

Nova Scotia Health System Pandemic Influenza Plan

Chapter 4: Public Health Measures

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Background

A variety of public health measures will be used during the management of pandemic influenza. Public health measures include public education, case and contact management, and strategies for social distancing. These public health measures may be voluntary or involuntary and may be implemented at the individual or at the community level. Surveillance, the coordination and delivery of vaccine programs, and the antiviral drug strategy are discussed elsewhere.

Objectives

The objectives of public health measures change as a pandemic progresses. During the pandemic alert period, the objectives are

- to contain the novel virus at its source
- to prevent further human cases caused by a virus that has not yet established efficient human-to-human transmission
- to slow the spread of the pandemic and thus gain time for strengthening preparedness measures, including the augmentation of vaccine supplies.

During the pandemic period, the objectives are

- to reduce the impact of the first wave of a pandemic (WHO 2004).

The effectiveness of control strategies used in the absence of treatment or a vaccine— isolation of symptomatic cases and tracing and quarantining of their contacts—is limited by the influenza virus’s short incubation period, its ability to survive for extended periods of time on environmental surfaces, its non-specific clinical symptoms, and the potential for sub-clinical infection and transmission from individuals prior to the onset of symptoms.

As the pandemic progresses, sustained human-to-human transmission is established, and the number of cases increases, these measures will cease to be effective or feasible, and containment of the disease will be impossible.

Planning Assumptions

- The novel influenza strain and the first human cases will be identified outside of Canada.
- Surveillance measures are in place to detect influenza-like illness (ILI).
- The pandemic strain may cause more than one wave of illness, with the second wave being more severe than the first.
- The incubation period, period of communicability and mode of transmission for the novel strain will be consistent with other known influenza strains, that is:
 - Incubation period: 1 to 3 days
 - Period of communicability: 24 hours prior to up to five days after onset of symptoms (usually three to five days in immunocompetent adults and seven days in young children)
 - Method of transmission: large droplet and contact (direct and indirect);
 - Airborne transmission has been hypothesized but is not thought to be clinically significant (Moser et al. 1979; Bridges, Kuehnert, and Hall 2003)
 - Transmission while asymptomatic is possible but is more efficient when symptoms, such as coughing, are present and viral shedding is high (i.e., early in the symptomatic period).
- The novel virus will be highly infectious, i.e., transmitted efficiently from person to person.
- The initial clinical presentation will be consistent with known influenza strains.
- Sub-clinical infection will occur (Nguyen-Van-Tam et al. 1999).
- Individuals who recover from illness caused by the pandemic influenza strain will be immune to further infection by that strain.
- It is unlikely that an effective vaccine will be available at the start of pandemic influenza activity in Canada, but it may be available for a second wave. Mass immunization campaigns will occur when sufficient quantities of the vaccine are available.
- The use of antiviral drugs to decrease the risk of transmission from the first cases infected with a novel virus and their contacts will be considered as a strategy to contain or slow the spread of novel viruses that have pandemic potential and that are identified in Canada. The use of this strategy will be limited to cases identified in the Pandemic Alert Period. During the Pandemic Period, this strategy will change to focus on early treatment.

- In the absence of data on the duration of viral shedding and the effect of neuraminidase inhibitors on viral load and shedding, the objective of treatment with antiviral drugs is to improve clinical outcome, which is assumed to correlate with decreased communicability.
- Public acceptance of restrictive control measures will positively correlate with the proximity of cases.
- It may be possible to delay introduction of pandemic influenza into isolated communities; however, it is not likely that this strategy could be sustained, especially if the virus has acquired the ability to efficiently spread from human to human.

Public Health Measures

Public Education

Public education is a key activity for the Department of Health Promotion and Protection (NSHPP) and district health authority (DHA) Public Health Services during all pandemic phases. A prepared and well-coordinated education and communication plan will increase baseline public knowledge during the Interpandemic Period, will minimize the time needed to disseminate educational materials to the public as the pandemic evolves, and will establish HPP as an accurate, reliable, and trusted source of information. Further details are included in the Communications section of this plan (Chapter two).

Public Health Case Management

(Refer to Annex 4-A)

During the Pandemic Alert Period when the number of cases is relatively small, it may be possible to contain the outbreak through isolation of cases and treatment with antiviral drugs. These measures may prevent secondary cases and slow the spread of the infection within the population.

Isolation of Cases

Timely identification and immediate isolation of cases may prevent secondary cases. However, individuals may be communicable before the onset of symptoms; therefore, isolation of symptomatic cases in itself will not be successful in stopping disease

transmission. In a recent mathematical model, even 100 per cent efficacy in isolating symptomatic cases was insufficient to control the outbreak (Fraser et al. 2004).

Antiviral Drugs

It is hypothesized that treating influenza patients with antiviral drugs will reduce their communicability. Therefore, during the Pandemic Alert Period, antiviral drugs will be used to treat ill individuals in an attempt to prevent spread from these cases. A portion of the antiviral stockpile will be set aside for this purpose.

Public Health Contact Management

(Refer to Annex 4-A)

If single cases or small clusters of pandemic influenza occur in Canada while transmission of the virus is still relatively inefficient, it may be possible to contain the outbreak through prompt and effective contact management, including activity restriction, quarantine, and post-exposure prophylaxis with antiviral drugs.

A contact is defined as a person with face-to-face exposure within one metre of a case. Tracing and follow-up of contacts would (a) identify contacts prior to their becoming communicable and (b) detect cases early on, decreasing the interval between the onset of symptoms and isolation. This could potentially limit or slow the spread of the disease.

Quarantine

The use of quarantine is not anticipated to be as effective for influenza as it is for infections with longer incubation periods. The success of quarantining contacts as a containment and control strategy is contingent on the thoroughness of contract tracing, rapid implementation, and ongoing monitoring (Svoboda et al. 2004). Additionally, this measure requires extensive public health resources. Given these caveats, the decision on whether to use individual quarantine measures will be made as the pandemic progresses, based on the size of the outbreak, the current epidemiologic data, and the availability of public health resources.

In a recent mathematical model, 100 per cent effective isolation of symptomatic cases and contact tracing and quarantine were necessary to control the outbreak. If the effectiveness of isolation decreased to 90 per cent, these measures were insufficient to control disease transmission (Fraser et al. 2004).

It is believed that quarantining contacts will not be sustainable beyond the Pandemic Alert Period. As the pandemic progresses, contact follow-up will become less focused toward the individual. Messages for contacts will be conveyed primarily by public education campaigns, and public health resources will be redirected towards other control strategies.

Antiviral Drugs

Providing chemoprophylaxis with antiviral drugs to the contacts of the first cases may also decrease the spread of the virus. A portion of the antiviral stockpile will be set aside for use during the Pandemic Alert Period. This strategy, however, will not be feasible once widespread community transmission occurs.

Community-Based Disease Control Strategies

Until epidemiological data on the pandemic influenza virus are known, it is difficult to predict which public health measures will be effective and should, therefore, be implemented. Additionally, the effectiveness of most community-based measures under consideration has not been evaluated. The recommendations made below are based primarily on expert opinion, particularly that of the Pandemic Influenza Committee (PIC) National Working Group on Public Health Measures and WHO (2004). Detailed descriptions of these control measures and the rationale for the recommendations can be found in Annex 4-G of this chapter.

Cancellation of Public Gatherings and Closure of Schools

Disease transmission in the community may be reduced by increasing social distance. Medical Officers of Health have the authority under the Health Protection Act to institute community-based infection control measures such as

- closure of community facilities (e.g., community centres, schools)
- cancellation of group events.

The restriction of public activity has economic and social implications. For example, the closure of schools affects parents who work outside the home, with consequences for child-care needs, as well as impacting the children's education. Therefore, decisions must be based on the expected level of effectiveness of the measure balanced with the degree of disruption it is likely to cause.

The following decision matrix was developed by Vancouver Coastal Health (2005). Issues to consider when implementing community-based strategies include the following:

- the epidemiology of the pandemic including
 - high-risk groups
 - high-risk settings
 - severity of the disease
- the transmission of other diseases in similar settings
- the probable effectiveness of public health measures
- the loss of workforce and ensuing complications due to closures
- the necessity for maintenance of essential services

As an aid in the decision-making process, the decision matrix in figure 1 considers the intensity and the duration of exposure. Both the decision-making process and the criteria for closures may need to be modified according to prevailing conditions experienced during the pandemic and the phase of the pandemic.

Figure 1: Vancouver Coastal Health decision matrix for measures to increase social distance

Note: Not all activities are identified; those listed are examples.

		Exposure Intensity		
		High <i>Very crowded</i>	Intermediate	Low
Exposure Duration	Prolonged duration > 4 hrs	Day-care centres Schools Post-secondary institutions (including dormitories)	Closed workplaces	
	Intermediate duration > 1 hr	Entertainment venues Sporting venues (participants and spectators) Special events	Day tours via buses Weddings, funerals Business conventions, trade shows	Restaurants Shopping malls
	Short duration < 1 hr	Public transit during rush hour Retail stores during major sale events	Public waiting areas and lines (e.g., banks, store checkout lines)	
Priority for cancellation—consider restriction at first confirmation of local cases.				
Cancellation or modification or event should be considered as local circumstances evolve.				
Cancellation unlikely to be of value. Public education recommended.				

Infection Control and Environmental Measures

The following measures are **not recommended**:

- the use of masks by well individuals
- hand-sanitizing stations in public settings
- increased frequency of cleaning of surfaces in public settings
- widespread environmental or air disinfection

Other measures

The following measures are **not recommended**:

- having the population in an affected area check for fever at least once daily
- thermal scanning in public places
- disinfection of clothing, shoes, or other objects of persons exiting affected areas
- restriction on travel to and from affected areas
- cordon sanitaire—quarantining all inhabitants of an area (e.g., a neighbourhood or community) and restricting movement in and out of that area

Travel and Border-Related Issues

Please refer to the *Canadian Pandemic Influenza Plan for the Health Sector*, Annex M, Public Health Measures, Section 9.0.

Roles and Responsibilities

(Outstanding issues are italicized)

Roles and responsibilities may vary depending on whether a public health, provincial, or national emergency is declared.

World Health Organization

- Provide global guidance regarding public health measures during a pandemic to the Public Health Agency of Canada

Federal Government

- Maintain an up-to-date public health measures strategy in the Canadian Pandemic Influenza Plan

Provincial Government

Department of Health Promotion and Protection

(Minister for this department is responsible for the Health Protection Act.)

- Develop policies and standards for public health measures during a pandemic
- Declare the beginning and end of a public health emergency on the advice of the Chief Medical Officer of Health

Chief Medical Officer of Health

- Prepare for and respond to the public health aspects of an influenza pandemic
- Recommend to the Minister responsible for the Health Protection Act if a public health emergency should be declared and if it cannot be mitigated or remedied without special measures
- Implement a broad range of special measures when a public health emergency exists
- Advise the Minister responsible for the Health Protection Act when the public health emergency has ended

District Health Authorities

Medical Officer of Health (MOH)

- Investigate any situation that may constitute a risk to public health and take action to decrease the risk
- Take reasonable action to protect the public health, including issuing public advisories and bulletins
- Write an order to deal with a case or contact of a communicable disease or to prevent transmission of a communicable disease
- Monitor the treatment and condition of a detained person and issue a certificate for release

- Take such action as the MOH reasonably believes is necessary to prevent, control, or deal with a public health emergency

Public Health Services

- Case management
- Contact management
- Operationalize public health measures under the direction of the Medical Officer of Health

Annex 4~A: Public Health Management of Novel Influenza Virus Cases and Contacts

Note: These recommendations regarding the public health management of novel influenza virus cases and contacts may change as the epidemiology of the virus becomes available.

1.0 General Information

1.1 Case Definition

For up-to-date case definitions, please refer to the Public Health Agency of Canada FluWatch website, www.phac-aspc.gc.ca/fluwatch/06-07/def06-07_e.html, Definitions for the 2006-2007 Season.

1.2 Causative Agent

Refer to the Influenza chapter, *Nova Scotia Communicable Disease Control Manual*. The subtype will not be known until the novel virus emerges.

1.3 Symptoms

Refer to the Influenza chapter, *Nova Scotia Communicable Disease Control Manual*.

1.4 Incubation Period

Refer to the Influenza chapter, *Nova Scotia Communicable Disease Control Manual*.

1.5 Source

Refer to the Influenza chapter, *Nova Scotia Communicable Disease Control Manual*.

1.6 Transmission

Refer to the Influenza chapter, *Nova Scotia Communicable Disease Control Manual*.

1.7 Communicability

Refer to the Influenza chapter, *Nova Scotia Communicable Disease Control Manual*.

1.8 Treatment

Treat with neuraminidase inhibitors (oseltamivir and zanamivir). M2 ion channel inhibitors (e.g., amantadine) are not recommended for treatment. Refer to Antiviral Drug Strategy chapter and Health Services chapter, *Nova Scotia Health System Pandemic Influenza Plan*.

Table 1: Recommended pediatric and adult doses of antiviral drugs for the treatment of influenza

Drug (trade name)	Treatment doses
Oseltamivir (Tamiflu®)	<i>Children</i> ^a
	See Table 2
Zanamivir (Relenza®)	<i>Adults</i>
	75 mg twice a day for 5 days
Zanamivir (Relenza®)	<i>Adults and children >7 years</i> ^b
	10 mg (2 puffs) twice a day for 5 days

^a Oseltamivir should not be used for treatment of influenza in pediatric patients less than one year of age. See Important Safety Information Regarding TAMIFLU® (Oseltamivir Phosphate) and Prescription in Children Less Than 1 Year of Age (www.hc-sc.gc.ca/dhp-mps/medeff/advisories-avis/prof/2004/tamiflu_hpc-cps_e.html).

^b The safety and efficacy of zanamivir for treatment of influenza in pediatric patients less than 7 years of age have not been established.

Table 2: Recommended dose of oseltamivir for children one year of age and older for the treatment of influenza

Body weight (kg)	Dosage
≤15	30 mg twice daily for 5 days
>15–23	45 mg twice daily for 5 days
>23–40	60 mg twice daily for 5 days
>40	75 mg twice daily for 5 days
<ul style="list-style-type: none"> Oseltamivir is not indicated for treatment of influenza in patients less than one year of age. Dose should be reduced by one-half in patients with creatinine clearance <30 mL/min 	

1.9 Core Messages for Prevention

- Identify cases early and isolate; educate about
 - symptoms of ILI and when and how to seek medical attention
 - proper infection control procedures, including procedures to use if leaving the home to seek medical care (e.g., using a private vehicle rather than public transit, phoning ahead, wearing a mask)
 - contact tracing and quarantine
 - basic personal hygiene (e.g., covering nose and mouth when sneezing and coughing) and hand washing

1.10 Post-exposure Prophylaxis

Post-exposure prophylaxis with oseltamivir or amantadine

Zanamivir was recently approved for prophylaxis in Canada, and recommendations as to its use are pending. Refer to Antiviral Drug Strategy chapter, *Nova Scotia Health System Pandemic Influenza Plan*.

Post-exposure prophylaxis should begin within 48 hours of exposure to the case and continue for at least seven days.

Table 3: Recommended pediatric and adult doses of antiviral drugs for the prophylaxis of influenza

Drug (trade name)	Prophylaxis doses
Oseltamivir (Tamiflu®)	<i>Adults and children >13 years</i> ^a 75 mg once a day ^b
Zanamivir (Relenza®)	<i>Adults and children >7 years</i> ^{c,d} 10 mg (2 puffs) once a day ^e
Amantadine (Symmetrel®)	See Table 4

^a Oseltamivir is not indicated for prophylaxis of influenza in pediatric patients less than 13 years of age.

^b The safety and efficacy of oseltamivir for prophylaxis of influenza in patients less than 13 years of age have been demonstrated for up to 6 weeks.

^c Zanamivir was recently approved for prophylaxis in Canada; recommendations for its use are pending.

^d The safety and efficacy of zanamivir for the prophylaxis of influenza in pediatric patients less than 7 years of age have not been established.

^e The safety and efficacy of zanamivir for prophylaxis of influenza in patients less than 7 years of age have been demonstrated for up to 4 weeks.

Table 4: Recommended adult and pediatric doses of amantadine for the prophylaxis of influenza

NO RENAL IMPAIRMENT		
Age	Dosage	
1–9 years	5 mg/kg once daily, or divided doses twice daily, total daily dose not to exceed 150 mg	
10–64 years	200 mg once daily, or divided doses twice daily	
>=65 years	100 mg once daily	
RENAL IMPAIRMENT		
Creatinine clearance (mL/min)	Dosage	
	10–64 years	>=65 years
>=80	100 mg twice a day	100 mg once a day
60–79	Alternating daily doses of 200 mg and 100 mg	Alternating daily doses of 100 mg and 50 mg
40–59	100 mg once a day	100 mg every two days
30–39	200 mg twice weekly	100 mg twice weekly
20–29	100 mg three times a week	50 mg three times a week
10–19	Alternating weekly doses of 200 mg and 100 mg	Alternating weekly doses of 100 mg and 50 mg

2.0 Procedure

2.1 Roles and Responsibilities

2.1.1 Medical Officer of Health (MOH)

In the event of a case of influenza-like illness (ILI) or a laboratory-confirmed novel influenza virus during the pandemic alert period (phases 3, 4, and 5), the MOH

- takes the lead immediately to initiate follow-up, contact tracing, and containment;
- informs health professionals about precautionary measures including quarantine and isolation
- informs the Office of the Chief Medical Officer of Health (OCMOH) about the case.

2.1.2 Investigator

During the pandemic alert period

- follows up cases
- assesses homes for suitability for isolation of cases

- monitors home isolation
- carries out contact tracing
- carries out active daily surveillance of contacts

2.1.3 *Physician*

- ensures that appropriate infection control procedures are in place in practice.
- ensures that patients are triaged. See *Nova Scotia Health System Pandemic Influenza Plan*, Health Services chapter.

2.1.4 *Laboratory*

The QEII Laboratory is providing direction on laboratory investigations for novel influenza viruses. See *Nova Scotia Health System Pandemic Influenza Plan*, Surveillance chapter, for laboratory procedures.

2.2 **Public Health Management of Novel Influenza Virus Cases and Contacts**

2.2.1 *Definitions*

Quarantine: The restriction of the activities of well persons who have been exposed to a case during its period of communicability.

Isolation: The separation, for the period of communicability of ill (i.e., symptomatic) persons from others in such places and under such conditions as to prevent or limit the direct or indirect transmission of the infectious agent.

Close contact: A person with face-to-face exposure within 1 metre of a case.

2.2.2 *Pandemic Alert Period: Steps in Public Health Management*

1. Public health case and contact management differ according to the pandemic phase (see Table 5).

Table 5: Public Health Management of Novel Influenza Viruses Cases and Contacts by Pandemic Phase

Interpandemic Period	
Case Management	Contact Management
1.0 No new virus subtype in humans. Subtype that has caused human infection may be present in animals <u>outside</u> Canada. Risk to humans is low.	
1.1 No new virus subtype in humans. Subtype that has caused human infection is present in animals <u>inside</u> Canada. Risk to human is low.	
2.0 No new virus subtype in humans. Animal influenza virus subtype that poses substantial risk to humans is circulating in animals <u>outside</u> Canada.	
2.1 No new virus subtype in humans. Animal influenza virus subtype that poses substantial risk to humans is circulating in animals <u>inside</u> Canada.	
<input type="checkbox"/> Refer to Influenza chapter, <i>Nova Scotia Communicable Disease Control Manual</i> .	<input type="checkbox"/> Refer to Influenza chapter, <i>Nova Scotia Communicable Disease Control Manual</i> .
<input type="checkbox"/> Refer to <i>Guide to Influenza Control for Long-Term Care Facilities</i> .	<input type="checkbox"/> Refer to <i>Guide to Influenza Control for Long-Term Care Facilities</i> .
Pandemic Alert Period	
3.0 New virus subtype in humans outside Canada (single cases). No or rare instances of human-to-human spread.	
<input type="checkbox"/> As for Phase 1.0.	<input type="checkbox"/> As for Phase 1.0.
3.1 New virus subtype in humans inside Canada (single cases). No or rare instances of human-to-human spread.	
<input type="checkbox"/> Isolate ill individuals in hospital according to infection control guidelines or at home for 5 days after onset of symptoms (7 days for young children) or until symptoms have resolved, whichever is longer.	<input type="checkbox"/> Trace contacts. Active surveillance for symptoms of illness for 3 days after last exposure (or for the duration of the incubation period of the novel virus, if different).
<input type="checkbox"/> Laboratory testing of cases	<input type="checkbox"/> No activity restrictions.
<input type="checkbox"/> Treat with antiviral drugs.	<input type="checkbox"/> Antiviral drug prophylaxis for contacts not necessary unless a severe or unusual case or human-to-human transmission cannot be ruled out.
<input type="checkbox"/> Report cases according to the surveillance plan.	<input type="checkbox"/> Recommend annual influenza vaccine.

Pandemic Alert Period

Case Management	Contact Management
4.0 New virus subtype in humans <u>outside</u> Canada (small clusters). Limited human-to-human spread.	
4.1 New virus subtype in humans <u>inside</u> Canada (single cases; no clusters). Limited human-to-human spread.	
<ul style="list-style-type: none"> □ As for Phase 3.1. 	<ul style="list-style-type: none"> □ Trace contacts. Active surveillance for symptoms of illness for 3 days after last exposure (or for the duration of the incubation period of the novel virus, if different). □ Quarantine or, at a minimum, restrict activity and contact with others for 3 days after the last exposure to the case or for the duration of the incubation period, whichever is longer. □ Antiviral drug post-exposure prophylaxis (depending on the resistance status of the virus).
4.2 New virus subtype in humans <u>inside</u> Canada (small localized clusters). Limited human-to-human spread.	
<ul style="list-style-type: none"> □ As for Phase 3.1. 	<ul style="list-style-type: none"> □ As for Phase 4.1.
5.0 New virus subtype in humans <u>outside</u> Canada (large clusters). Localized human-to-human spread.	
5.1 New virus subtype in humans <u>inside</u> Canada (single cases; no clusters).	
<ul style="list-style-type: none"> □ As for Phase 3.1. 	<ul style="list-style-type: none"> □ As for Phase 4.1.

Pandemic Alert Period**Case Management**

5.2 New virus subtype in humans inside Canada (large clusters). Localized human-to-human spread.

- As for Phase 3.1.

Contact Management**Close contacts**

- Trace close contacts if feasible (e.g., household contacts). Active surveillance for symptoms of illness for 3 days after last exposure (or for the duration of the incubation period of the novel virus, if different).
- Quarantine or, at a minimum, restrict activity and contact with others for 3 days after the last exposure to the case or for the duration of the incubation period, whichever is longer.
- Antiviral drug post-exposure prophylaxis (depending on the resistance status of the virus).

Other potential contacts

- For other potential contacts, identify exposure sites (e.g., school, workplace) rather than individuals.
- Recommend those linked to the exposure site (even if exposure status is unknown) to self-monitor for ILI for 3 days after last exposure (or for the duration of the incubation period of the novel virus, if different).
- Recommend those linked to the exposure site to restrict activity and contact with others for 3 days after the last exposure to the case or for the duration of the incubation period, whichever is longer.
- Recommend those self-monitoring for ILI immediately report if symptoms develop in order to receive instructions on isolation and medical management.
- Antiviral drug post-exposure prophylaxis is not recommended.

Pandemic Alert Period**Case Management****Contact Management**

6.0 New virus subtype in humans outside Canada (in the general population). Sustained human-to-human spread.

6.1 Pandemic virus subtype in humans inside Canada (single cases; no clusters).

□ As for Phase 3.1.

- Identify possible exposure settings. Instruct close contacts of the case as well as those linked with the setting to self-monitor for ILI for 3 days after last exposure (or for the duration of the incubation period of the novel virus, if different).
- Recommend those self-monitoring for ILI to immediately report if symptoms develop in order to receive instructions on isolation and medical management.
- Recommend that individuals isolate themselves immediately if ILI symptoms develop.
- Antiviral drug post-exposure prophylaxis is not recommended.

6.2 Pandemic virus subtype in humans inside Canada (localized or widespread activity). Sustained human-to-human spread.

- Isolate ill individuals in hospital according to infection control guidelines or at home. Currently recommended duration of isolation for individuals at home is 24 hours after symptom resolution; however, this may change based on available epidemiological data.
- Laboratory testing according to protocol.
- Treat with antiviral drugs according to clinical care guidelines.
- Report cases according to surveillance plan.

- Contact tracing is not recommended.
- Quarantining of contacts is not recommended.
- Antiviral drug post-exposure prophylaxis is not recommended.
- Provide information to the general public on how to self-monitor for ILI and steps to take if symptoms develop.

2.2.2 *Pandemic Alert Period: Steps in Public Health Management (Cont'd)*

2. During the pandemic alert period, individuals with symptoms and possible exposure will come to the attention of the health system when they contact their physician or an emergency department or, in the case of travellers, through PHAC. These individuals will be triaged and referred for assessment. This procedure will be different during the pandemic period (see Health Services chapter).
3. Once assessed, physicians will report to the MOH any patient who meets the following criteria:
 - a history of possible exposure to a novel influenza virus with either:
 - close contact in the previous three days with a case of a novel influenza virus *or*
 - recent travel within the previous three days to a WHO reported affected area or to a defined setting that is associated with a cluster of novel influenza virus cases
 - OR
 - compatible symptoms, according to the case definition, with no other known cause of the illness
 - OR
 - laboratory-confirmed novel influenza virus
4. **Pandemic Alert Period Case Management**
 - a) The case's physician will treat the case with antiviral drugs (see Health Services chapter).
 - b) The MOH in discussion with the clinician jointly determine, according to the clinical severity, the location where the case should be managed. The options are
 - isolation in hospital
 - isolation at home

Several conditions must be met before a client can be placed on home isolation:

 - The case must be able to separate himself/herself from the rest of the family in his/her own room and wear a mask for any interaction with others.
 - Someone should be available to be a caregiver for the person on home isolation. Discuss on a case-by-case basis.
 - c) The public health nurse (PHN) will

- interview the patient using the Case Report Form (Annex 4-B) as a guide
 - educate the individual on influenza and how to prevent transmission to others
 - assess the suitability, by phone, of the home/residence if the case is being placed on home isolation (Annex 4-E). If a home visit is required, the PHN may contact a public health inspector for assistance
 - advise the case that a PHN will contact him/her on a daily basis in order to
 - monitor symptoms
 - assess compliance with isolation
 - obtain a list of contacts
 - ask the case if his/her contacts are aware of the diagnosis of influenza and whether he/she knows that they are contacts
 - provide the case with a telephone number to call for concerns or questions
- d) For those placed on home isolation:
1. MOH recommends home isolation for the client and provides a letter with this recommendation (Annex 4-F).
 2. PHN conducts assessment of the home situation by phone.
 3. If a home visit is required and the PHN requires assistance, the MOH may contact a public health inspector.
 4. If the case's residence is not suitable, recommend to the clinician that the case be admitted to hospital.
 5. If suitable, provide client and family with the following:
 - Recommendations for Care Providers at Home (Annex 4-F)
 - Fact sheets (Annex 4-F)
 - General Guidance for the Use of Surgical Face Masks
 6. Inquire if the client has regular service providers entering the home (e.g., homecare workers). If so, ensure that appropriate agencies are aware of infection control precautions.
 7. Conduct active daily surveillance
 8. If there are any concerns regarding compliance, discuss the situation with the MOH.

9. MOH will write a letter to the client to be hand-delivered (Annex 4-F).
10. If concerns regarding compliance with isolation continue, inform the MOH. The MOH will discuss this with the Chief Medical Officer of Health and legal counsel on a case-by-case basis.

5. **Pandemic Alert Period Contact Tracing and Follow-Up**

Contact tracing will be initiated according to the following guidelines:

- a) All close contacts will be identified and interviewed.
- b) If the case traveled on a plane while symptomatic, inform the Office of the Chief Medical Officer of Health (OCMOH) as soon as possible so that appropriate passenger follow-up can be initiated.
- c) Any contacts with symptoms should be referred for assessment of influenza as soon as possible (see Health Services chapter).
- d) According the pandemic phase and degree of contact, contacts should be educated about influenza and directed to either
 - active daily surveillance (ADS) and quarantine at home *or*
 - self-monitoring.

Quarantine at Home Plus Active Daily Surveillance

For those placed on home quarantine:

- MOH recommends home quarantine for a contact and provides letter with this recommendation (Annex 4-F).
- PHN educates contact and provides Fact Sheets (Annex 4-F)
- PHN carries out active daily surveillance using contact tracing and tracking forms (Annexes 4-C and 4-D).

Self-Monitoring

Contacts should be advised to monitor themselves for fever, cough, shortness of breath, difficulty breathing, malaise, chills, rigors, or headache. Instruct the individual to seek medical attention at the nearest emergency department or Alternative Assessment site (see Health Services chapter) if any of these symptoms develop.

- e) Contact tracing forms
 1. The contact should be called and the following information should be noted on the Active Daily Surveillance of Contacts of a Novel Influenza Virus form (Annex 4-D):
 - address, date of birth, and family physician of the contact
 - date of initial contact with the case

- status of the contact:
 - self-monitoring
 - home quarantine + active daily surveillance (HQ+ADS)
 - case
2. The individual should be educated on the wearing of masks.
 3. The individual should be educated on his/her responsibility to actively monitor his/her own health:
 - i. Temperature should be taken twice daily at least 4 hours after the last dose of any fever-reducing medicine.
 - ii. Presence and nature of cough or any change in cough should be noted.
 - iii. Shortness of breath or difficulty breathing should be noted.
 4. Date ADS is initiated should be recorded.
 5. Contacts should be called daily and any change in status noted.
 6. ADS should be continued for up to 3 days after the date of last contact with the case.
 7. Upon completion of surveillance, date of discharge should be recorded.
 8. If there are any concerns regarding compliance, discuss the situation with the MOH.
 9. MOH will write a letter to the client to be hand-delivered (Annex 4-F).
 10. If concerns regarding compliance with quarantine continue, inform the MOH. The MOH will discuss this with the Chief Medical Officer of Health and legal counsel on a case-by-case basis.

2.3 Guidelines for Long-Term Care and Home Care

Long-term care facilities should follow the guidelines in the Health Services chapter of the *Nova Scotia Health System Pandemic Influenza Plan*.

2.4 Guidelines for Child-Care Centres

2.5 Guidelines for Institutions

Health facilities should follow the Infection Control Guidelines in the Health Services chapter of the *Nova Scotia Health System Pandemic Influenza Plan*.

Annex 4-B: Pandemic Alert Period Novel Influenza Virus Case Report Form

Pandemic Alert Period Novel Influenza Virus Case Report Form, 2006

Check one:		<i>Initial Report</i>	<i>Update (new info only)</i>	<i>Final Report (new info only)</i>
DISTRICT HEALTH AUTHORITY INFORMATION				
Date of report (dd/mm/yyyy) ____/____/____			DHA:	
Person Reporting:			Phone: (902)	
PATIENT INFORMATION				
Last Name:			First Name:	
Male	Female		Date of Birth (dd/mm/yyyy) ____/____/____	
City:		Postal code:	Occupation:	
CASE TYPE				
ILI	Laboratory-confirmed	Influenza ruled out	Discharged: Date discharged (dd/mm/yyyy) __/__/__	
CLINICAL INFORMATION				
When did symptoms first start? (dd/mm/yyyy) ____/____/____				
Fever >38 ⁰ C	Yes	No	Unknown	Arthralgia Yes No Unknown
Rigor & chills	Yes	No	Unknown	Myalgia Yes No Unknown
Cough	Yes	No	Unknown	Headache Yes No Unknown
Shortness of breath	Yes	No	Unknown	Vomiting Yes No Unknown
Sore throat	Yes	No	Unknown	Diarrhea Yes No Unknown
Other	Yes	No	Unknown	
Chest X-ray performed	Yes	No	Unknown	
Chest X-ray summary _____				
Was patient hospitalized?	Yes	No	Unknown	If Yes, name of hospital
City:	Physician:		Physician phone:	
If Yes, admission date ____/____/____ (dd/ mm/ yyyy)	Discharged		Yes	No
	Unknown		Discharge date ____/____/____ (dd /mm/ yyyy)	
Diagnosis at time of this report:	Influenza	Pneumonia	Other	
Disposition at time of this report:	Recovering	ICU	Dead: Date of death: _____	
SIGNIFICANT FACTORS				
Patient vaccinated for influenza in 2006/2007 season	Yes	No		
Underlying medical conditions	Yes	No		
If yes, Heart Lung Immune system Other: _____				
Note: Patient ID code number is to be completed by the reporting DHA. It should include a two-letter code for the province followed by an investigation number assigned by the province (e.g., health card number).				

EXPOSURE HISTORY

This section of the form will be developed once a novel influenza virus emerges

Travel to XXXX within 10 days of disease onset? Yes** No If yes, date left XXXX_ ___/___/___

(dd/mm/yyyy):

Specify country(s) of travel: _____

Contact in XXXX with: Hospital Doctor's office Person known to be ill with respiratory illness

Contact of previously identified case? Yes No Name: _____

Type of contact: Household Health care worker Airline Other: _____

First contact with case: (dd/mm/yyyy) ___/___/___ Last contact: (dd/mm/yyyy) ___/___/___

**If patient was ill during flight, notify OCMOH of airline, flight, and seat number.

SPECIMENS COLLECTED

Blood culture	Yes	No	Nasopharyngeal	Yes	No	Stool		
Whole blood	Yes	No	swab	Yes	No	Cerebral spinal	Yes	No
Acute sera	Yes	No	Bronchoscopy	Yes	No	fluid	Yes	No
Convalescent sera	Yes	No	Tracheal aspirate	Yes	No	Autopsy specimens	Yes	No

Annex 4~C: Novel Influenza Virus Contact List

12.

1.

13.

2.

14.

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2.

3.

Annex 4~D: Form for Active Daily Surveillance of Contacts of a Novel Influenza Virus

Active Daily Surveillance of Contacts of a Novel Influenza Virus

CONFIDENTIAL

CASE INFORMATION

Case Name

Case Unique Identification Number

(PI - NS - Health Card or Unique ID #) **PI-NS-**

Status of Case

- ILI
 Laboratory-confirmed

CONTACT INFORMATION

Contact Name

Date of birth (dd/mm/yyyy) ___ / ___ / _____

Sex Male Female

HCN

Address

(City) (Prov) (Postal code)

Phone ()

Name of family physician

Phone number of family physician ()

Date of last contact with case (dd/mm/yyyy) ___ / ___ / _____

Type of contact (e.g. HCW, household)

Contact is under (check all that apply) Self-monitoring
 Active Daily Surveillance
 Home Quarantine

Start date of surveillance (dd/mm/yyyy) ___ / ___ / _____

Final date of surveillance (dd/mm/yyyy) ___ / ___ / _____

Final assessment of contact Asymptomatic
 ILI
 Laboratory-confirmed case

Active Daily Surveillance of Contacts of a Novel Influenza Virus

Name of Contact:				
Date of Surveillance	Symptoms			Daily Assessment (Check one)
Day 1 Date (dd/mm/yyyy) ____ / ____ / ____	Yes	No		<input type="checkbox"/> Asymptomatic <input type="checkbox"/> Symptomatic
	<input type="checkbox"/>	<input type="checkbox"/>	Fever >38° C	
	<input type="checkbox"/>	<input type="checkbox"/>	Rigor or chills	
	<input type="checkbox"/>	<input type="checkbox"/>	Cough	
	<input type="checkbox"/>	<input type="checkbox"/>	Shortness of breath	
	<input type="checkbox"/>	<input type="checkbox"/>	Sore throat	
	<input type="checkbox"/>	<input type="checkbox"/>	Arthralgia	
	<input type="checkbox"/>	<input type="checkbox"/>	Myalgia	
	<input type="checkbox"/>	<input type="checkbox"/>	Headache	
	<input type="checkbox"/>	<input type="checkbox"/>	Vomiting	
	<input type="checkbox"/>	<input type="checkbox"/>	Diarrhea	
	<input type="checkbox"/>	<input type="checkbox"/>	Other_____	
Day 2 Date (dd/mm/yyyy) ____ / ____ / ____	Yes	No		<input type="checkbox"/> Asymptomatic <input type="checkbox"/> Symptomatic
	<input type="checkbox"/>	<input type="checkbox"/>	Fever >38° C	
	<input type="checkbox"/>	<input type="checkbox"/>	Rigor or chills	
	<input type="checkbox"/>	<input type="checkbox"/>	Cough	
	<input type="checkbox"/>	<input type="checkbox"/>	Shortness of breath	
	<input type="checkbox"/>	<input type="checkbox"/>	Sore throat	
	<input type="checkbox"/>	<input type="checkbox"/>	Arthralgia	
	<input type="checkbox"/>	<input type="checkbox"/>	Myalgia	
	<input type="checkbox"/>	<input type="checkbox"/>	Headache	
	<input type="checkbox"/>	<input type="checkbox"/>	Vomiting	
	<input type="checkbox"/>	<input type="checkbox"/>	Diarrhea	
	<input type="checkbox"/>	<input type="checkbox"/>	Other_____	

Active Daily Surveillance of Contacts of a Novel Influenza Virus

Name of Contact:				
Date of Surveillance	Symptoms			Daily Assessment (Check one)
Day 3 Date (dd/mm/yyyy) ___ / ___ / _____	Yes	No		<input type="checkbox"/> Asymptomatic <input type="checkbox"/> Symptomatic
	<input type="checkbox"/>	<input type="checkbox"/>	Fever >38° C	
	<input type="checkbox"/>	<input type="checkbox"/>	Rigor or chills	
	<input type="checkbox"/>	<input type="checkbox"/>	Cough	
	<input type="checkbox"/>	<input type="checkbox"/>	Shortness of breath	
	<input type="checkbox"/>	<input type="checkbox"/>	Sore throat	
	<input type="checkbox"/>	<input type="checkbox"/>	Arthralgia	
	<input type="checkbox"/>	<input type="checkbox"/>	Myalgia	
	<input type="checkbox"/>	<input type="checkbox"/>	Headache	
	<input type="checkbox"/>	<input type="checkbox"/>	Vomiting	
	<input type="checkbox"/>	<input type="checkbox"/>	Diarrhea	
<input type="checkbox"/>	<input type="checkbox"/>	Other _____		
Day 4 Date (dd/mm/yyyy) ___ / ___ / _____	Yes	No		<input type="checkbox"/> Asymptomatic <input type="checkbox"/> Symptomatic
	<input type="checkbox"/>	<input type="checkbox"/>	Fever >38° C	
	<input type="checkbox"/>	<input type="checkbox"/>	Rigor or chills	
	<input type="checkbox"/>	<input type="checkbox"/>	Cough	
	<input type="checkbox"/>	<input type="checkbox"/>	Shortness of breath	
	<input type="checkbox"/>	<input type="checkbox"/>	Sore throat	
	<input type="checkbox"/>	<input type="checkbox"/>	Arthralgia	
	<input type="checkbox"/>	<input type="checkbox"/>	Myalgia	
	<input type="checkbox"/>	<input type="checkbox"/>	Headache	
	<input type="checkbox"/>	<input type="checkbox"/>	Vomiting	
	<input type="checkbox"/>	<input type="checkbox"/>	Diarrhea	
<input type="checkbox"/>	<input type="checkbox"/>	Other _____		

Name of Contact:

Date of Surveillance	Symptoms			Daily Assessment (Check one)
Day 5 Date (dd/mm/yyyy) ____ / ____ / ____	Yes	No		<input type="checkbox"/> Asymptomatic <input type="checkbox"/> Symptomatic
	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Fever >38° C Rigor or chills Cough Shortness of breath Sore throat Arthralgia Myalgia Headache Vomiting Diarrhea Other_____	
Day 6 Date (dd/mm/yyyy) ____ / ____ / ____	Yes	No		<input type="checkbox"/> Asymptomatic <input type="checkbox"/> Symptomatic
	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Fever >38° C Rigor or chills Cough Shortness of breath Sore throat Arthralgia Myalgia Headache Vomiting Diarrhea Other_____	

NOTES

Annex 4~: Guidelines for Evaluating Homes for Quarantine or Isolation

It is important to ensure that the home environment meets the ongoing physical, mental, and medical needs of the individual to be placed in isolation or quarantine. An evaluation of the home for its suitability should be performed before the person is placed in isolation or quarantine. This evaluation may be performed through the administration of a questionnaire to the individual and/or the caregiver or on site by a public health nurse or inspector. Points to be considered in the evaluation include the following.

Item	Yes or No
Infrastructure	
Located in an area with 24-hour access to emergency medical services	
Telephone	
Electricity	
Heat	
Potable water	
Bathroom with toilet and sink	
Waste and sewage disposal	
Air conditioning (if needed)	
Accommodations	
Separate bedroom for patient	
Resources and support	
Primary caregiver who is not at high risk for complications from influenza	
Meals	
Laundry	
Essential shopping	
Other essential needs (e.g., prescriptions)	
Thermometer, hand hygiene supplies	
Radio, reading material, etc	

Annex 4~F: Novel Influenza Virus Public Health Case and Contact Management Fact Sheets and Letters

- Home Isolation Fact Sheet
- Quarantine Fact Sheet
- Fact Sheet for Care Providers at Home
- Letter from the Medical Officer of Health to a Case Recommending Home Isolation
- Letter from the Medical Officer of Health to a Case Requiring Home Isolation Who Is Not in Compliance
- Letter from the Medical Officer of Health to a Contact Requesting Home Quarantine
- Letter from the Medical Officer of Health to a Contact Requiring Home Quarantine Who Is Not in Compliance

Home Isolation Fact Sheet

This fact sheet is for people who have been placed under home isolation and their caregivers.

Q.1. What is isolation?

A. Isolation means keeping people who have an illness away from healthy people and restricting their movements to stop the spread of an illness.

Q.2. Why is home isolation needed?

A. Home isolation is needed to prevent or limit the spread of the influenza germ to other people.

Q.3. What should I do when I am in home isolation?

A. Here are the precautions you should follow.

- Remain at home in a separate room away from others for whichever time is longer:
 - 5 days from the day your symptoms began
 - OR
 - until you no longer have symptoms
 Public Health will let you know when it is time to end isolation.
- Keep the door of the room closed and the window open, if possible.
- Do not leave your house for the 5 days (unless you are seeking medical care).
- Do not accept any visitors.
- Avoid any direct contact with others in your home.
- Wear a mask when you are in the same room with another family member. (Public Health Services will provide masks and instructions on how to use them.)
- Change your mask at least twice a day. Family members do not need to wear masks unless they are told to do so.
- Wash your hands often. Public Health will give you information on how to wash your hands properly.

- Promptly throw away any tissues or any articles that come in contact with fluid from your nose, mouth, or eyes. Household cleaning products can be used to clean items that cannot be thrown away.
- Do not share personal items such as towels, drinking cups, cutlery, toothbrush, etc. Other family members can use dishes and cutlery that are properly washed in hot soapy water. They do not need to be thrown away.
- Monitor your health.
 - Take your temperature twice a day at least 4 hours after your last dose of fever-reducing medicine (such as acetaminophen or ibuprofen).
 - Note if you have a cough and what it's like (Is it a dry cough? Are you coughing anything up?)
 - Note if you are short of breath or have difficulty breathing
- If your condition worsens and you become sicker, you should call your physician or the hospital emergency department. Tell them that you are in isolation for influenza, that your condition is getting worse and that you plan to come to the emergency department. Follow their advice and keep your mask on during travel to the hospital. If you have to call an ambulance, tell them about your condition as well.

Q.4. What if a household member develops symptoms?

A. They should call their physician or the emergency department if they develop a cough and a fever over 38 degrees C (100.4 degrees F) and one or more of the following symptoms

- sore throat
- joint aches
- muscles aches
- severe weakness or fatigue

They should say that they are a household contact of a person in isolation for influenza. They should follow instructions provided by the emergency department and put on a mask during travel to the hospital.

Q.5. Do family members of individuals who are in isolation need to stay home?

A. Family members of people who are in isolation may be asked to stay at home. They will be contacted by Public Health with instructions.

Q.6. Will any health-care worker contact me during my isolation?

A. Yes. a public health nurse will contact you once a day. If a home visit is required, a public health nurse will make a visit.

Q.7. What precautions will the public health nurse take?

A. The public health nurse will wear a mask while in the same room with you. You should wear a surgical mask during the visit.

Q.8. What do I do if I have questions or concerns?

A. Call your local public health office between 8:30 am and 4:30 pm if you have questions or concerns. After hours or on weekends, contact your physician or the local emergency department if your symptoms get worse. For more information about influenza, see the Nova Scotia Department of Health Promotion and Protection website (www.gov.ns.ca/hpp/ocmoh/flu.htm).

Quarantine Fact Sheet

This fact sheet is for people who have been placed under quarantine and their families.

Q.1. What is quarantine?

- A. Quarantine means restricting the activities of people who are well, but who have been exposed to an illness during the time when the infection can be spread. This is called its period of communicability.

Q.2. Why is quarantine needed?

- A. Quarantine is needed to limit public movement of people who may have been exposed to influenza to prevent them from infecting others.

Q.3. Why do I have to stay home for 3 days?

- A. It can take up to 3 days from the time someone is infected with influenza to the start of symptoms. This is the incubation period. If you have not developed symptoms within 3 days from your last exposure to a person with influenza, Public Health officials will tell you when to end your quarantine.

Q.4. What should I do when I am in quarantine?

- A. Remain at home for 3 days after your last exposure or contact with a person with influenza. Do not leave your house and do not allow people to visit you. Monitor your health in the following ways:

- Take your temperature twice a day. If you take fever-reducing medicine (such as acetaminophen or ibuprofen), wait 4 hours before taking your temperature.
- Note if you have a cough and what it's like (Is it a dry cough? Are you coughing anything up?).
- Note if you are short of breath or have difficulty breathing.

Call your physician or the nearest emergency department if you develop a cough and a fever over 38 degrees C (100.4 degrees F) and one or more of the following symptoms:

- sore throat
- joint aches
- muscles aches
- severe weakness or fatigue

Q.5. Should members of my family stay at home while I am in quarantine?

A. No. Family members of healthy people who are quarantined do not need to stay home. There is no risk of them spreading influenza. If the entire family has been in contact with a case, they will all need to be quarantined.

Q.6. Will any health-care worker contact me during my quarantine?

A. Yes. A public health nurse will contact you once a day. If a home visit is required, a public health nurse will make a visit.

Q.7. What do I do if I have questions or concerns?

A. Call your local public health office between 8:30 am and 4:30 pm if you have questions or concerns. For more information about influenza, see the Nova Scotia Department of Health Promotion and Protection website (www.gov.ns.ca/hpp/ocmoh/flu.htm).

Fact Sheet for Care Providers at Home

The person who is sick should stay isolated at home following the directions of Public Health until they are told that this is no longer necessary.

Isolate the sick person

If possible, only the person who is taking care of the sick person should stay with them. The sick person should stay in one room with the door closed and with the window open, if possible. Other members of the family should stay away from the sick person. They should not handle or share things such as dishes until the care provider has cleaned them thoroughly. Discourage any visits from people who do not live in the house.

Hand washing is important

Everyone in the household should wash their hands often using soap and warm water. The person who is sick should cover their mouth when coughing or sneezing and wash their hands immediately after. The care provider should wash their hands immediately after providing care to the sick person. Waterless hand wash agents can also be used.

Wear masks

Influenza is spread by close contact. The person caring for the sick person should wear a mask. The sick person should always wear a mask if they leave their room or if another person is in the room with them. Anyone going in to the room should put on a mask before entering. You will be given a supply of masks and be told how to use them.

Keep things clean

- Wash the sick person's bed sheets, towels, and clothes in warm water. They can be washed with items belonging to other household members.
- The sick person should put used tissues directly into the garbage. It can be put out with the regular garbage.
- Clean surfaces and items inside the sick person's room with regular household cleansers. Clean items handled by the sick person as soon as you remove them from the sick person's room. Wash dishes, cutlery, and glasses in soap and warm water or in the dishwasher.

Care in the home

The sick person should follow the usual guidelines for taking care of themselves when ill. Rest, drink plenty of fluids, and take acetaminophen or ibuprofen for fever and pain. Taking cough medicine, decongestants, and/or sore throat lozenges may help to relieve symptoms.

Take the sick person's temperature at least twice a day with a thermometer. Write the temperature down. If the sick person is taking acetaminophen (e.g., Tylenol) or ibuprofen (e.g., Advil), wait at least 4 hours after the last dose before taking their temperature.

When to call for help

Public Health will call to check on the sick person's condition. If the symptoms worsen, including increased shortness of breath or fever, call your doctor for instructions.

Call Public Health immediately if other members of the household start to feel unwell and develop a fever or cough or any other respiratory symptoms.

Letter from the Medical Officer of Health to a Case Recommending Home Isolation

Dear _____

It has been reported to me that you are under investigation for a novel influenza virus. Influenza is a communicable disease that is spread to others through close contact. It can lead to very serious illness.

In consultation with your physician, I am recommending that you remain isolated in your home until I advise you otherwise. The time period that you must remain in isolation depends on how quickly you recover from your illness.

I have included some information on influenza and on home isolation. Public Health staff will gladly answer any questions you may have.

It is extremely important that you remain in isolation at home until advised otherwise.

Thank you for your co-operation.

Sincerely,

Letter from the Medical Officer of Health to a Case Requiring Home Isolation Who Is Not in Compliance

Dear _____

It has been reported to me that you are under investigation for a novel influenza virus. I wrote to you on (insert date) requesting that you remain in isolation at home voluntarily until you are advised otherwise.

It has come to my attention that you have not voluntarily isolated yourself. Influenza is a communicable disease that is spread to others through close contact. As you know, it can lead to very serious illness. I have included some information on influenza, and Public Health staff will gladly answer any questions you may have.

It is extremely important that you remain in isolation at home until advised otherwise. Therefore, I am requesting you to remain in isolation as directed.

Thank you for your co-operation in this matter.

Sincerely,

Letter from the Medical Officer of Health to a Contact Requesting Home Quarantine

Dear _____

It has been reported to me that you have been in contact with a novel influenza virus. In consultation with your physician, we are recommending that you remain in quarantine in your home until I advise you otherwise. You should remain in quarantine for 3 days after your last exposure to influenza.

Influenza is a communicable disease that is spread to others through close contact. It can lead to very serious illness. I have included some information on influenza and on home quarantine. Public Health staff will gladly answer any questions you may have.

It is extremely important that you remain in quarantine at home until advised otherwise.

Thank you for your co-operation.

Sincerely,

Letter from the Medical Officer of Health to a Contact Requiring Home Quarantine Who Is Not in Compliance

Dear _____

It has been reported to me that you have been in contact with a case of a novel influenza virus. I wrote to you on (insert date) requesting that you remain in quarantine at home voluntarily until you are advised otherwise.

It has come to my attention that you have not voluntarily quarantined yourself. Influenza is a communicable disease that is spread to others through close contact. It can lead to very serious illness. I have included some information on influenza, and Public Health staff will gladly answer any questions you may have.

It is extremely important that you remain in quarantine at home until advised otherwise. Therefore, I am requesting you to remain in quarantine as directed.

Thank you for your co-operation in this matter.

Sincerely,

Annex 4-G: Detailed Description of Community-Based Disease Control Strategies during the Pandemic Period

Infection Control and Environmental Measures

Use of Masks by Well Individuals

Advantages	Disadvantages
It may decrease exposure to large droplets containing the virus.	Hands and other surfaces may be contaminated when the mask is removed (requires public education).
Psychologically reassures people that they are taking measures to prevent infection.	It may cause panic if the availability of masks is limited.
	Use of masks without using other infection-control practices is of limited effectiveness and may provide a false sense of security.
	It is not feasible to wear masks constantly for the duration of the pandemic wave.
	Not all members of the public can afford to purchase masks
	Public purchase of masks may limit their availability in health-care settings where they are required.
This measure is not feasible or sustainable on a population basis and is not likely to be effective in reducing disease spread in the general population.	
Not recommended.	

Implement Hand-Sanitizing Stations in Public Settings (e.g., public transit settings)

Advantages	Disadvantages
It may increase the frequency of hand washing and thereby reduce the spread of disease.	It will not be effective against droplet spread via coughing and sneezing.
It reinforces key messages about hand washing.	Effectiveness depends on public compliance.
	It requires human and financial resources to keep stations adequately supplied. It is potentially expensive to supply and maintain.
	It may give people a false sense of security.
Frequent hand washing is an effective infection control measure when dealing with people known to be infectious. The public should be educated about hand washing and existing public washrooms should be appropriately stocked at all times. However, maintaining public hand-sanitizing stations during a pandemic is not a feasible strategy for Public Health Services, and its effectiveness in reducing viral transmission is uncertain.	
Not recommended.	

Increase the Frequency of Cleaning of Surfaces in Public Settings

(e.g., public transit settings, large institutions, businesses)

Advantages	Disadvantages
It may remove viable virus from frequently touched surfaces and therefore reduce the spread of disease.	Efficacy depends on the frequency and quality of cleaning (with appropriate supplies and techniques).
It reinforces key messages about the mode of transmission and personal hygiene.	Optimal frequency of cleaning cannot be determined and could be unsustainable during the peak of the epidemic in the community.
	It may be impossible to target cleaning efforts.
	It requires resources to maintain cleanliness.
Environmental cleaning is most effective when dealing with surfaces associated with people known to be infectious. Identifying infectious individuals in public settings is not possible, and virtually constant cleaning would be required to reduce the number of microorganisms on public surfaces.	
Not recommended.	

Other Measures Not Recommended for Implementation

Measure	Comments
Urge entire population in an affected area to check for fever at least once daily.	This is a potential measure to decrease the interval between symptom onset and patient isolation; however, this has not been effective in other situations.
Introduce thermal scanning into public places.	Experience has not shown this measure to be effective.
Carry out widespread environmental or air disinfection	This measure is not practical.
Disinfect clothing, shoes, or other objects of persons exiting affected areas.	This measure is not recommended for public health purposes. It may be required by veterinary authorities to prevent spread of infection in animals.
Restrict travel to and from affected areas.	Enforcement is considered impractical in most countries. It is likely to occur voluntarily when risk is appreciated by the public.
Establish a cordon sanitaire.	Enforcement is considered impractical.

Reference List

- Bridges, C., M. Kuehnert, and C. Hall. 2003. Transmission of influenza: Implications for control in health care settings. *CID* 37:1094–1101.
- Fraser, C., S. Riley, R. Anderson, and N. Ferguson. 2004. Factors that make an infectious disease outbreak controllable. *PNAS* 101:6146–51.
- Heymann A., G. Chodick, B. Reichman, E. Kokia, and J. Laufer. 2004. Influence of school closure on the incidence of viral respiratory diseases among children and on health care utilization. *Pediatr Infect Dis J* 23:675–7.
- Moser, M., T. Bender, H. Margolis, G. Noble, A. Kendal, and D. Ritter. 1979. An outbreak of influenza aboard a commercial airliner. *Am J Epidemiol.* 10:1–6.
- Nguyen-Van-Tam, J., R. Granfield, J. Pearson, D. Fleming, and N. Keating. 1999. Do influenza epidemics affect patterns of sickness absence among British hospital staff? *Infect Control Hosp Epidemiol.* 20:691–4.
- Svoboda, T., B. Henry, L. Shulman, E. Kennedy, E. Rea, W. Ng, et al. 2004. Public health measures to control the spread of the Severe Acute Respiratory Syndrome during the outbreak in Toronto. *N Engl J Med.* 350:2352–61.
- Vancouver Coastal Health. 2005. *Regional Pandemic Influenza Response Plan*. Vancouver, BC: Vancouver Coastal Health.
- World Health Organization. 2004. *WHO Consultation on Priority Public Health Interventions before and after an Influenza Pandemic*. Geneva: WHO.