reports.
  - The printing and distribution of the provincial report.

SCHEDULE 1

MANITOBA EMERGENCY MANAGEMENT SYSTEM Ver. 2.3

1.0 INTRODUCTION

1.1 General Emergency Response

Most emergencies are resolved within a comparatively short time by emergency responders attending on-site, usually police, fire and EMS along with specialists from government and the utility companies (collectively "emergency responders"). These emergency responders attend to emergencies in the course of their daily activities, and have developed professionally appropriate response systems and methods that suit their respective operational needs.

1.2 Independent Action by Emergency Responders

Emergency response agencies are designed to function in a rapid response environment where responders act within the scope of their authority and in compliance with their operational protocols. Various compliance mechanisms exist; and emergency responders are usually not required to obtain prior permission or direction from outside of their own agency.

1.3 Use of Incident Management Systems

When multiple emergency response agencies are required to work together on-site they most often use the Incident Command System. Incident Command is the standardized emergency management system specifically designed to allow emergency responders to adopt an integrated organizational structure equal to the complexity and demands of single or multiple incident sites.

ICS does not replace the proper function of government, nor create a structure that supersedes Constitutional, legislative or regulatory authority, but seeks to minimize organizational conflicts and encourage cooperation and action toward achievement of a common set of objectives compatible with the participants' responsibilities.

In most circumstances where a single agency or a number of agencies from the same discipline are involved on-site, Incident Command with a single Incident Commander is usually appropriate. Where a number of agencies from different disciplines are involved, the appropriate incident management system is the Unified Command System (hereinafter both Incident Command and Unified Command will be referred to as Incident Command or ICS).

ICS is the preferred on-site incident management system to be used by responders from provincial departments and agencies.

Although ICS is a fairly standard system with common features, there are several inter-jurisdictional variants, including a common healthcare variant, used in Manitoba. For the most part the variations are minor and do not detract from the implementation of ICS in a given emergency. However, ICS is not an intuitive system, and in order to implement it effectively, provincial department and agency personnel, particularly those responding on-site, will require appropriate ICS training so that they can effectively interoperate with other emergency responders.

Appropriate training shall be developed and provided by the Manitoba Emergency Measures Organization, the Office of the Fire Commissioner, Manitoba Health, Seniors and Active Living's Office of Disaster Management and Manitoba Sustainable Development in consultation with other provincial departments as may be appropriate.

1.4 Major Emergencies and Disasters

1.4.1 Escalated Intervention

There are certain types of emergencies that are not resolvable by the typical emergency responders, and disasters by their very scope require broad, societal intervention, including the participation of a number of federal, provincial and municipal departments and agencies, non-government organizations, and the private sector.

1.4.2 Escalated Decision-Making

As emergencies increase in scale and scope and become disasters, the decisions which must be made and the resources which must be used to resolve them, also increase in scale and scope. In the larger of these events decisions must be made which may have significant policy, financial and societal impacts.

These kinds of events often require escalated decisions from local, provincial and federal governments both at an administrative and ultimately at a political level. This is particularly true of decisions which may have far reaching or long-term impacts.

1.4.3 Statutory Definitions

In *The Emergency Measures Act* (the Act),

> "emergency" means a present or imminent situation or condition that requires prompt action to prevent or limit
>
> (a) the loss of life; or
>
> (b) harm or damage to the safety, health or welfare of people; or
>
> (c) damage to property or the environment.

and,

"disaster" means a calamity, however caused, which has resulted in or may result in

(a) the loss of life; or

(b) serious harm or damage to the safety, health or welfare of people; or

(c) wide-spread damage to property or the environment.

"major emergency" means an emergency that is not a routine emergency.

"routine emergency" means an emergency that

(a) can be effectively resolved
   a. by local police, fire and emergency medical services, working independently or together with public works and utilities personnel, and
   b. without requiring additional resources from a local authority not directly affected by the emergency, the Government of Manitoba or the Government of Canada,
(b) does not require evacuation of persons out of the geographic area over which a local authority has jurisdiction, and
(c) does not require the declaration of state of emergency or a state of local emergency.

1.4.4 Characteristics of Emergencies, Major Emergencies and Disasters

i. Scale vs Scope

The difference between an emergency and a disaster is not only a question of scale, but also of scope. We can examine this by way of the following example:

(1) A traffic accident involving two cars with four injured occupants may be a comparatively minor emergency, whereas a traffic accident involving a truck and a school bus with twenty injured occupants would be a more serious emergency.

This expansion is a matter of scale.

(2) Suppose that the truck involved in the second example was a tanker carrying propane and the accident occurred adjacent to a school. The truck caught fire and was in danger of exploding. Now in addition to the accident, there is a need to safely evacuate the students and staff of the school and get them out of the potential impact area.

(3) Suppose the tanker actually exploded and in addition to severely damaging the school and causing multiple casualties including dead and injured, the explosion damaged a nearby hydro sub-station. That damage cut off power to the community, and Hydro estimates that it will take two weeks to restore power.

This accident occurred in January at a time when the average daily temperature was approximately -20 c. and would likely remain so for most of the two week period.

The additional impacts represent exponential growth both of scale and scope.

The immediacy of the problem leading up to and including Part 2 remains primarily an emergency that can be resolved by the emergency responders, and on-site school officials. Although the scope of the event is increasing, in this example it remains within the capacity of the emergency responders and school officials.

In Part 3 it is likely that local emergency responders, the local hospital and available medical personnel may be overwhelmed. A comparatively small surge may be managed by drawing on mutual aid and medical facilities in nearby communities (assuming that there are such communities); however, a surge of this magnitude will likely exceed the capacity of nearby communities. Additional resources can be accessed but they are at some distance.

(4) Suppose the hospital's generator has a limited fuel supply, and the local fuel provider has no means of extracting it from its underground tanks without power, and no simple means of attaching a portable generator to his pumps.

(5) Suppose the majority of homes and business have no alternative power source, and Hydro will not be able to supply and rig a temporary power supply for at least two days. Some people, particularly those who require power to supply medical devices, those who are sick, the very old and the very young will be increasingly at risk as standby power runs out and as the retained heat in buildings dissipates.

The scale and scope of the event have now reached a point where this event might be described as a disaster.

Other Examples:

An early winter ice storm that exceeds Hydro's line clearing capacity, followed by a blizzard and rapidly dropping temperatures that impacts all of South-Eastern Manitoba from Selkirk south to the US border, including the City of Winnipeg and the Red River Valley, and east to the Manitoba/Ontario border.

An influenza pandemic approaching the scale and scope of the 1918 Spanish Flu.

ii. Impacts on Critical Infrastructure Networks/Cascade

While in no way minimizing the human impacts, each of these disasters have different characteristics, impacting on different areas of critical infrastructure. Although the initial impacts of a significant pandemic are on the healthcare system, and on the people

that operate, maintain and repair critical infrastructure networks, as the pandemic continues it is likely that maintenance related failures and repair issues will also become problematic.

As Critical Infrastructure fails and begins to impact the various interconnected networks that we rely on in a modern, industrialized society, a cascade may develop that is not unlike the organ failure cascade that can take place when serious illness or injury overtakes the human body.

2.0 EMERGENCY MANAGEMENT SYSTEM

2.1 System for Escalated Decision-Making

The Manitoba Emergency Management System (MEMS) is a schedule to the all-hazards Manitoba Emergency Plan (MEP) and sets out the structures used to facilitate an integrated response to major emergencies and disasters which in scale or scope exceed the resources available to on-site emergency responders, and requires the involvement and contribution of various municipal, provincial and federal departments and agencies, non-government agencies (NGOs), and the private sector, or requires escalated decision-making.

2.2 Complimentary with Other Systems

To the extent that it is appropriate the MEMS is intended to compliment the emergency management system used by the federal government, as well as those used by emergency responders, while at the same time conforming with the Constitutional, legislative and regulatory requirements, and the policies of the Government of Manitoba.

2.3 Integrated Government of Manitoba Response

The response of the departments and agencies of the Government of Manitoba should be marked by unity of purpose and common strategic objectives.

Departments and agencies are consulted during the planning phase, so that their input may be taken into consideration and included in plans and preparedness. To the extent that it is possible, roles and responsibilities will be identified, and operational issues will be resolved before an actual event. Pre-event planning, collaboration and the use of ICS should minimize potential conflict and encourage and enhance operational effectiveness and interoperability.

During a major emergency or disaster, all departments and agencies of the Government of Manitoba may be required to contribute personnel and resources, and responders should be trained to function in an ICS environment.

2.4.1 EMO Executive Director

On behalf of the Minister responsible for Manitoba EMO, the Executive Director has overall responsibility for the coordination of a Manitoba response to an emergency, and liaison between the ECC, the Steering Committee, and the Deputy Ministers' Committee on Emergency Management and Public Safety, including the form and content of situational advisories for dissemination to senior levels of government.

2.4.2 Integrated Public Information/ Communications

Effective emergency management in major emergencies and disasters depends on public reaction, confidence in the authorities managing the event, and compliance with their advice and directions. To facilitate accurate, common messaging, management and staff from Communications Services Manitoba, in coordination with their counterparts from federal and municipal government and the private sector, is responsible for coordinating the public communications function.

During a major emergency or disaster, all provincial departments and agencies are required to coordinate their public messaging through Communications Services Manitoba.

2.4.3 Departmental Roles

Departments and agencies may have various roles depending on the nature and scale of an emergency. These roles are set out in the all-hazards Manitoba Emergency Plan (MEP), and in the specific-hazards plans that are annexes to the MEP.

i. Primary, Supporting and Coordinating Departments

Major emergencies and disasters can vary widely in their scale and scope. Accordingly, departmental participation and roles can also vary. The following definitions describe the various departmental roles during an emergency:

(a) Primary Department

A department or agency with the legislated mandate related to a core element of an emergency. Depending on the nature of the emergency, there may be multiple primary departments.

(b) Supporting Department

A department or agency that provides assistance to a primary department.

(c) Coordinating Department

Manitoba EMO is the coordinating department of the Government of Manitoba based on the legislated responsibility of the Minister responsible for emergency management as set out under the Act.

Public Safety Canada is the federal coordinating department.

ii. Emergency Support Functions

Emergency support functions are actions in support of the needs that are anticipated to arise prior to or during an emergency. Departments, non-governmental organizations, and private sector representatives may be required to support the responsible department based on their resources and capabilities.

3.0 GOVERNANCE STRUCTURE

3.1 Escalated Decision-Making Across Departments

MEMS includes management structures and processes that are functional during non-emergency as well as emergency circumstances. Under MEMS, the Government of Manitoba will engage existing government operations structures to the greatest extent possible in responding to an emergency.

Decisions are influenced by the nature of the emergency without constraining the flexibility of the government to decide how it organizes its response to any given emergency.

The Manitoba governance structure allows for an escalated decision-making process across provincial departments and agencies, first to the Manitoba Emergency Coordination Centre (MECC), then to the Steering Committee, Deputy Ministers' Committee on Emergency Management and Public Safety, and then to Cabinet, or a sub-committee of Cabinet established for that purpose.

All or some of the following elements may be activated in response to an emergency. See Schedule 1 attached.

3.2 Manitoba Emergency Coordination Centre

The Manitoba Emergency Coordination Centre (MECC) is the facility where an integrated Government of Manitoba response to a major emergency or disaster is coordinated. It is staffed during major emergencies and disasters by Manitoba EMO personnel, along with additional personnel from other provincial and federal government departments and agencies, NGOs, and the private sector, as may be required in the circumstances.

The role of the MECC will vary somewhat depending on the nature of the emergency. If the emergency is one which can be resolved primarily on site by the typical emergency responders, the primary role of the MECC is to coordinate support.

If the emergency or disaster is one that cannot be resolved by the typical emergency responders, or where there is no specific site, the MECC may be used to coordinate the provincial or federal/provincial response.

3.2.1 Role of EMO Emergency Management Advisors

EMO Emergency Management Advisors and other personnel may attend to the site of a major emergency or disaster for the purpose of gaining situational awareness and reporting to the Director of Operations; coordinating provincial support; and providing advice to the local government and its agencies with respect to available provincial resources, declaration of a local state of emergency and exercise of the emergency powers under the Act, and activation of the local emergency plan.

3.2.1. Activation of the ECC

Depending on the nature of the emergency, and the level of Manitoba coordination required during an emergency, the Executive Director, may escalate or de-escalate response levels as appropriate, including activation of the MECC.

During a minimal MECC activation the MECC will be staffed by EMO Headquarters Staff under the direction of the Director of Operations. The primary objectives under minimal activation will be to monitor, analyze and disseminate information regarding a developing situation, and provide advice to the Executive Director.

Activity in the MECC may be escalated as circumstances require, with the addition of personnel and specialists from other departments and agencies, ultimately leading to a full activation of the MECC.

When fully activated liaison officers or subject matter experts from primary and support departments are engaged, and all of the primary functions within the MECC are staffed including command, operations, planning, logistics, and finance and administration.

Specialist functions reporting to the Director of Operations **may include** a representative from Communications Services Manitoba, counsel from the Manitoba Justice Department Civil Legal Services, a safety officer and department liaison personnel

3.3 Steering Committee

Steering Committees are established for specific hazards, and are co-chaired by the ADM of EMPS and a senior representative of the Primary Department most responsible for preparedness, response, recovery and mitigation of a specific hazard or event. If the Primary department is a Federal lead, participation shall be determined in consultation with the Regional Director of Public Safety Canada.

In a major emergency or disaster, this committee advises the Deputy Ministers' Committee on Emergency Management and Public Safety, and provides support and direction to officials within the MECC.

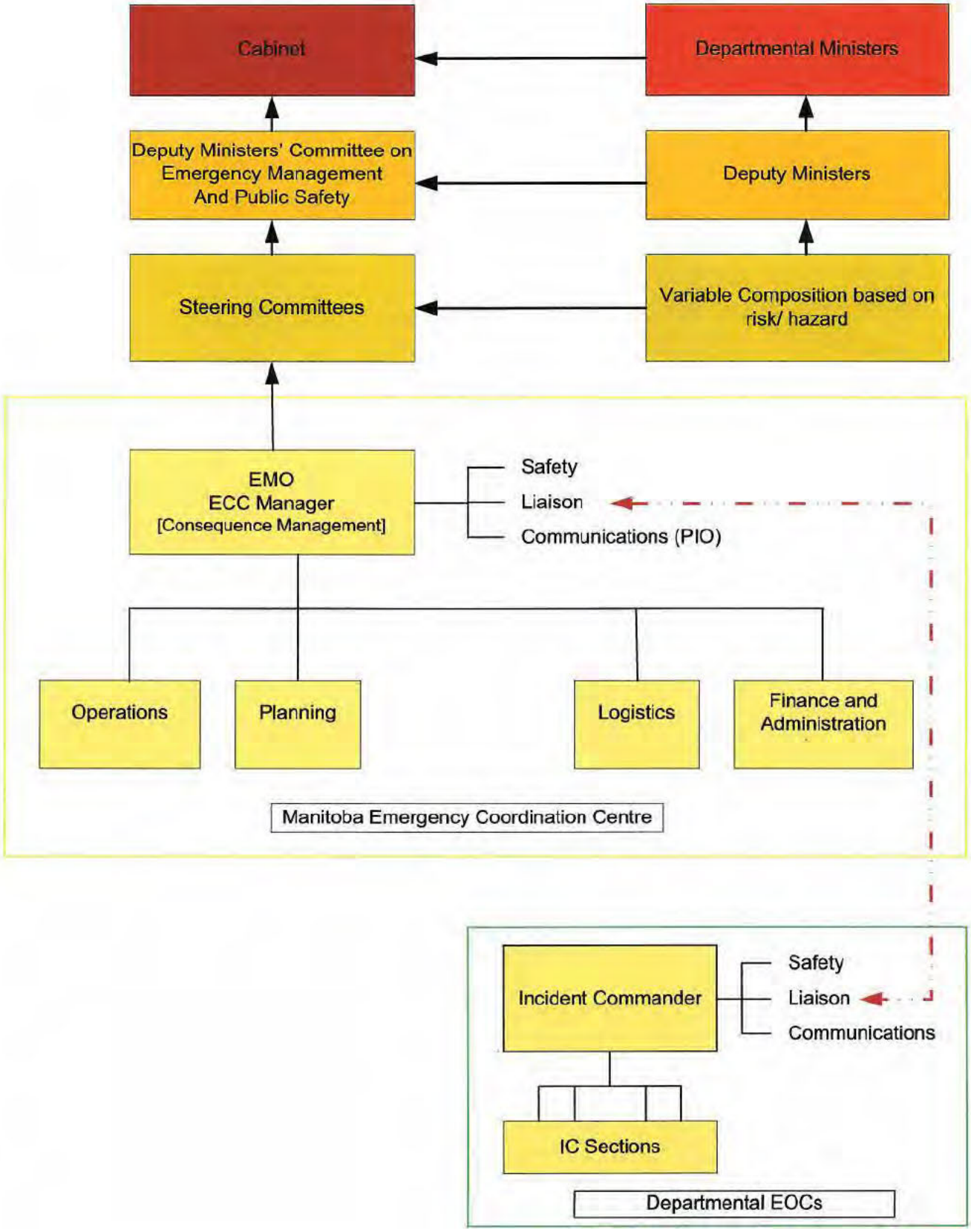
3.4 Deputy Ministers' Committee on Emergency Management and Public Safety

The Deputy Ministers' Committee on Emergency Management and Public Safety is chaired by the Clerk of Executive Council or his designate. In a major emergency or disaster, this committee provides advice to Cabinet, and direction to the Steering Committee through the Executive Director; and direction to Communications Services Manitoba on issues related to public communications.

3.5 Cabinet

In a major emergency or disaster, Cabinet is responsible for providing policy and direction to senior officials. To facilitate decision-making a sub-committee(s) of Cabinet may be formed to deal with specific issues.

End.


Cabinet
Departmental Ministers
Deputy Ministers' Committee on Emergency Management And Public Safety
Deputy Ministers
Steering Committees
Variable Composition based on risk/ hazard
EMO
ECC Manager
[Consequence Management]
Safety
Liaison
Communications (PIO)
Operations
Planning
Logistics
Finance and Administration
Manitoba Emergency Coordination Centre
Incident Commander
Safety
Liaison
Communications
IC Sections
Departmental EOCs

SCHEDULE 2
PROVINCIAL GOVERNMENT DEPARTMENTAL EMERGENCY ROLES AND RESPONSIBILITIES

In addition to the general department responsibilities set out in the Act and in the Manitoba Emergency Plan, this schedule describes certain emergency management roles and responsibilities specific to each provincial department.

These specific responsibilities highlight resources that exist within departments that contribute to the coordinated Provincial response.

1 ABORIGINAL AND NORTHERN AFFAIRS

- Provide advice and assistance to Northern Affairs communities in emergency operations and provide temporary community/municipal services if necessary.
- Coordinate government support to areas of Northern Manitoba that are within the jurisdiction of the Department of Aboriginal and Northern Affairs as follows:

Preparedness Planning

- Collect community emergency plans based on the emergency planning guidelines.
- Facilitate training for local community councils in emergency planning.

Response

- Provide a 24/7 emergency line and duty officer.
- Alert provincial departments and agencies likely to be involved in an emergency.
- Provide assistance to local authorities and provincial departments in the implementation of local community emergency plans.
- Dispatch regional Aboriginal and Northern Affairs staff to the affected communities.
- The Minister of Aboriginal and Northern Affairs is responsible for the declaration of a state of local emergency.

Recovery

- Assist communities in the application for disaster financial assistance.

Report

- Compile a department post-emergency report for each emergency incident.

2 AGRICULTURE, FOOD AND RURAL INITIATIVES

- Coordinate and lead on agricultural and food supply matters, including the following responsibilities:
  - Arrange for the provision of emergency veterinary services, as per *The Animal Care Act*.
  - Undertake arrangements for emergency evacuation and/or feeding of livestock.
  - Support agencies dealing with the rescue and care of companion and hobby farm animals in affected or evacuated areas.
  - Undertake arrangements for emergency evacuation of farm stored grains, fertilizer, pesticides, and other chemicals.
  - Take the provincial lead in an animal health incident or outbreak.
- Facilitate farm and rural stress response during an emergency.

3 CIVIL SERVICE COMMISSION

- Provide Employee Assistance Program (EAP) services to provincial government employees and government employees in external contracts.
- Provide training services through Organization and Staff Development (OSD).
- Provide assistance with the identification of employees with particular skills for redeployment purposes.

4 CONSERVATION

4.1 OPERATIONS DIVISION

4.1.1 FIRE PROGRAM

- Direct forest fire operations.
- Provide forest fire fighting equipment.
- Provide technical advice and assistance to other departments and local authorities about forest fire operations.

4.1.2 ENVIRONMENTAL EMERGENCY RESPONSE PROGRAM

- Operate within the mandates of *The Dangerous Goods Handling and Transportation Act* and *The Environment Act*.
- Direct the on-site response to environmental accidents.

- Oversee operations for contaminant monitoring and analysis.
- Direct environmental accident spill control, clean-up operations, and disposal arrangements.
- Arrange for the provision of technical personnel and equipment resources in support of law enforcement for dealing with Clandestine Drug Labs and as part of the provincial Chemical, Biological, Radiological, Nuclear, and Explosive (CBRNE) Response Team.
- Provide technical environmental advice to local authorities, departments, and agencies.
- Provide advice on public protection measures (evacuation, shelter-in-place and re-entry).
- Provide support to the Department of Water Stewardship - Office of Drinking Water by undertaking initial sampling, testing and assessment at the emergency site.

4.1.3 General

- Provide advice and assistance in waste disposal.
- Provide support to regulatory enforcement services.
- Provide supplementary emergency radio communication.
- Provide specialized transportation equipment and operations, e.g., ATV, snowmobiles, boats, and bombardiers.
- Assist the Office of Fire the Commissioner in search and rescue operations.
- Assist in acquiring helicopter/aircraft resources.
- Administer public access and egress systems within the flood plain and community rink dikes, in cooperation with Infrastructure and Transportation, Water Stewardship, and Justice.
- Provide other regional resource, staff, equipment, and infrastructure in support of emergency operations.

4.2 PROGRAMS DIVISION

- Provide staff familiar with emergency management systems

4.2.1 Lands and Geomatics

- Provide map services.
- Conduct flood/forest fire mapping and aerial photography.

4.2.2 Survey Services

- Provide survey crews.

5 CULTURE, HERITAGE AND TOURISM

5.1 Communications Services Manitoba

- Coordinate emergency public information responses on behalf of all government departments through media relations and other pertinent communication vehicles.
- Distribute materials to the media and assist in arranging media news conferences and events.
- Prepare and produce materials in print, web, or other formats with government departments.
- Produce ads and purchase advertising space.
- Help manage and direct public calls through Manitoba Public Inquiry.
- Liaise with other levels of government and organizations as needed to provide effective communications.

5.2 Archives of Manitoba

- Advise and assist governmental and non-governmental organizations in recovering, preserving and stabilizing damaged archival and library materials.

5.3 Translation Services

- Arrange for official languages translation services when and where required in an emergency response.

6 EDUCATION / ADVANCED EDUCATION AND LITERACY

- Advise and assist related authorities.
- Collaborate with Infrastructure and Transportation / Accommodation Services Division in school / institution emergency closing and re-openings.
- Provide qualified professional support for hearing-impaired students.
- Facilitate the provision of emergency transportation for students by liaising with school authorities.
- Arrange for education of displaced students upon the request of school authorities.

7 ENTREPRENEURSHIP, TRAINING AND TRADE

7.1 MANITOBA BUREAU OF STATISTICS

- Provide Manitoba population and demographic information.
- Assist in GIS mapping of Manitoba population and demographic information.

8 FAMILY SERVICES AND CONSUMER AFFAIRS

- Lead the Provincial Evacuation Planning Committee.
- Provide training for municipalities and ANA communities in the preparation and delivery of emergency social services.
- Determine and ensure the designated receiving/host communities have the capacity to provide Emergency Social Services (Registration & Inquiry, Emergency Food, Emergency Clothing, Emergency Lodging, Personal Services, Reception Centre Management).
- Provide support to host communities in the provision of Emergency Social Services when called upon.
- Establish and operate provincial reception centres when necessary.
- Establish and maintain a list of housing and accommodations.
- Coordinate damage assessment and inspection services of facilities used as reception centres.

[Note: It is unclear which of the above activities now fall under the roles and responsibilities of the Department of Housing and Community Development.]

8.1 CONSUMER AND CORPORATE AFFAIRS

- Administer *The Trade Practices Inquiry Act* which includes provision to investigate and where appropriate to prescribe the maximum price that may be charged for an article or product at any stage in its production, distribution, or marketing.

9 FINANCE

9.1 DISBURSEMENTS AND ACCOUNTING

- Upon approval of emergency funding or a disaster financial assistance program, facilitate payment for approved expenditures.

9.2 Insurance and Risk Management

- Coordinate provision of insurance adjustors to assist EMO in evaluation of damaged property.

9.3 Treasury Board Secretariat

- Support, review, and analyze requests for access to Vote 27, Emergency Expenditures.

9.4 Treasury Division

- Ensure government has cash resources to meet needs, and in appropriate accounts.
- Issue emergency cheques outside the SAP system (limited number available).

10 HEALTH / HEALTHY LIVING, CITIZENSHIP AND YOUTH

- Monitor and support Regional Health Authority (RHA) and health care organization emergency / disaster management activities.
- Evaluate the risk of negative health outcomes to the public.
- Provide information, advice and guidance to the public on health-related issues.
- Contribute health-related information to other sectors, organizations, and agencies.
- Liaise, collaborate, and coordinate on health-related matters with municipal, provincial, federal, and non-governmental (NGO) agencies.
- Secure, coordinate, and distribute necessary medical resources (e.g. human resources, supplies, vaccines, etc.) to support RHAs and health care organizations in response to the requirements of an emergency / disaster.
- Coordinate air ambulance evacuations (i.e. Lifeflight and basic air ambulance carriers) and ground medical evacuations.
- Coordinate the deployment of National Emergency Stockpile System (NESS) resources in Manitoba.
- Ensure continuity of care at health care organizations providing health services that are the responsibility of Manitoba Health and Healthy Living.
- Ensure the provision of institutional and community-based (public) health services in response to community needs during and immediately after an emergency / disaster.

- Support RHAs and health care organizations in the coordination of evacuations of health care facilities as required.
- Assign liaison officers and/or on-site response personnel to support RHAs and health care organizations as required.

11 INFRASTRUCTURE AND TRANSPORTATION

11.1 SUPPLY & SERVICES DIVISION

11.1.1 VEHICLE EQUIPMENT MANAGEMENT AGENCY (VEMA)

- Provide and service light vehicles necessary to the emergency response through Fleet Vehicles Agency.
- Provide and service radios necessary to the emergency response through Radio Services.
- Provide and service heavy equipment/vehicles necessary to emergency response through Mechanical Equipment Services.

11.1.2 MATERIALS DISTRIBUTION AGENCY (MDA)

- Provide office furniture; home care supplies/equipment; and personal care, janitorial and stationery supplies as necessary to the emergency response.
- Provide material support services.
- Arrange and provide transportation support for the movement of emergency equipment and supplies.
- Provide emergency postal services.

11.1.3 PROCUREMENT SERVICES

- Provide emergency purchasing services.

11.1.4 AIR SERVICES

- Coordinate Life Flight and Medivac flights on a 24-hour basis utilizing government aircraft and commercial charter on an as required basis.
- Provide government aircraft for conservation of forest and other natural resources of the province and/or jurisdictions.
- Provide coordination and certification to all government clients with air charter travel arrangements using government aircraft and commercial carriers.
- Provide monitoring of all Air Services Flights.
- Provide aviation supports to all Manitoba Government departments, agencies, and crown corporations.

- Plan, acquire, direct, and control the use of all air transportation resources.

11.2 ACCOMMODATION SERVICES DIVISION

- Assist College authorities in college emergency closing and re-opening.
- Coordinate use of government buildings for short term emergency housing.
- Liaise with universities with regards to emergency housing.
- Provide access to and security of the Manitoba Emergency Coordination Centre (MECC).
- Coordinate security services for other government facilities necessary to the emergency response.
- Coordinate the acquisition of commercial rental space for emergency facilities or accommodation.

11.3 ENGINEERING & OPERATIONS DIVISION

- Provide a 24/7 highway information call centre and web page.
- Construct and maintain provincial roads, bridges, airports, and water control infrastructures.
- Construct temporary roads and bridges for emergency access to affected locations.
- Arrange for emergency repair of damaged provincial roads, bridges, airports, and water control infrastructures.
- Plan, direct, and coordinate all highway traffic functions.
- Plan, direct, and coordinate the use of northern airports and provincial marine resources.
- Coordinate with Department of Water Stewardship to prepare, haul and provide sandbags, sandbagging equipment, and water barriers.
- Acquire, receive, issue and account for emergency supplies and equipment.
- Operate and maintain flood control works, under the direction of Water Stewardship.
- Administer public access and egress system within the flood plain and community ring dikes, in cooperation with the Departments of Water Stewardship, Conservation, and Justice.
- Coordinate with Department of Water Stewardship in the provision of engineering and technical advice and assistance to municipalities concerning flood protection measures.
- Plan, acquire, direct, and control the use of fleet-net radio, sat phones and equipment resources.
- Coordinate with Department of Water Stewardship to collect hydrologic data for flood forecasting purposes.
- Coordinate with Department of Water Stewardship to conduct groundwater monitoring and well protection programs.

11.4 TRANSPORTATION POLICY AND MOTOR CARRIER DIVISION

- Determine routing and ensure compliance of heavy-lift trucking and movement of heavy equipment.
- Assist in law enforcement situations.
- Provide special transportation permits.

12 INNOVATION, ENERGY AND MINES

12.1 ICT SERVICES MANITOBA

- Coordinate the procurement, deployment, maintenance, and removal of Information and Communication Technologies (ICT) including the following:
    - Computer hardware, software and technical services
    - Telecommunications devices
    - Wireless Services (Blackberry, smart phones; WiFi Access)
    - Remote Access Services (VPN, Dial-up, Web)

12.2 MINERAL RESOURCES DIVISION

- Advise and assist in the implementation of petroleum demand restraint measures prior to or during a declared petroleum emergency.
- Liaise with the Government of Canada respecting the implementation of the *Energy Supplies Emergency Act* (Canada) during emergencies.

13 JUSTICE

13.1 JUSTICE DIVISION

- Provide a legal advisor to the Hazard- or Event- Specific Steering Committee, led by EMO.
- Provide legal advice to departments and municipalities respecting provisions, orders and regulations to, and powers of *The Emergency Measures Act* (c. E80, C.C.S.M.) and the Manitoba Emergency Plan.

13.2 LAW ENFORCEMENT SERVICES

Through the police force having jurisdiction:

- Advise local authorities respecting the maintenance of law and order.
- Reinforce local police services.
- Provide security control of emergency operations area(s).
- Provide security control of evacuated area(s).
- Provide traffic and crowd control.
- Administer public access and egress system within the flood plain and community ring dikes, in cooperation with the Departments of Conservation, Infrastructure and Transportation, and Water Stewardship.
- Assist the Chief Medical Examiner.
- Conduct search and rescue of missing persons.
- Coordinate forced evacuations.

13.3 Corrections

- Provide institutional resources (personnel and bedding).
- Relocate and protect institutional inmates.

13.4 Office of the Chief Medical Examiner

- Exercise executive control over the bodies and related operations.
- Coordinate and mobilize special resources required.
- Coordinate the removal of bodies from the site.
- Provide temporary morgue facilities.
- Provide identification services and liaise with next of kin.
- Coordinate custody of remains and personal property.
- Determine cause, manner and circumstances of death.
- Fill out and forward death certifications.
- Release official information concerning decedents.

14 LABOUR AND IMMIGRATION

14.1 Office of the Fire Commissioner

- Provide an Incident Commander during the response phase of an emergency if it has been determined that an adequate Incident Command system may not be in place at a particular site or location.
- Provide on-site technical advice and/or assistance to municipal fire services.
- Provide and coordinate rescue activities and resources during a provincial emergency.

- Provide assistance to fire Mutual Aid Coordinators respecting municipal fire services emergency response.
- Provide logistical support to the RCMP for provincial ground search and rescue and clandestine drug operations.
- Provide building/structure safety inspection services.
- Conduct fire investigation for determination of cause and origin of fires.
- Coordinate and/or provide fire protection for communities during Department of Conservation Fire Program forest fires.
- Operate the Provincial Heavy Urban Search and Rescue (HUSAR), Hazardous Materials and CBRNE Teams.

14.2 Workplace Safety and Health

In so far as is reasonably practicable:

- Secure workers and self-employed persons from risks to their safety, health and welfare arising out of, or in connection with, activities in an emergency response.
- Protect other persons from risks to their safety and health arising out of, or in connection with, an emergency response.
- Provide electrical/mechanical inspection services.

14.3 Immigration

In so far as is reasonably practicable:

- Provide translation services where language barriers may exist during any and all phases of the emergency incident.

15 LOCAL GOVERNMENT

15.1 Administration and Finance

- Maintain financial administration of Vote 27, Emergency Expenditures.
- Liaise with other departments and Treasury Board for the administration of Vote 27, Emergency Expenditures.

15.2 Municipal Finance and Advisory Services

- Provide special guidance and assistance in municipal administration.
- Provide temporary management of municipal administration under *The Municipal Act*.

- Provide specialized personnel resources to Manitoba EMO and local authorities.

15.3 Assessment Services

- Provide technical support, information, and resources to EMO and local authorities.

16 WATER STEWARDSHIP

- Provide flood forecasting services.
- Provide flood monitoring.
- Collect hydrologic data for flood forecasting purposes, and coordinate with Departments of Infrastructure and Transportation and Conservation for additional collection of hydrologic data.
- Provide flood plain modelling/mapping.
- Provide public information on flood forecasts, regulation of water control structures, and flood-related activities.
- Coordinate, plan, and direct flood control operations.
- Plan collection of aerial photography and other aerial imagery.
- Plan ice jam mitigation program, and deploy ice jam mitigation equipment.
- Coordinate and provide provincial direction for the operation of flood control works (e.g. Red River Floodway, Portage Diversion).
- Administer public access and egress system within the flood plain and community ring dikes, in cooperation with the Departments of Conservation, Infrastructure and Transportation, and Justice.
- Coordinate with Department of Infrastructure and Transportation in the distribution of sandbags, sandbagging equipment, and water barriers.
- Coordinate with Department of Infrastructure and Transportation in the provision of engineering and technical advice and assistance to municipalities concerning flood protection measures.
- Provide advice to municipalities and Departments of Conservation and Infrastructure and Transportation on the most efficient and effective use of flood fighting resources.
- Provide permission to cut roads and create water diversions.
- Coordinate with Department of Infrastructure and Transportation to conduct groundwater monitoring and well protection programs.
- Conduct surface water protection monitoring and programming.
- Provide damage assessment in the public sector.

16.1 Office of Drinking Water

- Assure the provision of safe, adequate, aesthetically pleasing and acceptable drinking water supplies.

17 MANITOBA HYDRO

- Assure a continued supply of electrical energy and natural gas under emergency conditions.
- Provide temporary electrical or natural gas service when and where necessary for emergency operations.
- Protect Manitoba Hydro installations.
- Interrupt electrical or natural gas service for protection of life and property.
- Advise and assist departments and local authorities with respect to emergency electrical or natural gas service.

SCHEDULE 3

NON-GOVERNMENTAL ORGANIZATIONS

The Province of Manitoba works in partnership with the following major non-governmental organizations (NGOs) during an emergency. The types of assistance they provide are shown in the following table.

Agency	Types of Assistance
Amateur Radio Emergency Services (ARES)	Telecommunication resources, HAM radios, operators, and mobile command posts
Canadian Red Cross	Victim Registration and Inquiry, social services, financial assistance
Civil Air Rescue Emergency Services	Air reconnaissance and photography, air and ground search and transportation
Manitoba Hotel Association Inc.	Emergency shelter
Mennonite Disaster Services	Clean up, repair, rebuilding
Salvation Army	Emergency food, clothing, shelter, financial assistance
St. John Ambulance	Medical
Winnipeg Humane Society	Emergency shelter for household pets

All of the above mentioned services can be accessed through the EMO Duty Officer at 204-945-5555

AB2290

SCHEDULE 5

TEMPLATE FOR

ISSUING A DECLARATION OF STATE OF LOCAL EMERGENCY

QUORUM OF COUNCIL AVAILABLE

DECLARATION OF A STATE OF LOCAL EMERGENCY

RESOLUTION NO. _____. Date, _____

_____ Of _____

Moved by Councillor _____

Seconded by Councillor _____

WHEREAS the (RM, town,...)_____ of _____ is encountering (state problem...) _____, that requires prompt action to prevent harm or damage to the safety, health or welfare of persons located within the boundaries, of the _____ of _____, and to prevent damage to property within those boundaries.

THEREFORE BE IT RESOLVED THAT pursuant to Section 11(1) of The Emergency Measures Act, Chapter. E80 of the Continuing Consolidation of the Statutes of Manitoba, the Council of the _____ of _____ declares that a state of local emergency exists, _____ of the _____ of _____, From this _____ day of _____, 20__ to the _____ day of _____, 20____.

IN WITNESS WHEREOF of the Council of the _____ of _____ has by resolution carried, declared this state of local emergency this _____ day of _____, 20____.

The _____ of _____.

Per: _____

(Printed name) _____

****

TERMINATION OF STATE OF LOCAL EMERGENCY PURSUANT to Section 15 (1) of The Emergency Measures Act, The council of the _____ of _____ declares that the State of Local Emergency is terminated in the _____ of _____. Dated this _____ day of _____, 20____. Moved by Councillor _____ Seconded by Councillor _____

Per: _____

(Printed name) _____

Manual Samples

ABSENCE OF A QUORUM OF COUNCIL
DECLARATION OF A STATE OF LOCAL EMERGENCY

RESOLUTION NO._____.

_____ Of _____

Date: _____

WHEREAS the (RM, town....)_____ of _____ is encountering (state problem...) _____, that requires prompt action to prevent harm or damage to the safety, health or welfare of persons located within the boundaries, of the _____ of _____, and to prevent damage to property within those boundaries.

AND WHEREAS these (state problem...)_____ conditions present such an extreme emergency within the _____ of _____ that there is not sufficient time to convene a regularly constituted meeting of the Council of this _____ of _____ but rather this emergency compels me to respond to this emergency immediately on behalf of the _____ of _____.

THEREFORE pursuant to Section 11(2) of The Emergency Measures Act, Chapter. E80 of the Continuing Consolidation of the Statutes of Manitoba, I (mayor/reeve)_____, of the _____ of _____ declare that a state of local emergency exists, in the _____ of _____, From this _____ day of _____, 20_____ to the _____ day of _____, 20___.

The _____ of _____.

Per: _____

(Printed name)_____ of the _____ of:

_____.

****

TERMINATION OF STATE OF LOCAL EMERGENCY

PURSUANT to Section 15 (1) of The Emergency Measures Act, The council of the _____ of _____declares that the State of Local Emergency is terminated in the _____ of _____.

Dated this _____ day of _____, 20_____.

Moved by Councillor _____

Seconded by Councillor _____

Per: _____

(Printed name)_____

OPERATIONAL GUIDELINES

FOR

EVACUATIONS

(MANITOBA)

2017

FOREWORD

To ensure that the process of evacuation in the event of an emergency is accomplished in an orderly fashion and with life safety being the paramount consideration, a requirement exists to create a consistent format for use by any authorized person or group who may be required to cause an evacuation.

These operational guidelines provide a common decision making process, implementation procedure, and standard formats for the orders to be issued, including a declaration of a State of Emergency or State of Local Emergency.

These operational guidelines have been prepared using a "Three Stage Evacuation Process" and reviewed by the Interagency Emergency Preparedness Committee (IEPC) for Manitoba to form the provincial standard for evacuation guidelines.

These operational guidelines have been developed under an all-hazard approach and are intended ***only to provide advice***. This material should be used with diligence and cautions, bearing in mind that ***the order to evacuate should only be given after careful consideration of all the factors involved, and with life safety paramount.***

TABLE OF CONTENTS

1 REFERENCES

A. *The Emergency Measures Act*
B. *The Fires Prevention and Emergency Response Act*
C. *The Water Resources Administration Act*
D. *The Wild Fires Act*
E. *The Public Health Act*

2 INTRODUCTION

Ordering an evacuation of all or part of an emergency area is a very serious step in any emergency, and requires detailed planning.

In Manitoba, upon the declaration of, and during a state of emergency or a state of local emergency, *The Emergency Measures Act* (C.C.S.M. c. E80) provides emergency powers to the Minister responsible for Emergency Measures or the local authority to "cause the evacuation of persons and the removal of livestock and personal property and make arrangements for the adequate care and protection thereof."

The order to evacuate can also be given by the Fire Commissioner under *The Fires Prevention and Emergency Response Act* (C.C.S.M. c. F80) when an emergency exists and action is necessary to protect the health or safety of people or to prevent serious damage to property and the environment.

In addition, evacuations which relate to a specific discipline or hazard may be ordered subject to the following statutes:

- Minister charged by the Lieutenant Governor in Council with the administration of *The Water Resources Administration Act* (C.C.S.M. c. W70);
- Minister charged by the Lieutenant Governor in Council with the administration of *The Wildfires Act* (C.C.S.M. c. W128);
- Minister charged by the Lieutenant Governor in Council with the administration of *The Public Health Act* (C.C.S.M. c. P210).

Wherever the authority to order an evacuation may rest, a community needs to develop evacuation plans. If an evacuation were required, the municipality should be prepared to carry it out. In some cases clear and obvious risks will indicate the need for evacuation; in other cases a precautionary evacuation may be justified to avoid an expected risk. In still other circumstances - for example, where evacuees would have to drive through a plume of hazardous gases - it may be better for people to take shelter in their homes.

2.1 ASSUMPTIONS

- Spontaneous evacuation will occur when there is sufficient warning of the threat. Between 5 and 20 per cent of the people at risk will evacuate before being directed to do so.
- Some people will refuse to evacuate, regardless of the threat.

- Some owners of companion animals will refuse to evacuate unless arrangements have been made to care for their animals.
- Roughly 10 - 20 per cent of the population at risk will require assistance in reception centres or group lodging facilities (this figure should be adjusted based on information specific to the jurisdiction). Many evacuees will seek shelter with relatives, friends or in motels rather than use government-provided facilities.
- For some hazards, such as flooding, standard designated evacuation routes will be used to evacuate people.

2.2 ABBREVIATIONS AND DEFINITIONS

A list of abbreviations and definitions for terms used in this plan is provided in Appendix A.

3 PLANNING CONSIDERATIONS

Evacuation plans must deal with two distinct groups of people: the "population at risk," and the "host population" which will shelter the evacuees.

3.1 POPULATION AT RISK – "THE EVACUEES"

The population at risk is the principal focus of evacuation plans, and information about this population is an essential requirement of sound planning. The need for evacuation and the ease with which evacuation can be accomplished will depend on a number of factors: the day of the week and time of day, for example, will determine if families will be together at home, or scattered at work and at school. Some evacuees will need transportation; others will evacuate themselves; others may simply refuse to move.

The first requirement of evacuation planning is Hazard/Risk Vulnerability Assessment (HRVA) to determine what areas of the community are at risk from a specific hazard. The HRVA will also assist in determining the location of evacuation routes and reception facilities.

The next requirement is detailed information about the populations likely to be at risk. The table at Figure 1 is an example of what you need to know. In larger communities it may be necessary to collect and store this information in a computerized data bank. Schools, hospitals, nursing homes and similar institutions should each have separate emergency evacuation plans which show where their populations will assemble for transportation. Families should be encouraged to trust in institutional planning, and avoid the temptation to arrive independently to pick up family members. The evacuation plan should take these institutional plans into account, and provide for transportation, evacuation routes, etc. for each institution.

The approximate number in each of the following categories is required for day and night in each geographical area of the municipality.

1. Total population
2. Adults
3. Secondary school age
4. Elementary school age
5. Pre-school age
6. Hospital patients
    a. ambulatory
    b. non-ambulatory
7. Resident of homes for the aged
    a. ambulatory
    b. non-ambulatory

A chart of the necessary information would look like this:

Categories	Geographical Area (Day/Night)			
	Downtown	East Side	West Side	Suburbs
Adults	1665/39	824/1740	438/596	126/321
Secondary School	85/12	321/321	258/365	21/310
Elementary School	12/0	511/411	431/321	312/310
Hospital Patients (all considered adults)	60/60		312/312	
Elderly/Special Needs	134/134		83/83	
Total	1822/111	1913/2818	1673/1806	981/1272

Figure 1 - Demographic Details

In addition to knowing about the population at risk, it is necessary to develop some method of communicating with them. Usually broadcast media - local radio and television - will be the answer, but in areas where broadcast outlets are not available, other methods (sirens, a public address system, telephone fan-out networks, door-to-door visits) must be developed. Communications with this population category will always have two elements: you have to tell them that an evacuation is pending and then how and when to react.

The Evacuation Plan should also provide for assembly points for evacuees, evacuation routes, traffic control points, and vehicles or other means of evacuation. You will also require alternate assembly points and evacuation routes in the event primary routes are blocked. Possible "choke points" on the evacuation routes should be identified, and some means of clearing blockages must be available. The police can help identify these points and tell you how to deal with them.

A Directory of Resources should include transportation resources as well as methods of arranging access to these resources, an estimate of how long it will take to arrange for drivers, and other details. All of this planning must be done in advance of the actual emergency.

Finally, the Evacuation Plan should include a control mechanism to ensure the evacuation is carried out as planned, and to react to unforeseen circumstances. An essential element in this is an effective, flexible system of communications.

3.2 Host Population - "The Receivers"

Under *The Emergency Measure Act*, every local authority must prepare and adopt emergency preparedness programs and emergency plans, including evacuation plans. The Manitoba Emergency Measures Organization (Manitoba EMO), or Manitoba Families can assist by providing ESS volunteers with training and consultation in

developing their plans. During a disaster, ESS staff actively support local responders and ensure that the needs of evacuees are properly taken care of.

Reception planning is the responsibility of emergency social service agencies in the community, and it is an essential part of emergency response procedures. A large number of evacuees arriving from a neighbouring community is an emergency like any other, and must be accommodated in your emergency plan.

Reception planning starts in the same place as evacuation planning – with detailed information about the population likely to be involved and the probable circumstances of the evacuation:

- approximate number in each age group;
- number requiring 'official' accommodation compared with the number able to fend for themselves;
- number requiring special care - for example, hospitalized or institutionalized populations;
- amount of notice that can be expected before evacuees begin to arrive;
- principal evacuation routes and means of transportation.

This aspect of emergency planning should be coordinated with neighbouring communities.

Evacuee centres will require facilities for group lodging, feeding and washrooms, preferably with showers. Depending on the duration of the evacuation they may also require recreation facilities (especially for children) and arrangements for communicating with family members and friends. Planners should survey public and private facilities to determine how many people can be accommodated for short or long periods. Ideally, evacuees will be relocated to hotels and motels. The determining factor is usually the availability of washrooms and facilities for feeding evacuees. Safety, accessibility and assurance of continued of operations must be considered when selecting a centre. High schools and community centres often make good evacuee centres; shopping malls and elementary schools are less desirable

Reception arrangements should also include a formal registration and inquiry organization that will keep track of evacuees and their relocation arrangements, re-unite families that have become separated, and answer queries from concerned relatives and friends. This is a task that requires careful planning and training for volunteers. Communities may look to Non-Governmental Agencies (NGOs) to assist with this function; otherwise local volunteers can assume the responsibility. Remember that all volunteers must be trained before they will be able to fulfill these duties. Plans for receiving evacuees should be worked out with neighbouring communities on a reciprocal basis.

4 CONCEPT OF OPERATIONS

4.1 GENERAL

Evacuation is the process of removing persons and /or animals from an area where a present or imminent situation has or may result in the loss of life, serious harm or damage to the safety health or welfare of people, or damage to property or the environment.

Depending on the nature and scope of the event evacuations may be either local, affecting (a) a single building, (b) a group of building, or (c) widespread affecting a whole community.

4.2 AUTHORITY

To issue an evacuation order, a local authority must declare a "State of Local Emergency" as enabled under *The Emergency Measures Act*. Implementation of an evacuation order would normally be conducted by the local police authority.

A sample Declaration of a State of Local Emergency is provided in Appendix B.

4.3 NO NOTICE EVACUATION

Evacuation of people at risk from unique emergency situations that occur with little or no warning will be implemented on an ad hoc basis. The individual responsible for implementing the evacuation order should be the Incident Commander at the scene of the emergency, with support arranged through the Emergency Operations Centre (EOC), if activated, as necessary.

Evacuation instructions should be based on known or assumed health risks associated with the hazard.

4.4 PRE PLANNED EVACUATION

As authority to order an evacuation rests with a number of authorities, these guidelines represent a common policy and process format that can be followed by all. The following is simple, manageable and effective.

The Interagency Emergency Preparedness Committee (IEPC) is expected to adopt a three stage process to be used throughout the province to deal with emergency evacuations.

A consistent format and process will alert the population at risk of potential evacuation, because of the danger of possible loss of life and that they should be prepared to evacuate the area. This Evacuation Alert may allow for the population at risk to begin an orderly preparation to voluntarily leave the affected area, within a possible specified time frame, however, the reality of the situation may require immediate action with very short notice.

NOTE: In some instances an Evacuation Order is immediate and no evacuation alert is given.

The population at risk is ordered to evacuate the area specified in a formal written order. It is an Order and as such does not allow for any discretionary action on the part of the population at risk – they must leave the area immediately.

A statement must be included in all bulletins, pamphlets, warnings and orders which makes it very clear to all that, while the evacuation order is in effect, the area in question will have controlled access and that a pass may be required to regain access to the area.

The population at risk is allowed to return to the area previously evacuated, having been advised that the danger has passed. There is the possibility that the danger may reoccur and the evacuation notification might need to be reissued.

Shelter in place, i.e. advice to residents to remain inside and seal the building (shutting down heating and air conditioning). This action gives immediate protection and should only he considered for short duration.

Locating, rescuing, stabilizing and removing victims from hazardous and/or contaminated area. Only emergency services personnel with appropriate protective equipment and training should conduct rescue operations.

4.5 PROCESS

Regardless of who orders an evacuation, warning and implementation should follow the provincial standard of a three-staged evacuation process.

4.5.1 Stage 1 - Evacuation Alert

Alert the population at risk of the impending danger.
At this point, the movement of handicapped persons, transient population including vacationers, and in some cases, school population, and any voluntary evacuees, should become a priority.

Possible methods of warning the population at risk include

- door-to-door campaign with pamphlets delivered by representatives of the local authority under the direction of the police or under police supervision, i.e., volunteers, etc. ;
- radio and/or televisions broadcast;
- sirens and mobile/aerial public address announcements;
- telephone calls;
- electronic media (internet) could also be used in conjunction with the above.

An "Evacuation Procedure Bulletin" for information purposes. This bulletin should be included with the door-to-door Evacuation Alert that may be delivered to the house occupants time permitting.

A sample Evacuation Alert is provided at Appendix C.

The alert should

- identify hazard/emergency zone and travel route(s);
- identify reception centre locations and addresses;
- advise method declaring "All Clear" and procedure for issue of controlled re-entry passes.

4.5.2 Stage 2 - Evacuation Order

LEAVE THE AREA NOW!! The Evacuation Order should; provide time order in affect and include a Pass Form which can be used in the event that the evacuee has a need for controlled re-entry to the area, with instructions for its use.

All persons in the affected area are to be told that, in the interest of their own safety and considering the risk, they are **NOW ORDERED** to leave the area. The written Evacuation Order is to be in a consistent form. There is no discretion allowed in the Order, which clearly indicates immediate evacuation and relocation.

A sample Evacuation Order is provided at Appendix D.

THE POLICE WILL ENFORCE THIS EVACUATION ORDER

4.5.3 Stage 3 - All Clear

When the emergency which necessitated the evacuation is under control and the hazard/ emergency zone is declared safe (habitable), a retraction of the Evacuation Order should be implemented. This is to be done using the same procedure as for a warning. This procedure should advise the population at risk that the danger may reoccur and that an ALERT may be reinstated and the process recommences from

Stage 1.

A sample "All Clear" declaration is provided at Appendix E.

4.6 RESPONSIBILITIES

The local law enforcement authority normally has overall responsibility for evacuation operations.
In most situations, the Incident Commander may recommend an evacuation. If the Emergency Operations Centre (EOC) has been activated, the decision to evacuate will be made in consultation with the Director of the Emergency Operations Centre.

The responsibility for opening a Reception Centre and/or group lodging belongs to the Emergency Social Services Director through the EOC.

4.7 NOTIFICATION

The coordinator of the emergency program shall be notified whenever any significant Evacuation Action is implemented or anticipated.

The Emergency Social Services Director shall be notified whenever an Evacuation Action is implemented or anticipated. If sheltering is actually needed, the Director will open the designated reception centres or group lodging facilities.
If an Evacuation Plan is initiated, the Emergency Operations Centre shall ensure that senior officials have been alerted.

4.8 ALERTING THE PUBLIC

The method of alerting the public regarding Protective Action will be dependent upon the time available, hazard area, and resources available.

Available options include

- personal contact. General estimate of personnel required;
  - single family dwelling – 2 people per block
  - small apartment building – 2 people per building
  - large apartment building – 2 people per floor
- law enforcement, fire, public works and search and rescue vehicles using public address systems;
- local TV, radio and news media;
- government Access Channel on the cable television system and Cable TV interrupts;

- school alert receivers;
- telephone systems – manual or automatic dialing systems, non-dialing/office based systems;
- outdoor alerting systems.

The Evacuation Plan information provided to the public should include the following:

- whether residents should evacuate or shelter-in-place[1];
- why they are being advised/ordered to evacuate or shelter-in-place;
- whether evacuation is an Alert or an Order;
- the evacuation routes, including conditions of roads;
- what to do if a vehicle breaks down;
- the location of reception centres;
- assembly points for those needing transportation;
- estimated duration of evacuation.

The rationale for instituting this simple procedure for dealing with an emergency evacuation is to ensure

- population at risk receives a clear consistent message regardless of the emergency;
- media receives a clear consistent message regardless of the emergency;
- responders are familiar with a clear consistent approach and process regardless of the situation.

Ordering an evacuation of all or part of an emergency area is a very serious step, and requires detailed planning.

The order to evacnate should only be given after careful consideration of all the factors involved, and with life safety paramount.

4.9 Evacuation Routes

The Incident Commander and/or the EOC Director will select the best routes for evacuation from the threatened area. The best routes may have to be selected at the time of the incident. Notification of changes in the selected routes will be made to the Emergency Operations Centre Information Officer, and Emergency Social Services Director, as well as field personnel. The following factors should be considered:

[1] Shelter in place - immediate shelter inside a building or residence during a release of potentially toxic materiel to the outside air or when the air quality may be threatened, for example smoke.

- most evacuees utilize their own personal transportation during an evacuation;
- research approximately how many autos per lane per hour can be accommodated on most roads;
- the average vehicle occupancy is four persons;
- the local law enforcement/traffic management authority assessment.

4.10 Traffic Control Points

Traffic controls may be established at key intersections and at access control points to major evacuation routes as needed. In some cases, it may be necessary to control traffic on other routes to minimize the impact on the evacuation traffic.

4.11 Access Control

As an area is being evacuated, access controls must be established. Security may be obtained by establishing staffed Access Control Points and barricades at key locations around the perimeter.

The objectives of Access Control are

- to provide a controlled area from which an emergency evacuation will take place and prevent entry by unauthorized persons;
- to protect lives by controlling entry into hazard area;
- to maintain law and order in the hazard area.

Criteria for allowing entry into closed areas will be established for each incident.

- **No Access** – Prohibits the public from entering the closed area. Authorized personnel (i.e., local/provincial work as required). Media representatives will be allowed access on a controlled basis.
- **Limited Access** – Allows persons into closed areas according to access criteria established by the Incident Commander. Entry criteria should define the persons who will be allowed and whether motor vehicles are allowed.

5 CREATING A PLAN

5.1 GENERAL

Evacuation plans are complex and may vary according to the type of incident and geographic area involved.

Evacuation plans should provide for both minor evacuations of a limited area (for example, one resulting from a major fire or a gas leak) and major evacuations affecting a large part of the population (for instance a major chemical release). Plans should be flexible enough to accommodate both sudden emergencies and situations that provide more warning.

5.2 OBJECTIVES

The objectives of evacuation planning are

- to decide whether the exposed population is more effectively protected by sheltering-in-place or by evacuating;
- to develop an evacuation plan based on the type of threat, population, time, weather, communications, response resources and capabilities;
- develop notification and instructional information for persons within the threatened area;
- expedite the evacuation of persons from hazardous areas, control evacuation traffic and provide adequate means to transport persons without vehicles;
- institute access control measures to prevent unauthorized persons from entering vacated or partially vacated areas;
- provide sufficient resources to implement the plan;
- monitor the plan and make changes as conditions warrant.

5.3 PURPOSE

The purpose of an evacuation plan is to

- describe the means the authority will use to keep evacuees and the general public informed on evacuation activities and the specific actions they should take;
- describe the evacuation options and the evacuation routes that have been developed to protect and move people away from the different hazards the jurisdiction faces;
- describe the modes of transportation that will be used to move evacuees;

- describe the provisions that have been made for evacuating special needs populations. Such populations include:
  - children in school;
  - children in day care centres;
  - nursing home residents (long term);
  - women and children in transition homes;
  - the disabled (hearing impaired, sight impaired, mentally impaired, and mobility impaired);
  - institutionalized individuals (in hospitals, mental health facilities, nursing homes (short term), incarcerated residents (in jails, juvenile facilities, drug treatment centres, etc.) ;
  - transient populations (street people, motel and hotel guests, seasonal workers) people without transportation tourists;
- identify assembly areas for picking up people that do not have their own transportation;
- outline or reference the document that details the evacuation movement control procedures;
- describe the provisions that have been made to control access to the evacuated area;
- describe the provisions that have been made to provide security for the protection of property in the area that has been evacuated;
- describe the provisions that have been made for the return of people to their homes;
- detail methods of communicating warnings and orders;
- detail plans for provisioning evacuation sites for independents, dependants and pets; and
- detail temporary (< 24 hours) evacuation sites and the plans to move people from temporary sites to reception centres.

Shelter in place, i.e. advice to residents to remain inside and seal the building (shutting down heating and air conditioning). This action gives immediate protection and should only be considered for short durations.

The evacuation plan information provided to the public should include the following:

- whether residents should evacuate or shelter-in-place;
- why they are being advised/ordered to evacuate or shelter-in-place;
- whether evacuation is an Alert or an Order;
- the evacuation routes, including conditions of roads;
- what to do if a vehicle breaks down;
- the location of reception centres;
- assembly points for those needing transportation;
- estimated duration of evacuation.

5.4 ELEMENTS

The elements of the plan should include, but are not limited to, the following 10 items:

- coordination with all potentially involved agencies and resources regarding their roles;
- responsibilities, and tasks to be accomplished
  identification and clear delineation of the structures, facilities, or neighbourhoods subject to the selected protective action;
- establishment of easily understood directions and clearly identified evacuation routes, provision of traffic control and direction measures;
- establish staff requirements, equipment, and announce shelter locations;
- obtain alternate modes of transportation to aid those with special requirements or limited mobility (detailed planning and extensive coordination is required to effectively evacuate or implement in-place protection at special institutions and facilities, e.g. jails, hospitals and convalescent homes);
- establish readily identifiable perimeters and provide security within evacuated areas;
- plan for demobilization, lifting evacuation orders, and deactivating shelters;
- develop clear, complete and concise evacuation/shelter-in-place announcements, messages and notices.

5.5 REQUIREMENT ANALYSIS

In developing an evacuation plan it is essential that as much information as possible be assembled. An Evacuation Planning Worksheet (Appendix F) should be completed for each significant hazard identified in the community Hazard, Risk and Vulnerability Assessment.

5.6 PLAN CHECKLIST

The Evacuation Plan Checklist (Appendix G) which follows; is to assist in effectively responding to an evacuation scenario. The Checklist is written for a major incident. In most cases, you will not need to do each item on the list; use only those needed. **They are not listed in order of importance.**

5.7 PLAN TEMPLATE

The Evacuation Plan - Template (Appendix H) provides a start point for preparation of an evacuation plan.

5.8 PUBLIC INFORMATION MESSAGING

(Appendix I) includes a messaging template and instructions for evacuating or sheltering-in-place.

APPENDIX A – ABBREVIATIONS

EOC	Emergency Operations Centre
Manitoba EMO	Manitoba Emergency Measures Organization
ESS	Emergency Social Services
HazMat	Hazardous Materials
HRVA	Hazard/Risk Vulnerability Assessment
ICS	Incident Command System
IEPC	Interagency Preparedness Committee
NGO	Non-Governmental Organization
PPE	Personal Protective Equipment

APPENDIX B – SAMPLE - DECLARATION OF A STATE OF LOCAL EMERGENCY

QUORUM OF COUNCIL AVAILABLE
Declaration of a State of Local Emergency

Resolution No._____. Date:_____

_____ of _____

Moved by Councillor_____

Seconded by Councillor_____

WHEREAS the (RM, Town.)_____of _____is encountering (state problem)_____,that requires prompt action to prevent harm or damage to the safety, health or welfare of persons located within the boundaries, of the _____of _____, and to prevent damage to property within those boundaries.

THEREFORE BE IT RESOLVED THAT pursuant to Section 11(1) of *The Emergency Measures Act*, Chapter E80 of the Continuing Consolidation of the Statutes of Manitoba, the Council of the _____of _____declares that a state of local emergency exists, _____of the _____of_____, From this _____day of_____, 20__to the _____day of _____, 20__.

IN WITNESS WHEREOF of the Council of the _____ of _____ has by resolution carried, declared this state of local emerge this _____day of _____,20__.

The _____of _____

Per:_____

(Printed name)_____

****

TERMINATION OF A STATE OF LOCAL EMERGENCY

PURSUANT to Section 15(1) of *The Emergency Measures Act*, the council of the

_____ of _____declares that the State of Local Emergency is

terminated in the _____of _____.

Dated this _____ day of _____, 20__.

Moved by Councillor_____

Seconded by Councillor_____

Per:_____

(Printed name)_____

APPENDIX C – SAMPLE – EVACUATION ALERT

EVACUATION ALERT

This **EVACUATION ALERT** is a notification of the POTENTIAL danger which might arise due to a _____ in your area. The reason evacuation alerts are issued is to notify residents of the potential for loss of life from unstable _____ conditions. It would be prudent for residents to prepare to leave this area with very short notice.

This alert may be followed by an immediate order to evacuate, with more updated information on the condition, and when an evacuation order is issued you must leave your home immediately.

You will find attached to this EVACUATION ALERT notification a travel route which you must follow in the event that this EVACUATION ALERT is followed by an EVACUATION ORDER, and a telephone number for you to call in the event that you need transportation from the area.

A Travel Route Map and location of the Reception Centre is included for your use. Follow it closely.

Signature_____

Name of Local Authority (CITE AUTHORITY)

APPENDIX D – SAMPLE – EVACUATION ORDER

EVACUATION ORDER

Date: _____

The _____ (Authority) has been advised of the imminent danger

of _____

to the life and property of persons resident or present in (SPECIFIC DESCRIPTION OF

AREA WITH DETAIL)

Based on this information, an *order pursuant to* _____ *Cite the*

Authority

to evacuate these areas has been authorized in the interest of life safety at

_____ (time) hours.

Other agencies will be expediting this action in these areas on behalf of the Authority issuing this Order as first cited above.

FOLLOW THE TRAVEL ROUTE PROVIDED

YOU MUST LEAVE THIS AREA IMMEDIATELY

_____ **Signature**

(Name) LOCAL AUTHORITY (CITE AUTHORITY AND LEGISLATION)

THE POLICE WILL ENFORCE THIS EVACUATION ORDER

APPENDIX E – SAMPLE – DECLARATION OF ALL-CLEAR NOTICE

DECLARATION OF ALL CLEAR

Date

The _____ has been advised that the imminent risk of danger to life and properties in your area has diminished at this time.

The Evacuation Order, *pursuant to (*cite the Authority) is therefore terminated.

An Evacuation Alert/Order may need to be reissued, however if that is deemed necessary the process will re-commence.

_____

Signature

_____

Name of the Local Authority (CITE AUTHORITY AND LEGISLATION)

APPENDIX F – EVACUATION PLANNING WORKSHEET

For instructions see Appendix F (1)

Threat Information				
Type	**Details**			
Fire				
Natural disaster				
Hazardous materials				
Civil disturbance				
Impact	**Details**			
Life safety				
Environmental				
Other				
Comments				

Population/Location			
Population size – numbers of	Persons:		Animals:
Density	❑ High	❑ Medium	❑ Low
Type	❑ Residential	❑ Commercial	❑ Industrial

Special Considerations					
Type	**Yes**	**No**	**Type**	**Yes**	**No**
Jails			Transportation available		
Schools			Different languages spoken		
Hospitals			Hearing/sight/mobility impaired		
Population indoors (shut-ins)			Transients		
Shelters available			Familiar with the area		

Location/Distance (Plot on Map)				
Distance from incident to population:	M	KM		
Direction threat is from population:	❑ North	❑ South	❑ East	❑ West
The terrain is:	❑ Flat	❑ Slightly sloped	❑ Steep	❑ Very steep
Available evacuation routes:				
Comments:				

Hazardous Material Conditions				
Condition:	❑ Contained	❑ Not contained	❑ Controlled	❑ Uncontrolled
	❑ Continuous	❑ Not continuous	❑ Stable	❑ Unstable
Description:	❑ Puff	❑ Pool	❑ Plume	❑ Other
Location:	❑ Ground level	❑ Elevated	❑ Accessible	❑ Inaccessible
Temperature:	Ambient Temp:	On Fire:	Heated:	Cooled:
Refer to the Hazardous Materials Data Sheet for more Information				

Time

When threat is likely to occur:	Time:	Date:	
Time threat will last:	Hours:	Days:	Weeks:

Rate

Rate of threat/release	❑ Rapid	❑ Moderate	❑ Slow	❑ Stopped	❑ Unknown
Rate of threat movement	❑ Rapid	❑ Moderate	❑ Slow	❑ Stopped	❑ Unknown
Will contact population in:	Minutes:		Hours:	Days:	
Greatest threat will occur in:	Minutes:		Hours:	Days:	

Time Needed for Implementing Protective Actions

Action	Minutes	Hours
Deploy Response Personnel		
Develop Message		
Give Public Warning and Instructions		
Public Mobilization and Travel Time		
Special Needs for Mobilization and Travel Time		
Time Needed for Environmental Monitoring		

Comments:

Communications

Communicate with public	Yes	No	Communicate with responders	Yes	No
Able to warn public?			Able to communicate with all agencies?		
Able to warn Institutions?			Able to communicate with media?		
Able to warn transients?			Able to communicate with mutual aid?		
Able to warn hearing impaired?			Able to use phone system?		
Able to instruct and update?			Able to use outdoor alerting?		

Comments:

Resources and Responder Capabilities

Mobilize Needed Specialized Resources	Yes	No	Communicate with Responders	Yes	No
Able to mobilize existing resources?			Able to stop the threat?		
Able to mobilize additional resources?			Able to direct/control threat?		
Able to obtain specialized resources?			Able to neutralize the threat?		
			Able to identify the material?		

Comments:

APPENDIX F (1) – EVACUATION PLAN WORKSHEET INSTRUCTIONS

General Instructions

1. Use this form in conjunction with the Hazardous Materials Data Sheet.
2. Complete all sections of the worksheet, entering information on the lines provided. Place a check in the box ❑ provided when applicable.
3. Review the contents of the Hazardous Materials Data Sheet and Protective Actions worksheet at the Safety Briefing.

Section Instructions

The following instructions are provided for further clarification:

Section	Instructions
Threat Information	Identify the threat type(s) and the potential impact(s). Provide details as appropriate.
Population/Location	Identify the population threatened. Identify any special considerations that will impact your protective actions planning.
HazMat Conditions	If this is a HazMat incident, provide additional details about the condition of the release/spill. This information should be used in conjunction with the Hazardous Materials Data Sheet.
Time	Indicate time frames regarding the threat and time needed to implement protective actions.
Communications	Assess communications capabilities.
Resources and Responder Capabilities	Assess the capabilities of mobilizing resources and controlling the threat.

APPENDIX G – EVACUATION PLAN CHECKLIST

Options

1. **Do nothing**

2. **Determine potential threat area (emergency/disaster zone)/ stakeholders and establish a perimeter excluding people from entering the threat area by diverting vehicle and pedestrian traffic—indicate boundary on map**

   Agency in charge _____

   Resources assigned

   - ❑ Police change bullets from boxes
   - ❑ Fire
   - ❑ Public Works
   - ❑ Other

3. **Rescue – indicate area on map**

   Agency in charge _____

   Resources Assigned

   - ❑ HazMat Teams (special equipment needed)
   - ❑ Fire Department (level of Personal Protective Equipment needed)
   - ❑ Decontamination (set up area)
   - ❑ Ambulance Service (triage and treatment area)
   - ❑ Other

4. **Evacuate – indicate area on map**

   Agency in charge_____

   Resources Assigned

   - ❑ HazMat Teams (special equipment needed)
   - ❑ Fire Department (level of PPE needed)
   - ❑ Decontamination (set up area)
   - ❑ Ambulance Service (triage and treatment area)

- ❑ Police (limits of involvement shown on map)
- ❑ Other

❑ Ensure all agencies consult prior to evacuation. Ensure that all agencies fully understand the decision.

❑ Consider reception area locations and the number of people who will need to be assisted

Agency in charge _____

Resources Assigned

- ❑ Schools, recreation centres, other assembly halls
- ❑ A site with adult-sized furniture, capability of feeding, and public address system.
- ❑ (HazMat) The facility chosen will not be exposed if the wind shifts or increases.
- ❑ Alert the Emergency Operations Centre (EOC) for operations.

❑ Consider special facility/special population evacuation needs and establish priorities.

❑ Consider potential for domestic animals to be evacuated with families and alert S.P.C.A.

❑ Consider resources needed to conduct Emergency Evacuation Operations and advise potential mutual aid agencies.

❑ Determine the number of people needing transportation assistance.

❑ Dispatch transportation to special facilities and identified areas where assistance is required.

Agency in charge _____

Resources Assigned

- ❑ Transit (level of PPE needed)
- ❑ Fire Department (level of PPE needed)
- ❑ Decontamination (set up area)
- ❑ Ambulance service (triage and treatment area)

❑ Establish a policy on whether persons will be advised or ordered to evacuate.

❑ Prepare, print and distribute Emergency Evacuation notices if time permits.

❑ Assemble, brief and deploy Emergency Evacuation personnel.

❑ Announce Evacuation Plan decisions (boundaries and evacuation routes).

❑ Announce emergency reception area locations.

- ❑ Establish and announce a telephone number of evacuees to call for progress reports and re-entry times.
- ❑ Begin with Emergency Evacuation.
- ❑ Track numbers of evacuees and any reported injuries.
- ❑ Keep all field units updated regarding changes.
- ❑ Document the decision process.
- ❑ Notify local elected officials and the Manitoba Emergency Measures Organization
- ❑ Appoint an Information Officer, with support and back up.
- ❑ Re-evaluate the need for an Incident Command Structure (ICS). Is a Logistics, Planning, or Finance Section needed, if not already appointed?
- ❑ Consider the need for a Crisis Intervention Team.
- ❑ Track all costs related to the incident.
- ❑ Keep evacuees at the reception facilities and group lodgings informed of incident progress and projected return times.
- ❑ Decide on allowing return into evacuated area in consultation with all relevant parties.
- ❑ Schedule a debriefing with all parties to evaluate the Evacuation Plan.
- ❑ Make suggested changes in this procedure to the Emergency Program Coordinator and the Emergency Policy Group.

5. Shelter-in-Place (include the following in the evacuation plan)

Agency in charge_____

- ❑ Discuss and decide on appropriate alternate strategies.
- ❑ Seal off the area.
- ❑ Selective or partial evacuation.
- ❑ *(HazMat)* Issue a recommendation to close windows and shut off heating and ventilating systems in the threat area.
- ❑ *(HazMat)* Issue a recommendation for people to stay indoors.
- ❑ Appoint an Information Officer, with support and back up.
- ❑ Establish and announce a telephone number for persons to call for information on the incident.
- ❑ Re-evaluate the Incident Command Structure (ICS). Is a Logistics, Planning or Finance Section needed, if not already appointed.
- ❑ Prepare, print and distribute incident information for persons in the affected area.

- ❑ Notify elected officials and Manitoba Emergency Measures Organization.
- ❑ Assemble and brief a standby force of personnel to assist with an emergency evacuation if the need arises.
- ❑ Establish and announce needed information to the public.
- ❑ Consider the need for a crisis intervention team.
- ❑ Continue to monitor the situation and to re-evaluate the need to evacuate, keeping all field units up to date regarding changes.
- ❑ Track all costs related to the incident.
- ❑ Keep residents informed of incident progress and projected time until the incident is over.
- ❑ *(HazMat)* Monitor the release and revise projected end of incident times.
- ❑ *(HazMat)* Consider changing tactics on consultation with all relevant parties.
- ❑ Provide advice and information on any special precautions that should be taken during and after the event.

APPENDIX H –LOCAL GOVERNMENT EVACUATION PLAN

TEMPLATE

References

Applicable reference should be provided as appropriate, for example:

- local emergency plan; and
- Mutual aid agreements.

Introduction/Background

Provide a general overview of the hazards which may confront the jurisdiction and the need for effective contingency plans.

Situation

Identify:

- those emergency conditions that would necessitate an evacuation;
- potential impact areas, such as those prone to flooding, seismic activity or wildfires or near a facility that produces, stores and/or transports hazardous material; and population groups that will require special assistance.

Assumptions

Address the unknowns of the emergency situation, such as unanticipated contingencies and establish parameters within which evacuations will take place.
Typical assumptions include:

- *most hazards provide sufficient warning time to implement a planned evacuation;*
- *spontaneous/voluntary evacuation will occur when there is sufficient warning of a threat - between 5 and 20 % will evacuate before being ordered;*
- *some people will refuse to evacuate, regardless of threat;*
- *some pet owners will refuse to evacuate until arrangement are made for their pets;*
- *approximately 20 % of evacuees will require congregate care shelter;*
- *commercial transport will be available under a declaration of a state of emergency;*
- *standard evacuation routes may be established for specific seasonal hazards; and*
- *evacuation during NO notice emergency situations will be on an ad hoc basis, based on direction of the on-site incident commander.*

Purpose

To describe the provisions that have been made to ensure the safe and orderly evacuation of people threatened by a natural or man-made hazard.

CONCEPT OF OPERATIONS

General

Provide a general overview of the plan, including the warning process, areas likely to be affected and the routes and destination of evacuees.

Authority

Detail who can order an evacuation in jurisdiction covered by plan.

To order an evacuation, a local authority must declare a "state of local emergency', as enabled under *The Emergency Measures Act*.

Authority to implement an evacuation normally rests with the local authority, through the local law enforcement agency.

Security

Describe arrangements for

- *Security and protection of property in evacuated area*
- *Access control to evacuated area*

As an area is being evacuated, access controls must be established. Security may be achieved by establishing staffed Access Control Points and barricades at key locations around the perimeter. A record of all vehicles and personnel who enter a closed area.

Evacuation Routes

Describe routes established to move and protect people from the potential hazards which may confront the community. Evacuation routes should be separate from disaster routes intended for use by emergency responders.

Special Provisions

- Provisions for evacuation of special need (such as children in school/day care, handicapped, high risk (battered women), institutionalized (hospital) and incarcerated (prisoners) and transient (such as tourists and seasonal workers) populations.
- Provision for evacuation and care of livestock.

Transportation

- Modes of transportation
- Identify assemble areas for people without own transport
- Provision for return of residents to their homes

Accommodation and Feeding

- Provisions for congregate care(group lodging), including feeding, clothing and basic medical care
- Sanitary facilities
- Provisions for companion animals/pets

Public Information

Describe the means the authority will use to keep evacuees and general public informed on evacuation activities and specific action they should take.

Organization and Assignment of Responsibilities

- Wherever possible the organizational structure for an evacuation should reflect Incident Command Structure (ICS).
- *Describe the specific responsibilities of all key staff and emergency appointments, such as:*

Local Authority (Mayor/Chair)
Incident Commander
Evacuation Coordinator
Emergency Manager/Coordinator
Law Enforcement
Public Works
Public Information Officer
Emergency Social Services Coordinator
Health Services Coordinator
School Superintendent
Animal Control Coordinator
Other Tasked Organizations

COORDINATION INSTRUCTIONS

Situation Report and Returns

Describe specific reporting requirements and the format to be used. Attach sample format for required reports and returns.

Mutual Aid Agreements/Arrangements

Describe agreements/arrangement with neighbouring jurisdictions that address (traffic control, law enforcement, emergency social services, shelter, etc) available to facilitate evacuation operations.

Evacuation Movement Control Procedures

- Assembly areas
- Evacuation routes and route marking
- Traffic control points

Critical Timings

- Time reception centre(s) open
- Time by which evacuation must be completed

Plan Development and Maintenance

Identify who is responsible for developing operational guidelines and other necessary implementing documents and ensuring that the plan is maintained current.

Command and Control

- Scope of authority
- Interjurisdictional Relationships

Administration and Logistics

Describe the administration and general support requirements for the various evacuation functions.

Administration

Provide detail for tracking and recording information on evacuation detail, i.e., areas and numbers evacuated, numbers processed through reception centres and/or provided shelter.

Logistics

Detail the provision that have been made to secure or relocate those essential supplies and equipment needed to sustain operations and meet evacuee needs.

Consideration should include, but not limited to, the following:

- Food;
- Water and water trucks/trailers;
- Beds and bedding;
- Clothing;
- Medical equipment and supplies;
- Portable generators and lighting devices;
- Gas and diesel fuel;
- Sanitation devices;
- Public works vehicles and equipment; and
- Police and firefighting vehicles.

Attachments

- Pro Forma
  - Declaration of a Local State Of Emergency
  - Evacuation Alert
  - Evacuation Order
  - Declaration of All Clear
- Map
  - Potential Hazard Areas
  - Evacuation Routes (TBD)
  - Key Locations (e.g. Reception centres and medical facilities)
- Report and Returns - Sample (TBD)

APPENDIX I – PUBLIC INFORMATION MESSAGING

In developing a community education and awareness program regarding emergency evacuation information on the following issues should be addressed.

WHAT is an Evacuation Alert?

An Evacuation ALERT is a notification of **Danger** in your area. **EVACUATION ALERTS** are issued to advise the population at risk of the potential for loss of life from a hazard, and that they should be prepared to evacuate.

Alert Message Content

EVERYONE IN THE AFFECTED AREA SHOULD PREPARE TO MOVE TO A SAFE AREA

Things you should do NOW!!

- Gather essential items such as medications, eyeglasses, valuable papers, immediate care needs for dependants, and, if you choose, valuable keepsakes, photographs, etc. Make them available for immediate access for a quick departure.
- If you need transportation, the individual providing the alert notification will provide you with information regarding making arrangement for transport for you.
- Know the location of all family members and determine a planned meeting place should an evacuation be called while separated.
- Prepare to evacuate disabled persons and children. Relocate large pets and livestock to a safe area immediately, if possible.
- Arrange accommodation for your family, if possible, in the event of an evacuation. Emergency lodging will be provided if necessary. This lodging will probably not permit pets, so it is suggested that alternate arrangements be made for pets at the same time.
- Community emergency plans have been prepared to ensure your safety. It is important that you follow the directives you are given by the authorities to ensure your safety. Advance preparation is the key to safe and effective movement of people. Planning for providing care and recovery of evacuees, victims, and emergency workers has been put in place with your welfare in mind.

- If you are alerted of the possibility of a disaster impacting your area you may be provided with suggestions of things you should do to protect your property. These suggestions will be germane to the impending disaster, e.g. What you can do in the event of an impending flood, or fire etc.

EVERYONE IN THE AFFECTED AREA SHOULD NOW BE READY TO MOVE QUICKLY FROM THE AREA.

What is an Evacuation Order?

An Evacuation Order will only be issued by authorities having jurisdiction in response to imminent potential of loss of life or injury because of ANY **POTENTIAL DANGER**, to the population at risk, the residents, in the affected area. These orders are issued in the interest of LIFE SAFETY. Members of the RCMP, local Fire Departments, and the Local Authorities may be involved in expediting that action through door to door contact, the electronic media, etc.

Required Action

When an Evacuation is Ordered, take the following actions:

- gather personal/family emergency kit;
- proceed quickly and calmly to nearest evacuation site (temporary or permanent);
- report to Reception Centre indicated and register with the personnel staffing that centre. This will allow for effective communications for the evacuation team and will facilitate contact by friends or relatives who may be very concerned about your whereabouts and safety;
- keep a flashlight and portable radio with you at all times;
- follow the evacuation instructions which has been provided to you in the Evacuation Alert or Evacuation Order;
- ensure you haven't forgotten a necessity? Travel will be one-way only, out of your area to allow emergency vehicles access;
- TAKE EVERYTHING YOU WILL REQUIRE FOR AN EXTENDED STAY; and
- Remember THE POLICE WILL ENFORCE THIS EVACUATION ORDER

APPENDIX I (1) – PUBLIC INFORMATION MESSAGING TEMPLATE

This is _____ _____
Rank/Title *Name*

from the _____
Agency/Department

A _____ _____
size/intensity *incident*

_____ _____ _____
has occurred/is occurring *in* *location*

Because of the potential danger to life and health _____
the authority

_____ _____ everyone within _____ _____
has/have *ordered/recommended* # *blocks/kilometres/metres*

of that area to _____ _____
evacuate/shelter-in-place *immediately/as soon as possible*

If you are in following areas, you _____ _____
must/should *leave the area/get inside a building*

This message will be repeated. Specific instructions and locations will be given

If you are in the following areas, you _____ _____
must/should *leave the area/get inside a building*

_____. The areas involved are as follows:
immediately/as soon as possible

_____ _____
North/South/East/West *Location: street, highway or other significant geographical point*

_____ _____
North/South/East/West *Location: street, highway or other significant geographical point*

_____ _____
North/South/East/West *Location: street, highway or other significant geographical point*

_____ _____
North/South/East/West *Location: street, highway or other significant geographical point*

APPENDIX I (2) – EVACUATION INSTRUCTIONS

1. Stay calm.
2. Gather your family; take a neighbour or someone who needs help.
3. If evacuation is an alert: Take essential items (diapers, baby food, clothes, and money). Leave a message on the door.
4. If evacuation is an order: Take critical items (medicine, purse, wallet, and keys) only if they are immediately available. Take pets in pet kennels or on leash.
5. Turn off appliances (stove, light, and heaters).
6. Do not use more cars than you have to.
7. Do not use the telephone unless you need emergency service.
8. Go immediately to the home of a friend or relative outside the evacuation area, or to a Reception Centre located at: _____.
9. Emergency Response Workers will be stationed at intersections along the way to direct you.
10. If you need transportation, call: _____ or _____.
11. Children attending the following schools will be evacuated to:

School	Evacuation Location

12. Do not drive to your child's school. Pick your child up from the authorities at the shelter.
13. Keep the windows and vents in the car closed.
14. Other: _____.

APPENDIX J – SHELTER-IN-PLACE INSTRUCTIONS

Shelter in place is the practice of going or remaining indoors during the release of an airborne hazardous material, as opposed to evacuating the area.

HAZARDOUS MATERIAL RELEASE IN THE AIR

Unless the hazardous material is flammable, like natural gas, emergency response professionals recommend that you initially stay indoors (shelter in place) until you receive instructions to leave. If the hazardous material is already around the area you are in, evacuation may not be safe since you have to move through the hazardous material. Your building can help protect you.

THINGS TO DO - SHELTER IN PLACE

- Go indoors and stay there
- Close all windows and doors and every door inside the building
- Close all windows
- Do not use bathroom or kitchen vents
- Set thermostats so that air conditioners, furnaces and hot water heat do not come on.
- Do not use fireplaces. Close all dampers.
- Do not operate clothes dryers.
- Shelter in an inside room away from windows and doors
- Reduce and avoid smoking as it contaminates the air.
- Do not leave the building until told to do so.
- Stay tuned to local television or radio for information.
- Do not use the telephone as you may tie up the phone lines

For added protection

- Seal the cracks around the doorways with wide tape or a rolled towel
- Tape plastic over the window/ prepare this ahead of time.

SHELTER IN PLACE IS A GOOD DEFENSE

Shelter in Place has been shown to be a safe response to hazardous a material release of 3 hours or less. Our well weather-insulated buildings slow the movement of air into buildings and any hazardous material that does enter is weakened as it mixes with the indoor air.

Shelter in place information courtesy of the Brandon Emergency Support Team (BEST)

APPENDIX K – REAR LINK TO MANITOBA URBAN SEARCH AND RESCUE (USAR) DEPLOYMENT

Manitoba EMO will provide support to the Manitoba USAR team when they are deployed out of province.

EMO will he the link with Public Safety Canada, EPB/ GOC and the hosting province.

Upon confirmation that Manitoba USAR is on site the EOC will open with minimal staffing to support two way communications with the site.

EMO will also be the point of contact with the families of the team members.
General information from the site will be conveyed to families that are interested via conference call and urgent family matter information will be passed to the site via the Team Leader.

EOC duties:

- Situation reports will be compiled for briefing notes to tbe D/M's of IAT and Labour. Media information will be at the discretion of the Executive Director
- Updates of family contacts are to be obtained through OFC prior to deployment
- Links are to be obtained with the EMO of the involved province prior to deployment
- Staffing of the EOC will be the responsibility of the Director of Emergency Operations
- Manitoba EMO contact numbers (phone lines, fax, and e mail) will be supplied to the team leader prior to deployment
- A family call line number will be established at EMO
- A conference call line will be set up and scheduled at regular intervals

SCHEDULE 7

TELECOMMUNICATIONS

1.0 INTRODUCTION

As set out in s. 4.5.3 of the Manitoba Emergency Plan (MEP):

> **In an emergency, effective telecommunications is critical to**
>
> - **the efficient exchange of information**
> - **coordination,**
> - **command and control, and**
> - **responder safety.**

Historically public safety communications in a land mobile environment was assigned a specific frequency or a number of frequencies that were unique to a specific department or agency. Occasionally other agencies from the same discipline, e.g. police or fire might share a common frequency but rarely would agencies from different disciplines communicate directly with one another.

In addition to telecommunications established between responders at the site, telecommunications communications must be established between the site or incident commander, the Municipal Emergency Operations Centre (EOC) and the Manitoba Emergency Coordination Centre (MECC). See Appendix A attached.

1.1 INTEROPERABILITY

Since 9/11, greater emphasis has been placed on first responder cooperation and coordination.

Whereas effective telecommunication within a public safety agency is referred to as operability, interoperability has been defined as the ability of public safety agencies to talk across disciplines and jurisdictions via voice communications systems, exchanging information with one another on demand, in real time, when needed, and as authorized.

For those departments and agencies that use the FleetNet system, there is an opportunity to use features in that system to overcome some of the technical barriers to interoperability. Some features can be accessed at the consol level by trained dispatchers, while others may be accessed by individual users, including use of specific talkgroups.

The following "province-wide" FleetNet talkgroups are designated for inter-agency communications

- Government (GOV) — Command and Control
- Interagency (INTERAGENCY) — Calling and Response Coordination
- Operations 1 (OPS1) — Operations
- Operations 2 (OPS2) — Operations
- Operations 3 (OPS3) — Operations

- EMO Simplex (SIMPLEX) is a short range, unrepeated frequency that can be installed in FleetNet radios to retain limited local functionality if FleetNet service is unavailable, or if only short range is required.

A department that is not on FleetNet cannot access these features directly. Technologies are available which will allow bridging or cross-band repeating between different systems. Although not ideal, sometimes the simplest approach is to exchange radios between departments. This is not particularly effective in a major emergency or disaster.

Notes:

1. MTS will automatically install these talkgroups in radios operated by approved agencies, such as RCMP, EMS, Manitoba EMO and Office of the Fire Commissioner (OFC).

2. Other departments, agencies, and other organizations seeking to install these talkgroups will be required to provide authorization from the Executive Director before MTS will install them. Application should be made to the Execntive Director in writing.

3. The Executive Director will not authorize installation of the OPS1, OPS2 and OPS3 talkgroups until installation is approved by the Interoperability Coordinating Committee.

1.2 SERVICE INTERRUPTION

A variety of technologies can be used to provide telecommunications on site, between the site and agencies' EOCs, and between EOCs, including

- two-way radio,
- facsimile,
- email and other intra or internet-based services
- telephone (cellular and landline), and
- satellite communication systems.

Radio technologies usually require complex infrastructure to operate beyond the "line of sight" restriction. The modern telecommunications infrastructure used in Manitoba is extremely reliable in day to day use, and is often taken for granted. Nevertheless, this infrastructure can be damaged or otherwise interrupted.

Shared services, such as cellular telephone networks, have a limited number of frequencies and are sometimes incapable of handling the extreme volume of telecommunications traffic that is generated in a major emergency or disaster.

Even though we may think of cellular telephone, landline, facsimile, email, internet, two-way radio as different technologies, they often share common "pipes." These "pipes" can be a mixture of radio, microwave, and landline/optical fibre. The destruction or failure of such a "pipe" can disrupt messages that travel through the "pipe" regardless of what technology was used to generate the message.

All of these technologies require some form of electrical power.

As soon as practicable after impact, a quick survey should be made to determine which technologies are still available, and a tactical telecommunications plan should be prepared around the use of the surviving technologies.

Facsimile, email and other so-called "transmit and forget" technologies can be problematic if no one is continuously monitoring the receipt of information and acknowledging receipt. In 911 a number of firefighter deaths were attributed to warnings being left unread among many thousands of messages in the dispatchers' computerized cue.

1.2.1 Basic Replacement Considerations

(a) Short Range Telecommunications

Where short-range "line of sight" telecommunications are required, such as within the confines of a typical site, in addition to messengers or "runners" various temporary alternatives are usually available, including

- other service providers, e.g. Rogers cellular instead of MTS or MTS instead of Rogers (note that other cellular providers may share Rogers or MTS infrastructure)
- other radio systems that still work,
- radio systems used in their simplex (non-repeated) mode,
- General Mobile Radio Service (GMRS) or
- Family Radio Service (FRS).

Note: Radio signals at the frequencies commonly used in public safety applications are "blocked" by the curvature of the earth and by terrain such as mountains, hills and valley walls. Hand held satellite devices generally don't work well from inside buildings. Satellite signals (up and down) can also be blocked by significant precipitation. The signal emanating from the transmitter's antenna must be able to be "seen" by the receiver's antenna. This is the so-called "line of sight." In most circumstances, the higher the antenna of transmitter or receiver compared to the surrounding topography, the greater the "line of sight" and therefore the greater the range that can be achieved.

Range generally can be increased by

- raising the antenna height, or
- using a more efficient antenna.

Sometimes climbing to the top of a hill, or moving higher in a building is all that is

required. Independent of height, antennas on hand-held radios, particularly the "rubber duck" type are much less efficient than the antenna mounted on the roof of a car. These in turn are usually less efficient than a base antenna mounted on a tower or on the roof of a building.

Note: Increasing power output can improve the signal quality within the line of sight, but the power output settings of most commercial and public safety transmitters cannot be adjusted by the operator.

(b) Beyond "line of sight"

It is more difficult to set up a system that will work beyond the "line of sight." This generally requires a "repeater."

Note: A repeater is a radio which receives a signal from a transmitter within its "line of sight" and rebroadcasts it on a different frequency to receivers which are within its "line of sight," but which may be beyond the "line of sight" of the first transmitter. Even communications satellites are a form of repeater.

To achieve even greater distances

- a repeater antenna can be mounted on a very high building or tower (communications satellites take this to the extreme), or
- repeaters can be linked together using radio, microwave, cable or optical fibre. This is an overly simple description of a trunked radio (e.g. FleetNet) or cellular system.

In a widespread event where sites require telecommunications beyond the "line of sight," EMO may arrange for

- distribution of FleetNet radios, satellite telephones, or other suitable technology, and/or
- operators and equipment from the Amateur Radio Emergency Service.

(c) Amateur Radio Emergency Service (ARES)

ARES can provide temporary telecommunications services, using federally licensed operators and high-power radios that are capable of operating on frequencies that use ground waves or "bounce" off of layers in the earth's ionosphere to broadcast over long distances without complex central infrastructure.

Some of this equipment has been pre-installed in a number of federal, provincial and municipal facilities, including EMO, Manitoba Health Office of Disaster Management, Public Safety Canada, Department of National Defense, Environment Canada's Severe Weather Office, and the City of Winnipeg EOC.

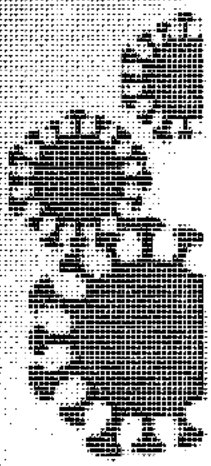
ARES can be activated through the **EMO Duty Officer at 204-945-5555**.

This is Exhibit "D" referred to in the Affidavit of Brent Roussin affirmed before me this 30th day of April, 2021.

A Barrister-at-law in and for the
Province of Manitoba.

AB2340

FEDERAL/PROVINCIAL/TERRITORIAL PUBLIC HEALTH RESPONSE PLAN FOR ONGOING MANAGEMENT OF COVID-19



August 14, 2020

Table of Contents

Executive Summary

This Federal/Provincial/Territorial plan developed in collaboration with federal, provincial and territorial public health officials, Indigenous partners, and health system partners, for these and other stakeholders, provides a common forward planning approach for ongoing management of COVID-19 in Canada. The plan acknowledges jurisdictional roles and responsibilities, identifies when national approaches are anticipated and when provincial/territorial flexibility and customization are expected.

Key elements of the plan include:

- a goal statement,
- public health response objectives,
- planning assumptions,
- a reasonable worst case scenario, and
- summaries of current and planned response activities for each main component of the public health response (i.e., Surveillance, Laboratory Response Activities, Public Health Measures, Infection Prevention and Control and Clinical Care Guidance, Vaccination, International Border and Travel Health Measures, Health Care System Infrastructure, Risk Communications and Outreach, and Research).

There is also content specifically addressing planning with Indigenous Communities, planning for high-risk settings and populations, and the role of modelling in the response. Much like other technical guidance, this document may require updating as our scientific knowledge of the SARS-CoV-2 pathogen increases, the epidemiological picture evolves in Canada and globally, epidemic control measures change, and new medical countermeasures become available (e.g., a vaccine, effective treatment).

The pandemic response goal is to minimize serious illness and overall deaths while minimizing societal disruption as a result of the COVID-19 pandemic. The COVID-19 response has been unprecedented with the swift implementation and public adoption of public health measures. While these measures have been successful in reducing the incidence of COVID-19 in Canada, the restrictive nature of many of these measures have had some negative health, well-being and societal consequences. Many of these consequences have disproportionately affected specific segments of the Canadian population. The goal statement and objectives reflect the need to respond in a way that achieves a better balance between minimizing the impact on morbidity and mortality with the impact on societal disruption in order to support a long-term, sustainable response.

To facilitate a common approach and appropriate level of preparedness across Canada, the plan includes a list of planning assumptions, a "reasonable worst case scenario", and a list of capabilities and requirements needed to mitigate this scenario. The scenario is not the most likely scenario, rather, it provides a baseline to guide consideration of key capabilities, capacity issues, and identification of resource needs that will help focus planning activities. It is provided as a "stress-test", not a prediction, and is intended to stimulate thinking concerning our current response efforts, capacity thresholds and resiliency. The reasonable worst case scenario includes an epidemic curve with a large peak in the fall or winter of 2020 followed by ongoing peaks and valleys for the next 2-3 years, with all peaks in incidence

creating a demand for resources that exceeds system capacity. It does not account for a widespread vaccine program or availability of an effective treatment.

The capabilities needed to mitigate this scenario, and for the ongoing management of COVID-19 in general, include the ability to:

- detect signals indicating a significant surge in cases may occur,
- prevent a large peak in the fall that greatly exceeds Canada's capacity to respond,
- reduce surges in incidence and hospitalizations,
- increase health care and public health capacity,
- monitor demand for health care resources, and
- foster ongoing public vigilance and compliance with measures and recommendations.

This plan, in conjunction with other foundational federal/provincial/territorial response plans, provides public health leaders with a coordinated approach to: address common issues, and to support the provincial/territorial responses to COVID-19 in the Canadian population. It includes information regarding the current focus of the public health response and anticipated needs for the short, mid and long term ongoing management of COVID-19, which will facilitate awareness and coordination both within and beyond the public health sector.

1. Purpose

The purpose of the *Federal/Provincial/Territorial Public Health Response Plan for Ongoing Management of COVID-19*, is to provide federal, provincial and territorial public health officials, Indigenous partners, health system partners and other stakeholders with a common forward planning approach for ongoing management of COVID-19 in Canada. This plan promotes a long-term approach that covers immediate planning imperatives for the fall/winter 2020 period and thereafter until population herd immunity in one form or another is sufficient to bring the pandemic activity in Canada to an end. This is an evergreen document that may require updating as our scientific knowledge of the SARS-CoV-2 pathogen increases, the epidemiological picture evolves in Canada and globally, epidemic control measures change, and new medical countermeasures become available (e.g., a vaccine, effective treatment).

Building on the ongoing public health response, this document identifies federal/provincial/territorial (F/P/T) public health preparations that are needed and already underway for the short, mid and long-term management of COVID-19 in Canada. It provides overarching guidance that is informed by existing intergovernmental pandemic preparedness, public health emergency planning and data, information and resource sharing agreements, arrangements and protocols (see *Appendix 1*) and draws extensively on the Canadian Pandemic Influenza Preparedness Guidance (CPIP). The CPIP stipulates that while it is a guidance document for pandemic influenza, much of its guidance is also applicable to other public health emergencies, which has been the case for the COVID-19 response. It is assumed that an ongoing (but appropriately scaled) F/P/T coordinated response structure and activities as outlined in the F/P/T Public Health Response Plan for Biological Events (F/P/T PHRPBE), will be needed for the foreseeable future.

To facilitate a common approach and appropriate level of preparedness across Canada, this plan includes a "reasonable worst case scenario." While this scenario is not necessarily the most likely scenario, it provides a baseline to guide consideration of key capabilities, capacity issues, and identification of resource needs that will help focus planning activities. As with other F/P/T plans, this document outlines overarching goals and objectives, acknowledges jurisdictional roles and responsibilities, identifies when national approaches are anticipated and when provincial/territorial (P/T) flexibility and customization are expected. This document has been developed to facilitate planning for an ongoing COVID-19 response that is not only flexible and adaptive but also sustainable.

2. Context

COVID-19 represents an unprecedented threat to the health, social and economic well-being of Canadians, Canadian society and the global community. On January 30, 2020 the Director General of the World Health Organization (WHO) determined that COVID-19 constituted a Public Health Emergency of International Concern (PHEIC) and declared it a pandemic on March 11, 2020, due to extensive international spread. Mitigating the impact of COVID-19 in Canada requires a comprehensive, integrated and cross-sectoral "whole-of-society", "whole-of-government" strategy that focuses on what is within the span of control of our country while trying to reduce the risk of what is not. The context of our planning, therefore, is primarily Canadian-centric but recognizes that the global situation will have a significant effect on response activities.

Mobilizing Canada's health sector response to COVID-19 remains a critical part of that overall effort. This plan and its more detailed components that are described herein, draws heavily on the experience acquired and the work completed during the response to the introduction and subsequent first wave of COVID-19 in Canada. While Canada's F/P/T pubic health officials have conducted pandemic planning for years, plans must be customized and supplemented as the pandemic unfolds, as each pandemic is different. Despite the incredible effort and pace of COVID-19 response in Canada to date, we are still operating from a place of significant unknowns and need to continue learning and adapting as we move ahead with planning activities.

While the pandemic has affected Canadians in diverse ways, Canadians have not experienced these impacts equally. Emerging evidence indicates that social determinants of health, including low-income status, adverse physical environments, precarious housing, and race/ethnicity, among others, correlate with increased risk of COVID-19 infection.[1] Data show that compared to men, women in Canada have experienced higher rates of COVID-19-related fatalities, and job losses have been higher for women, with recent recoveries in the workforce disproportionally benefitting men.[2] [3] As a result of the economic downturn triggered by the pandemic, visible minorities have been particularly affected, with a larger share reporting having difficulties meeting their financial obligations or essential needs compared to White workers.[4] Similarly, Indigenous Peoples, persons living with disabilities, and LGBTQ2IA+ communities, among others, have been disproportionally affected by the pandemic.[5]

Furthermore, some populations have been particularly impacted by the measures implemented to control the pandemic; for example, the unprecedented extent and duration of school closures which may have long-term effects on child development, health and education[6] [7]. As efforts shift towards the next phase of the response, it is imperative that the needs of diverse groups of Canadians are carefully considered in order to mitigate adverse consequences and reduce both known and reasonably anticipated inequities.

3. COVID-19 Response Goal, Objectives and Response to Date

3.1 Goal

Canada's goal for responding to COVID-19 is based on that established for pandemic influenza in the *Canadian Pandemic Influenza Preparedness: Planning Guidance for the Health Sector* document (last updated August 2018). The goal is:

- To minimize serious illness and overall deaths while minimizing societal disruption as a result of the COVID-19 pandemic.

This goal has guided F/P/T actions and has helped reduce the incidence of COVID-19 in Canada (i.e., flattening of the initial epidemic curve) and associated serious illness and deaths. Reducing the health impact of COVID-19 in the absence of a vaccine or effective treatment while minimizing societal disruption has been extremely challenging. The pandemic circumstances, not only in Canada but globally, have led to the extraordinary implementation of broad, restrictive community-based public health measures and the need to offer an unparalleled level of societal support measures (e.g., income support, housing support, and expansion of social services such as mental health and food assistance).

When the original CPIP pandemic goal was developed it was thought that the main cause of societal disruption would be the absence of essential workers (including health care providers) from the workplace due to illness, need to care for ill family members, workplace outbreak control measures and/or refusals to work. The closure of international borders, businesses, schools and restrictions on social gatherings was always acknowledged as a potential source of societal disruption in a severe pandemic. The COVID-19 response has been unprecedented with the swift implementation and public adoption of public health measures (PHM). The restrictive measures that have averted widespread essential service disruption due to illness have, however, had significant broader direct and indirect impacts on health and wellbeing.

3.2 Objectives

As the focus of planning now shifts to a long-term sustainable response it is time to examine how to strike an optimal balance between minimizing both health impacts and societal disruption. The following public health objectives aim to achieve this balance.

Objectives

To mitigate both health and societal impacts of the pandemic by:

- Taking public health action to reduce the incidence, morbidity or mortality of COVID-19 to a locally manageable level;
- Protecting high-risk populations and communities, including Indigenous communities;
- Reducing negative physical and mental health consequences of COVID-19 response actions;
- Taking a risk and evidence based approach to the use of restrictive public health measures;
- Supporting access to health care services (both COVID-19 and non-COVID-19 related services), supplies and treatment options;
- Leveraging Canada's research, surveillance and laboratory systems;
- Working with other sectors to strengthen the social and economic services and policies that protect health and prevent disease (e.g., adequate housing, employment and income supports); and
- Working collaboratively with the international community.

3.3 Response to date

F/P/T response actions to date have been comprehensive and have gone a long way toward achieving these national public health objectives. These actions include but are not limited to:

- rapid case identification, confirmation, and isolation for the period of communicability;
- rapid contact tracing, identification, communication and quarantine of contacts for the duration of the incubation period;
- supporting evidence-informed decision-making by collecting, analyzing and sharing surveillance and other scientific information to inform and target interventions;
- rapid outbreak identification and containment activities;
- preventing the importation of COVID-19 through border and travel restrictions;
- reducing the spread of infection through consistent and frequent communication to the public to promote the importance of individual, family, community and organizational mitigation strategies and PHM;
- promoting modifications to day-to-day activities to reduce transmission of COVID-19 in community settings as much as possible;

- protecting those most at risk of serious illness through the provision of resources, guidance and public messaging;
- protecting those most at risk of serious illness in congregate settings and health-care facilities through targeted communications, guidance and response actions;
- establishing a protective stance through community-level screening, guidance and quarantine measures for Northern/remote/isolated communities, and Indigenous populations;
- supporting community-level health and social interventions aimed at supporting and protecting populations at high risk and mitigating negative impacts of public health interventions;
- providing guidance to public health partners, health care delivery stakeholders, and non-health sectors/settings that facilitates an evidence-informed, risk-based approach;
- facilitating rapid access to health care supplies, equipment and resources, including medical evacuation from remote, isolated and under-serviced communities;
- supporting the continuity of health care and other essential services;
- providing additional mental health resources and social services; and
- facilitating a gradual, cautious return to community functioning in the context of ongoing COVID-19 activity.

Maintaining the trust and confidence of Canadians through timely and transparent communication of evidence-informed public health decisions; communicating appropriate and timely advice (including changes to this advice) to decision-makers, health professionals and the public; taking into consideration the diverse needs of population groups based on vulnerability, ethnicity/culture, ability status, and other socioeconomic and demographic factors; and supporting a coordinated response by working collaboratively with all orders of government and stakeholders, continue to be essential in this ongoing response. We need to prepare the public for the reality of living with COVID for the foreseeable future and the changes that will come in next 2 to 3 years by which time we hope to have widespread access to vaccines, effective treatment and increasing levels of herd immunity.

In order to achieve the response goal and objectives it is essential that the effectiveness of COVID-19 control measures be assessed against any negative effects of implementation of these measures (including the re-allocation of other public health program resources); with the objective of reducing COVID-19 incidence to a locally manageable level in mind. This is key to a sustainable long-term response.

Public health officials are prepared to respond to the variety of challenges that the management of COVID-19 will involve as the pandemic continues to unfold. Advice, recommended measures and interventions have been made based on these shared pandemic goals and objectives. As our collective knowledge increases, these objectives will be revisited and updated as needed.

4. Forward Planning: Assumptions and Epidemiological Drivers

This plan aims to support consistent but flexible public health planning at all levels of government in order to prepare for short, mid and long-term COVID-19 response activities. Plans should reflect a combination of nationally agreed upon approaches with regionally and locally adaptable actions and be aligned with the pandemic response goals and objectives, taking into account the needs of diverse

groups of Canadians on the basis of health status, age, gender, ethnicity/culture, ability status, and other socio-economic and demographic factors.

Table 1 identifies general planning assumptions that aim to provide a common basis for planning in the Canadian context for the next several months to years. The areas of uncertainty, listed in the table, help identify current unknowns. Given these areas of evolving evidence and knowledge, plans need to include flexible elements or placeholders that can be updated as the pandemic progresses and knowledge and experience increase. Both planning assumptions and areas of uncertainty require validation and/or updating and may be triggers for re-visiting and modifying plans.

Table 1: Summary of planning assumptions and areas of uncertainty

General planning assumptions
• Compared to influenza, COVID-19 has higher transmissibility (i.e. it has a higher basic reproductive number or R_0) is highly transmissible prior to symptom onset, and has a higher infection fatality rate.
• Transmission by asymptomatic cases is occurring.
• The pandemic likely won't be halted by "herd immunity" until ≥ 60% of the population is immune (through natural infection or vaccination).
• Immunity (from natural infection or vaccination) may not be strong or long-lasting.
• A vaccine will not be widely available in the short term or mid term (i.e., before 2021).
• Once a safe and efficacious vaccine is available it will be rolled out in a targeted manner.
• There will be a national approach to prioritization/targeting of any limited resource which will be based on an ethics framework. Policy development around prioritizing limited resources will also be informed by other logistical, epidemiological and societal considerations, for example the Declaration of the Rights of Indigenous Peoples.
• The national epidemic curve will be a compilation of the epidemic activity in each province and territory, which will be influenced by the locally implemented public health response measures and public adherence to and compliance with these measures.
• The risk of imported cases sparking localized outbreaks is ongoing.
• International borders will be open over time with corresponding increases in travel (during the period covered by this plan).
• Response measures implemented in one jurisdiction could have an impact on neighbouring jurisdictions, even if they themselves do not implement that measure.
• The level of response across Canada will vary based on local epidemiology (e.g., could be surging in multiple jurisdictions at same time, different times or lulls could coincide).

- Our health care system and public health system capacity has limits which could be breached during peaks of COVID-19 activity.

- Effects of concurrent circulation of influenza and other respiratory viruses will be additive, on health care (including long-term and other community care) and public health system capacity during the fall-winter period but potentially lower than usual seasonal increases due to the effect of COVID-19 public health and infection prevention and control measures.

- High uptake of an effective (i.e., well matched) seasonal influenza vaccine amongst those at high-risk of influenza complications will mitigate the demand for hospital resources during the influenza season. High vaccine coverage in the general population may also indirectly mitigate demand by reducing transmission of influenza to high-risk individuals.

- Public health capacity to respond to other priorities (e.g., the overdose crisis and higher rates of problematic substance use) needs to be maintained. Capacity to catch-up on interrupted program delivery may also be required.

Areas of uncertainty

- Whether there will be a change in COVID-19 severity, risk groups, transmission patterns/dynamics in the short, medium or long term (e.g., due to viral mutation).
- Duration of natural immunity (i.e., recovered cases), what constitutes immunity, and whether infection with other coronaviruses provides cross-protection.
- Whether COVID-19 will eventually have a seasonal pattern similar to other respiratory infections.
- Whether restrictive community PHM could successfully be implemented again, to what degree, duration, how consistently and at what level (e.g., P/T vs regionally vs locally).
- How potential variations in risk tolerance over time and in different geographic areas will impact response actions.
- Whether significant rates of co-infection with SARS-CoV-2 and a seasonal influenza virus or other respiratory pathogen will occur and whether co-infection will significantly impact morbidity or mortality cases and subsequently demand on the health care system and resources.
- Whether recommendations for early/lower thresholds for influenza antiviral treatment will significantly reduce influenza-associated hospitalizations.
- Robustness of international COVID-19 data and testing.

Three potential epidemic curve patterns (see *Figure 1*) have been proposed by modellers, epidemiologists and other experts for planning purposes[8]:

1. *Peaks and Valleys:* The initial wave of COVID-19 in spring 2020 is followed by a series of repetitive similar or smaller waves that occur through the summer and then consistently over a 1- to 2-year period, gradually diminishing sometime in 2021.
2. *Fall Peak:* The initial wave of COVID-19 in spring 2020 is followed by a larger wave in the fall or winter of 2020 and one or more smaller subsequent waves in 2021.
3. *Slow Burn:* The initial wave of COVID-19 in spring 2020 is followed by a "slow burn" of ongoing transmission and case occurrence, but without a clear wave pattern.

The slow burn scenario is our aim as it is most likely to keep incidence, morbidity and mortality at a locally manageable level.

Figure 1: Potential Epidemic curve Patterns

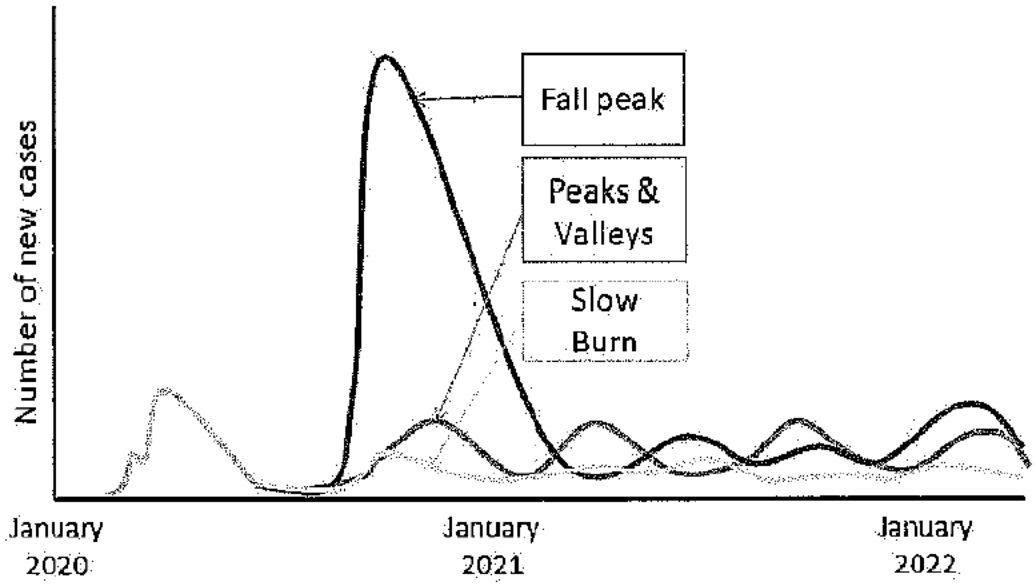


Figure 1 – Text Description
This figure is a graph that has an X-axis (horizontal) with 3 points in time: January 2020, January 2021 and January 2022 and a Y-axis (vertical) that does not have a scale but represents the number of new cases of COVID-19; together these frame a general epidemic curve. The curve starts with an orange line depicting the initial wave of COVID-19 cases in Canada, specifically starting with zero cases at the start of January 2020 followed by a relatively steady increase in new cases over time, peaking in April 2020, then followed by a more gradual decrease to July 2020. The rest of the graph includes 3 lines (in shades of blue) that pick up where the orange line left off (corresponding to July 2020). These 3 lines depict the 3 potential epidemic curve patterns described in the text prior to the figure. In accordance with the text these lines are labelled: "Fall peak", "Peaks and Valleys" and "Slow Burn". All 3 potential epidemic curve patterns end just after the X-axis point for January 2022, roughly corresponding to March 2022.

These patterns assume different levels of ongoing or temporarily imposed mitigation measures and does not include a scenario where there is an absence of public health measures. They do not account for a widespread vaccine program with good uptake.

Modelling and capacity assessments facilitate appropriate planning by exploring how possible ranges of parameters relevant to these issues affect the extent and impact of the epidemic. Forecasting models are best suited to inform what may occur in the coming 2-3 months; therefore the role of modelling in long-term planning is focused on providing additional information to decision makers regarding the potential impact of control measures as opposed to the incidence rate itself.

Mathematical modelling supports planning our response to epidemics and outbreaks, and the COVID-19 epidemic has demonstrated the important role and need for the full range of modelling tools required

to support decision-making during a complex public heath crisis. This role and the types of models currently in use are described in *Appendix 2: Modelling Support for Forward Planning*.

It is important to recognize that the national epidemic curve will likely be a combination of the epidemic curve patterns from each province and territory, which in turn will be dependent on the effect of the escalation and suppression drivers in each jurisdiction. *Figure 2* identifies epidemiological drivers that will influence the number and timing of new cases and therefore the epidemic curve "wave pattern" we experience in Canada going forward.

Figure 2: Epidemiological Drivers

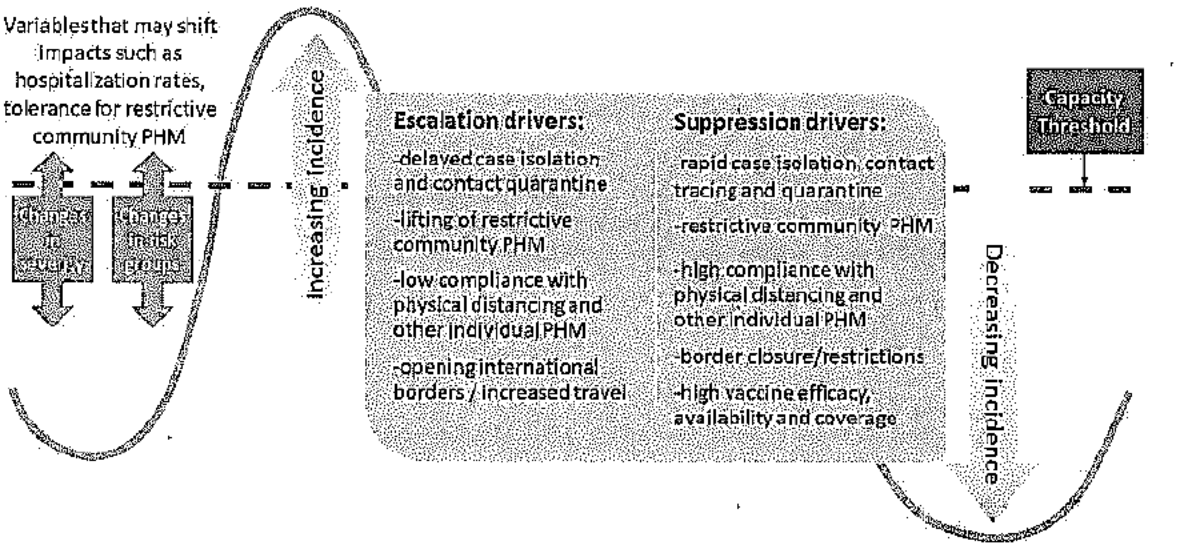


Figure 2 –Text Description
This graphic visually conveys how epidemiological drivers influence incidence of COVID-19 and thereby the epidemic curve pattern (depicted by an orange line that arcs up and then down). The escalation drivers (that would lead to more new cases and depicted by an upward blue arrow that includes the text "Increasing incidence" and points to the upward arc) are listed in a text box as: delayed case isolation and contact quarantine, lifting of restrictive community public health measures, low compliance with physical distancing and other individual public health measures, and the opening of international borders/increased travel. The suppression drivers (that would lead to less new cases and thus depicted by a downward blue arrow that includes the text "Decreasing incidence" and points to the downward arc) are listed as: rapid case isolation and contact tracing and quarantine, restrictive community public health measures, high compliance with physical distancing and other individual public health measures, border closure/restrictions, and high vaccine effectiveness, availability and coverage. Also included in this graphic is the concept of "Capacity Threshold" which conveys the idea of an upper response capacity limit that could be breached by a high number of cases occurring over a short period of time. This is depicted with a horizontal red dashed line that crosses the upward arcing orange line (that suggests an epidemic curve pattern where the number of new cases is peaking). Finally variables that may shift impacts, such as hospitalization rates, tolerance for restrictive community public health measures, are broadly grouped as "changes in severity" and "changes in risk groups" in two text boxes with both up and down arrows coming off of the boxes to highlight that these variables may impact the response capacity threshold.

An epidemic curve pattern is one part of a planning scenario as it reflects the potential changes in the number of new cases occurring over a period of time. To ensure optimal planning it is important to consider not only the number of cases but variables that may shift the health and societal impacts of those new cases (as depicted on the left side of Figure 2) and subsequently possible surges that exceed current health care and public health capacity thresholds. These variables include but are not limited to: changes in severity of illness experienced by the majority of cases, changes in high-risk groups (i.e., both the demographic characteristics of who is getting severely ill and identification of new risk factors for severe illness), availability of an effective treatment and/or vaccine, duration of naturally acquired immunity and concurrent demands on the health and public health system that affect capacity to manage new cases. The manifestation of these variables will also influence public risk perception and therefore, in a somewhat circular manner, epidemiological drivers like compliance with PHM.

5. Reasonable Worst Case Scenario

To facilitate planning in the context of a high degree of uncertainty and the numerous possible scenarios, a "reasonable worst case scenario" has been developed. It is based on a combination of the previously described "Fall peak" and "Peaks and Valleys" epidemic curve patterns. See *Figure 3*. This scenario should not be considered a prediction or even highly likely, but rather a common set of characteristics that will support robust forward planning (see text box).

Figure 3: Epidemic curve for reasonable worst case scenario

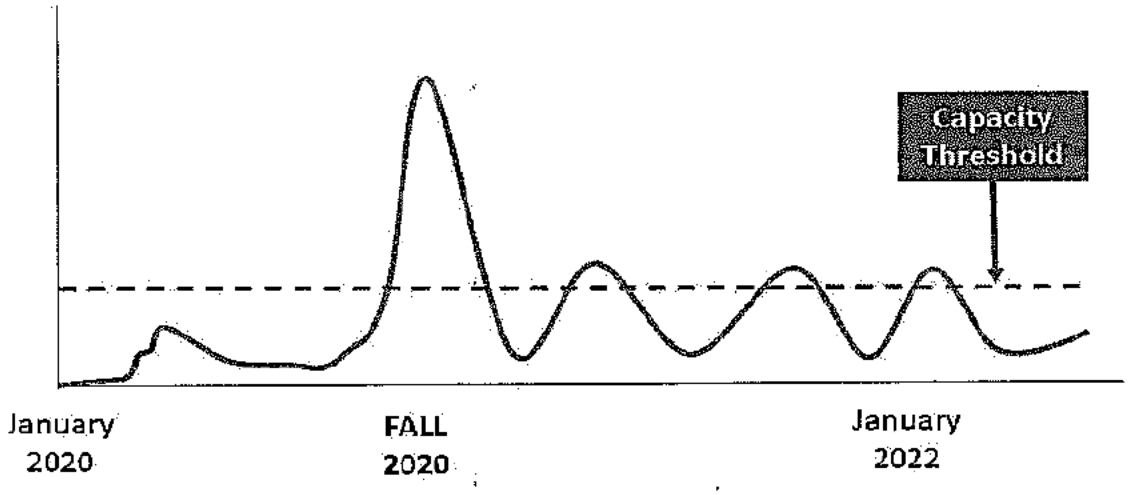


Figure 3 – Text Description
This figure is a graph that has an X-axis (horizontal) with 3 points in time; January 2020, Fall 2020 and January 2022 and a Y-axis (vertical) that does not have a scale but represents the number of new cases of COVID-19; together these frame a general epidemic curve. The epidemic curve pattern for the reasonable worst case scenario (which is a combination of the "Fall Peak" and "Peaks and Valleys" scenarios previously described in the text) is depicted with a blue line that undulates horizontally across the graph. The line depicts the initial wave of COVID-19 cases in Canada, specifically starting with zero cases at the start of January 2020 followed by a relatively steady increase in new cases over time, peaking in April 2020, then followed by a more gradual decrease to July 2020. The line stays relatively flat then heads upwards to form a peak that corresponds with the Fall 2020 time frame and is 2 to 3 times higher that the initial wave. This peak is followed by a relatively sharp decline to complete the image of a large Fall wave. The line then continues in a peak and valley pattern through to its conclusion corresponding to the Spring 2022 time frame. Also included in this graphic is the concept of "Capacity Threshold" which conveys the idea of an upper response capacity limit that could be breached by a high number of cases occurring over a short period of time. This is depicted with a horizontal red dashed line. In this epidemic curve for the reasonable worst case scenario, the peaks in the curve all cross over the capacity threshold line – depicting the situation where the surge in cases results in increased response capacity demands that exceed the capacity threshold.

Reasonable worst case scenario characteristics:

- Epidemic curve with a large fall 2020 peak followed by ongoing peaks and valleys for the next 2-3 years
- Fall/winter peak occurs in 2020 and is 2-3 times higher than the incidence experienced at the peak of the initial wave, with corresponding increases in mortality. (Note: the amplitude of the fall peak at the PT or regional level in this scenario will be influenced by the incidence experienced at the peak of the initial wave.)
- Demand for health care resources (hospitalizations, ICU beds, ventilators, personal protective equipment, Long-term care spaces, etc.) exceeds system capacity (during all peaks)
- Shortage of health care providers (e.g., due to illness, burnout, work refusal, international competition)
- Demands on both laboratory and public health resources exceed capacity (during all peaks)
- COVID-19 peaks occur concurrently with severe influenza/other respiratory pathogens season
- Similar timing of peaks across the country (each jurisdiction experiences peaks at same time)
- Low level of compliance with public health measures
- Permeation of mis/disinformation in Canadian society
- Weak/non-sustained post-infection immunity (recovered cases can become susceptible again)
- No effective widely available treatment
- No effective vaccine available

Nationally the incidence was approximately 31/100,000 population or 11,849 new cases reported during the peak week in the initial wave. There was a high degree of variation between PTs with the most populous PTs having the greatest impact on the national epidemic curve. The reasonable worst case scenario should include planning for a fall or winter peak of 2-3 times the amplitude of the initial wave in PTs or regions that experienced a high peak in incidence during the initial wave and up to 100 times the peak incidence in areas that had lower incidence in the initial wave.

This reasonable worst case scenario can be used to identify any new or outstanding preparedness and response needs or issues that would require, or benefit from, a coordinated F/P/T effort should Canada be faced with this scenario. It is provided as a "stress-test" not a prediction and is intended to stimulate thinking concerning our current response efforts, capacity thresholds and resiliency.

More specifically, the scenario presents a set of potential risks, each requiring mitigation strategies based on an assessment of capacity requirements and our collective capability to manage the risks. *Figure 4* identifies high-level capabilities that need to be in place for this scenario and *Table 2* identifies associated requirements that should be considered at all levels of government.

Figure 4: Capabilities for management of the reasonable worst case scenario

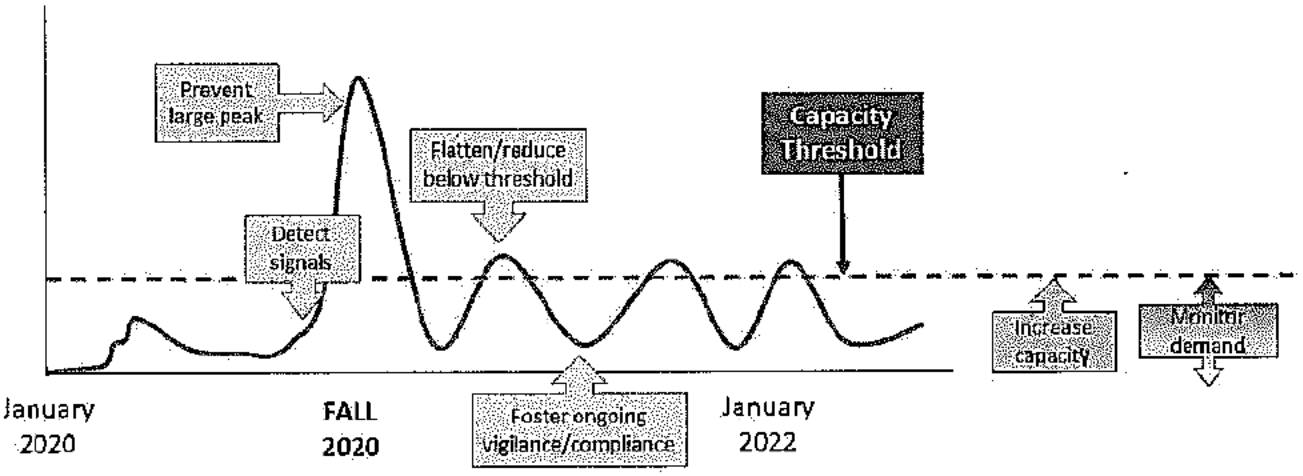


Figure 4 – Text Description

This figure is the same as Figure 3 but includes text boxes that identify capabilities needed for the management of the reasonable worst case scenario. Several of the text boxes have arrows that point to locations on the curve pattern where it is particularly important that the capacity be in place, however the intention is that these capacities are needed on an ongoing basis throughout the response. Also included in this graphic is the concept of "Capacity Threshold" which conveys the idea of an upper response capacity limit that could be breached by a high number of cases occurring over a short period of time. This is depicted with a horizontal red dashed line. In this epidemic curve for the reasonable worst case scenario, the peaks in the curve all cross over the capacity threshold line – depicting the situation where the surge in cases results in increased response capacity demands that exceed the capacity threshold. There are two red shaded text boxes that highlight the need to increase response capacity and to monitor demand. There are four text boxes, that point to the epidemic curve. The first includes the text "Detect signals" and points to the epidemic curve (depicted by a blue line), right before a surge in the number of new cases (depicted by an upswing and peak in curve) corresponding with a large Fall 2020 wave. The next text box includes the text "Prevent large peak" and points to the epidemic curve right where the large Fall 2020 peak is depicted. Where a subsequent peak (smaller in amplitude to the Fall 2020 wave) occurs and crosses the capacity threshold line, a text box indicates the need for capacities aimed at reducing demands causes by the peak in cases with the text "Flatten/reduce below threshold" included in the box. Finally in a "valley" in the peaks and valleys epidemic curve portion of the reasonable worst case scenario epidemic curve, there is a text box indicating the ongoing need to "Foster ongoing vigilance/compliance" particularly when new case numbers seem to be low or decreasing.

Table 2: Reasonable worst case scenario risk management requirements

Capability	Risk Management Requirements
DETECT –signals indicating a significant surge in cases may occur	➢ timely surveillance data (local, P/T, national and international) ➢ laboratory resources to rapidly distinguish between COVID-19 and other respiratory viruses ➢ rapid analysis/investigation to assess risk of large peak (exceeding response capacity), based on precise/granular local level data ➢ early warning for increased demand on resources and response activities ➢ rapid resource allocation to reduce and/or manage impacts ➢ pro-active risk communication ➢ ongoing vigilance/commitment to COVID-19 response
PREVENT –large fall peak that greatly exceeds capacity to respond	➢ resources to ensure ongoing response measures are adequate to control current spread and prevent new cases ➢ public cooperation with surveillance and case and contact management activities (i.e., to facilitate timely identification and isolation/quarantine) ➢ consistent, clear localized triggers for re-implementation of restrictive PHM ➢ rapid deployment of targeted outbreak control/containment resources (including implementation of local "lockdowns") ➢ gradual, controlled "re-opening" of settings and gradual resumption of activities (with modifications) that are known to be associated with increased transmission risk ➢ high compliance with ongoing modifications/controls put in place as restrictive PHM are lifted ➢ high compliance with personal protective measures ➢ proactive international border control measures ➢ increased messaging and public education regarding personal protective measures as more social interactions move back indoors in the fall season ➢ increased health care system capacity (especially in high-risk settings such as long-term care) and consideration of how to deliver needed health care (e.g., at alternate sites, using retired workers or students or alternate care providers)
REDUCE –surges in incidence and hospitalizations	➢ adequate resources to ensure ongoing response measures to control current spread and prevent new cases, hospitalizations and deaths ➢ focus on rapid detection and isolation of cases, and rapid identification and quarantine of contacts ➢ rapid detection of outbreaks and deployment of outbreak control/containment resources ➢ consideration of how to re-implement restrictive community PHM and which PHM to re-implement based on clear local-level triggers ➢ increased use of/compliance with, personal protective measures ➢ ongoing international border control measures with possible re-introduction of restrictions

INCREASE—health care and public health capacity	➢ laboratory surge capacity to ensure rapid diagnosis and case notification ➢ availability of public health resources for surges in case and contact management requirements in the community (including isolation of cases and quarantine of contacts at home/alternative designated sites), development of new guidance products and provision of expert advice based on evolving scientific literature ➢ resources (i.e., human and equipment/supplies), planning and training for outbreak control activities in high-risk settings, including clear emergency back-up contact points ➢ surge capacity to ensure availability/access to health care resources including equipment (e.g., ventilators, personal protective equipment) during peaks ➢ availability of sufficient health care providers to meet surge in demand ➢ ability to access and distribute effective pharmaceutical treatments ➢ ongoing monitoring of scientific literature, networks and expert advice to inform best practices for treatment and identification of effective pharmaceuticals that reduce hospitalization requirements and/or duration of hospitalization ➢ recovery policies and measures (e.g., discharge for recovery at home or alternate site) to avert potential backlogs in the hospital system
MONITOR—demand for health care resources	➢ surveillance for early indicators that other illnesses that may cause a surge in demand for health care resources (e.g., seasonal influenza, other respiratory pathogens) ➢ linkages between health care delivery and public health to ensure timely establishment of alternative/over-flow care sites ➢ enhanced monitoring of global supply chains that could trigger drug shortages and identified alternatives and strategies to prioritize and conserve supply (e.g., critical supply reserve etc.)
FOSTER –ongoing public vigilance and compliance with measures and recommendations	➢ ongoing public trust in public health authorities ➢ communication and education products to support continued widespread public adherence to personal protective measures and community-based public health measure ➢ public knowledge, attitudes and behavior research to inform sustainable effective behavioral changes

6. COVID-19 F/P/T Response Components

Forward planning will also be informed by ongoing reflection regarding what has worked well, what we have learned and what we can be adjusted based on evidence and experience. Using the response components identified in the CPIP, with a focus on those requiring F/P/T public health leadership and consultation, this section provides details on national-level activities planned or already underway that will assist and expedite complementary planning in each federal government department, province and territory.

6.1 Surveillance

The purpose of surveillance and risk assessment activities is to provide decision makers with the timely epidemiological and risk information they need to inform action. Similar to national influenza surveillance (FluWatch), COVID-19 surveillance is a pan-Canadian initiative that integrates numerous data streams including existing surveillance systems with novel, non-traditional data sources.

Current Status/Focus

Currently, the following data sources are facilitating monitoring across the spectrum of disease (i.e., from mild cases in the community based on sentinel surveillance to severe illness based on hospitalization data).

- Case-level data reported by PTs: Revised national dataset including more information on cases, risk factor data, improved occupational data, and the addition of race/ethnicity data is a key priority.
- Aggregate laboratory result data: Provincial public health laboratories and PHAC's National Microbiology Lab report numbers of people tested for SARS-CoV-2.
- Syndromic surveillance data: Canadian residents with influenza-like illness and individuals reporting influenza-like illness to participating sentinel practitioners participating in PHAC's FluWatch.
- Apps: User data from Canada COVID-19 and other symptom tracking applications.
- Mobility data: Partnership with BlueDot Inc., and other sources that may become available, to monitor indicators of population movement as a proxy measure for compliance with PHM, and the levels of inter-P/T movement.
- Special survey: Impact of COVID- 19 on specific populations (e.g., health care worker).
- Sentinel Surveillance Networks:
    - Hospital networks - Several hospital-based data streams measure the impact of COVID-19 in Canadian hospitals and collect detailed case information on most severe cases.
    - Canadian Pediatric Surveillance Program - occurrence of Multi Inflammatory System in Children (MIS-C).
    - Community-based systems/ networks - Assess the level of transmission in the community and the epidemiologic characteristics of outpatient cases.
- Publicly available data: supplementary data source to add situational awareness on COVID-19 transmission in jurisdictions.

Preparations/Forward Planning

Preparations are underway to improve the quality, completeness and timeliness of surveillance data in advance of a potential fall resurgence. This includes F/P/T/Indigenous support of First Nations/Inuit/Métis-led data management. In general, the multiple data streams are being configured in order to pick up signals and changes in epidemiology. These preparations and ongoing activities based on the anticipated short, mid or long-term timeframe are identified below.

Short term:

- Work with Surveillance Expert Working Group (SEWG) on the operationalization of a new national dataset.
- Work with the PHAC Health Portfolio Operations Centre (HPOC) to ensure seamless reporting and mapping to existing data.

- Updating/developing data dictionary, case report form, metadata guide (i.e., description of data collection processes in each jurisdiction), and surveillance guidance.
- Implementation of updated database infrastructure.
- Work through the Canadian Public Health Laboratory Network (CPHLN) to determine what demographic data on COVID-19 tests would be available at the national level and to improve laboratory surveillance data steam.
- Continue the work with P/T representatives to increase standardization of outbreak reporting (including establishment of a weekly outbreak dataset) via the Canadian National Public Health Intelligence system.

Medium to Long term:

- Consideration of new cloud-based database for use in HPOC and to support multiple data streams.

Planning Variables or Signals

It is possible that a new syndrome or rare event would require the development of a new, or adjustments to, the surveillance strategy as has occurred for Multisystem Inflammatory Syndrome in Children (MIS-C).

New settings or populations affected by outbreaks could emerge in outbreak surveillance (or via outbreak intelligence gathering) which could precipitate new data needs, additional surveillance activities or new variables to be collected to inform actions. For example, outbreaks among temporary foreign workers have highlighted the need to be prepared to rapidly implement specific surveillance and coordination mechanisms, as well as drawn attention to how social determinants of health (e.g., crowded housing, precarious work, access to medical services) can impact transmission and control of COVID-19.

6.2 Laboratory Response Activities

Laboratory-based surveillance is an integral part of monitoring respiratory virus activity. Because there are numerous respiratory viruses circulating at one time especially during the fall and winter seasons, laboratory testing using validated tests is critical for diagnosing COVID-19. Since the start of the COVID-19 outbreak, Canada's National Microbiology Laboratory (NML) has been providing leadership in regard to testing for COVID-19 and surge capacity for provincial and territorial public health laboratories. The NML has also contributed to domestic and international efforts to better understand COVID-19 virus characteristics that can inform the development of medical countermeasures.

Current Status/Focus

Canada's public health laboratories response activities are currently focused on the following:

- optimizing molecular testing to reduce reagent consumption by exploring the reduction in PCR target genes, pooling of samples, evaluating the optimal types of samples, swabs and transport media, through the Canadian Public Health Laboratory Network (CPHLN);
- working to evaluate serological testing kits as well as developing in-house contingency serological tools such as ELISA, neutralization assays and point of care tests (serological work is in support of the broader Canadian Immunology Task Force);

- supporting work being done by the Canadian COVID Genomics Network (CanCOGeN) to sequence 150,000 genomes;
- working closely with northern, remote and Indigenous communities to enable those communities to have greater access to laboratory diagnostic tools (e.g., diagnostic platforms, reagents, training, supply chain management, and augmentation of Transport of Dangerous Goods (TDG) sample shipping requirements) to meet pandemic challenges in those and all Canadian communities; and
- undertaking (through the NML) animal research that will aid in understanding pathogen characteristics.

Preparations/Forward Planning

The NML together with the CPHLN undertaking the following activities in order to prepare for a potential fall resurgence based on the reasonable worst case scenario but also as part of the laboratory preparedness long-term vision.

Short term:

- Optimizing molecular testing to be able to distinguish COVID from non-COVID respiratory infections during the coming flu season
- Continuing strong communication among Canada's public health partners through CPHLN to ensure aligned and appropriate laboratory response strategies

Mid term:

- Optimizing serological testing to be able to determine whether individuals have been previously infected, especially for healthcare and other service providers such as police, fire, long-term care facilities, etc.
- Streamlining molecular and serological testing, including stewardship of reagents so they are conserved as testing demands increase
- Developing, validating, and enabling greater access to faster diagnostic tools such as Point of Care tests (prioritizing northern, remote, isolated and Indigenous communities)
- Working with manufacturers to enhance the sourcing of critical laboratory supplies that meet appropriate standards
- Working with P/Ts and other stakeholders to inform the use of testing in specialized settings (such as borders)

Planning Variables or Signals

Although the percentage of positivity has been diminishing recently, a change in the inflection of that curve (i.e., switch to increasing trend) is an immediate signal that a second wave has been triggered and therefore may affect timelines, strategy or prioritization of these activities.

6.3 Public Health Measures

PHM are the activities implemented by public health authorities to support individuals and communities to prevent, delay or mitigate infectious disease transmission. These include measures focused on individuals (i.e., personal practices, case and contact tracing, self-monitoring, isolation and quarantine) to protect themselves and others, and community measures such as public education campaigns and general recommendations for non-pharmaceutical interventions (e.g., hand hygiene, physical distancing

and use of non-medical masks) to protect groups and the community at large. The community-based measures should be informed by a risk assessment tailored to each setting. Some measures are referred to as "restrictive" if they include limiting the movement, activities, or access to resources/facilities/institutions, at the community as opposed to individual level (e.g., school closure, cancellation of mass gatherings, access to workplaces, businesses or event venues). Many of these measures have important consequences beyond the context of COVID-19 management which require careful consideration and prioritization in relation to other determinants of health, such as childhood development.

Since the start of the COVID-19 outbreak the F/P/T public health response has involved working closely with multilateral partners, other government departments, First Nations, Inuit and Métis stakeholders to develop, update and disseminate appropriate public health guidance for a range of target audiences on how to detect, report, prevent and manage COVID-19 infection. One example of this is the formation of the Public Health Working Group on Remote, Isolated and Northern Indigenous Communities that is working to adapt public health measures guidance to the unique needs, context and considerations of these communities in the response.

Current Status/Focus

Current FPT PHM include:

- Focusing on isolating all cases, and tracing and quarantine of all contacts in a timely manner;
- Monitoring the evolving domestic and international situation, updating advice and adjusting PHM accordingly (e.g., advice on non-medical mask use);
- Phased lifting of restrictive PHM by PTs while monitoring for signals of concern (e.g., increases in unlinked cases) and protecting high-risk populations;
- Promoting risk based approaches to using PHM based on the setting and consideration of the broad impacts of PHM on health and wellbeing;
- Supporting workplaces/businesses by working with the Canadian Centre for Occupational Health and Safety, to provide guidance for safe and healthy workplaces; and
- Developing and updating national guidance as information becomes available.

Preparations/Forward Planning

In terms of F/P/T preparations, the focus is on building, adjusting and updating existing PHM guidance and resource products as needed, based on new knowledge, experience and contingencies (including planning for the reasonable worst case scenario).

It is important that these ongoing activities continue to be as timely and responsive as possible and take into consideration the specific needs of high-risk populations by social, economic and demographic factors. Community-based PHM are most effective when implemented as early as possible in response to epidemiological triggers of concern. Therefore, preparations include being ready to re-implement restrictive community PHM if required, while modifying them if possible to avoid negative impacts on health, wellbeing and society. Communication activities that continue to build public trust and confidence will be critical to facilitating public understanding and cooperation with respect to recommended PHM.

These preparations and ongoing activities based on the anticipated short, mid or long-term timeframe are identified below.

Short term:

- Ongoing updates to existing national guidance as evidence evolves;
- Completing new guidance (e.g., post secondary guidance);
- Updating public and health professional communication and education products;
- Developing sufficient P/T public health capacity to isolate cases, trace and quarantine contacts in place, including through the use of digital tools;
- Establishing a process for providing comprehensive advice to workplaces/businesses.

Mid term:

- Ongoing situational monitoring of COVID-19 and broader impacts of PHM and recommendations, updating advice and adjusting PHM accordingly;
- Ongoing guidance updates;
- Monitoring public compliance with PHM; adjusting messaging and enforcement as required;
- Re-instituting PHM in jurisdictions, if resurgence occurs;
- Providing considerations for PHM into plans for vaccination clinics (influenza and COVID-19); and
- Re-evaluating F/P/T plans for stockpiling supplies (e.g., hand sanitizer, gloves, masks, disinfectant supplies) in consideration of PHM

Long term:

- Evaluating the long-term strategy for PHM and developing/updating F/P/T plans;
- Providing public education to entrench PHMs as a core practices that will become the new baseline practices based on effectiveness of measures (evidence reviews); and
- Work with other sectors to strengthen the social services to protect health and mitigate risk.

Planning Variables or Signals

Preparations and forward planning will consider adaptations to current activities, recommendations and guidance, e.g., if there are significant changes in diseases activity, high risk groups or public adherence to recommended PHM, and the impact these may have in various population groups.

6.4 Infection Prevention and Control and Clinical Care Guidance

While impacting the F/P/T public health response, the provision of infection prevention and control (IPC) and clinical care guidance and expert advice has predominantly been aimed at informing practising health care professionals. Therefore engagement with stakeholders outside of the public health sector, in particular front line health care workers, is a key part of supporting preparedness.

Current Status/Focus

The current focus of response activities pertaining to IPC and Clinical Care include:

- Ensuring that previously published COVID-19 Infection Prevention and Control documents continue to provide relevant and evidence-informed guidance;
- Updating (based on new information) the interim guidance for the clinical management of patients with moderate to severe COVID-19;
- Providing clinical guidance on the changing presentation, complications, risk factors and outcomes of COVID-19;
- Completing any outstanding guidance products;

- Planning for joint PHAC/Association of Medical Microbiology and Infectious Disease Canada (AMMI) webinars addressing ongoing key clinical issues that will occur once a month starting July 2020, potentially through to March, 2021; and
- Providing key clinical journal articles review and summation to F/P/T public health tables.

Preparations/Forward Planning
All Clinical Care Guidance and Infection Prevention and Control documents are being reviewed on an ongoing basis to ensure they reflect the most up to date information on clinical care and IPC. This includes key clinical findings in the literature, responding to new and/or changing science.

Planning Variables or Signals
If additional clinical or infection prevention and control information emerges, (e.g., a change in mode of transmission or additional or unknown risk groups), there may be a need to revise or develop additional IPC or Clinical care guidance documents. Similarly, the identification and availability of an effective treatment will requires updating of Clinical care guidance.

6.5 Vaccination

The World Health Organization (WHO) is providing information on the progress of over 150 COVID-19 vaccine candidates[9]. At this time 21 candidate vaccines are in clinical evaluation and 139 candidate vaccines are in preclinical evaluation. It is necessary to start planning for implementation of a COVID-19 vaccine strategy for Canada now, however, for planning purposes it is assumed that an efficacious vaccine will not be available until 2021 at the earliest.

Reducing hospitalizations due to seasonal influenza and invasive pneumococcal disease through increased vaccine coverage can preserve both public health (e.g., diagnostic/testing, outbreak response) resources and health care (i.e., outpatient visits and inpatient stays) capacity[10]. For these reasons it has been identified as a forward planning element.

Current Status/Focus
PHAC is involved in COVID-19 vaccine planning through strategic discussions with the regulator and potential manufacturers. PHAC has also engaged the National Advisory Committee on Immunization (NACI) to develop an equitable, ethical, feasible and accessible framework outlining prioritization principles that will optimize pubic health benefits from vaccination against COVID-19 during the pandemic. NACI has also published guidance on COVID-19 vaccine research priorities.

Preparations/Forward Planning
Anticipating that it will take time to manufacture a sufficient supply of a new COVID-19 vaccine, and shipments may be staggered, Canadians need to be aware that the vaccine will not be offered to all Canadians at the same time. Furthermore, the traditional influenza pandemic vaccine approach (i.e. to vaccinate everyone immediately) may not be advisable or appropriate for a novel coronavirus vaccine developed where there is limited experience of its safety and effectiveness.

It is expected that PHAC will have an interim framework informed by NACI at the end of summer 2020, following extensive evidence reviews and F/P/T engagement to identify target groups for the first available doses of COVID-19 vaccine and vaccine program strategies. In the absence of a COVID-19

vaccine, general planning (as outlined in the Vaccine Annex of the CPIP) is proceeding, for example, enhanced tracking systems for adverse events following immunization (AEFI), vaccine effectiveness (VE) assessment and uptake; allocation, storage and handling; vaccine delivery strategies, are all being addressed as part of the vaccine strategy for COVID-19 vaccination in Canada. In the event vaccine is sourced from manufacturers that do not have an existing Canadian presence, PHAC may also be involved in contracting for vaccine storage and distribution centres. In addition, the Government of Canada is proactively procuring essential supplies (e.g., needles, syringes, epinephrine, etc.) on behalf of the PTs via the National Emergency Strategic Stockpile to mitigate against potential supply shortages when a COVID vaccine becomes available for use in Canada.

A newly formed Government of Canada COVID-19 Vaccine Task Force will focus on strategic investments in vaccine research, development, and domestic bio-manufacturing to facilitate domestic vaccine supply. In addition, a COVID-19 Vaccine Clinical Trial Discussion Forum is convening academic, government, and industry partners to discuss vaccine clinical trial challenges and optimal designs.

While a COVID-19 vaccine is not anticipated in time to respond to any fall resurgence of COVID-19, the timelines for guidance products is as follows:

Short term:

- Interim NACI guidance (this fall) on COVID-19 vaccine strategies and target groups for early vaccines.

Mid term:

- Adaption of the contents of the CPIP Vaccine Annex for the COVID-19 context.

Longer term:

- Enhancements/preparations for AEFI tracking and analysis;
- NACI final programmatic guidance on the use of authorised COVID-19 vaccine(s); and
- Logistical planning for supply chain, including for transport /storage /use of vaccines in northern, remote, isolated settings and Indigenous communities.

Influenza vaccines and routine programs

F/P/T public health responders are concerned about interruptions to routine immunization programs due to COVID-19 PHM and physical distancing, and are monitoring trends. To this end, PHAC has issued guidance on the importance of immunization program continuity in particular to mitigate the risk of measles and other vaccine-preventable disease outbreaks once international travel resumes.

Also of concern is the potential convergence of COVID-19 and influenza in fall 2020, which could exacerbate pressures to the health system. In response, PHAC is taking action to order a specialty influenza vaccine (Fluzone High Dose) on behalf of the P/Ts for the 2020 influenza season to support the prevention of influenza transmission and outbreaks in long term care (LTC) homes. PHAC has ordered enough vaccine for all adults over 65 years in LTC. The intent is to reduce the burden of influenza on the healthcare system and LTC homes/facilities that will potentially be dealing with concurrent COVID-19 outbreaks.

In anticipation of increased or sustained COVID-19 transmission during the roll-out of influenza vaccination programs (fall, 2020), PHAC is also preparing guidance on the delivery of influenza vaccine in the presence of COVID-19. The guidance will focus on alternative delivery models, clinic set up, changes

to immunization practices and processes, infection prevention and control, and personal protective equipment at influenza vaccine clinics.

Planning Variables or Signals

It is important for planning purposes to recognize that the final vaccine strategy in Canada cannot be designed until more is known about the new COVID-19 vaccine's characteristics (e.g., efficacy, safety, dosing schedule), how well the candidate vaccines work in different populations (e.g., elderly), and the supply situation. Forward planning should include consideration of variations in vaccine acceptability and response to AEFI reports or signals. This will require AEFI surveillance, health promotion and education and risk communication expertise.

6.6 International Border and Travel Health Measures

Since the onset of the pandemic, the Public Health Agency of Canada (PHAC) has significantly shifted its border and travel health programs to focus primarily on mitigating the risk of COVID-19 importation and together with other response measures, protecting the capacity of provinces and territories to offer health services to Canadians. Prior to this pandemic, it was not envisioned that extensive international border closures would be implemented as a pandemic response measure.

Current Status/Focus

Several new and enhanced border and travel health measures critical to the COVID-19 response have been developed and implemented including:

- an increased capacity for PHAC to undertake health-related risk assessments and provide travel advice and other measures to minimize the risk of Canadians' exposure to the disease, including on conveyances (air, marine, land);
- leveraging the provisions of the *Quarantine Act*, together with the creation of a new compliance and enforcement regime, to limit entry of foreign nationals and impose new quarantine and isolation requirements for incoming travellers to Canada;
- the establishment of a stronger public health presence at the border (i.e., public health officers being assigned to 36 high volume points of entry) as well as enhanced PHAC capacity to conduct virtual health assessments for COVID-19 via access to a 24/7 Central Notification System;
- the establishment of temporary federal quarantine facilities across the country and their continued management to support enforcement of public health Orders;
- enhanced partnerships with provincial and territorial health authorities and other key players to support data-sharing, compliance, enforcement of quarantine and awareness on COVID-19 (e.g., through the ArriveCan app); and
- messaging and communication tools for the travelling public.

Preparations/Forward Planning

Moving forward as part of planning for a potential resurgence of the disease, PHAC will continue to maintain a high level of readiness to respond to COVID-19 through a combination of border and travel measures that are calibrated to:

- Evolution of the domestic COVID-19 situation and provincial and territorial considerations;
- Updated modelling and risk analysis of other countries and international experiences to ensure lessons learnt;

- Operational capacity pre-, at- and post-border to handle anticipated increased incoming and outbound travel volumes;
- Consideration of public health/health system capacity to manage potential increase in imported cases (testing, contact tracing and reporting, provincial and territorial health care capacities); and
- Volumes that different classes/sectors or arrival modes bring to Canada.

Planning Variables or Signals

Should the international and/or domestic context shift, signalling a need for Canada to consider border and travel measures anew, there are a variety of possible approaches that could be explored:

- **Global restrictions:** Increase/impose global restrictions for all destinations, control through health-related measures. Possible exclusion of high-risk countries based on country risk assessments.
- **Country-specific restrictions:** Remove global advisory/prohibition of entry, but maintain/impose restrictions for individual destinations by exception, based on risk of importation
- **Sectoral/class restrictions:** Decrease exemptions to travel measures based on a sectoral analysis
- **Reciprocal:** Leave global advisory/prohibition of entry, remove or ease restrictions based on reciprocal arrangements with individual states (or regions e.g., Caribbean) and assessment of respective COVID situations
- **Modal:** Ease measures first for entry by air/sea and later for entry by land

6.7 Health Care System Infrastructure

A peak in pandemic activity greater than the first COVID-19 wave in any jurisdiction can have a substantial impact on health care service capacity and the ability of health care organizations to keep those providing or receiving health care services safe.

Current Status/Focus

The F/P/T public health response in terms of health care system infrastructure has involved linking with those partners responsible for monitoring, anticipating and planning for surges in health care system capacity in order to increase mutual knowledge and situational awareness, and support response activities regarding the delivery of health care to COVID-19 cases in Canada. To support this work:

- the Government of Canada together with the PTs have taken steps to support hospital surge capacity and ensure timely access to critical equipment and supplies;
- funding has been provided for the development, expansion and launch of virtual care and mental health tools to support P/T services;
- modelling has been used to project anticipated demands;
- sharing of hospital-based data (on rates of admission, current capacity and equipment/supplies/resources usage) has been included in surveillance products; and
- the Logistics Advisory Committee (LAC) has been convened to facilitate resource procurement.

Preparations/Forward Planning

In terms of forward planning, the Government of Canada will continue to:

- consult with PTs and use modelling to assess need for additional procurement of personal protective equipment (PPE), essential supplies, and life-saving medical equipment to support P/T health care systems and increase National Emergency Strategic Stockpile (NESS) capacity

- explore opportunities to build domestic production capacity for critical PPE and other essential supplies
- monitor for potential COVID-related drug shortages and work with P/Ts and stakeholders to proactively develop and implement strategies to manage these risks
- provide PPE to First Nations, Inuit and Métis communities to ensure the safety of healthcare workers and others supporting the delivery of health services through the Indigenous Services Canada (ISC) PPE Stockpile and PHAC's National Emergency Strategic Stockpile (NESS)
- facilitate sharing of best practices on alternate care facilities, triage and management of delivery of non-COVID-19 health care services review the latest available scientific evidence to inform guidance for health settings and develop tailored approaches for communities with specific health care needs, such as remote, northern and isolated communities as well as Indigenous peoples in urban settings.

Health care institutions, many of which are already working close to full capacity, need to plan for how they will accommodate potentially large influxes of patients, including establishing ethical frameworks for the allocation of scarce resources such as ICU beds and ventilators. In remote, northern and isolated communities it is also critical to plan for potential supply-chain and medical evacuation interruptions due to weather.

Forward planning must consider the broad health care system impacts and changes that occurred during the initial wave of COVID-19 in Canada. Specifically, the unanticipated reduction in emergency room visits for serious conditions, the shift of primary care to virtual care, and the backlog of surgery, need to be addressed both in terms of the implications for "catchup" and the need to plan for future waves in a way that doesn't shut down the health care system more than is necessary.

Planning Variables or Signals

In the event health care institutions start to see an increase in the number or change in the characteristics (e.g., demographics, underlying medical conditions) of patients being treated for COVID-19, the Government of Canada will work with PTs to monitor capacity and use of PPE, ventilators, intensive care unit (ICU) beds, and other critical supplies, to enable collaborative and effective management of outbreaks. Surge capacity in terms of health care workers and other human resources is also being examined.

6.8 Risk Communications and Outreach

Communication of information and advice in a public health emergency is a critical public health intervention that helps to protect public health, save lives, and minimize the overall social and economic impacts. Using a risk communications approach, the Public Health Agency of Canada, together with other government departments and P/Ts counterparts, have worked hard to provide health care providers, Canadians and key stakeholders with the timely, trusted, accessible, evidence-informed and complete information they require to protect themselves, their families, their communities and businesses.

Current Status/Focus

The current focus is on communicating clear, concise and concrete messages that will cut through the current fatigue, confusion and fragile compliance, in order to: ensure Canadians have the information they need to protect themselves and others from the virus and to reduce its impacts on personal health,

the healthcare system, social life and the economy as Canadians' transition into the new reality of 'Living with COVID-19'; and to help Canadians make a conscious and informed decision about the activities that they will participate in outside the home and how they can participate in a way that protects them, their families and communities.

Key activities to date include:

- engagement of F/P/T and Indigenous networks to ensure consistency of messaging and to share best practices (and lessons learned) across jurisdictions;
- briefings by Chief Medical Officers of Health and local Medical Officers of Health in the PTs and nationally by the Chief Public Health Officer and Deputy Chief Public Health Officer –including modelling and epi updates;
- targeted communications on enhanced border measures;
- use of all communications levers (advertising, web, social media, regular briefings, national mail outs, partnerships, P/T collaboration, community outreach, etc.) to reach stakeholders (including the Canadian public);
- The implementation of a four-phased COVID-19 Risk Communications Strategy with different foci (e.g., containment and delay, tools and empowerment, mitigation and working together to 'flatten the curve', perseverance and ongoing vigilance in context of disease reduction and re-opening of society); and
- F/P/T and Indigenous community collaboration to share best practices and lessons learned and to ensure future messaging is aligned and consistent (via Public Health Network Communications Network and the Special Advisory Committee).

Challenges and Considerations:

Messages in the earliest phase of the pandemic were clear – stay home; wash your hands – now the environment is much more complex:

- There are different epidemics across the country so different public health measures are in place across jurisdictions. Messages and their delivery must be clear and firm to combat any confusion.
- There is still much uncertainty that impacts how precise and definitive we can be in our messaging. As science evolves and we learn more, advice to Canadians may change, adding to confusion and accusations of flip-flopping from earlier messages.

Communicating is becoming more complex as the economy reopens and Canadians engage in social and economic activities following a prolonged period of disruption to their lives:

- Canadians are being encouraged to participate in the economy as it re-opens in this period of recovery. We need to help people make an informed and conscious decision each time they leave their home to help them protect themselves and others.
- Canadians need to assess their activity, their risk tolerance, their risk to others and the importance of their own behaviour in reducing risk. Our communications efforts must arm them with the information to do so easily and accurately.

The risk perception (and compliance) of Canadians will vary based on their individual experiences and their unique reality.

- We need to maintain the current level of compliance and find ways to continue to encourage and provide positive reinforcement to those who are following public health guidance while tackling low risk perception and compliance among specific groups.

Preparations/Forward Planning

It is now important to shift messaging as we transition Canadians into the reality of 'Living with COVID' and transition nationally from an acute response to the loosening of public measures to varying degrees across the country. The lifting and loosening of PHM needs to be balanced with the message that certain measures must remain in place in order to keep the level of transmission at a locally manageable rate. All levels of government need to communicate that Canadians should be prepared for a walk back or tightening of PHM if necessary.

The forward planning communications approach includes:

Provide clear, consistent, concise and concrete messages and advice with relatable examples and tools for Canadians:

- Apply behavioural science to test a variety of public health messages and tools.
- Guidance to help the public minimize risk while venturing out into public spaces.
    - Checklists for when you leave the house
    - Decision making tools

Stop telling and start showing:

- The best way to reinforce the behavior we want from Canadians is to demonstrate it.
- Showcase community members/organizations/spokespersons who are "doing it right."
- Leverage more storytelling to motivate behavior (youth testimonials, etc.).
- Recognition and celebration of those who have made a difference.

Communicate with empathy and honesty

- The efforts of Canadians through the first phase have very likely saved thousands of lives. Need to acknowledge that and encourage everyone to keep doing that.

This approach will be supported by F/P/T strategies, content and implementation plans that include:

- Sufficient public opinion research (POR) and behavioural insights (re. behaviours, vaccine, public health measures, back to school) to identify all Canadians' priorities, values and concerns, and capture regional variations;
- Public Education Campaigns
- Vaccine readiness campaigns (seasonal flu and COVID-19);
- Travel readiness campaigns;
- Contact tracing related communication activities;
- F/P/T collaboration to share best practices and lessons learned and to ensure future messaging is aligned and consistent (via PHN Communications Network and SAC).

This will predominantly be achieved through strategic outreach and engagement by the Chief Public Health Officer (CPHO), Deputy Chief Public Health Officer (DCPHO) and P/T spokespersons, public education campaigns, media relations and issues management, social media, and website updates. Significant outreach and engagement with a range of health and non-health stakeholders has been an essential part of the national response to COVID-19. This outreach and engagement has evolved throughout the pandemic from a focus on proactively sharing the latest public health developments and resources to identifying stakeholder information needs and perspectives, to collaborating on guidance development and joint communication messages. A range of stakeholders have been engaged through

regular COVID-19 briefings, teleconferences and webinars including the following: CPHO Health Professionals Forum (national health professional organizations), national allied health organizations, local public health medical officers of health, critical infrastructure stakeholders, agriculture and agri-food stakeholders, business groups, and childcare and education stakeholders.

It has been and continues to be especially important to engage community leaders from Indigenous communities, racialized communities/communities of color, and faith-based organizations to help deliver critical information[11].

Planning Variables or Signals
Surges in cases requiring change in or implementation of restrictive community PHM along with any changes in science (e.g., new information about COVID-19 that requires a shift in Canada's public health response or guidance to specific populations), changes to border measures, indicators of vaccine hesitancy and vaccine availability, will all necessitate updating of the current F/P/T communication strategy and products.

6.9 Research

The Government of Canada has mobilized Canada's research and scientific communities in response to the spread of the novel coronavirus (COVID-19). Priority research areas include medical countermeasures (vaccines, therapeutics, and diagnostics), clinical management research, as well as social and policy research.

Current Status/Focus
Currently:

- the Government of Canada has established mechanisms for mobilizing rapid research responses for this type of emergency, which have been activated to accelerate development of medical countermeasures, to support priority research on the transmission and severity of COVID-19, and to understand the potential benefits and potential limitations of medical, social and policy countermeasures;
- Health Canada has established a number of temporary innovative and flexible measures to help prioritize and expedite the regulatory review of COVID-19 health products without compromising Canada's high standards for safety, efficacy and quality (these measures have been put in place to facilitate safe and timely access to products Canadians and health care workers need);
- there are several federal programs available aimed at mobilizing industry, innovation and research to respond to COVID-19;
- capacity at federal research facilities is being leveraged, and federal granting agencies are strategically aligned to support Canadian research capacity;
- the Canadian private sector (R&D, manufacturing) is being engaged to contribute research and development solutions; and
- the Government of Canada is also supporting various strategies to bring significant findings arising from these research efforts to decision-makers in a useful and timely way.

Preparations/Forward Planning
In order to prepare for a fall resurgence based on the reasonable worst case scenario, the following needs have been identified:

- Need to prioritize and pursue a wide array of **Clinical Trials activities** for therapeutics and vaccines.
- Need to strengthen our capacity to deliver on **relevant COVID-19 modelling work:** The COVID-19 epidemic has demonstrated the important role and need for greater and ongoing capacity to implement the full range of modelling tools required to support decision-making during a complex public heath crisis. Models help to predict where and when COVID-19 infections may emerge or re-emerge, and they can be used to explore the best combinations of approaches to control disease progression and protect the health of Canadians.
- Need to **pursue research and surveillance studies** aiming at better understanding mechanisms of infections and immunity against the COVID-19 virus. Investigating and tracking the genetic diversity of SARS-CoV-2, the virus that causes COVID-19, across Canada to better respond to its spread; evaluating and establishing blood test (serologic) methods to determine the immune status of Canadian populations; and research and research coordination with partners to develop COVID-19 animal models and medical countermeasures.
- There is a need to invest in and mobilize knowledge relating to social sciences such as sociology, anthropology and psychology. Specifically **behavioural science and ethnic research** can guide future policy and regulatory actions.
- Need to strengthen our capacity to perform **rigorous and rapid evidence review** to generate evidence reviews and answer specific questions to provide the most up-to-date science evidence for optimal decision-making.
- Need to explore the epidemiological value of new, innovative methods to track community spread, such as **testing SARS-CoV-2 from sewage water** to provide early warning ability at the community level (municipality, special settings such as Long-Term Care Facilities, prisons, hospitals and remote communities).

Short to Mid term:
In the short to mid term, the approach to these preparations is to:

- Work collaboratively with National partners, FPT, stakeholders groups (including National Indigenous Organizations; Indigenous researchers and scholars; National Collaborating Centre for Indigenous Health), and the Federal Science Community to support the work of key task groups mandated to support Canada's COVID-19 response (Immunity Task Group, the Vaccine Task Force, the Therapeutic task Group) and Indigenous-led culturally grounded research;
- Work collaboratively with Federal Science Based departments with specific targeted engagement with the CIHR and the Chief Science Advisor of Canada; and
- Continue engagement with the pan-Canadian Public Health Network (via the Technical Advisory Committee and Special Advisory Committee). Activities include sharing research, data and local experience that will inform further planning in alignment with our stated public health pandemic goal and objectives (e.g., quantifying the negative and positive consequences of the PHM that were uses in the initial response to be better able to address the inequities that have arisen).

Long term:
In the longer-term, efforts will include seeking investment to strengthening laboratory capacity in the area of genomic innovation and bio-informatics.

Planning Variables or Signals

As with other response component several factors including: evidence of significant increased in the mortality ratio, data from vaccine and therapeutic clinical trials, data on immunological protection of Canadians, new / rigorous knowledge on the impact of COVID-19 specific high-risk groups, a significant shift in genomic pattern of SARS-CoV2 (leading to examine possible shift in virulence or infectivity) and new / rigorous knowledge of the importance of a non-respiratory mode of transmission, would potentially impact preparations for the ongoing COVID-19 response.

7. Planning with Indigenous Communities

Indigenous communities have been supported as they worked to update and activate their community pandemic plans. Over 30 Indigenous organizations have been engaged and collaborating together to support public health response through the Public Health Working Group on Remote, Isolated and Indigenous Communities as part of the SAC structure. Indigenous Services Canada (ISC) together with National Indigenous Organizations (NIOs), have been leading work with PHAC, Statistics Canada and the First Nations Information Governance Centre to address data gaps regarding the impacts of COVID-19 on Indigenous Peoples.

As a result of community supported response efforts, infection rates on-reserve and in the North have remained lower than the rate in the overall Canadian population. However, it is important to note that gaps for urban, Métis, Inuit and off reserve First Nations populations persist and increased linkages are required to support these populations. A summary of the response activities that have been supported to date in addition to the strategy/approach, actions and deliverables for these preparations for the short, mid and long term (i.e., being before September, September to December, and 2021 and beyond, respectively) are included in *Appendix 3: COVID-19 Response Planning with Indigenous Communities*.

8. Planning for High-risk settings and populations

A specific setting may be considered as "high-risk" due to:

- the potential for higher rates of severe disease or death amongst those in the setting compared to that of the general population (because of clustering of people with underlying medical conditions, clustering of those in high-risk age group or both); and/or
- potential for high rates of transmission (because of unavoidable crowding indoors with limited ability to use or inconsistent use of protective measures).

Epidemiologic investigations of outbreaks in these settings are key to improving our understanding of transmission dynamics and setting-specific risks. It can be challenging to significantly mitigate these risks; therefore planning activities need to look at the specific circumstances of each setting and what enhanced measures can be put in place to prevent and manage COVID-19 outbreaks in these highly variable contexts. This should include measures to prevent introduction of the virus into these settings, (e.g., through screening of employees and visitors, restriction of visitation, efforts to prevent work at more than one high-risk location, implementation of a quarantine period for people entering the setting).

As has been observed during the first wave of COVID-19, high-risk settings that would benefit from special planning considerations have included:

- Long-Term Care facilities.
- Worksites necessitating close proximity to others (e.g., meat processing) or with communal housing (e.g., temporary foreign workers living on work farms, remote/fly-in work camps like northern mines).
- Remote populations without ready access to advanced health services (e.g., fly-in only access communities), and with potentially elevated rates of underlying medical conditions or other pre-existing disparities.
- Homeless shelters.
- Prisons.

While guidance has been developed and measures have been put in place aimed at preventing further outbreaks in these settings, planning for the reasonable worst case scenario necessitates that we undertake activities in the short term to shore up capacity to undertake prevention and outbreak response measures, as well as, continuously monitoring these measures and adjusting as necessary. For example:

- If there were to be a high level of pandemic activity in the surrounding geographic areas would the response plans for these settings be applicable and sufficient?
- What are the existing gaps in guidance, measures or resources, and how can these be addressed prior to a potential fall resurgence?
- Are prevention measures that were implemented during the first wave of COVID-19 sustainable and realistic for a fall resurgence and/or the reasonable worst case scenario?
- What impact could these measures have on high-risk populations?

This collaborative work to plan and support high risk settings and populations will continue at all levels of government and across multiple sectors and stakeholders from public health, health care, education, agriculture/agri-food, immigration, economic development, corrections, social services/housing, science/research and labour.

As work continues, it is important to take into consideration the impact that these measures may have on the various sociodemographic groups most likely to be affected. Considerations for low-income workers, seniors, migrant workers, persons living in overcrowded housing, persons experiencing homelessness, and prisoners, among others, will need to remain a cornerstone of all response plans.

9. Assessment and Evaluation

Assessing and evaluating pandemic response efforts during periods of relatively lower response tempo will help identify areas of improvement and prioritize future planning efforts. It is also vital, on an ongoing basis, to determine whether response activities have been effective and implemented efficiently so as to achieve the intended results and whether areas of uncertainty (see Section 4) can or have been addressed. The F/P/T COVID-19 response governance structure (see Appendix 1), which includes the Special Advisory Committee (SAC), Technical Advisory Committee (TAC) and Logistics Advisory Committee (LAC), provides multiple forums for these discussions and opportunities for sharing of experience, lessons learned and identified best practices. More structured processes for assessment

and evaluation, including in-action and after-action reviews should be considered at all levels of government to inform forward planning and future pandemic preparations.

Now that the initial wave of COVID-19 is subsiding and our collective knowledge about this disease and its impact has increased, the broader direct and indirect consequences of the COVID-19 response in terms of other physical and mental health outcomes as well as societal and economic impacts must be acknowledged and assessed so that reduction of negative impacts can be accounted for in comprehensive forward planning efforts.

This should involve consideration of the impact response measures may have on individuals' physical, social, mental and emotional health and wellbeing, including how this may affect the adoption of control measures. The broader impact of restrictive community PHM in terms of health, wellbeing, child development and welfare needs to be assessed and plans implemented to prevent other immediate health harms and to prevent increasing health inequities for higher risk populations. These could be in the area of other direct impacts to health including; risks of delaying health procedures, domestic violence, child welfare/neglect, reducing access to harm reduction services or safe drug supply and mental health services. It could also involve addressing indirect COVID-19 associated health and wellbeing risks such as congregate housing, low employment standards, lack of access to educational supports for high need students, and risk of visitor restriction policies (e.g., family caregivers in long-term care homes).

Resources and guidance to support mental health is in development, however the need for other resources needs to be considered. Furthermore, improving the conditions (such as housing and employment conditions) that increase the risks associated with COVID-19, could also help reduce the health and societal impacts of future pandemics.

Appendix 1: Canada's Public Health Emergency Response System and Inventory of Resources, Guidelines and Agreements to inform COVID-19 Preparedness and Response

Canada's public health emergency response "system" comprises a series of complementary, mutually reinforcing plans, arrangements, protocols and networks that incorporate lessons-learned from previous outbreaks like SARS, 2009 H1N1 pandemic and Ebola which are regularly updated to reflect the latest evidence and scientific advance. Taken together, they span the local, provincial, territorial, pan-Canadian, North American and international levels and provide a strong and proven framework for Canada's response to COVID-19.

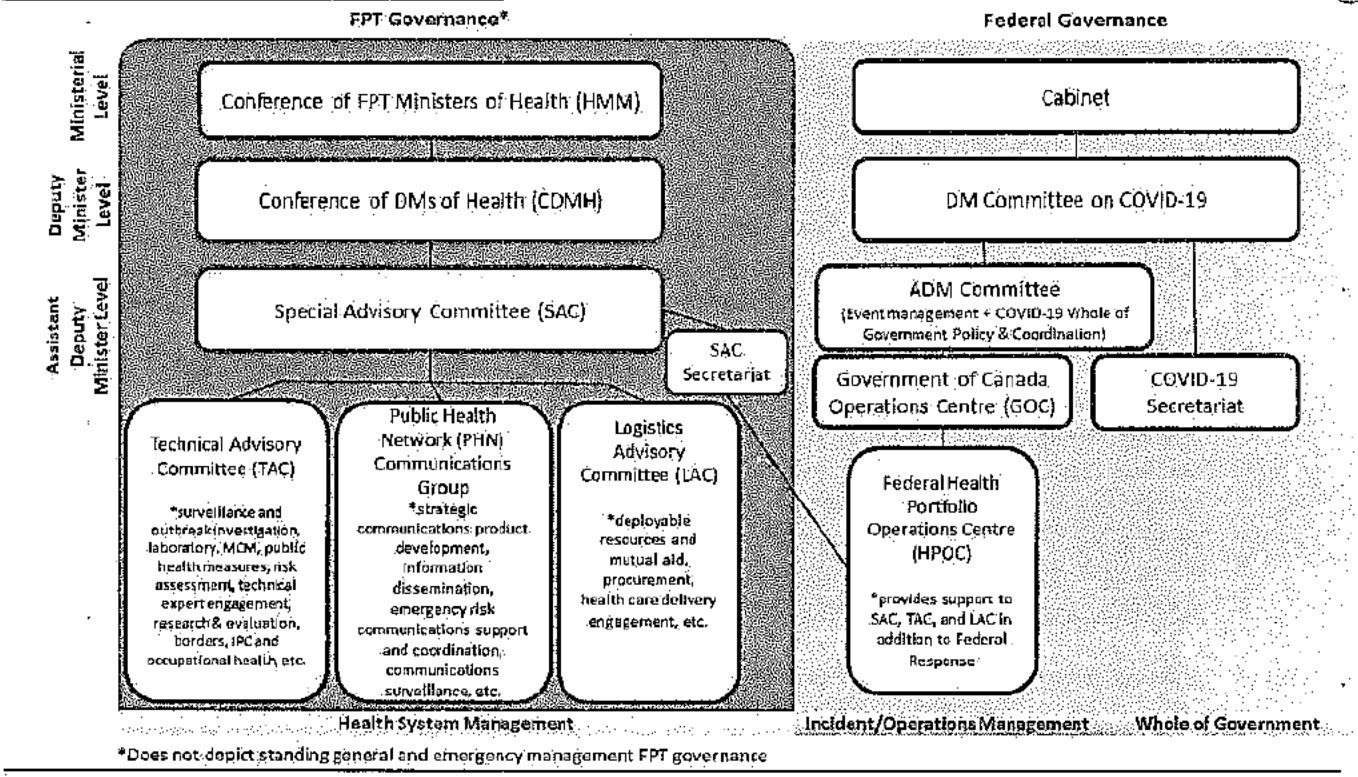
As public health in Canada is an area of shared jurisdiction, federal, provincial and territorial health officials and experts are working together through the *Special Advisory Committee (SAC) on COVID-19* and its various expert committees and working groups to ensure a coordinated and effective response to the COVID-19 outbreak in accordance with the *F/P/T Public Health Response Plan for Biological Events*. The Plan, which includes a summary of F/P/T roles and responsibilities in a public health emergency, can be found at https://www.canada.ca/en/public-health/services/emergency-preparedness/public-health-response-plan-biological-events.html

The SAC draws on the pan-Canadian Public Health Network (PHN) structure. Established in 2005, the PHN reflects lessons-learned from the Severe Acute Respiratory Syndrome (SARS) outbreak, which highlighted the imperative for a proactive and collaborative approach to public health emergency planning and response in Canada. PHN has since proven its value and effectiveness as a vehicle for collaborative leadership during the 2009 H1N1 pandemic, Middle Eastern Respiratory Syndrome (MERS-CoV) and Zika outbreaks.

SAC comprises members of the PHN Council and the Council of Chief Medical Officers of Health (CCMOH). Three expert groups comprising senior F/P/T officials and public health experts from across the country support SAC:

- Technical Advisory Committee (TAC): monitors COVID-19 epidemiology, shares information and advises on technical issues through the development of recommendations, guidelines and protocols.
- Logistics Advisory Committee (LAC): supports logistics (e.g., supplies, joint procurement, scarce resources), shares information and advises on logistical issues through the development of recommendations, guidelines and protocols.
- Public Health Network Communications Group: supports consistent and coordinated public communications and messages on COVID-19 across jurisdictions.
- Public Health Working Group on Remote and Isolated Communities supports Indigenous public health response in remote and isolated Indigenous communities.

Graphic 1: COVID-19 Governance Structure



Graphic 1 – Text Description

This graphic depicts two main hierarchical governance structures and linkages between the two particularly at the working level. The structure on the left side of the graphic on the teal background shows the Federal/Provincial/Territorial Governance structure that has been activated for the COVID-19 response as per the Federal/Provincial/Territorial (F/P/T) Public Health Response Plan for Biological Events. There is an asterisk linked to text to remind the viewer that this does not depict standing general and emergency management F/P/T governance. At the top of this structure is the Conference of FPT Ministers of Health (HMM) which operates at the Ministerial level. Directly below the HMM is the Conference of Deputy Ministers of Health (CDMH) which operates at the Deputy Minister level. Directly below the CDMH is the Special Advisory Committee (SAC) which is considered to operate at the Assistant Deputy Minister Level. Below the SAC are 3 committees/groups and a brief description of the types of response issues they lead on from a F/P/T public health response perspective. The Technical Advisory Committee (TAC) reports up to the SAC and leads on: surveillance and outbreak investigation, laboratory, medical countermeasures (MCM), public health measures, risk assessment, technical expert engagement, research & evaluation, borders, infection prevention and control, and occupational health, etc. The Public Health Network (PHN) Communications Group, also reports to SAC and leads on: strategic communications product development, information dissemination, emergency risk communications support and coordination, communications surveillance, etc. The Logistic Advisory Committee (LAC) is the third main group that reports to SAC and leads on: deployable resources and mutual aid, procurement, health care delivery engagement etc. This entire FPT governance structure has a health system management perspective/focus, as is indicated in a yellow bar spanning the bottom of this side of the graphic.

On the right side of the graphic on a grey background is the Federal Governance structure which has more of an incident/operations management and whole of (federal) government focus. At the top of this structure is the Cabinet which like the HMM on the left (FPT side) operates at the Ministerial Level. Reporting up to Cabinet is during this response is the Deputy Ministers Committee on COVID-19, which operates at the Deputy Minister Level and is directly supported by an Associate Deputy Ministers Committee (that oversees federal event management

and the COVID-19 whole of government policy and coordination) and the COVID-19 Secretariat. These two groups along with the Government of Canada Operations Centre (GOC), operate at the Assistant Deputy Minister Level. The Federal Health Portfolio Operations Centre (HPOC), which is linked to the GOC, provides support to the SAC, TAC and LAC in addition to the federal response. The HPOC formally links to the SAC via the SAC secretariat which functions as is a key linkage point between these two governance structures. At the working level the HPOC Incident Management Structure (IMS) includes groups that develop F/P/T response products and support the TAC, LAC PHN Communications Group and SAC.

The Government of Canada has also established a Cabinet Committee on the federal response to COVID-19 that meets regularly to ensure whole-of-government leadership, coordination, and preparedness for a response to the health and economic impacts of the virus.

FPT Collaborative Agreements: Mutual Aid, Information Sharing and Emergency Supplies

Federal/Provincial/Territorial Public Health Response Plan for Biological Events: is a federal, provincial, and territorial (F/P/T) guidance document that provides an overarching governance framework to ensure a coordinated intergovernmental health sector response to public health events that are biological in nature and of a severity, scope or significance to require a high level, coordinated F/P/T response.

Canadian Pandemic Influenza Preparedness: Planning Guidance for the Health Sector (CPIP): is an F/P/T guidance document that outlines how jurisdictions will work together to ensure a coordinated and consistent health-sector approach to pandemic preparedness and response. While CPIP is specific to pandemic influenza, much of its guidance is also applicable to other public health emergencies. CPIP consists of a main body, which outlines overarching principles, concepts, and shared objectives, as well as a series of technical annexes that provide operational advice and technical guidance, along with tools and checklists on specific elements of pandemic planning. CPIP is regularly updated to reflect new evidence and best practices.

Operational Framework for Mutual Aid Surge Requests for Health Care Professionals: is a guidance document that provides for a consistent and timely pan-Canadian approach to inter-jurisdictional health care professional mutual aid during health emergencies. The framework identifies roles and responsibilities and provides standard processes to guide jurisdictions making requests for, and offers of, mutual aid and the mobilization/demobilization of health care professionals. It also informs a complementary *Memorandum of Understanding (MOU) on the Provision of Mutual Aid in Relation to Health Resources During an Emergency Affecting the Health of the Public*.

Multilateral Information Sharing Agreement (MLISA): is a legal agreement that establishes standards on sharing, usage, disclosure and protection of public health information for infectious diseases and public health emergencies of international concern. The MLISA sets out what public health information is to be shared and how it will be used. It allows for trends and/or urgent public health events to be identified more rapidly and to reduce duplication of information requests. MLISA also informs *an FPT MOU on the Sharing of Information during a Public Health Emergency*. The Memorandum of Understanding (MOU) provides a framework for the sharing of information between and among its signatories during public health emergencies.

National Emergency Strategic Stockpile (NESS): contains supplies that provinces and territories can request in emergencies, such as infectious disease outbreaks, natural disasters and other public health events, when their own resources are not enough. These include a variety of items such as medical equipment and supplies, pharmaceuticals and social service supplies, such as beds and blankets.

Public Health Ethics Framework: A Guide for Use in Response to the COVID-19 Pandemic in Canada: is a framework is intended for use by policy makers and public health professionals making public health decisions in the context of COVID-19. Section 1 articulates ethical principles and values for public health authorities to consider, and Section 2 sets out a framework to help clarify issues, analyse and weigh relevant considerations, and assess options, in order to support decision making in real situations.

Federal Emergency Response Plans

The Federal Emergency Response Plan (FERP): is the Government of Canada's all-hazards response plan. The FERP outlines the processes and mechanisms required to facilitate a whole-of-government response to an emergency. The FERP is designed to harmonize federal emergency response efforts with the efforts of PT governments, non-governmental organizations (NGO) and the private sector.

The Federal Policy on Emergency Management (FPEM): promotes an integrated and resilient whole-of-government approach to emergency management planning, which includes better prevention/mitigation of, preparedness for, response to, and recovery from emergencies. It provides direction to federal institutions on mandate-specific all-hazards risk identification and management within a federal institutions area of responsibility.

International Response Plans and Protocols

North American Plan for Animal and Pandemic Influenza (NAPAPI): outlines how Canada, the United States and Mexico intend to strengthen their emergency response capacities, as well as trilateral and cross-sectoral collaborations and capabilities, in order to assist each other and ensure a faster and more coordinated response to outbreaks of animal influenza or an influenza pandemic. The NAPAPI complements national emergency management plans in each of the three countries.

Global Health Security Initiative (GHSI): is an informal, international partnership among like-minded countries and organizations to exchange information and coordinate practices within the health sector to strengthen public health preparedness and response globally, including pandemic influenza.

International Health Regulations (IHR): represent an international agreement between all World Health Organization (WHO) Member States to build capacity to detect, prevent, assess, notify and response to public health events. Canada has a legal obligation to meet the core public health capacities set out by the IHR.

World Health Organization (WHO) Strategic Response Plan: outlines the public health measures that the international community stands ready to provide to support all countries to prepare for and respond to COVID-19. The document (published February 3, 2020 and updated on April 14, 2020) takes what has been learned so far about the SARS-CoV-2 virus and translates that knowledge into strategic action that can guide the efforts of all national and international partners when developing context-specific national and regional operational plans.

Appendix 2: Modelling Support for Forward Planning

Modelling recreates the essential components of pathogen transmission cycles from our understanding of the biology of the pathogens and their interactions with their hosts. Models help to predict where and when infectious diseases may emerge or re-emerge, and they can be used to explore the best methods or combinations of methods to control disease outbreaks or epidemics and protect the health of Canadians. For response to COVID-19, there are three broad types of model being used:

1. Deterministic compartment models. These are Susceptible-Exposed-Infectious-Recovered (SEIR) type dynamic models in which the population is divided into "susceptible", "exposed", "infectious" and "recovered" classes. After encountering infection, individuals in a population move from one state to the next. This basic structure includes elements to model SARS-CoV-2 and impacts of public health measures, with more realism. These elements include compartments for isolated cases and quarantined "exposed" contacts from which onward transmission to susceptible people is limited or absent, compartments for asymptomatic cases that may or may not be detected by surveillance, as well as flows to "isolation" and "quarantine" compartments that allow variation according to different levels of public health effort. These models are used to inform broad policies at a national level, including i) estimating numbers of cases, hospitalisations and deaths; ii) estimating the effects of non-pharmaceutical interventions (NPIs), (physical distancing, case detection and isolation, and contact tracing and quarantine), iii) design of vaccination programs; and iv) the design of programs to enhance "herd immunity" via use of antivirals/therapies if vaccines prove ineffective.

2. Agent-based models. These are also SEIR models, and they can also be used to inform development of national strategies. However, because they can simulate disease transmission with some detail in and amongst homes, work places leisure spaces etc., they are particularly useful for decision-making at an individual community level regarding needs for NPIs, and strategies for relaxing restrictive closures.

3. Branching models. These are a more recent addition to the types of models used for COVID-19. They simply assess what factors cause single chains of transmission to expand or become extinct. They are being used to assess the needs for controlling transmission in work places and institutions.

The PHAC has developed models that can be shared, and are constantly undertaking modelling to support decisions. The PHAC External COVID-19 Modelling Expert Group was formed in February 2020, and currently comprises 33 members from 21 universities across Canada, as well as 43 members from other Federal departments/organisations provincial/territorial public health organisations. The group comprises the majority of infectious disease modelling group leads in Canadian universities, and is capable of supporting modelling needs for decision-making.

Appendix 3: COVID-19 Response Planning with Indigenous Communities

A summary of response activities for Indigenous Communities, including the work of SAC's FPTI Public Health Working Group on Remote and Isolated Communities, that have been supported by Indigenous Services Canada (ISC) and the F/P/T response partners to date include:

- **Preparedness:** Resources to support pandemic planning updates/activation; access to medical supplies and PPE; training; and, guidelines.
- **Health Human Resources:** Resources to support surge capacity for health human resources, including nursing, medical and paramedical supports; as well as, charter services to get health human resources into communities with reduction to commercial airline service.
- **Infrastructure:** Resources to procure temporary shelter solutions and to support communities in efforts to re-tool existing spaces to offer safe assessment and overflow space; and, additional surge supports for food, water and other supply chain components.
- **Infection prevention and control (IPC):** Shared information (i.e., public health measures and promoting personal health measures for individuals and health providers), training and increasing capacity to support community response, including public service announcements in Indigenous languages. Provided training of community workers and health providers on IPC. Funded communities and service providers to increase their capacity for infection prevention and control, including First Nations-run schools, boarding homes, family violence shelters and friendship centres.
- **Medical transportation:** Supported medical transportation or adapting its polices (i.e., to use private modes of transportation where possible for those with higher risk factors) to minimize transmission; and, offered IPC support for service providers such as boarding homes.
- **Governance:** Worked with Indigenous partners, the Public Health Agency of Canada (PHAC), Health Canada, Public Safety's Government Operations Centre, and other departments, as well as their provincial and territorial counterparts for a coordinated and consistent Canadian approach to COVID-19 to protect the health and safety of First Nations, Inuit and Métis communities.
- **Communications and Surveillance:** Developed and broadly disseminated communication messaging through Department's COVID-19 Single Window to networks with Public Service Announcements in multiple Indigenous languages. Used digital media to further reach stakeholders with communications such as public health measures. Multilateral calls with partners at the national and regional levels.
- **Monitoring:** Adapted the Department's flu surveillance tool to track COVID-19 across First Nations communities; and developed a tracking tool to develop dashboards on key indicators of COVID-19.

Based on knowledge and feedback learned to date, ongoing preparations needed to support Indigenous populations to respond to a possible fall resurgence include continued planning and logistics that support food security; and, also medical supplies, including PPE, needs of communities and off-reserve Indigenous organizations providing essential services. Continued access to timely testing supplies, P/T labs for processing, and results, including point of care testing for northern, remote and isolated communities. There is also a need to plan for reduced flight schedules, which can create supply chain challenges for food, medical supplies, and health human resources reaching communities; and for communities to send swab tests taken for processing at PT labs.

Additional refresher training in infection prevention control is required to support health professionals and communities, for example in donning and doffing PPE and environmental cleaning practices to

reduce the spread of COVID-19. In addition to supporting training for health human resources working in communities, increased funding for telemedicine and virtual health care providers is required to support ongoing health service delivery, and to avoid a potential backlog in appointments following the pandemic or worsening health conditions.

Access to care to treat more severe symptoms of COVID-19 in remote and isolated communities also requires that ongoing arrangements, or new ones, are in place to ensure an adequate number of beds in hospitals south of 60, to support the treatment of Indigenous peoples living in northern, remote and/or isolated communities without this type of service. In communities where there are long-term care facilities, or Elders residences, it is important to have access to adequate resources to support their planning in keeping Elders safe and healthy – this includes funding to take basic infection prevention control measures (i.e. PPE, high dose flu vaccine, cleaning supplies, etc.), to engineered and more administrative public health measures.

A distinctions-based approach has been adopted by the Federal Government to ensure that the unique rights, interests and circumstances of the First Nations, the Métis Nation and Inuit are acknowledged, affirmed, and implemented. In this context, it takes into account the cultural and socio-economic particularities of each of the Indigenous Nations involved. Distinctions-based, Indigenous-led analysis of this information is necessary to advancing culturally appropriate and science-based approaches, for First Nations, Inuit and Métis Nation communities. Learning from H1N1, we know that long standing public health gaps and health disparities between First Nations and non-Indigenous Canadians increase the likelihood and potential severity of a coronavirus disease outbreak in Indigenous communities. These disparities are often exacerbated in remote or fly-in communities, where access to necessary supplies and health care services is limited as compared to non-Indigenous communities. We also know that in H1N1 data for First Nations/Inuit/Métis populations were not captured in a consistent way, or a way that supported communities in their preparedness and response efforts.

Surveillance activities are critical to informing public health responses to a pandemic. They support the early detection and description of potential health threats present in Canada, including on-reserve First Nations communities. In order to be able to make informed decisions, decision makers and leaders throughout the system need reliable public health data. Existing data quality and gaps for First Nations, Inuit and Métis populations living both on and off reserve are critical to effectively responding to future waves of COVID-19 among this population, protecting their health and safety by getting them the access to care required.

The strategy/approach, actions and deliverables for these preparations for the short, mid and long-term (i.e., being before September, September to December, and 2021 and beyond, respectively) include:

Short term: In the short term, ongoing work to continue to secure medical supplies & PPE are necessary, both to support future waves of COVID-19; and, to support the return of services in communities (i.e. immunization, water monitoring, treatment for substance use, etc.). Access to point of care testing is vital to supporting the safe reopening of northern, remote and/or isolated communities and continued work to advocate for access to test cartridges available or GeneXpert machines, and for new point of care technologies when approved will continue. Flu and pneumococcal vaccine planning, from securing vaccines, working with PTs on vaccine strategies, mobile clinics, etc. as well as planning for flu vaccine mass immunization strategies in light of COVID-19, and potential space limitations in communities, leading to prolonged clinics to allow for appropriate physical distancing, regular disinfection of spaces,

etc. Ongoing monitoring of forest fires for possible evacuations and planning in light of COVID-19 over the summer and fall months.

Medium term: Ongoing access to funding to support food security, working with Transport Canada and Agriculture and Agri-Food Canada essential. Access to required PPE for Inuit, Métis and off reserve First Nations organizations providing new services as an interim measure to respond to COVID-19 and links with local public health authorities and the Public Heath Agency of Canada required to support these services and population. Access to care and planning for the availability of hospital beds required to support possible influx of Indigenous patients requiring care for more severe symptoms of COVID-19. Resources needed to bolster long-term care in communities and mental wellness supports to address impacts associated with pandemic and isolation; as well as, ongoing substance use (i.e. opioid, crystal meth, etc.). COVID vaccine prioritization and deployment strategy planning for First Nations, Inuit and Métis populations.

Longer term: Resources to support Indigenous-led data collection/governance/infrastructure to support data optimization for the longer term in Canada is essential. Resources to bolster community-led public health supports and work are required, as well as training to support these functions. To support access to patient care, as well as the work of community based workers and nurses in northern, remote and/or isolated communities increased funding for telemedicine and virtual health care providers is necessary. This will avoid a backlog of medical or specialist appoints after COVID-19, and support access to timely care supporting better health outcomes.

High level signals that would necessitate a change in timelines or strategy/approach and sub-sequent actions and deliverables, include:

- ongoing and prolonged active cases – either slow, or in an outbreak scenario on reserve
- signals and risks of community spread, where communities may be at a higher risk due to geographic location
- access to health care to treat more severe symptoms
- strain on system for medivacs should there be a greater need in PTs
- shifts in hospitalization rate, ICU admission rate, case fatality rate
- reproductive rate
- Long-term care (LTC) outbreaks
- shift in age/sex distribution of cases

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This is Exhibit "E" referred to in the Affidavit of Brent Roussin affirmed before me this 30th day of April, 2021.

A Barrister-at-law in and for the
Province of Manitoba.

AB2384

Manitoba

News Releases

Manitoba MediaBulletin

April 20, 2021

COVID-19 BULLETIN #407

Public health officials advise that one new death in a person with COVID -19 have been reported today:
• a female in her 90s from Prairie Mountain Health region, linked to the outbreak at Russell Health Centre.

The current five-day COVID-19 test positivity rate is six per cent provincially and 6.3 per cent in Winnipeg. As of 9:30 a.m. today, 211 new cases of the virus have been identified. However, eight cases have been removed due to data correction. This brings the net-new number of cases today to 203 and the total number of lab-confirmed cases in Manitoba to 36,470.

Today's COVID-19 data shows:
• 14 cases in the Interlake–Eastern health region;
• 25 cases in the Northern health region;
• 27 cases in the Prairie Mountain Health region;
• seven cases in the Southern Health–Santé Sud health region; and
• 138 cases in the Winnipeg health region.

The data also shows:
• 1,783 active cases and 33,727 individuals who have recovered from COVID-19;
• 66 people in hospital with active COVID-19 as well as 66 people in hospital with COVID-19 who are no longer infectious but continue to require care, for a total of 132 hospitalizations;
• 18 people in intensive care units with active COVID-19 as well as 15 people with COVID-19 who are no longer infectious but continue to require critical care, for a total of 33 ICU patients;
• 2,194 laboratory tests were completed yesterday, bringing the total number of lab tests completed since early February 2020 to 627,113; and
• the total number of deaths in people with COVID-19 is 960.

Additional data on variants of concern is updated from Tuesday to Saturday at https://geoportal.gov.mb.ca/. Data related to COVID-19, outbreaks and some downloadable and historic data can also be found at this site.

Outbreaks have been declared over at Grassroots Early Learning and Child Care Centre in Thompson, at Stony Mountain Institution in Stony Mountain and at the Flin Flon Personal Care Home in Flin Flon.

Other possible exposure locations are listed online by region at the province's #RestartMB Pandemic Response System webpage. For up-to-date information on possible public exposures to COVID-19 in regions, visit www.gov.mb.ca/covid19/updates/flights.html#event and click on your region.

For up-to-date information on COVID-19 in Manitoba, including information the online screening tool, testing criteria and locations, self-isolation requirements, public health fundamentals and the provincial response level on the #RestartMB Pandemic Response System, visit www.manitoba.ca/COVID19.

- 30 -

AB2385

AB2386

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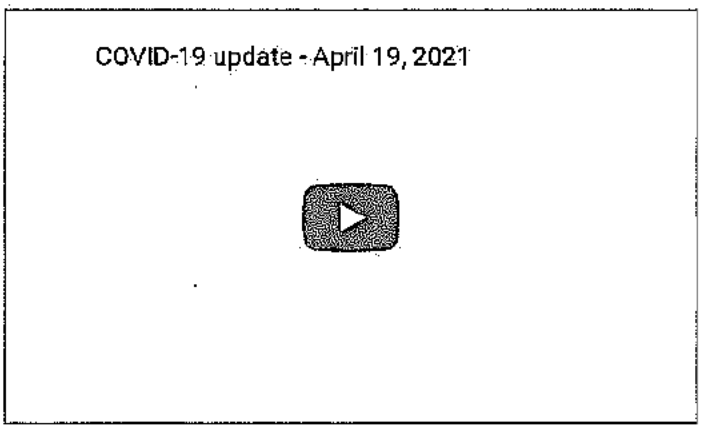
Twitter Feed

Media Bulletin - Manitoba

April 19, 2021

COVID-19 BULLETIN #406

Watch news conference



Public health officials advise that no new deaths in people with COVID-19 have been reported today.

The current five-day COVID-19 test positivity rate is 5.7 per cent provincially and 5.7 per cent in Winnipeg. As of 9:30 a.m. today, 108 new cases of the virus have been identified. The total number of lab-confirmed cases in Manitoba to 36,267.

Today's COVID-19 data shows:
- 12 cases in the Interlake–Eastern health region;
- five cases in the Northern health region;
- 10 cases in the Prairie Mountain Health region;
- 18 cases in the Southern Health–Santé Sud health region; and
- 63 cases in the Winnipeg health region.

The data also shows:
- 1,685 active cases and 33,623 individuals who have recovered from COVID-19;
- 62 people in hospital with active COVID-19 as well as 70 people in hospital with COVID-19 who are no longer infectious but continue to require care, for a total of 132 hospitalizations;
- 15 people in intensive care units with active COVID-19 as well as 15 people with COVID-19 who are no longer infectious but continue to require critical care, for a total of 30 ICU patients;

AB2387

- 2,491 laboratory tests were completed yesterday, bringing the total number of l e early February 2020 to 624,868; and
- the total number of deaths in people with COVID-19 is 959.

Additional data on variants of concern is updated from Tuesday to Saturday at https://geoportal.gov.mb.ca/. Data related to COVID-19, outbreaks and some downloadable and historic data can also be found at this site.

An outbreak has been declared at the Dauphin Personal Care Home in Dauphin. The site has been moved to the Critical (red) level on the #RestartMB Pandemic Response System.

Other possible exposure locations are listed online by region at the province's #RestartMB Pandemic Response System webpage. For up-to-date information on possible public exposures to COVID-19 in regions, visit www.gov.mb.ca/covid19/updates/flights.html#event and click on your region.

For up-to-date information on COVID-19 in Manitoba, including information the online screening tool, testing criteria and locations, self-isolation requirements, public health fundamentals and the provincial response level on the #RestartMB Pandemic Response System, visit www.manitoba.ca/COVID19.

- 30 -

For more information:

- Public information, contact Manitoba Government Inquiry: 1-866-626-4862 or 204-945-3744.
- Media requests for general information, contact Communications Services Manitoba: 204-945-3765.
- Media requests for ministerial comment, contact Communications and Stakeholder Relations: 204-794-0732.

AB2388

Manitoba

News Releases

Manitoba MediaBulletin

April 21, 2021

COVID-19 BULLETIN #408

Public health officials advise that one new death in a person with COVID-19 have been reported today:
- a male in his 50s from Northern Health region.

The current five-day COVID-19 test positivity rate is 6.3 per cent provincially and 6.6 per cent in Winnipeg. As of 9:30 a.m. today, 164 new cases of the virus have been identified. However, two cases have been removed due to data correction. This brings the net-new number of cases today to 162 and the total number of lab-confirmed cases in Manitoba to 36,632.

Today's COVID-19 data shows:
- 15 cases in the Interlake-Eastern health region;
- 30 cases in the Northern health region;
- 19 cases in the Prairie Mountain Health region;
- 24 cases in the Southern Health-Santé Sud health region; and
- 76 cases in the Winnipeg health region.

The data also shows:
- 1,833 active cases and 33,838 individuals who have recovered from COVID-19;
- 72 people in hospital with active COVID-19 as well as 65 people in hospital with COVID-19 who are no longer infectious but continue to require care, for a total of 137 hospitalizations;
- 18 people in intensive care units with active COVID-19 as well as 16 people with COVID-19 who are no longer infectious but continue to require critical care, for a total of 34 ICU patients;
- 2,785 laboratory tests were completed yesterday, bringing the total number of lab tests completed since early February 2020 to 630,143; and
- the total number of deaths in people with COVID-19 is 961.

Additional data on variants of concern is updated from Tuesday to Saturday at https://geoportal.gov.mb.ca/. Data related to COVID-19, outbreaks and some downloadable and historic data can also be found at this site.

Public health officials advise of a possible exposure to the B.1.1.7 variant of concern at McDonalds, 217 Mystery Lake Rd. in Thompson on April 8 from 4 p.m. to 12:00 a.m.; April 10 and 11 from 6 a.m. to 2 p.m.; and April 13 and 14 from 2 to 10 p.m. Any person experiencing symptoms since attending the site should isolate immediately and go for testing. For further assistance contact Health Links–Info Santé at 204-788-8200 or (toll-free) 1-888-315-9257 to be screened to see if a test is required. For up-to-date information on testing sites, visit www.gov.mb.ca/covid19/locations.html.

An outbreak has been declared at St. Maurice Daycare Inc., in Winnipeg. The facility has been moved to the Critical (Red) level on the #RestartMB Pandemic Response System.

Outbreaks have been declared over at Boyne Lodge Personal Care Home in Carman, Boissevain Hospital and Evergreen Place Personal Care Home in Boissevain and the MD Practice Solutions of Manitoba Inc., Health Science Centre unit GD4, Donwood Manor, Heritage Lodge, Lions Manor Personal Care Home, Meadowood Manor, Oakview Place and Parkview Place all in Winnipeg.

Other possible exposure locations are listed online by region at the province's #RestartMB Pandemic Response System webpage. For up-to-date information on possible public exposures to COVID-19 in regions, visit www.gov.mb.ca/covid19/updates/flights.html#event and click on your region.

AB2389

Updated enforcement statistics are posted online weekly. For more information, go to Cross-Departmental Reports at https://manitoba.ca/openmb/infomb/departments/index.html.

For up-to-date information on COVID-19 in Manitoba, including information the online screening tool, testing criteria and locations, self-isolation requirements, public health fundamentals and the provincial response level on the #RestartMB Pandemic Response System, visit www.manitoba.ca/COVID19.

- 30 -

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This is Exhibit "F" referred to in the Affidavit of Brent Roussin affirmed before me this 30th day of April, 2021.

A Barrister-at-law in and for the
Province of Manitoba.

AB2391

Manitoba

News Releases

Manitoba MediaBulletin

April 19, 2021

COVID-19 VACCINE BULLETIN #66

Eligibility Criteria

Eligibility to be immunized at a super site or pop-up clinic has been expanded to include individuals aged 54 or older and First Nation people aged 34 or older. Anyone who has been in Manitoba for one month or more can receive the vaccine at no cost if they meet provincial eligibility requirements.

Eligibility for the AstraZeneca/Covishield vaccine is being expanded to include all individuals aged 40 and over. This change will be in effect as of today. Previous prioritization for individuals with specific health conditions will no longer be in place.

Appointments

Appointments are currently available at super sites in Winnipeg (RBC Convention Centre), Brandon, Thompson, Selkirk and Morden. Eligible individuals can book their appointment at a super site online at https://protectmb.ca with an email address and health card number.

Pop-up clinics are also scheduled in a number of communities across the province in the coming weeks. Appointments for super sites or pop-ups can be made by calling (toll-free) 1-844-626-8222 (1-844-MAN-VACC).

Eligible people who would like to be immunized with AstraZeneca/Covishield at a medical clinic or pharmacy can use the COVID-19 Vaccine Shot Finder, located at:
www.gov.mb.ca/covid19/vaccine/finder.html.

Vaccine Administration

To date, 341,926 doses of vaccine have been administered including 272,104 first doses and 69,822 second doses.

Focused Immunization Teams will provide first-dose immunizations to people in 27 congregate living facilities this week.

Vaccine Supply and Distribution

To date, a total of 486,810 doses of vaccine have been delivered to Manitoba. This includes:
- 284,310 doses of Pfizer vaccine;
- 118,400 doses of the Moderna vaccine; and
- 84,100 doses of the AstraZeneca/Covishield vaccine.

Additional Information

All data in this bulletin is current as of April 18, unless noted otherwise.

At this time, only first dose appointments are available. The province will provide more information about planning for second doses in the weeks ahead.

When attending a vaccine appointment, people are reminded to bring their completed consent form (available online at https://protectmb.ca), wear a short-sleeved shirt, wear a mask, and bring their health card or other form of identification. To help support good physical distancing on site, people should arrive no more than 15 minutes before their scheduled appointment time.

More information about the vaccine campaign in Manitoba is available at www.manitoba.ca/vaccine and https://protectmb.ca. For regular updates, visit https://protectmb.ca and sign up for the weekly e-newsletter.

- 30 -

BACKGROUND INFORMATION ATTACHED

Backgrounder
Background Information - https://www.gov.mb.ca/asset_library/en/newslinks/2021/04/BG-COVID_Vaccine_66.pdf

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AB2393

Manitoba Backgrounder

CONGREGATE LIVING FACILITIES

This week, Focused Immunization Teams will continue to offer first-dose COVID-19 immunizations to residents of congregate living facilities. This includes 27 locations throughout the province.

Winnipeg Regional Health Authority		
April 19	Winnipeg Remand Centre	Winnipeg
April 21	Seven Oaks General Hospital	Winnipeg
April 21	St. Boniface General Hospital	Winnipeg
April 22	Manitoba Youth Centre	Winnipeg
Southern Health–Santé Sud		
April 19	Chalet Ste. Agathe	Ste. Agathe
April 19	Place Ste. Anne	Ste. Anne
April 19	Village View Apartments	Plumas
April 19	St. Eustache Manor	St. Eustache
April 19	Main Street Motel	St. Adolphe
April 19	Crocus Village	Winkler
April 19	Winkler Leisure Manor	Winkler
April 20	East Borderland Housing	Sprague
April 20	Shady Oaks Lodge	Vita
April 20	Mandan Manor	Sanford
April 20	Manoir St. Pierre	St-Pierre-Jolys
April 20	Paradis des Pionniers	St. Jean Baptiste
April 20	Cedar Estates	Winkler
April 20	Town Square Apartments	Winkler
April 21	Regency House	Portage la Prairie
April 21	Rotary Park	Portage la Prairie
April 21	Somerset Manor	Somerset
April 21	Swan Lake Manor	Swan Lake
April 21	Autumnwood Apartments	Winkler
April 22	Queens Court	Portage la Prairie
April 22	Windsor Estates	Portage la Prairie
April 22	Garden Park Estates	Winkler
April 22	Hillcrest Manor	Winkler

AB2394

Manitoba

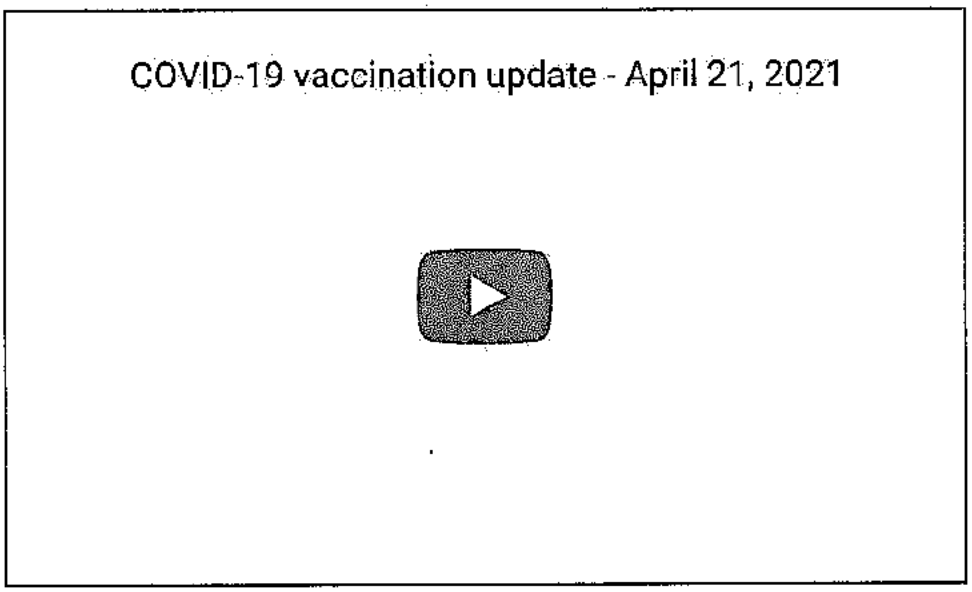
News Releases

Manitoba MediaBulletin

April 21, 2021

COVID-19 VACCINE BULLETIN #67

Watch news conference



Eligibility Criteria

Front-line police and firefighters are now eligible to make appointments to be vaccinated.

Eligibility to be immunized at a super site or pop-up clinic has also been expanded to include individuals aged 50 or older and First Nation people aged 30 or older. Anyone who has been in Manitoba for one month or more can receive the vaccine at no cost if they meet provincial eligibility requirements.

Eligibility for the AstraZeneca/Covishield vaccine includes all individuals aged 40 and over.

Appointments

Appointments are currently available at super sites in Winnipeg (RBC Convention Centre), Brandon, Thompson, Selkirk and Morden. Starting today, people can now also begin booking appointments at the super site in Winnipeg on Leila Avenue, which opens May 7. Eligible individuals can book their appointment at a super site online at https://protectmb.ca with an email address and health card number.

Appointments are now also being booked for Indigenous-led COVID-19 immunization pop-up clinics in Winnipeg, Brandon, Thompson and Portage la Prairie. These follow provincial eligibility criteria.

AB2395

Pop-up clinics are also scheduled in a number of communities across the province. Appointments for super sites or pop-ups can be made by calling (toll-free) 1-844-626-8222 (1-844-MAN-VACC).

Eligible people who would like to be immunized with AstraZeneca/Covishield at a medical clinic or pharmacy can use the COVID-19 Vaccine Shot Finder, located at www.gov.mb.ca/covid19/vaccine/finder.html.

Workforce

To date, 2,326 people have been hired to assist with Manitoba's vaccination efforts including immunizers, clinic managers, clinical leads, system navigators and observers. This is in addition to 1,239 staff who have been assigned to COVID-19 immunization efforts from regional health authorities, bringing the total of new hires and existing staff to 3,565.

Vaccine Administration

To date, 364,389 doses of vaccine have been administered including 293,995 first doses and 70,394 second doses.

Focused Immunization Teams will provide first-dose immunizations to people in 27 congregate living facilities this week.

Vaccine Supply and Distribution

To date, a total of 521,910 doses of vaccine have been delivered to Manitoba. This includes:
- 319,410 doses of Pfizer vaccine;
- 118,400 doses of the Moderna vaccine; and
- 84,100 doses of the AstraZeneca/Covishield vaccine.

Additional Information

All data in this bulletin is current as of April 20, unless noted otherwise.

At this time, only first-dose appointments are available. The province will provide more information about planning for second doses in the weeks ahead.

When attending a vaccine appointment, people are reminded to bring their completed consent form (available online at https://protectmb.ca), wear a short-sleeved shirt, wear a mask, and bring their health card or other form of identification. To help support good physical distancing on site, people should arrive no more than 15 minutes before their scheduled appointment time.

More information about the vaccine campaign in Manitoba is available at www.manitoba.ca/vaccine and https://protectmb.ca. For regular updates, visit https://protectmb.ca and sign up for the weekly e-newsletter.

-30 -

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AB2396

Manitoba

News Releases

Manitoba NewsRelease

April 19, 2021

MANITOBA EXPANDING ELIGIBILITY CRITERIA FOR ASTRAZENECA/COVISHIELD VACCINE, CONTINUES TO PROTECT MANITOBANS BY EXPANDING VACCINATION CAPACITY

Public health officials are expanding the criteria for the AstraZeneca vaccine to all Manitobans aged 40 and over while continuing to implement measures to increase capacity, Health and Seniors Care Minister Heather Stefanson announced today.

"Tens of thousands of doses of the AstraZeneca vaccine remain in clinics and pharmacies across the province, which is why we're expanding the eligibility criteria for the vaccine," said Stefanson. "I want to thank physician and pharmacy partners for their work to provide vaccine and look forward to the numbers of doses administered increasing quickly over the coming days."

Effective immediately, all Manitobans aged 40 and over will be eligible to receive the AstraZeneca/Covishield vaccine at a medical clinic or pharmacy. Eligible Manitobans can find their nearest clinic or pharmacy with available doses by visiting https://manitoba.ca/covid19/vaccine/finder.html.

"Based on all of the evidence available internationally to date, we continue to believe benefits of the AstraZeneca/Covishield vaccine to protect against COVID-19 outweigh any potential risks," said Dr. Joss Reimer, medical lead for the Vaccine Implementation Task Force. "Expanding the criteria will help us reach more Manitobans, particularly those who may face challenges or face barriers in going to a super site or pop-up clinic."

The minister noted the change in eligibility comes as Manitoba continues to expand its capacity to provide the vaccine including:

- implementing a more responsive ordering process for medical clinics and pharmacies;
- opening new super sites in north Winnipeg and Steinbach in early May; and
- adjusting the use of pop-up clinics by locating them in areas where there is a significant barrier for the majority of people to get to the nearest super site.

In addition, changes are being made to the planning process for super sites as vaccine deliveries begin to rise.

"We've been operating with a small margin of doses carrying over from the end of one week into the next, in case a shipment of vaccine is delayed," said Johanu Botha, operations lead for the Vaccine Implementation Task Force. "But supplies seem to have stabilized, so we are now able to tighten our processes and add a bump to our doses administered to help us get needles into arms as quickly as possible."

For more information on vaccine eligibility and Manitoba's vaccine rollout campaign, visit www.protectmb.ca.

- 30 -

AB2397

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Need More Info?

Public information, contact Manitoba Government Inquiry: 1-866-626-4862 or 204-945-3744.

Media requests for general information, contact Communications Services Manitoba: 204-945-3765.

Media requests for ministerial comment, contact Communications and Stakeholder Relations: 204-290-5374.

Twitter Feed

News Release - Manitoba

April 20, 2021

NORTH DAKOTA AND MANITOBA ANNOUNCE JOINT INITIATIVE TO VACCINATE ESSENTIAL WORKERS TRANSPORTING GOODS AND SERVICES ACROSS CANADA-U.S. BORDER

Watch news conference

Backgrounders
Overview
Agreement

Essential Worker Cross-Border Vaccination Initiative

BISMARCK, N.D.—North Dakota Gov. Doug Burgum and Manitoba Premier Brian Pallister today announced the Essential Worker Cross-Border Vaccination Initiative, where North Dakota will administer COVID-19 vaccinations to Manitoba-based truck drivers transporting goods to and from the United States. This is the first such program between a Canadian and American jurisdiction.

"North Dakota and Manitoba have a long and rich history of friendship and co-operation, and this vaccination initiative is an opportunity to strengthen that bond by offering assistance that will protect public health and the flow of goods and services on both sides of the border," Burgum said. "With adequate vaccine supplies and all North Dakotans having access to vaccine while Canada is dealing with a vaccine shortage, we want to do our part to ensure essential workers from Canada who are frequently travelling through our state are vaccinated. The timely and effective administration of vaccines is essential for public health and the eventual safe reopening of our shared border."

Quick Links

Manitoba Ombudsman
Manitoba Auditor General
Manitoba Advocate for Children and Youth
Manitoba Public Insurance
Manitoba Hydro
Manitoba Liquor and Lotteries
Elections Manitoba

The Essential Workers Cross-Border Vaccination Initiative is an opportunity to sup ...orth Dakota's integrated economies by co-operating on the vaccination of individuals who work in both jurisdictions.

"As Manitoba faces the third wave of the pandemic and the significant challenges associated with variants of concern, our number one limiting factor in protecting Manitobans is the availability of COVID-19 vaccines," Pallister said. "Manitoba is proud to partner with North Dakota on this innovative strategy to provide life-saving vaccines to Manitoba's essential workers delivering the goods and services Manitobans, Canadians and Americans rely on. Manitoba and North Dakota have enjoyed a strong relationship of mutual respect and friendship, and I want to thank Governor Burgum and his team for their willingness to support Manitoba through this joint vaccination effort."

With the assistance of the Manitoba Trucking Association (MTA) and its members, Manitoba will identify and co-ordinate with eligible individuals and work with North Dakota to schedule vaccination appointments for truck drivers during their routine trips to the U.S. over the next six to eight weeks. It is estimated roughly 2,000 to 4,000 Manitoba drivers will take part in this program.

"On behalf of my eligible driving staff and all Manitoba Trucking Association members, I welcome today's announcement," said Bernie Driedger, president of Portage Transport Inc. "When it comes to the COVID vaccine the most important question is not where can one get it, but when can one get it? To see Manitoba and North Dakota coming together to creatively collaborate on a vaccination strategy that will expedite the vaccination of Manitoba truck drivers working to or through North Dakota is excellent news. This move protects these important essential workers and their families, while also freeing up vaccination spots back in Manitoba. A genuine win/win. We congratulate our provincial government partners on the initiative they took to make this happen".

The North Dakota Department of Transportation's rest area near Drayton, N.D., will initially serve as the vaccination site, which will also be open to North Dakotans ages 16 and older to get vaccinated. Vaccinations will take place from noon to 8 p.m. on Wednesdays, Thursdays and Fridays.

The state and province are establishing a joint-operations group to manage the initiative. The North Dakota Department of Health will provide nurses and other staff to administer the first and second doses of the vaccine to provide full immunization of truckers. There is no cost to the state or province as the U.S. government supplies the vaccine and reimburses the costs to administer.

The shared goal of this initiative is to create a model of continental co-operation for others to emulate as we prepare to safely reopen our shared border. Manitoba and North Dakota will consider further joint initiatives to vaccinate other essential workers and Manitobans.

North Dakota and Manitoba share the fifth-busiest border crossing between the United States and Canada, and represents the gateway to economic opportunity and prosperity in the Midwest and Prairies.

- 30 -

BACKGROUND INFORMATION ATTACHED

The Province of Manitoba is distributing this release on behalf of the Manitoba government and the State of North Dakota.

For more information:

- Public information, contact Manitoba Government Inquiry: 1-866-626-4862 or 204-945-3744.
- Media requests for general information, contact Communications Services Manitoba: 204-945-3765.
- Media requests for ministerial comment, contact Communications and Stakeholder Relations: 204-794-0732.

Manitoba

NO Dakota
Be Legendary.

The Manitoba/North Dakota Essential Workers Cross Border Vaccination Initiative

STATEMENT OF PURPOSE

The spirit of friendship and collaboration between Manitoba and North Dakota is strong and undiminished.

North Dakota and Manitoba share the fifth-busiest border crossing between the United States and Canada. More than a million vehicles per year typically cross our shared border. Our two jurisdictions are the gateway to Midwestern and Prairie prosperity that we wish to preserve and protect amidst the COVID-19 pandemic.

The Province of Manitoba and the State of North Dakota are therefore embarking on a joint project, the *Essential Workers Cross-Border Vaccination Initiative*, in support of our shared priority to vaccinate as many people as possible, as quickly as possible, so that our common border can be safely re-opened for all our residents.

With this initiative, we affirm our shared values and goals:

- To help and support each other throughout this pandemic
- To protect the residents of Manitoba and North Dakota by vaccinating as many individuals as possible, as quickly as possible
- To ensure that essential workers, goods, and services necessary for our lives and livelihoods are able to travel safely across our shared border
- To lay the groundwork for a quick and safe return to open borders, open trade, and open travel between us
- To create a model of continental cooperation for others to emulate.

We view the *Essential Workers Cross-Border Vaccination Initiative* as an opportunity to support our integrated economies by cooperating on the vaccination of individuals who work in both our jurisdictions. This initiative will begin with truck drivers as they regularly cross the U.S.-Canada border, keeping our economy moving and our people and businesses supplied with the goods they need.

THE INITIATIVE

The State of North Dakota will provide COVID-19 vaccine to fully immunize Manitoba-based truck drivers during their routine trips to the U.S. over the next 6-8 weeks.

...2/

Eligibility

- Drivers must be able to cross into the U.S. and return to Canada without a requirement to quarantine under federal public health rules
- Drivers will be required to have a valid Manitoba Class 1 license and be on assignment at the time of vaccination
- Eligibility and appropriate use of the initiative will be communicated directly to drivers with the assistance of the Manitoba Trucking Association and its members
- Estimated initiative uptake is 2,000-4,000 drivers

Vaccination Location(s)

- Northbound Alexander Henry Rest Area near Drayton, North Dakota
- Others to come on stream as required
- Location will have sufficient space for truck parking, drive-thru inoculation, and 15-minute observation periods

Vaccine Administration

- Vaccines and immunization staff will be supplied and administered by the State of North Dakota
- Nortb Dakota has an online pre-registration system that will be used to limit crowding and lost time for drivers, and aid in the scheduling of staff and delivery of doses
- Trucking companies may want to manage vaccine booking in tandem with their driver scheduling

Vaccine and Dose Schedule

- North Dakota will administer vaccines authorized by the United States Food and Drug Administration and Health Canada
- North Dakota will adhere to the recommended dose schedule and will administer both first and second shots to eligible drivers accordingly
- All drivers will be eligible for doses within the dose schedule

Vaccine Records and Information-sharing

- North Dakota to provide proof of vaccination to drivers
- North Dakota to provide record of vaccine use to US federal government, barring issue with Canadian addresses
- North Dakota to provide record of vaccinations to Manitoba for incorporation into provincial database

Timing of Initiative

- Vaccinations will commence on Wednesday, April 21
- The vaccination site will be open each Wednesday-Friday, noon to 8pm to accommodate northbound, returning travel by truckers

...3/

Costs and Reimbursement

- There will be no cost to North Dakota or Manitoba. Vaccines and the cost of administering vaccines will be covered by the United States Government

Future Application

- This initiative will be considered for scaling to meet other designated vaccination needs for Manitobans

AB2402

Manitoba

NORTH Dakota
Be Legendary.

MEMORANDUM OF UNDERSTANDING BETWEEN THE PROVINCE OF MANITOBA AND THE STATE OF NORTH DAKOTA

WHEREAS fighting the spread of COVID-19 requires unprecedented international action and cooperation; and

WHEREAS North Dakota and Manitoba have long enjoyed strong and deep bonds of friendship founded on generations of shared historical, economic, social, and cultural experiences; and

WHEREAS our two jurisdictions have had an official intergovernmental relationship for over 35 years, dating to the North Dakota-Manitoba Agreement on Consultation and Co-Operation of 1985; and

WHEREAS jobs and communities in both North Dakota and Manitoba benefit from bilateral trade, tourism and the integration of markets and supply chains for goods and services across our economies; and

WHEREAS maintaining the safe and efficient flow of goods and services across the Canada-United States border is essential for both the North Dakota and Manitoba economies; and

WHEREAS protecting the health and safety of truckers is a shared priority and critical to maintaining essential trade in goods across the Canada-United States border during the COVID-19 pandemic; and

WHEREAS Manitoba and North Dakota, in the spirit of close cooperation, are committed to collaborative efforts to protect the health and safety of Canadians and Americans; and,

WHEREAS timely and effective administration of COVID-19 vaccinations is essential for public health and the safe reopening of the Canada-United States border, and North Dakota has both sufficient vaccine supply and the public health capacity to vaccinate Manitobans who desire it;

THEREFORE, Manitoba and North Dakota have agreed to jointly establish the *Essential Worker Cross-Border Vaccination Initiative* as follows:

1. North Dakota will provide first and second dose COVID-19 vaccinations to Manitoba-based essential workers beginning with Manitoba-based truck drivers who are transporting goods to or from the United States
2. North Dakota will identify, prepare, and staff appropriate immunization sites, and supply and administer vaccines approved for use in both the United States and Canada.
3. Manitoba, with the assistance of the Manitoba Trucking Association and its members, will identify and coordinate with eligible individuals and work with North Dakota to coordinate scheduling of appointments for vaccinations;
4. North Dakota will provide proof of immunization to individuals who are vaccinated, and share records of immunization with Manitoba, and
5. Manitoba and North Dakota will jointly determine opportunities for expanding this initiative to vaccinate other designated essential workers and Manitobans.
6. There will be no cost to North Dakota or Manitoba as the United States Government will assume all costs of providing vaccines and vaccinations to every Manitoban participating in this Initiative;
7. Manitoba and North Dakota will establish a joint operations group to manage the *Essential Worker Cross-Border Vaccination Initiative* and meet the objectives of this agreement.

Original signed by
Governor Doug Burgum

Original signed by
Premier Brian Pallister

AB2403

Manitoba

News Releases

Manitoba NewsRelease

April 20, 2021

NEW COMMUNITY-LED CLINICS WILL SUPPORT COVID-19 VACCINE UPTAKE AMONG URBAN INDIGENOUS PEOPLE

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Community Clinics Will Also Support COVID-19 Immunizations for Homeless People: Stefanson

The Manitoba government is partnering with five community organizations to establish new Indigenous-led COVID-19 immunization clinics, Health and Seniors Care Minister Heather Stefanson announced today, noting this initiative will help support better access and uptake of immunization among Indigenous people, who have been most seriously and disproportionately affected by the virus.

"These new immunization sites are an important option for people who would otherwise face barriers in accessing immunization, recognizing that Indigenous people have been disproportionately affected by COVID-19," said Stefanson. "These locations have been developed with the guidance and expertise of our community partners, and we are grateful for their support. By working together, we can help protect each other from this virus."

Most of the immunization clinics are expected to open the week of April 26, with the Portage la Prairie and Thompson locations expected to open the week of May 3. Eligible people can make appointments through the provincial call centre, with support from the community partners when needed. The clinics will be located at:
- Ma-Mow-We-Tak Friendship Centre in Thompson, 4 Nelson Rd., Thompson;
- Brandon Friendship Centre, 205 College Ave., Brandon;
- Prairie Fusion Arts and Entertainment Centre, led by the Portage la Prairie Community Revitalization Corporation, 11 Second St. NE, Portage la Prairie;
- Aboriginal Health and Wellness Centre, 180 Higgins Ave., Winnipeg; and
- Ma Mawi Wi Chi Itata Centre – Win Gardner Place, 363 MacGregor Ave., Winnipeg.

"Indigenous leadership and partnerships improve health-care quality and access for Indigenous people," said Dr. Marcia Anderson, public health lead for the First Nations Pandemic Response Coordination Team. "This is critical for the success of Manitoba's vaccine rollout and our shared goals of protecting the people we love and protecting the capacity of the health-care system."

The work to establish these clinics has been led by an urban Indigenous vaccine committee, which includes representatives from Indigenous governance organizations and community organizations.

"Collaboration and partnerships with Indigenous organizations is instrumental in strengthening our ability to efficiently and safely provide access to vaccinations to Indigenous peoples in Manitoba," said Indigenous and Northern Relations Minister Clarke. "Our government committed to support the development of an effective plan that is relevant to the Indigenous population and reflects the needs of its members in urban areas."

Clinic locations will provide culturally safe supports to people who might otherwise face barriers in accessing immunizations, to help support vaccine confidence and ensure these individuals are included in the largest immunization campaign in the province's history.

Outreach co-ordinators and organization staff will help ensure their clients are aware of the clinics and the opportunity to be immunized, and will help to answer any questions or concerns they may have.

To help reduce barriers, about 20 per cent of all immunizations will be done on a walk-in basis, with the remainder being scheduled appointments. When possible, child minding or children's activity kits will be offered to support parents who may not be able to make other arrangements. An Elder or traditional Knowledge Keeper will be at sites regularly, and traditional ceremony, smudging and traditional medicines may also be offered.

The Aboriginal Health and Wellness Centre in Winnipeg and the sites in Brandon, Portage la Prairie and Thompson will also be used to help immunize people who are homeless or precariously housed. These sites are known and

trusted by people experiencing homelessness, and will work closely with the community shelters to s access. At these sites, individuals will also receive a comfort kit that includes food and over-the-counter pain medication.

In the coming weeks, Focused Immunization Teams will visit shelters across the province to also offer immunizations to people who are homeless and these sites will be scheduled as soon as possible. All eligible and consenting individuals who are homeless and aged 18 or older are eligible for immunization.

To develop this plan, the committee also held extensive consultations with Indigenous governments, First Nation medical leadership, community-based partners and individuals with lived experience of homelessness.

In Manitoba, 50 to 60 per cent of all COVID-19 admissions to intensive care units have been First Nation people.

- 30 -

BACKGROUND INFORMATION ATTACHED

Backgrounder
Background Information - https://www.gov.mb.ca/asset_library/en/newslinks/2021/04/BG-Urban_Indigenous_Immunization_Plan-HSC-INR.pdf

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Manitoba Backgrounder

URBAN INDIGENOUS COVID-19 IMMUNIZATION CLINICS

Immunization clinics for Indigenous people living in urban centres, with a focus on those who may face barriers in accessing the COVID-19 vaccine in other locations, will open in late April and early May. These clinics will be managed by five community partners.

"Aboriginal Health and Wellness Centre of Winnipeg (AHWC) is providing an opportunity for everyone in our community to get vaccinated. As Indigenous leaders, we believe in the benefits of COVID-19 vaccination, and are encouraging our relatives and community members who work and live in our city to get immunized for the sake of our elders, adults, youth and children. AHWC embraces culture and promotes staying safe and expanding access. I support you and we support each other – if you are apprehensive about getting the shot, come speak to us and let us support you!" — Della Herrera, executive director, Aboriginal Health and Wellness Centre of Winnipeg.

"Creating a safe, accessible and welcoming vaccination centre for our urban Indigenous community is extremely important in protecting our future. Ma Mawi Wi Chi Itata Centre Helpers will be on site to greet and support individuals and families through this process and will also be offering community support services. We are really excited to work with our partners so we can vaccinate as many of our urban Indigenous community as possible." — Diane Redsky, executive director, Ma Mawi Wi Chi Itata Centre Inc.

"The Portage la Prairie Community Revitalization Corporation, in partnership with the Portage Urban Indigenous Peoples Coalition, is pleased to accept this opportunity to provide COVID-19 vaccinations to our urban Indigenous citizens. The Urban Indigenous Vaccine clinic will be a space to combine modern medicine technology with traditional Indigenous teachings. This space will be welcoming to all Indigenous people within the city of Portage la Prairie and surrounding area. Pidamaya, Miigwetch." — Victoria Espey, executive director, Portage la Prairie Community Revitalization Corporation.

"We are pleased to be a part of the delivery of a second site in our community of Brandon and in being able to offer our location of the Mahkaday Ginew Memorial Centre, located at 205 College Ave., for a safe environment to those looking to receive the vaccination to help increase the fight against COVID-19. As president of the Brandon Friendship Centre, I have already received my first dose of the vaccination through our super site at the Keystone Centre and we understand the need to open our doors for community in a good way for those looking for services that provide a cultural safe environment." — Jason Gobeil, president, Brandon Friendship Centre.

...2/

"The Ma-Mow-We-Tak Friendship Centre is pleased to host a vaccination clinic in a location that Indigenous people already trust and attend for programs and services. Offering additional supports such as interpretation, support, guidance and assistance in a culturally sensitive location will help ease tensions and fears and provide a comfortable experience for those who might otherwise be hesitant. The Ma-Mow-We-Tak Friendship Centre encourages everyone to do their part and get vaccinated!" — Dee Chaboyer, executive director, Ma-Mow-We-Tak Friendship Centre.

This is Exhibit "G" referred to in the Affidavit of Brent Roussin affirmed before me this 30th day of April, 2021.

A Barrister-at-law in and for the
Province of Manitoba.

AB2408

Manitoba

News Releases

Manitoba **NewsRelease**

April 19, 2021

NEW ORDERS PROTECT MANITOBANS AGAINST THIRD WAVE

As Numbers Are on the Rise, Province Implements Stricter Orders to Slow the Spread of COVID-19 Variants of Concern While Rapid Testing Strategy is Implemented and Vaccine Rollout Speeds Up: Pallister

New public health orders are being introduced this week to slow the spread of variants of concern and protect Manitobans and the health-care system against the third wave, Premier Brian Pallister and Dr. Brent Roussin, chief provincial public health officer, announced today.

"Despite our best collective efforts and having some of the strictest measures in the country, COVID-19 cases and particularly variants of concern are on the rise," said Pallister. "Introducing more restrictive measures is not what many of us want to hear right now, but it's what we need to do to protect Manitobans and our health-care system. It is our goal that by acting quickly now, we can slow the speed of the third wave avoid a return to full shutdown in many sectors throughout our province."

The following additional public health order restrictions will be in effect on Tuesday, April 20 at 12:01 a.m.:
- all households may only have two designated visitors indoors;
- outdoor gatherings on public and private property limited to a maximum of 10 people including household members;
- faith-based gatherings limited to 25 per cent capacity or 50 people, whichever is lower, with indoor masks orders in place except while household groups are seated at a service, are appropriately distanced from other groups and are not singing; and
- weddings and funerals reduced to 10 people, in addition to an officiant and photographer.

The following additional public health order restriction will be in effect on Wednesday, April 21 at 12:01 a.m.:
- Retail stores must be limited to one-third the capacity of the store or up to 333 patrons, whichever is lower and malls will be limited to 33 per cent of the facility's capacity.

"We have been carefully monitoring our numbers and epidemiology and are seeing a concerning trend in case numbers and test positivity rates, particularly in the aftermath of spring break and the Easter and Passover holidays," said Roussin. "The fundamentals continue to be paramount in stopping the spread of this deadly virus. Manitobans need to continue to stay home as much as possible and significantly limiting close contacts. If you do need to leave the house, ensure you are taking measures to keep yourself and others safe including frequent handwashing, staying home when sick, covering your cough and wearing a mask, even outdoors, and seek immediate testing even when you experience mild symptoms."

Changes to the orders are in effect until Wednesday, May 12.

Additionally the province announced a new rapid testing partnership with Manitoba businesses and the critical services sector to help limit the spread of COVID-19 in the workplace and community through early, asymptomatic testing. As well, Manitoba's Vaccine Implementation Task Force is expanding the eligibility criteria for the Astra-Zeneca vaccine to all people age 40 and up, rather than keeping it restricted to older Manitobans only.

"We must be cautious in our attitude towards COVID-19 and we must be proactive in our actions against COVID-19," said Pallister. "We have more tools in our toolkit now than we did during the first and second waves. While public health orders and the fundamentals remain paramount, we continue to strengthen our proactive measures to help address rising case numbers from multiple angles including enforcement, rapid testing and accelerated and expanded vaccinations. These measures will help us slow the spread of the virus more quickly and effectively, protecting our most vulnerable populations."

AB2409

For up-to-date information on COVID-19 in Manitoba, visit www.manitoba.ca/COVID19.

- 30 -

BACKGROUND INFORMATION ATTACHED

Backgrounder

Background Information - https://www.gov.mb.ca/asset_library/en/newslinks/2021/04/BG-Third_Wave_PHOs_2-PR-CPPHO.pdf

AB2410

Manitoba Backgrounder

CHANGES TO PUBLIC HEALTH ORDERS
EFFECTIVE TUESDAY, APRIL 20, 2021

SECTOR	Existing Restrictions Under Red Level	NEW RESTRICTIONS UNDER RED LEVEL
Indoor gathering sizes	Households can choose one of the following: • continue designating two visitors to their home; or • designating a second household so that two households can visit each other, as long as everyone in the house has authorized those designated individuals to visit.	All households limited to two designated visitors.
Outdoor gathering sizes	Maximum gathering size of 10 people on private property and 25 people on public property, in addition to household members.	Outdoor gatherings on public and private property limited to a maximum of 10 people, including household members.
Restaurants and bars	Capacity limit of 50 per cent, with the requirement for tables to sit with only household members, and other public health measures in effect	No change.
Gyms, Fitness and Indoor Recreation	Capacity limit of 25 per cent with public health measures in place including for spectators and in common areas and locker rooms. Masks must be worn at all times except while swimming.	No change.
Casinos and VLTs	Casinos must remain closed; VLTs in a business may operate if each machine is separated by at least two metres of distance or by a non-permeable barrier.	No change.
Museums, Galleries and Libraries	Capacity limit of 25 per cent or up to 250 people, whichever is lower.	No change.

Movies Theatres and Concert Halls	Must remain closed.	No change.
Community, Cultural and Religious Gatherings	Capacity limit of 25 per cent or 100 people, whichever is lower. Masks are not required when seated when appropriately distanced and when not singing or chanting.	Capacity limit of 25 per cent or 50 people, whichever is lower. Masks are not required when seated when appropriately distanced and when not singing or chanting.
Personal services	Capacity limit of 50 per cent, with public health measures in place.	No change.
Weddings and funerals	Up to 25 people may attend in addition to an officiant and a photographer or videographer.	Up to 10 people may attend in addition to an officiant and a photographer or videographer.

CHANGES TO PUBLIC HEALTH ORDERS
EFFECTIVE WEDNESDAY, APRIL 21, 2021

SECTOR	EXISTING RESTRICTIONS UNDER RED LEVEL	NEW RESTRICTIONS UNDER RED LEVEL
Retail and malls	Retail store capacity limit of up to 50 per cent or 500 people, whichever is lower. Mall capacity limit of up to 50 per cent of the facility's capacity.	Retail store capacity limit of up to one-third the capacity of the store or up to 333 patrons, whichever is lower. Mall capacity limit of up to 33 per cent of the facility's capacity.

AB2412

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Media requests for general information, contact Communications Services Manitoba: 204-945-3765.

Media requests for ministerial comment, contact Communications and Stakeholder Relations: 204-290-5374.

Twitter Feed

News Release - Manitoba

April 19, 2021

NEW PUBLIC HEALTH ORDERS IN PLACE FOR VACCINATED PERSONAL CARE HOME STAFF

New Orders Allow Vaccinated Personal Care Home Staff to Provide Care at Multiple Locations In Order to Improve Staffing Availability and Protect Manitobans: Stefanson

A new public health order will go into effect Tuesday, April 20 at 12:01 a.m. that will continue the requirement for non-vaccinated staff who work in personal care homes to provide care at a single site and enable vaccinated staff who work in personal care homes to provide care at more than one site, Health and Seniors Care Minister Heather Stefanson announced today.

"Personal care home staff on the front line provide an absolutely invaluable service to our Manitoba seniors and personal care home residents who have been hardest hit by COVID-19," said Stefanson. "Our government has fast tracked vaccinating both personal care home residents and staff, and this new public health order recognizes that work and improves staffing flexibility for personal care homes and to allow care providers to schedule additional shifts."

In May 2020, the Manitoba government issued an emergency order for personal care homes to limit the number of employees who work at multiple sites. This order required health-care staff to work in a single personal care home, with limited exceptions. The emergency order was put in place to reduce the risk of transmission of COVID-19 in long-term care facilities.

Effective Tuesday, April 20 at 12:01 a.m., public health is moving to ease some of these restrictions by updating the orders to exempt staff who have been vaccinated for COVID-19. This applies to personal care home staff and agency staff who provide service to personal care homes.

"Across Canada, a significant proportion of reported COVID-19 deaths have affected residents of long-term care facilities," said Stefanson. "We are continuing this order to protect our most at-risk Manitobans and ensure employees working in personal care homes can provide care safely."

Staff who have received at least one dose of COVID-19 vaccine can work at more than one site as early as two weeks after their first dose. The second dose must be received within 16 weeks. Staff who have been vaccinated can request a print out confirming their vaccination from their local public health office, or print a copy online. For more information, visit: www.gov.mb.ca/covid19/vaccine/immunization-record.html.

COVID-19 vaccines have been shown to reduce the risk of contracting and spreading COVID-19, as well as to reduce severe illness. As the majority of personal care home residents have also received the vaccine, having vaccinated staff move between sites will have less risk for residents, said Stefanson.

AB2413

The new order will be in effect until lifted by the chief provincial public health officer, a decision that will be based on a number of different factors including case numbers, test positivity rates and the ongoing risk of COVID-19.

To view current public health orders, visit www.gov.mb.ca/covid19/restartmb/prs/orders/index.html.

- 30 -

For more information:

- Public information, contact Manitoba Government Inquiry: 1-866-626-4862 or 204-945-3744.
- Media requests for general information, contact Communications Services Manitoba: 204-945-3765.
- Media requests for ministerial comment, contact Communications and Stakeholder Relations: 204-794-0732.

This is Exhibit "H" referred to in the Affidavit of Brent Roussin affirmed before me this 30th day of April, 2021.

A Barrister-at-law in and for the
Province of Manitoba.

AB2415

Manitoba

News Releases

Manitoba **NewsRelease**

April 19, 2021

PROVINCE LAUNCHING COVID-19 RAPID TEST ASYMPTOMATIC SCREENING STRATEGY TO PROTECT MANITOBANS

Rapid Testing Partnership with Small Business, Industry, and Critical Services Sector

The Manitoba government has launched a rapid testing screening program to support businesses and critical service providers by helping to limit the spread of COVID-19 through early detection, Health and Seniors Care Minister Heather Stefanson announced today.

"We are partnering with Manitoba businesses and critical services to make the best use of our rapid test supply with the goal of identifying asymptomatic cases of COVID-19 in the workplace and other critical settings that would otherwise go undetected," said Stefanson. "This rapid test program will help us protect more Manitobans as we deal with a rise in COVID-19 cases."

This program builds on the current Fast Pass asymptomatic rapid testing in place for teachers and education workers. Rapid testing using an antigen-based test is already in place for asymptomatic staff at select personal care homes in Manitoba.

The expanded strategy will focus primarily on providing antigen-based rapid tests to targeted industries and critical service providers in non-health-care settings. It focuses on organizations that can self-administer a sustainable asymptomatic screening program and whose specific setting may benefit from routine testing because of their geographical location, potential supply chain, community or population impacts, transportation or living arrangements, or who have a workforce that have been disproportionally impacted by COVID-19. Partner organizations will be responsible for administering the tests and tracking, and reporting test results to the province.

The province has distributed a three-month supply of rapid tests to participating organizations and is providing training and other resources to support launch of the program. The majority of sites will use nasal swabs, which can be administered by non-health-care professionals, as they do not go as far into the nasal cavity as the nasopharyngeal swab that is used for a typical COVID-19 test. Red River College will support the pilot by offering participants a two-hour virtual training module on nasal swabbing and how to conduct a rapid test.

The initial rollout includes a number of organizations from a cross-segment of Manitoba sectors including the Addictions Foundation of Manitoba, Manitoba's Wildfire Service, a mid-size Manitoba-based agri-foods business (Winkler Meats), a mining operation in northern Manitoba (Alamos Gold Inc.), and a major airline (Air Canada).

"The opportunity for our employees to participate in this important, science-based, rapid screening initiative adds another tool in our multi-layered approach to employee safety," said Dr. Jim Chung, chief medical officer at Air Canada.

Depending upon uptake and results, the program may expand to other industries such as construction or transportation or look to implement other delivery models, such as pop-up screening clinics at a later date. Manitoba also launched a second Fast Pass site in Winkler on April 12 that expands access to rapid testing for school-based and child-care staff.

"As we continue to immunize and protect more Manitobans, this rapid testing program can help screen even those who have been immunized to provide assurances to workforces and their employees," said Stefanson.

For more information on Manitoba's rapid testing strategy, visit www.gov.mb.ca/covid19/testing/rapid-testing.html.

- 30 -

BACKGROUND INFORMATION ATTACHED

Backgrounder
Background Information - https://www.gov.mb.ca/asset_library/en/newslinks/2021/04/BG-Rapid_Testing_Strategic_Rollout-HSC.pdf

manitoba.ca | 1-866-MANITOBA

Manitoba Backgrounder

MANITOBA'S RAPID TEST SCREENING PROGRAM

Types of Tests Used in the Rapid Test Screening Program

The two antigen-based rapid tests being used for this program are:

- Abbott PanBio COVID-19 antigen test – provides COVID-19 results within about 20 minutes. The test can be administered by either a nasal swab or the deeper nasopharyngeal swab.
- BD Veritor COVID-19 antigen test – provides COVID-19 results within about 20 minutes. The test is administered using a mid-turbinate swab, which does not go as deep into the nasal cavity as the nasopharyngeal swab.

Red River College Virtual Nasal Swab Training

Red River College is supporting the rapid test asymptomatic screening strategy by offering partner organizations a two-hour virtual training session on anterior nasal swabbing and conducting the rapid test. The course, which was designed in partnership with the province, provides non-health-care providers with the knowledge, practice and tools needed to safely conduct an anterior nasal swab and use an antigen rapid test device.

Rapid Testing Screening Program for 2021 Wildfire Season

The Abbott PanBio rapid antigen test will be used to support regular asymptomatic screening for staff working in the Manitoba Wildfire Service. Because wildfires can occur in remote locations throughout the province, staff move quickly throughout communities to provide immediate support and work out of a number of bases in remote communities. Tests will be administered by trained program staff who have taken the new Red River College virtual training program for the anterior nasal swab.

Client Screening Intake for Addictions Foundation of Manitoba

Beginning April 6, Addictions Foundation of Manitoba residential drug or alcohol treatment sites in Winnipeg began providing antigen rapid tests for COVID-19 as part of their client-intake processes. The BD Veritor antigen rapid test will be administered by nurses working at the site.

...2/

Alamos Gold Lynn Lake Mining Operation Workforce Screening Program

The Alamos Gold Lynn Lake project is located in northern Manitoba and consists of two primary sites just east of the town of Lynn Lake. A nurse has been hired to offer workers the BD Veritor antigen rapid test beginning April 6.

Winkler Meats Workforce Screening Program

Winkler Meats is a Canadian meat producer based out of Winkler and distributes products to Western Canada and Ontario. The site will begin offering workers the Abbott PanBio antigen rapid test beginning April 12. Tests will be administered by trained staff who have taken the new Red River College virtual training program for the anterior nasal swab.

Air Canada Workforce Screening Program

Air Canada will begin offering rapid tests to staff using a self-administered nasal swab for the BD Veritor antigen rapid test beginning the end of April. This approach is consistent with other Air Canada programs currently in place in other jurisdictions.

Fast Pass Sites

Manitoba began offering school-based and child-care staff the option of seeking asymptomatic testing at the Fast Pass site at 1066 Nairn Ave. in Winnipeg on March 22. A second Fast Pass site opened April 12 at 485 George Ave. in Winkler. Similar to the Winnipeg Fast Pass site, the Winkler site offers asymptomatic and symptomatic testing for eligible individuals. Fast Pass sites use the Songbird Hyris bCUBE PCR test. More details on Fast Pass sites can be found at www.gov.mb.ca/covid19/testing/rapid-testing.html.

AB2419

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Twitter Feed

Media Bulletin - Manitoba

April 20, 2021

COVID-19 ENFORCEMENT UPDATE

The Manitoba government is providing an update on ongoing enforcement efforts to protect Manitobans from the spread of COVID-19.

A total of 121 warnings and 21 tickets were issued for the week of April 12 to 18 including:
- 14 $1,296 tickets to individuals for various offences;
- four $5,000 tickets to business; and
- three $5,150 tickets to individuals under the federal quarantine act.

Eight of the 14 $1,296 tickets issued last week were in relation to gatherings in private residences or outdoors.

Officials advise that security personnel from Commissionaires Manitoba are now greeting travellers arriving at the Winnipeg International Airport to advise on Manitoba's self-isolation requirements, distribute public health materials and answer basic questions about public health orders.

Officials note that most Manitobans are doing their part to reduce the spread of COVID-19 and are following the fundamentals. However, education and enforcement remain necessary in some instances. The public is reminded that abusive and aggressive behaviour will not be tolerated, and criminal offences will be reported to police and investigated.

Enforcement officials continue to work with businesses to provide guidance and the majority of interactions are educational in nature.

Manitobans are urged to continue reporting compliance and enforcement issues by visiting www.manitoba.ca/COVID19 and completing the reporting form, or by calling 204-945-3744 or (toll-free) 1-866-626-4862 and pressing option three on the call menu.

Almost 3,300 personnel across various agencies are empowered to enforce public health orders to protect Manitobans. This includes RCMP, law enforcement agencies, provincial employees and municipal partners, such as the City of Winnipeg.

Since enforcement efforts began in April 2020, a total of 3,804 warnings and 1,180 tickets have been issued, resulting in more than $1.6 million in fines to businesses and individuals.

Updated enforcement statistics are now posted online weekly at https://manitoba.ca/openmb/infomb/departments/index.html#cdr.

Additional data related to COVID-19, including data on enforcement, vaccines, outbreaks as well as some downloadable and historic data, can be found at https://geoportal.gov.mb.ca/.

In addition to a $298 fine for not wearing a mask in indoor public places, fine amounts for violating public health orders have been set at $1,296 for tickets issued to individuals, including sole proprietorships and partnerships, and $5,000 for tickets issued to corporations.

AB2420

The Manitoba government is taking strong action to protect Manitobans and ensu
Current orders under the Public Health Act are available at:
https://manitoba.ca/asset_library/en/proactive/20212022/orders_soe_bridge_04192021.pdf.

Some public health orders remain in effect and Manitobans are reminded to adhere to all current public health orders and stay home. Stick to the fundamentals of physical distancing, hand washing and wearing a mask. For more information on COVID-19 in Manitoba, visit www.manitoba.ca/COVID19.

For information about online events and activities designed to make staying home a little easier, visit Safe at Home Manitoba at www.safeathomemb.ca/.

- 30 -

For more information:

- Public Information, contact Manitoba Government Inquiry: 1-866-626-4862 or 204-945-3744.
- Media requests for general information, contact Communications Services Manitoba: 204-945-3765.
- Media requests for ministerial comment, contact Communications and Stakeholder Relations: 204-794-0732.

Quick Links

Manitoba Ombudsman
Manitoba Auditor General
Manitoba Advocate for Children and Youth
Manitoba Public Insurance
Manitoba Hydro
Manitoba Liquor and Lotteries
Elections Manitoba

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Manitoba

This is Exhibit "I" referred to in the Affidavit of Brent Roussin affirmed before me this 30th day of April, 2021.

A Barrister-at-law in and for the
Province of Manitoba.

AB2422

Safe at home MB.ca

Français

Manitoba

- Stay Safe
- Stay Home
- Stay Connected

Manitoba

Our recovery starts at home.

AB2423

Stay Safe

Manitobans have been tackling the challenge of COVID-19 for over a year now. We know the past year has been difficult. We've all had to adjust to the new normal to help keep ourselves and our loved ones safe. We've not seen our friends and family as much we want to. We've all missed out on activities and events that used to bring us together. It's important to recognize what we're feeling, and it's also important to know that our collective effort has helped keep people safe and helped onr health care workers by keeping case counts lower.

With thousands of people being vaccinated daily, we know that we have reason for optimism. It's important to continue to do a bit more of what's been working for a little longer. That means keeping contacts to a minimum and staying home as much a possible and when we enjoy our fabulous Manitoba summer outside, that we do that safely as well. With a last push of us all working together, we'll be able to get through this.

AB2424

For up-to-date information on COVID-19 in Manitoba, please visit Manitoba.ca/c

Learn more about Manitoba's largest-ever immunization effort and find out when it's your turn to be vaccinated at https://protectmb.ca/

Stay safe, focus on the fundamentals

You can reduce your risk and help prevent the spread of COVID-19 by adopting these fundamental habits:

- Check yourself for symptoms every day.
- Stay home when you are sick.
- Get tested if you have symptoms of COVID-19.
- Wash your hands or use alcohol-based hand sanitizer frequently.
- Cover your cough or sneeze.
- Maintain social (physical) distancing.
- Wear a mask when social (physical) distancing is not possible.
- When enjoying the outdoors with groups from outside your household distance and wear a mask when distancing is not possible.

Manitoba public health officials have also issued public health orders to help reduce the risk and prevent the spread of COVID-19. Please visit the **State of Emergency page** to see how these orders affect you.

Mental health

We all feel stressed or anxious from time to time, and these feelings may be amplified by the COVID-19 pandemic. You may be experiencing:

- Fear of getting sick with COVID-19 or of making others sick.
- Worry about finances or shopping safely for essential items.
- Conflict with family or friends over differences in risk comfort levels.
- Sadness about being isolated from loved ones.

Take care of your mental health. Start preparing now for how your emotions may affect you later. It's normal to have feelings of sadness or disappointment about your change in routine, your finances or your social life.

Under the current conditions, it's okay to avoid contact with others outside your household to protect yourself, your family and your community.

If you live alone, consider holding a virtual gathering with friends, family or another household. You may also visit with one person with whom you regularly interact at your home or theirs.

The outdoors has been a refuge for many during the pandemic. Canadians have been getting outside for exercise and lower-risk socializing with masks and social distancing. Dress well, follow gathering size limits and other public health measures, and the outdoors can be an excellent way to improve your mental health and well-being all winter long.

AB2425

Mental Health Virtual Therapy
Learn more and sign up at www.manitoba.ca/covid19/bewell/virtualtherapy.html

Klinic Crisis Line
204-786-8686 or 1-888-322-3019 (TTY 204-784-4097)

Manitoba Suicide Prevention & Support Line
1-877-435-7170 (1-877-HELP170)

Kids Help Phone
1-800-668-6868

Manitoba Addictions Helpline
1-855-662-6605 http://mbaddictionhelp.ca/

Klinic Sexual Assault Crisis Line
204-786-8631 or 1-888-292-7565 (TTY 204-784-4097)

Manitoba Farm, Rural & Northern Support Services
supportline.ca - online counselling
1-866-367-3276(hours Mon-Fri, 10 a.m. to 9 p.m.)

First Nations and Inuit Hope for Wellness Help Line
1-855-242-3310

Canada.ca/Coronavirus has a wide range of immediate mental health and substance use resources and supports for Canadians, including the online Wellness Together Canada portal. This portal can help Manitobans experiencing a range of common feelings like:

- A sense of being socially excluded or judged.
- Concern about your children's education and well-being.
- Fear of getting sick with COVID-19 or of making others sick.
- Worry about losing your job, not being able to work or finances.
- Fear of being apart from loved ones due to isolation or physical distancing.
- New or increased desire to use alcohol or other substances.

Latest Updates

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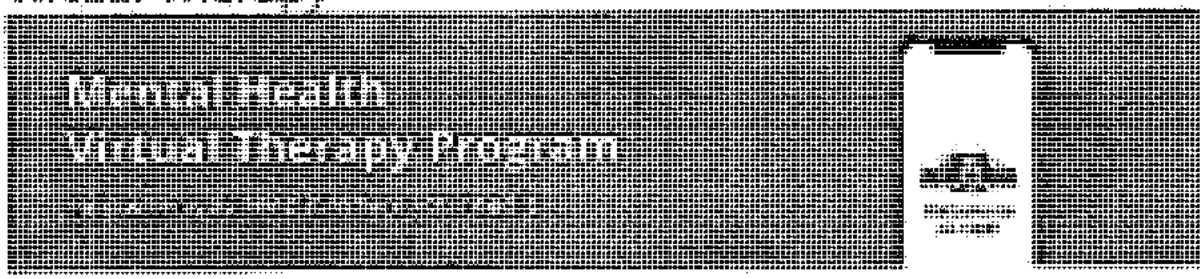
AB2426

Manitoba

Virtual Therapy



Mental Health Virtual Therapy Now Expanded

The COVID-19 pandemic brings a high level of stress and anxiety as it rapidly changes the way we work, socialize and live. **Mental health virtual therapy can help Manitobans age 16 or older who are coping with mild to moderate symptoms of anxiety and now includes two free counselling sessions.**

NEW: Two-session virtual counselling

Starting October 13, every Manitoba resident age 16 or older have access to up to two free counselling sessions with a trained professional at Morneau Shepell.

To book your first session, call toll free **1-844-218-2955.** Counselling sessions can be by video or telephone, as preferred. Sessions are offered in multiple languages.

Sign up for the AbilitiCBT program now

AbilitiCBT is a free digital therapy program from Morneau Shepell, available to all residents of Manitoba age 16 or older experiencing mild to moderate symptoms of anxiety due to the pandemic. So far, over 4,000 Manitobans have signed up for the service in the last 6 months.

Kids Help Phone is available to those under 16 years of age.

What to expect at signup with AbilitiCBT program

You will be redirected to the AbilitiCBT home page to sign up in English or French.

You will need to enter your email and create a password to access the program.

Next, you will be asked to complete the health screening questionnaire online.

After you sign up, you will receive a welcome email outlining your next steps, including:

Connecting with a professional therapist by phone or video

Moving through 10 structured modules

If you prefer to work from your smartphone or tablet, download the AbilitiCBT app.

About the AbilitiCBT digital therapy program

Cognitive behavioural therapy (CBT) is one of the most effective forms of therapy. AbilitiCBT by Morneau Shepell is a free online digital therapy program available to Manitoba residents age 16 or older experiencing mild to moderate

AB2427

symptoms of anxiety and depression due to the pandemic. It's free, confidential and accessible at hor computer, smartphone or tablet.
You do not need to be referred by a doctor to use AbiltiCBT. You will be able to connect to a professional therapist trained to help you deal with:

pandemic challenges

the state of uncertainty

physical isolation

care for family and community members

information overload

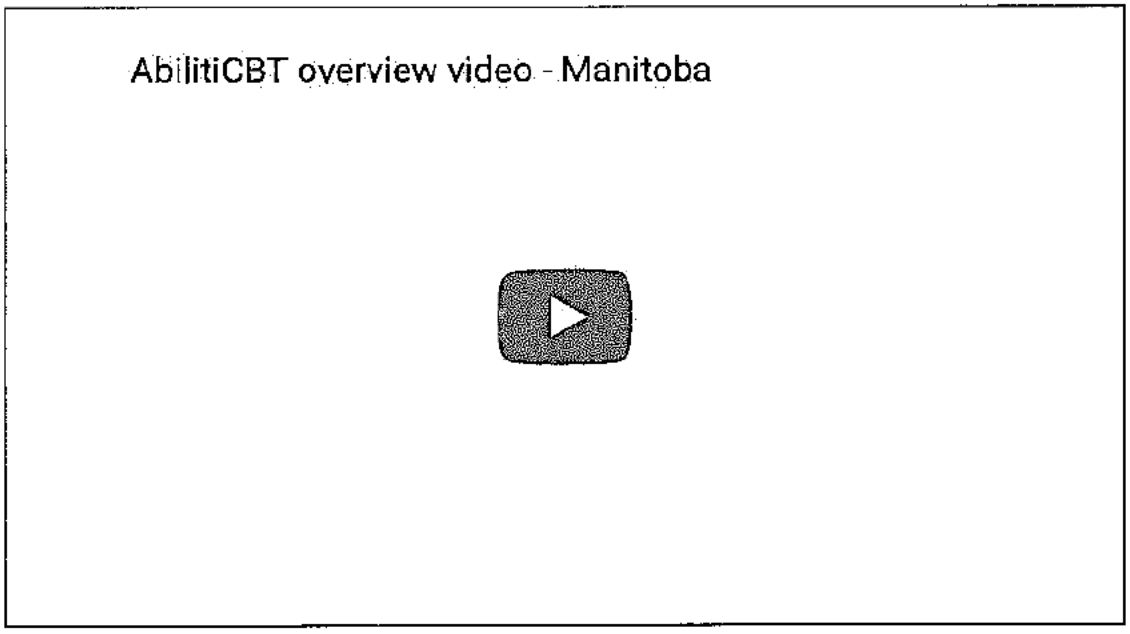
stress management

AbilitiCBT can help you:

Learn what anxiety is and how it affects your emotions, mind, body and behaviour.

Reduce anxiety by learning cognitive behavioral therapy skills and using them to change responses to triggers.

Develop coping strategies to track and reduce anxiety and better manage daily activities.



How AbilitiCBT works

The AbilitiCBT program starts by assessing your needs through an online questionnaire and consultation with a professional therapist -- either by phone or video chat.

Then, you move through 10 modules, at your own pace, while the therapist tracks and monitors your progress.

There will be scheduled check-ins along the way to make sure you're getting the help you need. You can connect with your therapist over the phone, via chat, or through a video check-in.

Why use AbilitiCBT

It's confidential

It works and is clinically effective

It's supported by experts

It's accessible from home

It's free and convenient

AB2428

Not quite ready for therapy? Review these self-guided resources to support your total well-being.

Resources

Frequently Asked Questions

Partner Toolkit

Self-guided resources to support your total well-being

Therapists in Manitoba: Join the Morneau Shepell Team

Morneau Shepell is recruiting professional therapists to support Manitobans struggling with COVID-19-related anxiety. Visit their website for information about the role and how to apply.

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News Releases

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PROVINCE EXPANDS SAFE AT HOME MANITOBA PROGRAMMING, UNVEILS REVAMPED COVID-19 PUBLIC AWARENESS CAMPAIGN TO PROTECT MANITOBANS

Innovative Programs to Help Keep Manitobans Active and Engaged While Staying Safe at Home: Cox and Roussin

The Safe at Home Manitoba grant has been expanded to support more than 300 projects totalling $5 million to help Manitobans stay active and engaged while adhering to public health orders, Sport, Culture and Heritage Minister Cathy Cox announced today, joined by Dr. Brent Roussin, Manitoba's chief provincial public health officer, as the province unveiled a revamped public awareness campaign to protect Manitobans from the spread of COVID-19.

"The Safe at Home Manitoba program has been a tremendous success in helping to improve the quality of life for many Manitobans in all regions of the province, while helping us stop the spread of COVID-19," said Cox. "This pandemic is far from over, which is why it is so important that we continue to offer ways for Manitobans to stay 'safe at home'. We are proud to expand this innovative and creative initiative to offer over 300 virtual programs to run throughout the winter months to keep Manitobans busy, active, entertained and, most importantly, safe."

Due to high demand and the success of the initial launch of Safe at Home Manitoba, the province invested an additional $2 million to provide a total of $5 million for a wide variety of Manitoba organizations, municipalities, local businesses and individual artists providing free, inclusive programming such as live streaming of the performing arts, at-home fitness, cooking classes, art programs for children, and resources for seniors, Indigenous youth, newcomers and vulnerable Manitobans, the minister noted.

Additionally the province is launching phase two of its Safe at Home advertising campaign, which encourages Manitobans to continue their efforts to bend Manitoba's COVID curve down by following public health advice and staying safe at home as often as they can. These messages are supported with new 'Resist' public health messages that remind Manitobans of the importance of following the fundamentals especially as the province begins to cautiously restart the economy.

"As we look to gradually loosen restrictions and allow Manitobans to get back to doing some of the things they love and have missed, it is crucial that we continue to follow the fundamentals and avoid activities that are known to cause the greatest risk – close-contact settings, crowded places and closed spaces," said Roussin. "The Safe at Home Manitoba programs provide the opportunity for Manitobans of all ages to stay active, healthy and engaged, while protecting themselves, their loved ones and their community."

The province has invested over $440,000 in the Safe at Home advertising campaign, which began in November and will run until the end of March. The campaigns include a mix of digital and social ads, as well as radio and television commercials. The Manitoba government will continue to prioritize educating the public on the risks of COVID-19, the minister noted.

The new ads can be viewed at www.youtube.com/playlist?list=PLvqXTqcYDg_dli2BWP6jJrAR_Mv9yZ-8G.

For more information on the various online programming, visit the Safe at Home Manitoba website at www.safeathomemb.ca. New activities and events are being added regularly. The application deadline for Safe at Home Manitoba projects is now closed.

- 30 -

BACKGROUND INFORMATION ATTACHED

backgrounder
Backgrounder Information - https://www.gov.mb.ca/asset_library/en/newslinks/2021/02/BG-Safe_at_Home_Update-SCH-CPPHO.pdf

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