7A. Infection Prevention and Control/Occupational Health and Safety Tools

Contents

Droplet and Contact Precautions in Non-Outbreak Conditions

All health care settings should use droplet and contact precautions to reduce the spread of influenza. The following describes droplet and contact precautions in non-outbreak conditions, and should be the standard for infection prevention and control during the interpandemic and pandemic alert periods.

General Precautions

All health care settings must have **accessible hand hygiene stations** in appropriate locations, and signage instructing all staff, patients, residents, visitors and volunteers on when to practice hand hygiene. Hand hygiene has been shown to be effective in preventing and controlling infections in both institutions and community settings. Signage and hand hygiene stations help raise awareness about the risk of disease transmission in health care settings, and reinforce personal/individual responsibility for hand hygiene.

All health care settings should establish a clear expectation **that staff do not come into work when ill** with a febrile respiratory illness and support this expectation with appropriate attendance management policies. For example, all health care settings should ensure that they: provide sick leave benefits for all staff (either in the form of paid sick days for full-time staff or in compensatory wage rates in lieu of benefits to part-time staff); avoid reward programs for staff who have no sick days; avoid penalizing staff for taking sick days; and actively exclude staff who are ill (i.e., send staff home who arrive at work ill).

Precautions for Patients with Flu Symptoms

Patients who have influenza symptoms (i.e., fever, cough) who come to a health care setting for care should be asked to wash their hands and wear a surgical or procedure mask and either wait in a separate area or keep one metre away from other patients and staff. The purpose of asking symptomatic patients to wear masks is to protect other patients/staff in common waiting areas. While masking is preferable, not all patients will be able to tolerate masks (e.g., children, people with chronic breathing problems, and people with dementia). In these cases, the setting should, if possible, have the patient wait in a separate area or keep at least a one metre distance from other patients. Each health care setting's capacity to separate patients with flu symptoms will depend on space. In crowded waiting areas, precautions like hand hygiene and masks become even more important. If masks are not available, patients should be encouraged to use another method to cover their mouth and nose when coughing or sneezing (e.g., tissue).

Patients who have symptoms of influenza-like illness and a travel history to an area with a health alert should be moved immediately out of the waiting room and put in a separate room.

Whenever possible, patients who have flu symptoms who are admitted to a hospital should be accommodated in a single room or put in a room with other flu patients.

Precautions for Health Care Workers

Health care workers providing care for patients with flu symptoms should consistently use droplet/contact precautions:

- wear a mask when working within one metre of the patient
- use protective eye wear when working within one metre of the patient

- perform hand hygiene (i.e., using alcohol-based hand sanitizer or washing hands: before seeing the patient; after seeing the patient and before touching the face; and after removing and disposing of personal protective equipment)
- use examination procedures that minimize contact with droplets (e.g., sitting next to rather than in front of a coughing patient when taking a history or conducting an examination)
- wear appropriate gloves when likely to have contact with body fluids or to touch contaminated surfaces
- wear gowns during procedures and patient care where clothing might be contaminated
- clean and disinfect any communal or shared equipment after use.

Removing Personal Protective Equipment (PPE)

After the health care provider has completed patient care and is more than one metre away from the patient:

- Remove gloves and discard using a glove-to-glove/skin-to-skin technique
- Remove gown (discard in linen hamper in a manner that minimizes air disturbance)
- Perform hand hygiene
- Remove eye protection and discard or place in clear plastic bag and send for decontamination as appropriate
- Remove mask and discard
- Perform hand hygiene.

This is a minimum procedure. If health care providers believe their hands have become contaminated during any stage of PPE removal, they should perform hand hygiene before proceeding further.

Note: Sinks that patients use may be heavily contaminated and should not be used by health care providers for hand hygiene unless no other alternative is available.

Criteria for Selecting Eye Protection

- Eye protection must provide a barrier to splashes from the side
- May be safety glasses or face shields
- May be single use disposable or washable before reuse
- Prescription eye glasses are not acceptable as eye protection.

Criteria for Selecting Alcohol-based Hand Sanitizer

- 60% to 90% alcohol (isopropanol or ethanol).

Precautions for High Risk Procedures

Certain respiratory procedures (see box from Occupational Health and Safety Section) carried out on patients with influenza – that is, procedures that may generate aerosols – can expose staff to respiratory pathogens and are considered higher risk for staff and others in the area. When patients are diagnosed with influenza, all elective high risk procedures (e.g., dental care) should be postponed until the illness is resolved, and any non-elective high risk procedure should be performed using appropriate precautions to reduce risk of exposure.

Equipment and the Environment

Health care settings must ensure that staff has quick easy access to the personal protective equipment required. All units and crash carts should be equipped with:

- masks, eye protection, gloves, gowns
- a manual resuscitation bag with hydrophobic submicron filter
- in-line suction catheters.

In all settings where care is delivered, staff should follow procedures for managing and disposing of equipment that is consistent with the Public Health Agency of Canada guidelines (see http://www.phac-aspc.gc.ca/publicat/ccdr-rmtc/98pdf/cdr24s8e.pdf).

- Providers should only take the equipment they need into the area where care will be provided. All reusable equipment must be cleaned and disinfected. (See also the College of Physicians and Surgeons of Ontario document: *Infection Control in the Physician's Office, 2004*.)
- Whenever possible, providers should use disposable equipment which can be safely discarded with regular garbage and should be disposed of immediately upon exiting the room where care is delivered. Providers should also have an adequate supply of alcohol-based hand sanitizer to ensure appropriate hand hygiene.

All health care settings should maintain routine cleaning practices including: keeping the working environment clean and disinfecting areas that may have been contaminated after each patient visit.

Maintaining a clean environment involves wiping down any areas touched by a patient with influenza during the visit (e.g., arms of the chair in the waiting room, the examination table, the edge of the desk, the stethoscope, anything within arm's reach of where the patient was sitting).

The use of commercial, pre-packaged disinfectant wipes that are easily accessible to all staff allows efficient cleaning of equipment and surfaces between patients. All settings should follow the Public Health Agency of Canada *Infection Control Guidelines on Hand Washing, Cleaning, Disinfection and Sterilization in Health Care* (see http://www.phac-aspc.gc.ca/publicat/ccdr-rmtc/98pdf/cdr24s8e.pdf). The guidelines include the appropriate cleaning agents to use and contact time.

All contaminated surfaces and equipment should be cleaned following a high risk procedure. Surfaces should be cleaned and disinfected, and equipment disinfected or discarded, by staff performing the high risk procedure *before* leaving the room and *before* removing personal protective equipment. Staff should not re-enter the room until it has been cleaned.

For more information on droplet/contact precautions, see the Public Health Agency of Canada publication: Infection Control Precautions for Respiratory Infections Transmitted by Large Droplet/Contact: Infection Control Guidance in a Non-Outbreak Setting, When an Individual Presents with a Respiratory Infection. (See: http://www.phac-aspc.gc.ca/sars-sras/pdf/sars-icg-nonoutbreak_e.pdf

Guide to Health Care Provider Personal Protective Equipment (PPE) by Type of Influenza

The MOHLTC is currently developing a provincial position on the type of personal protective equipment to be used during an influenza pandemic. This section will be updated when that work is complete.

Pandemic Planning and Response Activities by Healthcare Sector

The following tables list the steps to be taken by the acute, community and long-term care sectors to establish the hierarchy of controls by pandemic period. Where advice is identical for all sectors, it is provided in one row across the chart; where it varies, it is provided in individual columns.

Interpandemic/Pandemic Alert Periods

Control Measure	Acute Care Sector	Community Sector	Long-Term Care Sector
Planning	Be aware of the planning in your area regarding triage and the possible use of assessment clinics or other alternative sites to which patients/clients with FRI symptoms should be triaged.		
Engineering Controls		Given the wide range of settings involved in community care, it may be challenging to institute engineering controls; however, the following infrastructure measures should still be considered before a pandemic strikes.	
	Are there engineering modifications that should be made to your infrastructure ahead of time that would help eliminate or reduce the risk of exposure to influenza? Ventilation: Systems should be designed and maintained in accordance with CSA Standards, Special Requirements for Heating, Ventilation, and Air Conditioning (HVAC) Systems in Health Care Facilities. Physical layout: physical barriers such as acrylic partitions can put in place in triage, waiting areas, or other high risk zones, or the setting can lay out waiting areas and wards to create a one metre distance between health care providers and patients/clients/residents. Physical infrastructure: confirm the infrastructure is in place to support staff in implementing infection control measures (e.g., sinks, hand-sanitizer stations, appropriate receptacles for disposing of materials).		
Training and Education	Employers, in consultation with Joint Health and Safety Committees/Health and Safety Representative, should ensure that: staff is trained and knowledgeable about the principles and procedures of infection control, their training needs are assessed; and appropriate training and re-training is provided. The impact of training should be reviewed through supervision. See recommendations for infection prevention and control education programs in Chapter 7. Current infection prevention and control advice is to use droplet and contact precautions for influenza, but some aerosol-generating procedures (e.g., intubation, bronchoscopy, suctioning) require airborne precautions. To identify and implement measures to protect workers from the risk of health care acquired respiratory diseases, all facilities should: conduct a respiratory disease hazard risk assessment; identify workers to be involved in risk activities (i.e., aerosol generating procedures); and provide a respirator protection, education and fit-testing program consistent with the Canadian Standards Association "Selection, Use and Care of Respirators". Note: Some pandemic flu strains may be more highly transmissible and require higher levels of protection. In this case, the Ministries of Health and Long-Term Care and Labour will provide advice on precautions and training through Important Health Notices.		
Administration	Screening: Employers, in consultation with Joint Health and Safety Committee, should develop policies and plans for ILI screening and appropriate management of patients, visitors, and staff. See Chapter 12: Influenza Assessment, Treatment and Referral Centres for more information on assessment protocols. The Canadian Pandemic Influenza Plan, Appendix F, Appendix IV contains an. "Influenza-Like-Illness (ILI) Assessment Tool" to assist with immediate triage of patients or staff and accommodation/cohort of patients, prior to further occupational health or clinical management. http://www.phac-aspc.gc.ca/cpip-pclcpi/pdf-cpip-03/cpip-appendix-f.pdf. This ILI triage tool should not be used for clinical management, which is specified in the "Clinical Care Guideline and Tools" annex of the Canadian Pandemic Influenza Plan. As more information becomes available, specific triage tools for clinical management will be developed and posted on the ministry website at www.health.gov.on.ca/pandemic.		
			Long-Term care settings may have residents returning from other levels of care; these residents should be carefully screened and monitored. Measures such as limiting movement within the facility may be necessary; plan for these and develop

Control Measure	Acute Care Sector	Community Sector	Long-Term Care Sector
			contingency plans for necessities such as meal delivery, including the protection of workers if meals are being delivered to individual rooms.
	Supports for Staff: Evaluate Employee Assistance Plan and human resources policies and enhance as appropriate. Health care workers may need considerable personal support to keep working during a pandemic. Organizations should consider plans for supports that may include emotional support and grief counselling, care for children, seniors, or sick family members, or simple basic personal support such as food and other services on the job.		
	Cohorting: In consultation with Joint Health and Safety Committees/Health and Safety Representative, develop plans to cohort both patients and staff. Patients: Identify the units or areas of your facility in which patients with pandemic influenza can be cohorted. Identify infrastructure/equipment needs for these designated areas to reduce unnecessary exposure to other staff and patients. (e.g., can portable x-ray equipment be made available in these areas?) Staff: During seasonal influenza outbreaks, staff are deployed to designated areas; however, during a pandemic this may not be an effective measure as all staff will be exposed to the virus in the community.	Cohorting: Ambulatory care settings: Adjust physical settings as much as possible to separate patients with ILI from those who are well by minimizing time spent in waiting areas, providing separate waiting areas, directly isolating patients with influenza-like illness, or creating separate areas within your waiting area, that allow at least one meter of space between those with and without ILI. Staff: During seasonal influenza outbreaks, staff are deployed to designated areas, however, during a pandemic this may not be an effective measure as all staff will be exposed to the virus in the community. Home setting: Audit environments of current patients to develop appropriate strategies.	Cohorting: In consultation with Joint Health and Safety Committees/Health and Safety Representative, develop plans to cohort residents. Residents: Identify the units or areas of your facility in which residents with pandemic influenza can be cohorted. Identify the infrastructure/equipment needs for these designated areas to reduce unnecessary exposure to other staff and patients. Room-mates of residents should be treated as close contacts and they should not be separated.
	Staffing Plans: Consult existing employee/employer agreements and identify staff who may be at high risk of complications of influenza. They should be informed of their risk and offered alternate work assignments as available (see Annex G of the Canadian Pandemic Influenza Plan). During a pandemic, deployment practices may change and employers will work with appropriate parties to negotiate these processes prior to a pandemic. See this Chapter and Annex F of the Canadian Pandemic Influenza Plan for recommendations on fitness to work and the management of health care workers during a pandemic.		
	Visitors: Develop policies and procedures for screening visitors as they enter the facility and implement the appropriate controls.	Visitors: In ambulatory settings, develop policies and procedures for screening visitors as they enter the facility and implement the appropriate controls. Home care: develop awareness materials for individuals being cared for in the home for visiting friends and relatives.	Visitors: Develop policies and procedures for screening visitors as they enter the facility and implement the appropriate controls.
Personal Protective Equipment	Ensure that workers are using PPE appropriately. Ensure appropriate precautions when staff are performing procedures that pose a higher risk of aerosolization. Under the Occupational Health and Safety Act, employers who require N95 respirators in the workplace must have a written respiratory protection program in addition to fit-testing and associated training. If using airborne precautions, fit of respirators can change (e.g., if wearers change weight or grow facial hair).		

Control Measure	Acute Care Sector	Community Sector	Long-Term Care Sector
	Ensure that fit-testing is available throughout the course of the pandemic if workers or supervisors feel that they or those under their supervision need to be re-assessed. Promote use of surgical/procedure masks by patients with symptoms in waiting rooms, triage areas, emergency vehicles, or in transportation. Stockpiling PPE. Facilities are also responsible for putting in place their own 4 week stockpile of personal protective equipment for the protection of their workers. For guidance on planning for supplies and equipment see Chapter # Supplies and Equipment.		

Pandemic Period

Control Measure	Acute Care Sector	Community Sector	Long-Term Care Sector
Planning	Implement role in influenza assessment, treatment referrals (see Chapter 11). Signs and phone messages direct patients to appropriate sites for assessment.	Implement role in influenza assessment, treatment referrals (see Chapter 11). Signs and phone messages direct patients to appropriate sites for assessment.	Implement role in influenza assessment, treatment referrals (see Chapter 11). Give staff clear instructions for caring for potentially ill residents.
Engineering Controls	Implement designated units or areas for influenza patients. Ensure that the necessary equipment is in place within their physical area to help limit patient transportation needs and potential transmission.		
Training and Education	Ensure materials on proper use of PPE and other infection control measures are available as 'refresher' materials to staff. Continue to monitor ministry websites for any change in level of necessary precaution.		
Administration	Screening: Implement planned screening for: • Patients: to be isolated, cohorted, or, as per local plans, triaged to alternate sites. • Staff: if symptomatic, to be sent home or deployed with restrictions as outlined in plans. • Visitors: Limit entrances for visitors and implement appropriate controls as they enter/exit the facility. Ensure that clear signage is posted and any other necessary communication materials are available, clearly indicating the processes in place and providing instructions to both patients and staff. Cohorting: • Implement planned isolation or cohorting of patients in waiting areas and within wards. As the pandemic progresses, it may not be possible to accommodate ILI patients in single rooms. • Implement staffing plan, dependent on outcomes of screening process. • Ensure that clear	Screening: Implement planned screening: Patients: • In ambulatory care settings, encourage patients to call Telehealth where they will receive an initial assessment and be directed as appropriate. • In home care settings, perform an ILI assessment of clients and household contacts by phone whenever possible prior to each visit in order to assess risk. • In Emergency Responder settings, those taking the emergency call should perform assessment by phone. Staff and Visitors: • Staff: if symptomatic, to be sent home or deployed with restrictions as outlined in plans. • Visitors: ensure patients cared for in the home are aware of appropriate controls for allowing visitors into their home. Ensure that clear signage is posted and any other necessary communication materials are available, clearly indicating the processes in place and providing instructions to both patients and staff. Cohorting: • In ambulatory care settings, implement planned isolation or cohorting of patients in waiting	Screening: Implement planned screening for: • Residents: to be isolated, cohorted, or, as per local plans, triaged to alternate sites. • Staff: if symptomatic, to be sent home or deployed with restrictions as outlined in plans. • Visitors: Limit entrances for visitors and implement appropriate controls as they enter/exit the facility. Ensure that clear signage is posted and any other necessary communication materials are available, clearly indicating the processes in place and providing instructions to both residents and staff. Cohorting: • Implement planned isolation or cohorting of residents. As the pandemic progresses, it may not be possible to accommodate ILI patients in single rooms. • Implement staffing plan, dependent on outcomes of screening process. • Ensure that clear education materials are in place regarding instructions, protocols, and procedures; including hand hygiene and cough/sneeze etiquette. Supports for Staff: • Health care workers may need

Control Measure	Acute Care Sector	Community Sector	Long-Term Care Sector
	education materials are in place regarding instructions, protocols, and procedures; including hand hygiene and cough/sneeze etiquette. Supports for Staff: • Health care workers may need considerable personal support to keep working during a pandemic. These supports may include emotional support and grief counselling, family care for children, seniors, or sick family members, or simple basic personal support such as food and other services on the job. Staffing Plans: • As the pandemic grows, deployment practices may change and employers should work with appropriate parties to develop policies. The practice of not allowing health care workers with influenza to work may have to be adapted. Health care settings will identify health care workers who are considered "fit to work". • Personnel requiring restrictions during a pandemic will provide the Occupational Health Service with documentation as defined by the organization supporting their requirement for accommodation. Appropriate available alternate work will be provided. • See section 7.7 of this document for definition of "fit to work". Elective Procedures: • Postpone elective high-risk procedures. Environmental Cleaning and Housekeeping Measures: • See Chapter 7A. • Ontario Best Practice Manual: Cleaning, Disinfection and Sterilization. http://www.health.gov.on.ca/english/providers/program/infectious/diseases/ic_cds.html	areas. • Implement staffing plan, dependent on outcomes of screening process. • Ensure that clear education materials are in place regarding instructions, protocols, and procedures; including hand hygiene and cough/sneeze etiquette. Supports for Staff: • Health care workers may need considerable personal support to keep working during a pandemic. These supports may include emotional support and grief counselling, care for children, seniors, or sick family members, or simple basic personal support such as food and other services on the job. Staffing Plans: • As the pandemic grows, deployment practices may change and employers should work with appropriate parties to develop policies. The practice of not allowing health care workers with influenza to work may have to be adapted. Health care settings will identify health care workers who are considered "fit to work". • Personnel requiring restrictions during a pandemic will provide the Occupational Health Service with documentation as defined by the organization supporting their requirement for accommodation. Appropriate available alternate work will be provided. • See section 7.7 of this document for definition of "fit to work". Elective Procedures: • Postpone elective high-risk procedures; cancel home-care visits that are not absolutely essential. Environmental Cleaning and Housekeeping Measures: • See Chapter 7A. • Ontario Best Practice Manual: Cleaning, Disinfection and Sterilization. http://www.health.gov.on.ca/english/providers/program/infectious/diseases/ic_cds.html	considerable personal support to keep working during a pandemic. These supports may include emotional support and grief counselling, care for children, seniors, or sick family members, or simple basic personal support such as food and other services on the job. Staffing Plans: • As the pandemic grows, deployment practices may change and employers should work with appropriate parties to develop policies. The practice of not allowing health care workers with influenza to work may have to be adapted. Health care settings will identify health care workers who are considered "fit to work". • Personnel requiring restrictions during a pandemic will provide the Occupational Health Service with documentation as defined by the organization supporting their requirement for accommodation. Appropriate available alternate work will be provided. • See section 7.7 of this document for definition of "fit to work". Environmental Cleaning and Housekeeping Measures: • See Chapter 7A and Chapter 19. • Ontario Best Practice Manual : Cleaning, Disinfection and Sterilization. http://www.health.gov.on.ca/english/providers/program/infectious/diseases/ic_cds.html

Control Measure	Acute Care Sector	Community Sector	Long-Term Care Sector
Personal Protective Equipment	Ensure that workers are appropriately using the indicated PPE. Ensure appropriate precautions when staff are performing procedures that pose a higher risk of aerosolization. Under the Occupational Health and Safety Act, employers who require the use of N95 respirators in the workplace must provide fit-testing and associated training. Note: fit of respirators can change if those wearing them change weight or grow facial hair. Ensure that fit-testing is available throughout the course of the pandemic if workers or supervisors feel that they or those under their supervision need to be re-assessed. Promote use of surgical/procedure masks by patients with symptoms in waiting rooms, triage areas, emergency vehicles, or in transportation. Access to Ministry stockpile: In addition to the 4 week stockpile that facilities are responsible for, the Ministry of Health and Long-Term Care will have in place a personal protective equipment stockpile to support the health care system for an additional 4 weeks. To access the ministry stockpile during a pandemic, facilities shall contact the Ministry Emergency Operations Centre.		

Training and Education for Health Care Workers

Best practices in infection prevention and control assume that health care settings in Ontario have basic infection and prevention control systems/programs in place. These should be reviewed in consultation with Joint Health and Safety Committee and include the necessary training and education to provide health care workers with the knowledge and skills necessary to implement good infection control practices.

In addition to the training requirements laid out in legislation and regulation, MOHLTC is developing influenza pandemic training curricula based on the following learning objectives:

Influenza Pandemic Background:

1. Describe the potential impact of an influenza pandemic and how it might affect individuals, society and the health care system.
2. Define the terms outbreak, epidemic and pandemic.
3. Identify criteria for an influenza pandemic.
4. Distinguish between seasonal and pandemic influenza.
5. Distinguish between avian and human influenza.
6. Describe how avian influenza or another strain might theoretically evolve into a human influenza pandemic.
7. Discuss how an influenza pandemic may begin and spread.
8. Describe the World Health Organization (WHO) stages of pandemic influenza.

Infection Control (Basic):

1. Describe how the influenza virus is transmitted.
2. Define routine practices in infection control.
3. Discuss hand hygiene and its importance in infection control.
4. Describe appropriate respiratory hygiene.
5. Define febrile respiratory illness (FRI).
6. Describe droplet and contact precautions, including environmental measures.
7. Identify appropriate personal protective equipment (PPE) that will protect the user from influenza virus.
8. Describe how to safely don and doff PPE.

Personal and Family Care:

1. Discuss personal hygiene and infection control in the home and community as they pertain to influenza.
2. List the benefits of seasonal influenza vaccine and identify its shortcomings related to pandemic influenza.
3. Identify the role and limitations of antiviral medications in pandemic influenza.
4. Identify personal readiness strategies people can undertake to prepare themselves and their families for a pandemic.
5. Identify potential obstacles and concerns in your home/family if you are not present due to illness or working.
6. Identify potential ways to overcome these obstacles and concerns.
7. List supplies that you should have on hand in case an emergency occurs.
8. Identify ways in which your employer/association/union can assist

you in managing personal issues at home during a pandemic.

9. List reliable sources of information that you and your family can access before and during an influenza pandemic.

System Planning for Pandemic Flu:

1. Identify the areas of municipal and provincial pandemic influenza planning responsibility and describe how Ontario health care organizations fit in.
2. Identify key organizations in every community that health care organizations must interact with during pandemic 'flu planning and response.
3. Describe the basic organization and structure of the **Incident Management System.**
4. Describe the role and organization of an Emergency Operations Centre.
5. Describe the role and importance of the Incident Management System in responding to an influenza pandemic.

Infection Control (Advanced):

1. Describe the various ways that micro-organisms are acquired.
2. Discuss routine procedures:
   - Importance of hand hygiene
   - Personal protective equipment
   - Blood borne illness precautions.
3. Discuss droplet transmission precautions.
4. Discuss contact transmission precautions.
5. Discuss airborne transmission precautions:
   - Hazard assessment
   - Engineering and Administrative Controls (e.g. control of patient flow, isolation, etc)
   - Personal Protective Equipment.
6. List examples of organisms requiring each of the above levels of precautions.
7. Discuss the benefits and limitations of vaccines routinely administered in Ontario.

Occupational Health and Safety:

1. Identify the legislation relevant to worker health and safety with respect to infectious disease.
2. Describe Workers' rights and obligations with respect to infectious disease under the Occupational Health and Safety Act (OHSA).
3. Describe Employers' and supervisors obligations with respect to infectious disease under the OHSA.
4. Identify the Joint Health and Safety Committee's rights and responsibilities under the OHSA.
5. Identify psychosocial issues and needs of workers with respect to working in the healthcare setting during a pandemic.

Business Continuity:

1. Define Risk Assessment and describe pandemic influenza planning in this context.
2. Discuss screening and surveillance of staff.
3. Discuss the importance of appropriate attendance management in relation to a pandemic.
4. Discuss issues related to the curtailing of non-essential health services during a pandemic.
5. Identify non-health related issues pertaining to a pandemic and describe their effects on the health care system.

6. Discuss ethical issues related to working in the healthcare setting during a pandemic

Communication Strategies:

1. Identify various means to obtain information about pandemic influenza from the Ministry of Health and Long Term Care
2. Identify how health care workers may access information and updates from their employers both inside and outside the organizational borders
3. List the types of contact information required by an employer to contact an employee (or physician if applicable) during an emergency
4. Discuss appropriate means of communicating to patients/families/clients/public information during a pandemic

Clinical Care:

1. Define Febrile Respiratory Illness (FRI) and Influenza-Like Illness (ILI)
2. Describe screening strategies during non-outbreak and outbreak conditions
3. Discuss clinical care pathways for patients with ILI during a pandemic (understanding that these will not be fully defined until the clinical components of the pandemic strain are described)
4. Describe the indications for and techniques of specimen collection for laboratory testing for influenza virus during a pandemic.
5. Discuss the role of antiviral medications in the treatment of patients.
6. Discuss the role of antiviral medications in the prophylaxis of contacts and of key providers during a pandemic.
7. Identify ethical issues with respect to mass casualties during a pandemic.
8. Discuss patient triage issues with respect to access to health care resources.
9. Discuss surge capacity in the health care system.
10. Identify public health issues in the control of a pandemic (e.g. quarantine, school closures, and restriction of public events).
11. Discuss the management of the patient without influenza in the hospital, long term care home or community during a pandemic.

The curriculum for the above-listed components of an influenza training program for healthcare workers is currently in development. For updates, please monitor the ministry website at: (http://www.health.gov.on.ca/pandemic).

Occupational Health Management of Health Care Workers

The Canadian Pandemic Influenza Plan Annex on Infection Control contains the following definition of Fit to Work: "Terminology used in occupational health to communicate a worker's ability to remain at or return to work. This ability includes three categories: fit for work, unfit for work, fit with restrictions. This categorization allows the occupational health nurse to maintain confidentiality about a worker's diagnosis, symptoms, and immune status.

- **Fit for Work** - Fit to work with no restrictions.
- **Unfit for Work –** Defined as a medically determinable illness that prevents an employee from performing the regular or modified duties of their occupation.
- **Fit for work with restrictions** - Allows for the re-assignment of duties or re-integration into the workplace in a manner that will not pose an infection risk to the HCW or to the patients and or other individuals in the workplace.

Recommendations regarding the Occupational Health Management of Health Care Workers during an Influenza Pandemic are as follows:

1. Fit for Work

A) Ideally, HCWs are fit to work when *one* of the following conditions applies:

- they have recovered from ILI
- they have been immunized against the pandemic strain of influenza as outlined in Annex D of the Canadian Pandemic Influenza Plan
- they are on appropriate antivirals as outlined in Annex E of the Canadian Pandemic Influenza Plan.

Health care workers who meet these criteria may work with all patients and may be selected to work in units where there are patients who, if infected with influenza, would be at high risk for complications.

B) Whenever possible, well, unexposed health care workers should work in non-influenza areas.

C) Asymptomatic health care workers may work even if influenza vaccine and antivirals are unavailable. Meticulous attention should be paid to hand hygiene and health care workers should avoid touching mucous membranes of the eye and mouth to prevent exposure to the influenza virus and other infective organisms.

2. Unfit for Work

Ideally, staff with ILI should be considered "unfit for work" and should not work; nonetheless, due to limited resources, these HCWs may be asked to work if they are well enough to do so (see 3(B) below).

3. Fit to Work with Restrictions

A) Ideally, symptomatic staff who are considered "fit to work with restrictions" should only work with patients with ILI. Health Care Workers who must work with non-exposed patients (non-influenza areas) should be required to wear a mask if they are coughing and must pay meticulous attention to hand hygiene.

B) Symptomatic health care workers who are well enough to work should not be redeployed to intensive care areas, nurseries or units with severely immunocompromised patients (i.e., transplant recipients, hematology/oncology patient, patients with chronic heart or lung disease, or patients with HIV/AIDS and dialysis patients).

Environmental Cleaning

The Canadian Pandemic Influenza Plan, Appendix F, provides the following guidelines for environmental cleaning (i.e., housekeeping, laundry, waste).

Acute Care Settings	Community Care Settings	Chronic Care Settings
i. Acute Care settings should adhere to the recommendations for housekeeping, laundry and waste management as outlined in the Health Canada Infection Control Guidelines *Handwashing, Cleaning Disinfection and Sterilization in Health Care* and *Routine Practices and Additional Precautions for Preventing the Transmission of Infection in Health Care*. ii. Equipment and surfaces contaminated with secretions from patients suspected or confirmed to have influenza should be cleaned before use with another patient. iii. Special handling of linen or waste contaminated with secretions from patients suspected or confirmed to have influenza is not required.	A) Ambulatory Care Settings Clean equipment and environmental surfaces, potentially contaminated by coughing patients, as frequently as possible, preferably after each patient. Housekeeping, laundry and waste management, as outlined in the Health Canada Infection Control Guidelines *Handwashing, Cleaning Disinfection and Sterilization in Health Care* and *Routine Practices and Additional Precautions for Preventing the Transmission of Infection in Health Care*. Equipment and surfaces contaminated with secretions from patients suspected or confirmed to have influenza should be cleaned before use with another patient. Special handling of linen or waste contaminated with secretions from patients suspected of having or confirmed to have influenza is not required. B) Self-Care Settings: The influenza virus survives well in the environment and patients may contaminate their environment with respiratory secretions. On hard porous surfaces the virus can survive for 24-48 hours, can then be transferred to hands and survive for up to 5 minutes. Equipment and surfaces contaminated with secretions from patients suspected of having or confirmed to have influenza should be cleaned before use with another individual. • Environmental surfaces and objects that have been touched by an individual with ILI or the caregiver should be cleaned daily with a regular household cleaning agent. • Products that are labeled "antibacterial" are not necessary. • Special handling of clothing or linen used during the care of an individual with ILI is not necessary. • Heavily soiled linen should be rolled or folded to contain the heaviest soil in the centre of the bundle. Large amounts of solid soil, feces, or blood clots should be removed from linen with a gloved hand and toilet tissue then placed into a bed pan or toilet for flushing. In order to prevent splashing, excrement (e.g., from clothing, reusable incontinence pads) should not be removed by spraying with water. • Use of a commercial laundry detergent with household bleach (according to product instructions and where suitable for fabrics) and a normal machine wash and machine dry are sufficient to clean soiled linen in a home care setting. • Machine drying or hanging clothing and linens on a clothes line at the home care site is a suitable method for drying.	i. Long term care settings should adhere to recommendations for housekeeping, laundry and waste management as outlined in the Health Canada Infection Control Guidelines *Handwashing, Cleaning Disinfection and Sterilization in Health Care* and *Routine Practices and Additional Precautions for Preventing the Transmission of Infection in Health Care*. ii. Equipment and surfaces contaminated with secretions from residents suspected of having or confirmed to have influenza should be cleaned before use with another patient. iii. Special handling of linen or waste contaminated with secretions from residents suspected of having or confirmed to have influenza is not required.

Acute Care Settings	Community Care Settings	Chronic Care Settings
	• Garbage generated during the care of an individual with ILI does not require special handling and may be placed with household waste for disposal. • Medical sharps, i.e. hypodermic needles used in the care of an individual with ILI should be placed in a puncture resistant container and disposed of in accordance with local by-laws.	

Infection Prevention & Control Guidelines for Emergency Operations Centres

1. Scope and Purpose

This Draft Infection Prevention & Control Guidelines (IPCG) for Emergency Operations Centres (EOCs) is intended for use in EOCs only.

Its purpose is twofold:

- To identify the issues that may impact or affect EOCs; and
- To identify infection prevention and control measures that can be implemented to help the operational continuity of EOCs, especially during influenza season or a pandemic.

This document should be considered in the design and implementation of a specific emergency response program tailored to the needs of the EOC and / or the unique situation.

Each EOC should have a designated Safety Officer.

In this document, EOCs refer to the following:

- Community EOCs;
- Ministry EOCs;
- The Provincial EOC (PEOC);
- EOCs for industry partners responsible for critical infrastructure; and
- Any other EOC, as appropriate (e.g., Fire, Police, volunteer organizations, schools and institutions).

2. Key Issue: Infection Prevention and Control to help Ensure Continuity of Operations (Business Continuity)

Primary concern - The primary concern for EOCs is maintaining essential services while experiencing potential workforce shortages due to employee illness as a result of an infectious disease outbreak, ranging from a cold to potentially serious respiratory illnesses such as influenza.

Primary goal – The primary goal for EOCs is to ensure that preventive practices are established to decrease the risk of transmission of febrile respiratory illness in an EOC setting, thus helping to ensure continuity of operations (business continuity), which is especially important during emergency operations. ***Note: for the purposes of this document the emphasis is on influenza viruses.***

Transmission of influenza - Human influenza is transmitted from person-to-person primarily via virus-laden large **droplets** (particles >5 μm in diameter) that are generated when infected persons cough or sneeze. These large droplets can then be *directly* deposited onto the mucosal surfaces of the upper respiratory tracts of susceptible persons who are near (e.g., within 3 feet) the droplet source. Transmission may also occur through direct and indirect contact with respiratory secretions.

- Droplet-spread infections pass from one person to another with ease.
- Droplet-spread illness can also be transmitted *indirectly* when people touch or have contact with hands, surfaces and objects contaminated with droplets of respiratory secretions, and then touch or have contact with their own or someone else's mucous membranes or eyes. Transmission of *influenza* from

environmental surfaces has not been demonstrated by epidemiologic studies.

Infection Prevention and Control Measures

It is recommended that EOCs establish policies about infection prevention and control measures that will minimize influenza virus infection and transmission.

It is expected that all EOCs will have a designated Safety Officer who will provide orientation to **infection prevention and control policies** in place, which should include the following **components**:

- **Promotion of influenza immunization** - Influenza immunization is strongly recommended for all involved in the operations of an EOC, unless medically contraindicated. In Ontario, annual influenza immunization is recommended and available free to everyone over the age of 6 months who lives, works, or studies in Ontario.
- **Education on hand hygiene** - Practicing frequent hand washing, the use of alcohol-based sanitizers, care when disposing of tissue, and hand hygiene after using tissues, are recommended. An appropriate alcohol based hand sanitizer is one containing 60% to 90% alcohol (isopropyl or ethanol).
- **Assessment** – Continuous assessment of the potential risk of infection and the appropriate use of personal protective equipment must be done (refer to sections 7 & 8 below).
- **Regular cleaning** – The work environment, focusing on frequently touched surfaces, must be subject to a regular cleaning schedule.
- **Policy on individual responsibility** – It is each individual's responsibility to keep him/her, and fellow staff members, safe, including staying home when ill. EOCs should establish a clear expectation that staff do not come to work when ill with a febrile respiratory illness and support this expectation with appropriate attendance management policies.
- **Procedures for personnel screening** – Procedures must be established for the screening of personnel for febrile respiratory illness, based on the MOHLTC document "*Preventing Febrile Respiratory Illnesses*", posted on the Ministry of Health and Long-Term Care website. Available at: (http://www.health.gov.on.ca/english/providers/program/infectious/diseases/ic_fri.html)

Hand-Hygiene and Cough Etiquette

Frequent and thorough hand-hygiene and routine infection control practices are important measures in preventing the spread of many infectious illnesses, including influenza.

Frequent and thorough hand hygiene, either with soap and warm running water (for at least 15 seconds) or alcohol-based hand sanitizer, is the single most important measure for preventing infections. Alcohol-based hand sanitizers are not effective when hands are visibly dirty. Hands should be washed thoroughly with soap and warm running water, or wiped with 'moist wipes' to remove visible dirt prior to using alcohol-based hand sanitizers.

EOCs should design, implement and reinforce an awareness campaign to educate all personnel regarding routine infection-control practices that can prevent the spread of respiratory illness.

A routine 'infection control practices' education campaign should also include cough etiquette: covering one's nose and mouth with a tissue when coughing or sneezing; washing one's hands after coughing/sneezing; appropriate disposal of tissues; and hand-hygiene after tissue use.

Some suggestions for consideration by EOCs are:

- accessible hand hygiene stations in multiple locations, and signage instructing staff when and how to perform hand hygiene
- posted guidelines/signage, and regular education about hand hygiene and cough and respiratory etiquette
- quick and easy access to hygiene supplies (soap, hand-washing gels, single use paper towels, tissues, etc).

Workspace and Equipment Disinfection

EOCs should maintain routine cleaning practices to keep the working environment clean; 24/7 operation of an EOC should be reflected in the frequency of cleaning.

In addition, protocols may be instituted to clean the individual workplace before handing over to the next shift of personnel.

Guidelines to be considered include the following:

- scheduled cleaning of the personal workplace at the beginning or end of each shift
- following manufacturer's instructions for cleaning agents
- containers for cleaning materials should be covered and kept separate from food preparation and rest areas
- surfaces to be cleaned should include frequently touched surfaces, such as: telephones, desktop, and keyboard
- appropriate cleaning agents can be pre-packaged single-use cleaning towels or prepared for specific use (see: http://www.phac.aspc.gc-ca/publicat/ccdr-rmtc/98pdf/cdr24s8e.pdf)
- individual headphones for each person stationed in the EOC.

Personnel Screening

Workplace screening supports sustained operational capability during an outbreak/pandemic situation.

Screening questions will be provided by the MOHLTC at the onset of an infectious disease emergency.

Personnel conducting workplace screening at building or departmental entrances need not be health professionals but should be advised as to the protocols to be followed.

Personnel ill with a febrile respiratory illness (fever and cough) should be denied admission to the EOC until assessed by a health professional.

Non-essential personnel should not be permitted access to the EOC.

Personal Protective Equipment (PPE)

There is no indication for PPE in an office setting like the EOC.

If key personnel must enter the EOC when symptomatic, they should:

- maintain >1 meter distance from others
- wear a mask to contain expelled droplets
- practice frequent hand hygiene

- ensure their workspace and any equipment they touch is disinfected (e.g. keyboards, phones).

Safety Officer

Under the IMS system, a Safety Officer (within the Command Section), is responsible for the health and safety for all EOC personnel.

The duties of the Safety Officer should include the development/adaptation, review and update of the infection prevention and control initiatives.

The duties and responsibilities of Safety Officer must be clearly identified to all personnel in the EOC.

Summary

An infection prevention and control program is not a static program or document; it should be monitored, evaluated, and updated on a regular basis to ensure it is congruent with current infection control practice guidelines.

Ongoing evaluation of procedures should occur to ensure compliance with routine infection prevention and control practices and health and safety standards.