

2019 Novel Coronavirus (COVID-19): From an emerging novel infectious disease to planning for a pandemic response



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March 2020

1. What is COVID-19?
2. Current global situation
3. Roles of different levels of public health in Canada
4. Public Health Advice
5. Pandemic Stages
6. Planning for a pandemic- businesses
7. Other resources

What is COVID-19?

- A new (novel) strain of coronavirus initially identified in Wuhan City, Hubei Province, China.
 - Coronaviruses:
 - Large family of viruses found in both animals and humans.
 - Usually associated with mild illness (similar to the common cold) but can also cause more severe illness.
 - Examples that have emerged in the past 20 years which were able to transmit between humans: MERS and SARS

Symptoms

- Symptoms:
 - More frequently noted
 - Fever
 - Dry cough
 - Shortness of breath
 - Less frequently noted
 - Muscle aches
 - Headache
 - Sore throat
 - Diarrhea



Fever

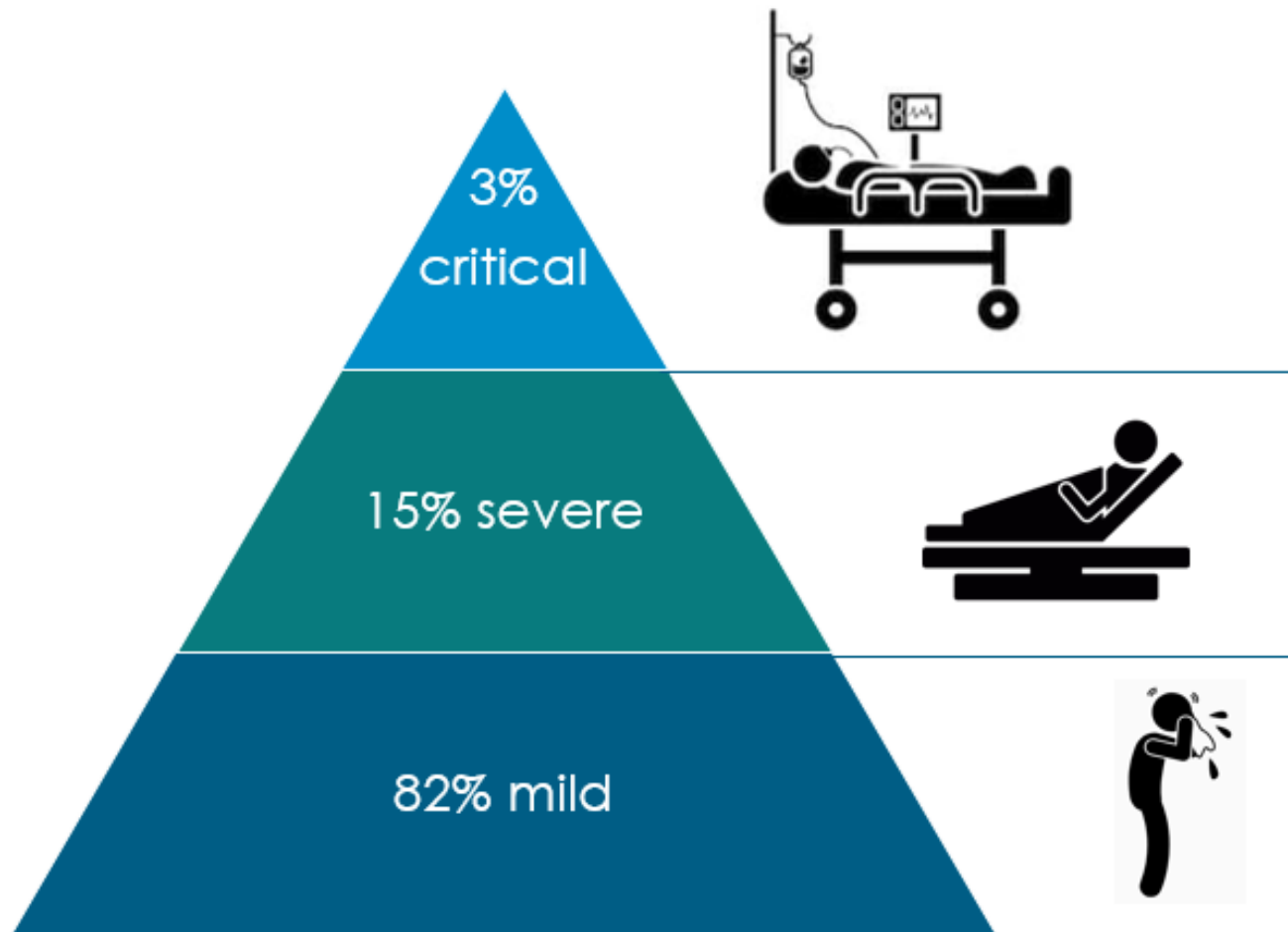


Cough



Shortness of Breath

Clinical Severity



Source: China NHC, 2020

Transmission/Spread

In general, for coronaviruses, spread occurs through:

- Respiratory droplets generated when you cough or sneeze.
- Touching something with the virus on it, then touching your mouth, nose or eyes before washing your hands.
- Close, prolonged personal contact such as living in the same household

No evidence, to date, of airborne spread.



Source: SCDHEC, 2019

Testing/Treatment

- Diagnosed by a healthcare provider:
 - Signs and symptoms and laboratory testing
 - Travel history or contact with someone having or suspected of having COVID-19 is also important.
- There is no specific antiviral treatment or vaccine

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As of March 3, 2020:

- Global Situation

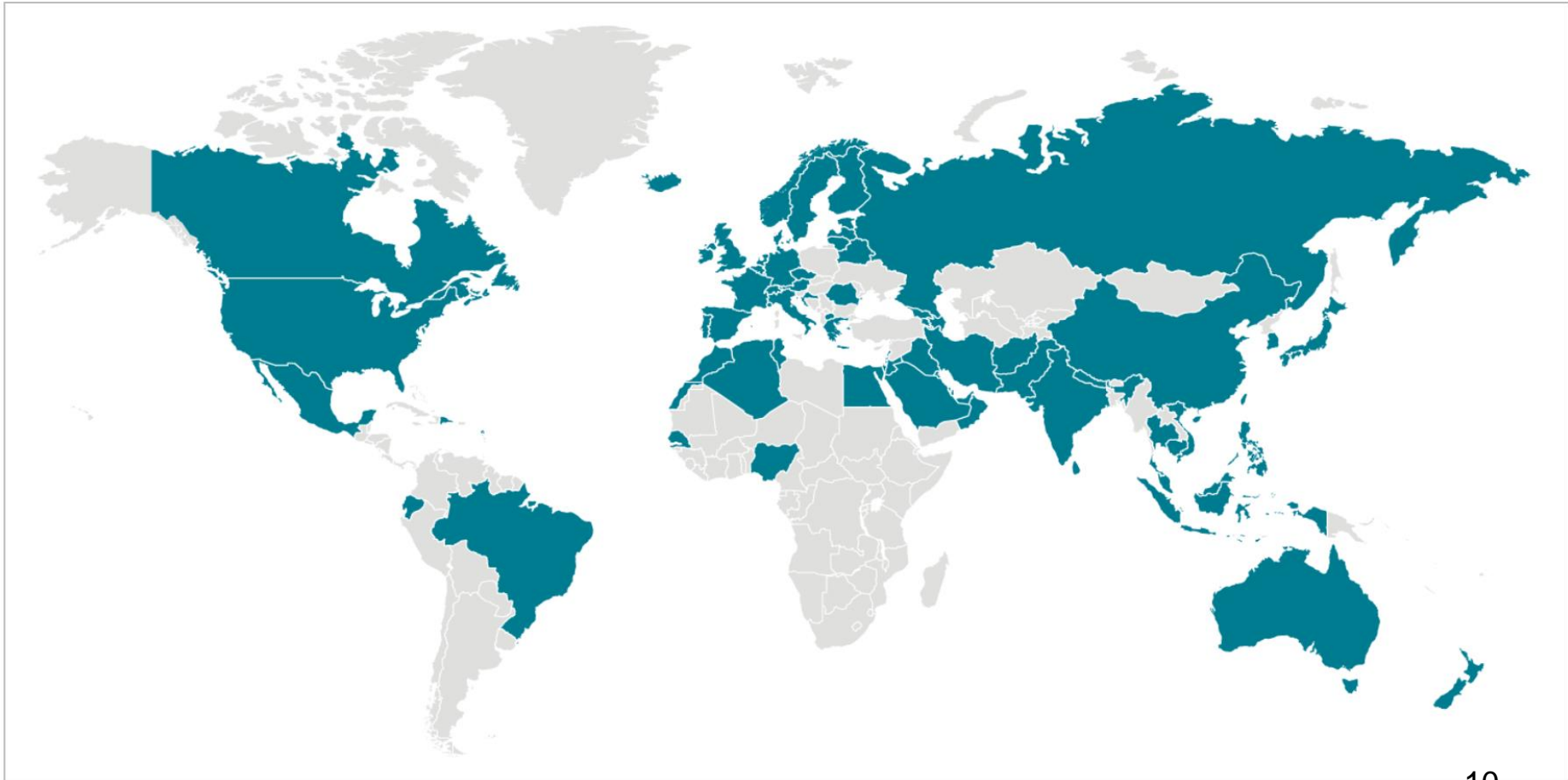
- China: 80,152 cases; 2,945 deaths
- Asia: 6,580 cases; 47 deaths (South Korea - 28)
- Europe: 3,285 cases; 83 deaths (Italy - 79)
- Middle East: 2,529 cases; 77 deaths (Iran - 77)
- North America:
 - United States - 103 cases; 6 deaths
 - Canada - 30 cases

Summary: <15,000 cases outside of China

7th consecutive day, more cases reported from outside China than within China

Global Map

As of 11:00 a.m. ET March 3, 2020



Current Situation

- National and Provincial Situation – March 3
 - 30 confirmed cases in Canada.
 - 20 in Ontario
 - 9 in British Columbia
 - 1 in Quebec
- Local (Toronto) Situation
 - 11 confirmed cases in Toronto
 - Cases travel related or close contact
 - At this time, no community spread

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Roles – Federal

Responsible for:

- Determining the national case definition
- Providing national guidance for COVID-19 response
- Border security, screening, and determining quarantine
- Providing travel advice
- Liaising with global partners (e.g., World Health Organization) and other national governments
- Working with provincial partners (e.g., Ontario Ministry of Health)



Government
of Canada



Public Health
Agency of Canada



Canada Border
Services Agency

Roles – Provincial

Responsible for:

- Providing policy direction for healthcare sector and public health
- Gathering and monitoring data from local public health units
- Providing infection prevention and control guidance; managing supply chains
- Laboratory / testing capacity



Responsible for:

- Follow-up of cases and suspected cases of COVID-19
- Contact tracing and management
 - **Close contact – within 2 metres for 15 minutes or longer**
 - Household contacts
 - Assess risk at other settings like school, work, etc

Responsible for:

- Active monitoring of the local and global situation
- Providing up to date, evidence informed information to the public and stakeholders (eg. hotline, webpage, media)



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- Prevent the spread of respiratory viruses:
 - Wash your hands often with soap and water for at least 15 seconds or use an alcohol-based hand sanitizer.
 - Avoid touching your eyes, nose, and mouth with unwashed hands.
 - Avoid close contact with people who are sick.



- Prevent the spread of respiratory viruses:
 - Stay home when you are sick.
 - Cover your cough or sneeze with a tissue, then throw the tissue in the trash.
 - Clean and disinfect frequently touched objects and surfaces.
 - Follow routine infection prevention and control policies and procedures set out by your company or organization.



Returning travellers

- Check travel restrictions and advisories from the Public Health Agency of Canada
- Information is always being updated
- Self-isolation vs self-monitoring



MENU ▾

[Home](#) > [Travel](#) > [Travel abroad](#) > [Travel health and safety](#)

Travel health notices

Filter items

Date  	Travel health notices	Location	Level  
2020-03-02	Coronavirus disease (COVID-19) in China	China	Level 3
2020-03-02	Coronavirus disease (COVID-19) in Northern Italy	Northern Italy	Level 3
2020-03-02	Coronavirus disease (COVID-19) in Iran	Iran	Level 3
2020-03-02	Coronavirus disease (COVID-19) in Japan	Japan	Level 2
2020-03-01	Coronavirus disease (COVID-19) in South Korea	South Korea	Level 2

Level 2 - Practise special precautions

Travel health notices recommend that travellers practise special health precautions, such as receiving additional vaccinations. A notice at this level would be issued if there is an outbreak in a limited geographic location, a newly identified disease in the region or a change in the existing pattern of disease.

Level 3 - Avoid non-essential travel

Travel health notices include a warning to avoid non-essential travel in order to protect the health of Canadian travellers and the Canadian public. The notice outlines specific precautions to take when visiting the region and what to do if you become ill during or after travel. A notice at this level would be issued during a large-scale outbreak in a large geographic area, or if there is increased risk to the traveller and an increased risk of spreading disease to other groups including the Canadian public.

Level 4 - Avoid all travel

Advises travellers to avoid all travel in order to protect the health of the Canadian public. A notice at this level would be issued if there is a high risk of spread of disease to the general public regardless of measures taken while travelling. Avoiding travel will limit the spread of the disease in Canada and internationally.

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When do we declare a Pandemic for COVID-19?

Right now, WHO had declared COVID-19 “a public health emergency of international concern”

What is a pandemic?

- A pandemic is the worldwide spread of a new disease, spread person-to-person.
- No prior immunity in the population
- Impact and severity of disease is considered

WHO's H1N1 Pandemic Phases no longer being used

WHO PANDEMIC PHASE DESCRIPTIONS AND MAIN ACTIONS BY PHASE

PHASE	DESCRIPTION	MAIN ACTIONS				
		PLANNING AND COORDINATION	SITUATION MONITORING AND ASSESSMENT	COMMUNICATIONS	REDUCING THE SPREAD OF DISEASE	CONTINUITY OF HEALTH CARE PROVISION
PHASE 1	No animal influenza virus circulating among animals have been reported to cause infection in humans.	<p>Develop, exercise, and periodically revise national influenza pandemic preparedness and response plans.</p>	<p>Develop robust national surveillance systems in collaboration with national animal health authorities, and other relevant sectors.</p>	<p>Complete communications planning and initiate communications activities to communicate real and potential risks.</p>	<p>Promote beneficial behaviours in individuals for self protection. Plan for use of pharmaceuticals and vaccines.</p>	<p>Prepare the health system to scale up.</p>
PHASE 2	An animal influenza virus circulating in domesticated or wild animals is known to have caused infection in humans and is therefore considered a specific potential pandemic threat.					
PHASE 3	An animal or human-animal influenza reassortant virus has caused sporadic cases or small clusters of disease in people, but has not resulted in human-to-human transmission sufficient to sustain community-level outbreaks.					
PHASE 4	Human to human transmission of an animal or human-animal influenza reassortant virus able to sustain community-level outbreaks has been verified.	<p>Direct and coordinate rapid pandemic containment activities in collaboration with WHO to limit or delay the spread of infection.</p>	<p>Increase surveillance. Monitor containment operations. Share findings with WHO and the international community.</p>	<p>Promote and communicate recommended interventions to prevent and reduce population and individual risk.</p>	<p>Implement rapid pandemic containment operations and other activities; collaborate with WHO and the international community as necessary.</p>	<p>Activate contingency plans.</p>
PHASE 5	The same identified virus has caused sustained community level outbreaks in two or more countries in one WHO region.	<p>Provide leadership and coordination to multisectoral resources to mitigate the societal and economic impacts.</p>	<p>Actively monitor and assess the evolving pandemic and its impacts and mitigation measures.</p>	<p>Continue providing updates to general public and all stakeholders on the state of pandemic and measures to mitigate risk.</p>	<p>Implement individual, societal, and pharmaceutical measures.</p>	<p>Implement contingency plans for health systems at all levels.</p>
PHASE 6	In addition to the criteria defined in Phase 5, the same virus has caused sustained community level outbreaks in at least one other country in another WHO region.					
POST PEAK PERIOD	Levels of pandemic influenza in most countries with adequate surveillance have dropped below peak levels.	<p>Plan and coordinate for additional resources and capacities during possible future waves.</p>	<p>Continue surveillance to detect subsequent waves.</p>	<p>Regularly update the public and other stakeholders on any changes to the status of the pandemic.</p>	<p>Evaluate the effectiveness of the measures used to update guidelines, protocols, and algorithms.</p>	<p>Rest, restock resources, revise plans, and rebuild essential services.</p>
POST PANDEMIC PERIOD	Levels of influenza activity have returned to the levels seen for seasonal influenza in most countries with adequate surveillance.	<p>Review lessons learned and share experiences with the international community. Replenish resources.</p>	<p>Evaluate the pandemic characteristics and situation monitoring and assessment tools for the next pandemic and other public health emergencies.</p>	<p>Publicly acknowledge contributions of all communities and sectors and communicate the lessons learned; incorporate lessons learned into communications activities and planning for the next major public health crisis.</p>	<p>Conduct a thorough evaluation of all interventions implemented.</p>	<p>Evaluate the response of the health system to the pandemic and share the lessons learned.</p>

- 1. Investigation**
- 2. Recognition – Containment**
- 3. Initiation of a pandemic – Mitigation**
- 4. Acceleration of a pandemic – Mitigation**
- 5. Declaration of a pandemic**

1. Investigation

- Cases of novel virus infection in humans for first time
- Occurred in Wuhan, China
- Late December 2019 to Early January 2020

2. Recognition – Containment

- potential for ongoing transmission of a novel virus in humans
- China – January 2020
- **Current situation in Canada**
- Many countries reporting cases but few have sustained local transmission

2. Recognition – Containment

Local Public Health:

- Case and contact follow up
- Epidemiology and surveillance
- Communications to public and stakeholders & hotline

Organizations

- Update business continuity plans
- Update pandemic plans- local, provincial, national
- Stock piles of supplies (eg. Masks for health care workers)

3. Initiation of a pandemic – Mitigation

- Sustained transmission occurring in very small number of countries
- **Current situation eg. in Japan, Italy, Iran**
- As community spread occurs, enter this phase

3. Initiation of a pandemic – Mitigation

Interventions as in recognition phase

Encourage plans by different sectors – eg. Businesses, schools, funeral homes, day care centres, etc

4. Acceleration of a pandemic – Mitigation

- Sustained local transmission across population
- Attempt to slow down spread to reduce impact on health care system, and await the arrival of a vaccine/anti-viral medications
- **Current Situation in China**
- Not yet present in any other countries

<https://www.cdc.gov/coronavirus/2019-ncov/php/pandemic-preparedness-resources.html>

4. Acceleration of a pandemic – Mitigation

- Use of broader population level mitigation strategies to reduce impact such as reducing social distancing, large gatherings
- Consideration for school and workplace strategies such as closures
- No longer tracing individual cases

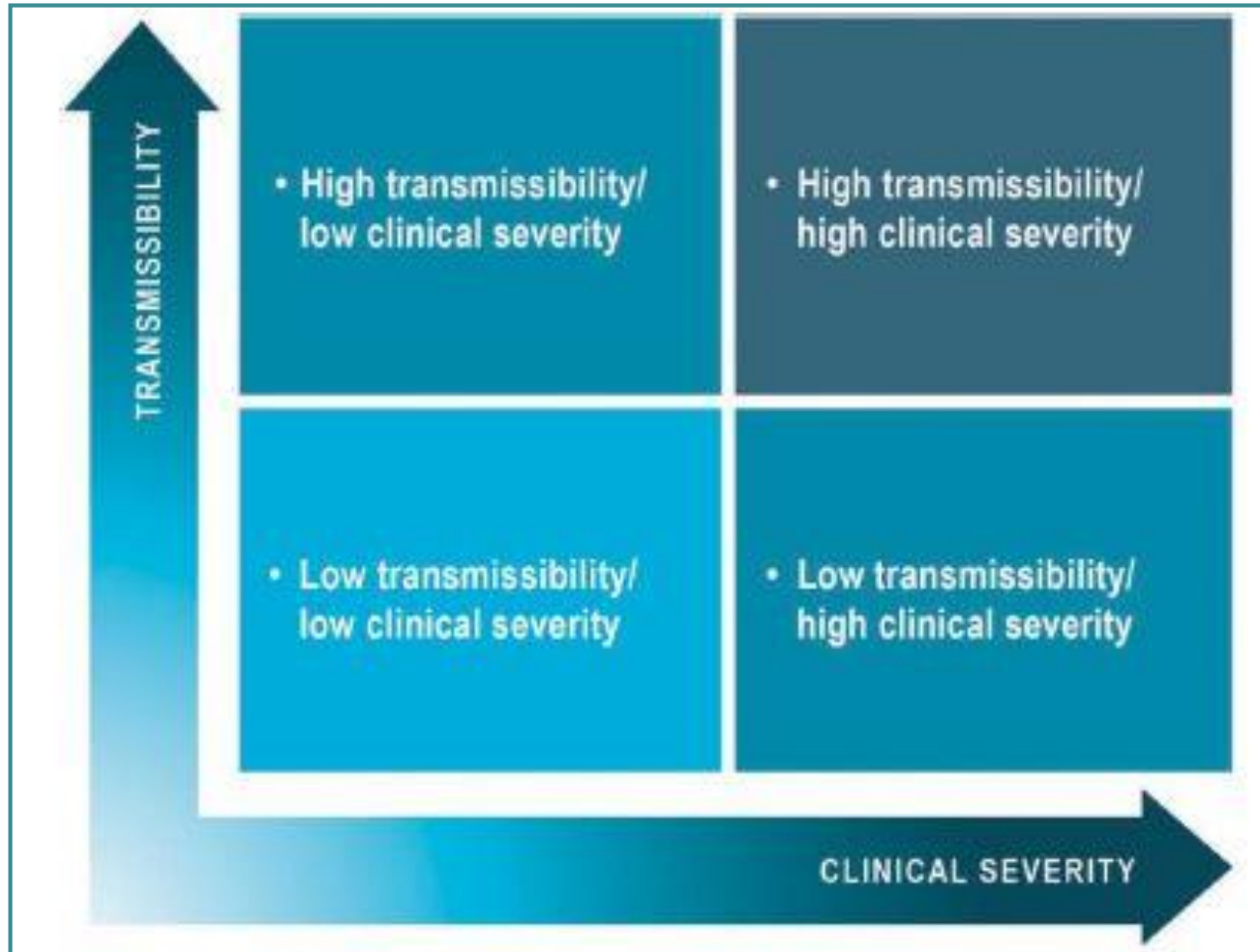
<https://www.cdc.gov/coronavirus/2019-ncov/php/pandemic-preparedness-resources.html>

5. Declaration of a pandemic

Ongoing, may last for 1 to 2 years

Interventions implemented have to be sustainable

Four Severity Scenarios Used in the OHPIP



Four Severity Scenarios Used in the OHPIP

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Preparing for a Pandemic – Businesses Business Continuity Plans

Each business should have a business continuity plan that

- identifies the organization's mandated and critical services
- ranks all services in order of priority – essential and non-essential
- identifies the internal and external effects of disruptions

Preparing for a Pandemic – Businesses Policies and Training

- Communication will be critical- internal and external
- Staff Education and training
- Skill set inventory
- Human resources policies
 - eg. Quarantined individual, contact of a contact
- Occupational health and safety
- Infection prevention and control measures
- Policies for working remotely

Preparing for a Pandemic – Businesses

Staff impacts

- Higher absenteeism rate over the course of the pandemic
- Employees taking time off to care for ill dependents
- Public measures e.g. closure of schools may increase staff absenteeism
- Scenario planning if staff absenteeism is at 10% up to 50%

- Supply chain disruptions to be expected
- Travel restrictions – essential and non-essential travel
 - Quarantine when returning from travel
- Limiting large gatherings
- Impacts on the economy

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Coronavirus disease (COVID-19): Outbreak update

[Outbreak update](#)

[Symptoms and treatment](#)

[Prevention and risks](#)

[Being prepared](#)

[For health professionals](#)

[Canada's response](#)

[Travel advice](#)



[Home](#) > [Health](#) > [Diseases and conditions](#) > [Coronavirus disease \(COVID-19\): Outbreak update](#)
> [Coronavirus disease \(COVID-19\): For health professionals](#)

Public Health Guidance for Schools (K-12) and Childcare Programs (COVID-19)

February 28, 2020

The Public Health Agency of Canada (PHAC), in collaboration with Canadian public health experts has developed this guidance for federal/provincial/territorial (F/P/T) public health authorities (PHA) on the prevention and management of novel coronavirus (COVID-19) in schools and childcare settings.

The strategy outlined in this guidance is containment (i.e. to reduce opportunities for transmission to contacts in the community) and is based on the Canadian context and [public health assumptions](#) that reflect the currently available scientific evidence and expert opinion. It is subject to change as new information on transmissibility and epidemiology becomes available. It should be read in conjunction with relevant P/T and local legislation, regulations and policies. For information regarding COVID-19, visit the [Canada.ca](#) and [WHO web site](#).

Current context

There is currently no widespread transmission of COVID-19 in Canada; therefore, PHAC recommends that schools take standard respiratory illness precautions, the same precautions that are recommended every year for cold and influenza season.

At present, school closures are not recommended for the prevention of COVID-19.



Pandemic Plans

Canada

- [Canadian Pandemic Influenza Preparedness: Planning Guidance for the Health Sector](#)
- [Alberta's Pandemic Influenza Plan](#)
- [Ontario Health Plan for an Influenza Pandemic](#)
- [Manitoba's Preparing for Pandemic Influenza](#)
- [British Columbia's: Pandemic Influenza Plan](#)
- [New Brunswick Pandemic Influenza Plan \(PDF Document - 220.50 KB - 19 pages\)](#)
- [Québec Pandemic Influenza Plan - Health Mission \(PDF Document - 2.01 MB - 123 pages\)](#)
- [Newfoundland and Labrador Pandemic Influenza Plan](#)

International

- [North American Plan for Animal and Pandemic Influenza \(NAPAPI\)](#)
- [World Health Organization: Pandemic Preparedness](#)
 - [Pandemic Influenza Risk Management WHO Guidance \(2017\)](#)

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Links of Interest

- [Influenza](#)
- [Emergency Preparedness and Response](#)
- [Pandemic Flu](#)

Canadian Pandemic Influenza Preparedness: Planning Guidance for the Health Sector

**CANADIAN PANDEMIC
INFLUENZA PREPAREDNESS:**
Planning Guidance for the
Health Sector



Plan-Canadian Public Health Network
Réseau pan-canadien de santé publique
© Her Majesty the Queen 2017

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27 February 2020

Getting your workplace ready for COVID-19

In January 2020 the World Health Organization (WHO) declared the outbreak of a new coronavirus disease in Hubei Province, China to be a Public Health Emergency of International Concern. WHO stated there is a high risk of the 2019 coronavirus disease (COVID-19) spreading to other countries around the world.

WHO and public health authorities around the world are taking action to contain the COVID-19 outbreak. However, long term success cannot be taken for granted. All sections of our society – including businesses and employers – must play a role if we are to stop the spread of this disease.

The UK has left the EU

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Department for
Business, Energy
& Industrial Strategy



Public Health
England

Guidance

COVID-19: guidance for employers and businesses

Published 25 February 2020

Coronavirus Disease 2019 (COVID-19)

CDC > Coronavirus Disease 2019 (COVID-19)



Coronavirus Disease 2019 (COVID-19)

COVID-19 Situation Summary +

What You Should Know +

Travel Information +

**Preventing COVID-19 Spread in
Communities** -

At Home

At School

At Work

In Healthcare Settings

Information for Specific Groups +

Healthcare Professionals +

Resources for Healthcare
Facilities +

Resources for Health +

Preventing COVID-19 Spread in Communities

Protect yourself and your community from getting and spreading respiratory illnesses like coronavirus disease 2019.

Americans should be prepared for the possibility of a COVID-19 outbreak in their community. The community can take measures to reduce the spread of COVID-19. Everyone has a role to play in getting ready and staying healthy.

Currently a vaccine is not available for COVID-19. Until a vaccine is developed, community-based interventions such as school dismissals, event cancellations, social distancing, and creating employee plans to work remotely can help slow the spread of COVID-19. Individuals can practice everyday prevention measures like frequent hand washing, staying home when sick, and covering coughs and sneezes. Click below to learn about steps to take before, during, and after any community spread of COVID-19.

How to prepare and take action for COVID-19:

At Home



Get my household ready

At School



Get my school ready

At Work



Get my workplace ready

From Toronto Public Health:

Dr. Herveen Sachdeva

Luli Gjeka

Sarah Almasri

Toronto Public Health's Hotline
For the public and stakeholders
416-338-7600

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