

Prevention and Control of Influenza

I. Prevention—Vaccination is the key component of an influenza prevention program. See the Vaccination policy for details about the influenza vaccination program for residents and staff of _____.

II. Control

A. Background

The effectiveness of influenza vaccine in preventing or modifying acute influenza infection varies and depends on age, immunocompetence, and the degree of similarity between virus strains included in the vaccine and those actually circulating in the population. Among the elderly, influenza vaccine is most effective in preventing severe acute illness, secondary complications such as pneumonia, and death. However, overall efficacy in preventing acute influenza illness is low (30-40%) among the frail elderly. This is likely due to a reduced or lack of antibody response to vaccine antigens. Nevertheless, high vaccination rates in congregative settings have been shown to reduce the spread of infection.

Despite high vaccination rates in congregative settings with older people, influenza outbreaks continue to occur. Thus, there is a need to be prepared to identify and control outbreaks in these settings. The remainder of this policy will deal with identification and control of influenza A and B.

B. Identification of acute influenza.

Surveillance for influenza-like illness (ILI) is part of the infection control program of _____. The infection control professional in conjunction with unit managers will be responsible for surveillance for ILI during influenza season (typically November to April).

For surveillance purposes ILI has been defined as: :

- a. fever ($\geq 100^{\circ}$ F)
plus
- b. at least 3 of the following
 - (1) chills
 - (2) malaise or loss of appetite
 - (3) headache or eye pain
 - (4) muscle aches
 - (5) sore throat
 - (6) dry cough

However, in congregative settings with older people who have been vaccinated, influenza may still occur but the presentation may be modified:

- fever is the major manifestation of influenza
- with cough and/or rhinitis.

A key aspect of surveillance for ILI is the understanding that influenza tends to affect a group or cluster of residents over a short period of time. This clustering is an important point in terms of recognition of ILI that does not meet the strict definition above.

Therefore, if a temporal and/or geographic cluster (3-5) of residents develops ILI as defined above (modified definition), the following will be done:

- a. swabs of the nasopharynx will be done for influenza A and B antigen testing in residents with the most recent onset of illness (usually within 24-48 hours)
- b. these swabs will be sent to a lab (needs to be defined) for analysis

If influenza A or B antigen is identified in the nasopharyngeal specimens of 1 or more residents on a unit or floor, this will be considered evidence of acute influenza on that unit. No further testing will be necessary on that unit once a positive test has been obtained. A case definition will be developed by the infection control professional to identify additional cases once influenza has been documented. If clusters of ILI occur on other units or floors of the facility, testing should be done of appropriate residents on those units or floors, and the same approach should be used as previously described.

C. Control of acute influenza A outbreak

Prompt identification and management of outbreaks is key to dealing with influenza in the congregative setting. To ensure prompt response to an outbreak preapproved medication orders will be in place to deal with this contingency and the medical director has the authority to initiate the preapproved orders.

[Author's Note: there has been rapid development of resistant to antiviral agents among influenza A strains in recent years that has changed the approach to dealing with outbreaks in the long term care setting. For example, during the 2009/2010 influenza season, seasonal H1N1 strains were resistant to oseltamivir (Tamiflu) and susceptible to adamantanes (amantadine and rimantadine). However, the 2009 pandemic H1N1 strain, that is oseltamivir susceptible but resistant to adamantanes, has become the predominant strain and totally replaced the prior seasonal H1N1 strain that was resistant to oseltamivir. Therefore, oseltamivir is the agent of choice for treatment and prophylaxis of influenza A or B during the 2010-2011 influenza season. This may not be the case in the future and one must be aware of the resistant patterns of influenza A viruses from year to year.]

1. When influenza A is documented in the facility, those with symptomatic infection of ≤ 48 hours in duration will be treated with oseltamivir (Tamiflu) and chemoprophylaxis with oseltamivir will be started as soon as possible.
2. Treatment regimen: Tamiflu 75 mg PO BID for 5 days (should be started ≤ 48 hours of onset of symptoms)
3. Tamiflu prophylaxis regimen.
 - a. 75 mg daily until 7 days after the last case is identified.
 - b. the main side effect is nausea

D. Control of acute influenza B outbreak –same as for Influenza A

E. Other Control Elements

1. Residents with ILI will be confined to their rooms until symptoms resolve
2. Droplet precautions will be utilized in the care of residents with ILI
3. Group activities will be curtailed based on the judgment of the infection control professional, director of nursing, and administrator until the outbreak is resolved
4. Consideration will be given to restricting visitation to family members only without respiratory illness as well as delaying admissions to units until the outbreak has resolved; these restrictions will be at the discretion of the director of nursing and administrator
5. Surveillance for ILI among employees will also be performed and those with ILI will not be allowed to work until symptoms have resolved.
6. Handwashing by staff will be stressed as an important method for breaking the chain of transmission of influenza

III. Notification

1. Influenza outbreaks will be reported promptly to the Department of Health by the infection control professional
1. When residents require transfer to another facility during an influenza outbreak, the accepting facility will be informed about the outbreak so that the proper precautions can be put into place.