Interim Guidance for the Management of pandemic H1N1 2009 outbreaks in closed facilities

The following guidance should be read in conjunction with relevant provincial and territorial guidance documents. The Public Health Agency of Canada will be posting regular updates and related documents at www.phac-aspc.gc.ca.

Introduction

This guidance document has been prepared by the Public Health Agency of Canada to provide guidance to clinicians and public health professionals on the management of pandemic H1N1 outbreaks in closed facilities in which high risk persons reside. These guidelines are based on the management of seasonal influenza outbreaks, and our evolving understanding of the immuno-epidemiology of pandemic (H1N1) 2009. The guidelines provide recommendations for early detection measures, define the triggers for investigating outbreaks, and describe antiviral treatment and prophylaxis strategies. They do not supersede clinical and public health judgment or provide guidance on the management of individual patient care. Guidance on the management of seasonal influenza outbreaks in the 2009/10 season will be available later this year.

Background

The goal of outbreak control is to reduce the size of the outbreak within closed facilities thereby reducing the morbidity and mortality of residents and minimizing staff illness and absenteeism.

Definition of a closed facility

Based on the recently revised Annex on antiviral use during a pandemic, [1] a facility is deemed "closed" when it has a fixed residential population with limited turnover or has units or wards that can be closed. Appropriate facilities for outbreak control include those with residents or patients that would be at high-risk for developing influenza-related complications, a surveillance capacity to detect influenza activity; and the health care capacity to manage an antiviral regimen. Potential settings meeting the above criteria are more likely to include: long term care facilities, some in-patient units in an acute care or specialty hospital, and correctional facilities that house young adults.

Definition of Influenza-like Illness (ILI)

Influenza-like illness (ILI) is defined as the acute onset of respiratory illness with fever and cough and one or more of the following: sore throat, arthralgia, myalgia, or prostration. Fever may not be prominent in the elderly or young children.

Infection prevention and control measures

Best practices can be found in the: Interim guidance for infection prevention and control measures for health care workers in long term care facilities.[2] Immunization is the primary prevention strategy for influenza. NACI recommends seasonal flu immunization of those persons at high risk of influenza-related complications, and those capable of transmitting influenza to individuals at high risk of complications. [3] Pandemic H1N1 2009 vaccine will be available in late 2009/early 2010.

EARLY DETECTION

Surveillance

Surveillance is needed on a year-round basis and includes surveillance of respiratory infections in both residents and staff. This is generally the responsibility of Infection Control and Employee health departments. It is useful to educate all staff in detection of influenza-like-illness (ILI) and how to report to the Infection Control Practitioner (ICP) or designate.
Methods of data collection for patient ILI include passive surveillance by staff and active surveillance (i.e. chart review) by the ICP, designate or the physician. Staff should report their own respiratory illness to his/her supervisor or Employee Health.

Triggers for outbreak investigation

Triggers for outbreak investigation include:

- one confirmed case of pandemic H1N1 within the facility, i.e. unit or floor within 7 days **or**
- 2 or more cases of ILI, one of which can be a staff member with known contact with resident/patient case, in one geographic area within a 7 day period **or**
- more than one geographic area of the facility having a case of ILI

Laboratory testing

Confirmation of an outbreak requires laboratory testing. Specimens are best collected as soon as possible after symptom onset. The preferred method of specimen collection in adults is nasopharyngeal swab. The specimen and requisition should be clearly labelled with exposure history and clinical symptoms. The most sensitive and specific test is RT-PCR. Caution is required in interpreting a negative result from a point-of-care test due to its poor sensitivity (i.e. it could be a false negative result).

OUTBREAK CONTROL MEASURES

Infection Prevention and Control Measures

An outbreak is typically declared by the local Medical Officer of Health (MOH) or designate. Unless protocols are in place that note otherwise, the MOH will determine the extent of outbreak control measures and the need for restrictions on admissions and transfers from the facility. Signage is generally posted at the entrance to an affected facility instructing those with ILI to not enter the premises. All staff, volunteers or visitors with ILI symptoms are instructed to stay home for 7 days after symptom onset or until symptoms have resolved (whichever is longer). Ill residents are restricted to their room; ill patients may be cohorted in the same room. Staff movement between floors may be restricted.

Pharmaceutical measures

Use of antiviral drugs to control outbreaks of influenza in closed facilities is standard practice. During an outbreak, early treatment (i.e. antiviral medications started less than 48 hours after onset of symptoms) is generally recommended for all cases in both residents and staff, especially those with risk factors for complications from influenza.[2] In determining the appropriate prophylaxis strategy, consideration of the severity of illness, its transmissibility and the vulnerability of the resident population is indicated. Elderly appear to be less susceptible to pandemic H1N1 2009. Pandemic H1N1 2009 outbreaks in long term care facilities have been rare to date and when they have occurred, have been mild with little transmission. In the presence of mild disease with little transmission, prophylaxis may not be necessary. With limited transmission, post-exposure prophylaxis may be indicated only for those in the affected unit or geographic area. If there is sustained and widespread transmission, it may be indicated for the entire facility. Medical directives, dispensing plans, advanced consent for the cognitively impaired, and staff illness policies can facilitate rapid outbreak control. As the pandemic progresses, it may be necessary to develop protocols for quickly accessing antivirals from the National Antiviral Stockpile.

The dosing recommendation for antiviral use is as follows:

	Treatment	**Prophylaxis of contacts**
oseltamivir (Tamiflu®)[3]	75 mg BID x 5 days For case with known renal impairment and known creatinine clearance of 10-30 ml/min give once daily x 5 days)	75 mg OD x 10 days For case with known renal impairment and known creatinine clearance of 10-30 ml/min, give 75 mg every other day, or alternatively, one 30 mg capsule or 30 mg suspension every day for the duration of the outbreak.

zanamivir (Relenza®)[4]	10 mg(2 inhalations) BID x 5 days	zanamivir (Relenza) 10 mg (2 inhalations) x 10 days or for duration of outbreak

Oseltamavir is generally considered the first line treatment due to its systemic absorption and increased availability. Zanamivir is inhaled and may be more difficult to administer to the cognitively impaired; it is not recommended for people with reactive airway disease. Product monographs contain additional prescribing information. [4,5] .

REPORTING

Facility outbreak reporting

Facilities should notify local public health whenever a respiratory outbreak is suspected and investigate the nature, extent and duration of an outbreak. This includes starting a line listing of all resident and staff case by unit or geographic area of the facility.

Adverse event reporting

Reports of adverse reactions to antiviral medications are an important source of information that will help guide their safest and most effective use. Please report any serious adverse reactions Online at www.healthcanada.gc.ca/medeffect or by calling 1 866-234-2345.

DECLARATION OF THE END OF THE OUTBREAK

The MOH or designate declares an outbreak is over when no new cases have occurred for 14 days after the onset of symptoms in the last case. This is to cover two incubation periods; the incubation period is currently under review.

References and resources:

1. Public Health Agency of Canada *Annex E*:*The Use of Antiviral Drugs During a Pandemic (updated May 2009). Canadian Pandemic Influenza Plan for the Health Sector* (2006). Located at: CPIP Annex E
2. Interim guidance for infection prevention and control measures for health care workers in acute care facilities PDF
3. National Advisory Committee on Immunization (NACI) *Statement on Influenza Vaccination for the 2008-2009 Season.*Canada Communicable Disease Report. 2008 Vol 34; ACS-3. See: NACI Influenza Statement 2008 2009
4. Product monograph for Tamiflu from Roche Canada
5. Product monograph for Relenza from GSK . See: http://www.gsk.ca/english/docs-pdf/Relenza_PM_20080515_EN.pdf PDF
6. Harper et al. Seasonal Influenza in Adults and Children- Diagnosis, treatment, Chemoprophylaxis, and Institutional Outbreak Management: Clinical Practice Guidelines Infectious Disease Society of America. 2009:48. 1003-1026

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