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TO: Illinois Long Term Care Facilities and Assisted Living Facilities

FROM: Richard Dees, Chief, Bureau of Long Term Care
Karen McMahon, Immunization Section Chief
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RE: Guidelines for Control of Influenza Outbreaks in Long Term Care Facilities and Assisted Living Facilities

DATE: October 28, 2008

Influenza in the community enters Long Term Care Facilities (LTCFs) and Assisted Living Facilities (ALFs) via infected staff and visitors.

Vaccination is the primary measure to prevent influenza, limit transmission, and prevent complications from influenza in long-term care and assisted living facilities.

During October - March, the occurrence of acute respiratory illness in several residents within a short time frame should be considered due to influenza until proven otherwise, regardless of whether the affected residents have been vaccinated.

The purpose of this memorandum is to provide facilities with current guidance for prevention and control of influenza as well as reporting requirements in the event of an outbreak in your facility. The local health department should be notified within 24 hours by telephone or fax and is available to help manage an outbreak.

Influenza is a contagious respiratory disease that can cause substantial illness and death among long-term care facility (LTCF) and Assisted Living Facility (ALF) residents and illness among personnel in LTCFs/ALFs. Each influenza season, staff should be prepared to monitor staff and residents for influenza and to promptly initiate measures to control the spread of influenza within facilities.

Influenza is primarily transmitted from person to person via large virus-laden droplets (particles > 5 µm in diameter) that are generated when infected persons cough or sneeze; these large droplets can then settle on the mucosal surfaces of the upper respiratory tracts of susceptible persons who are near (e.g., within about 6 feet) infected persons. Transmission may also occur through direct or indirect contact with respiratory secretions, such as touching surfaces contaminated with influenza virus and then touching the eyes, nose, or mouth. Adults may be infectious and able to spread influenza to others from the day before getting symptoms to approximately 5 days after symptoms start. Young children and persons with weakened immune systems may be infectious for 10 or more days after onset of symptoms.

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I. Definitions

The following definitions will assist you in determining how to respond to influenza-like illness (ILI) within your facility:

- **Outbreak**: A sudden increase of ILI cases over the normal background rate for a 24-72 hour period, or when any resident tests positive for influenza. One case of confirmed influenza in a LTCF or ALF resident is typically considered an outbreak.[1]
- **ILI:** During influenza season, an influenza like illness in a LTCF or ALF is defined as:

Fever (>100°F orally) or prostration AND new cough or sore throat

The rationale for considering an outbreak when a single case is diagnosed is based upon the fact that elderly individuals may not have a fever when they have influenza, so that by the time a single case is detected, there are likely to be other cases in the facility that are as yet, undetected.

Note: When influenza is circulating in the surrounding community of the LTCF/ALF, a high index of suspicion should be maintained. The medical director might consider loosening the ILI case definition to fever OR prostration OR new cough for a highly suspect influenza outbreak situation in which many patients do not manifest multiple signs.

II. Reporting

PLEASE REPORT ALL OUTBREAKS OF INFLUENZA to the **local health department** within 24 hours by telephone or fax. Pursuant to the Control of Communicable Diseases Code Section 690.295, any unusual case or cluster of cases that may indicate a public health hazard." An outbreak of influenza is reportable under this definition. The appropriate reporting form is included with this memorandum.

III. Outbreak Management

See Attached document: Control of Influenza Outbreaks in Long-Term Care and Assisted Living Settings

IV. General Prevention and Control Measures

Strategies for the prevention and control of influenza in long-term care and assisted living facilities include the following: annual influenza vaccination of all residents and health-care personnel (e.g., all paid and unpaid workers who have contact with residents and visitors, including volunteer workers), implementation of Standard Precautions and Droplet Precautions, active surveillance and influenza testing for new illness cases, restriction of ill visitors and personnel, administration of prophylactic antiviral medications, and other prevention strategies such as respiratory hygiene/cough etiquette programs.

A. Vaccination

Health-care personnel and persons at high risk for complications from influenza, including all residents of long-term care and assisted living facilities, are recommended to receive annual influenza vaccination according to current national recommendations. Immunization policies should include annual influenza vaccination for all residents and staff, and pneumococcal vaccine for all residents.

1. Vaccination of Residents

Standing orders for influenza vaccine should be in effect for all residents ≥6 months of age.

Residents should be vaccinated beginning in October. Residents admitted from October through March should be vaccinated on admission. Consider residents with uncertain immunization histories NOT immunized and vaccinate accordingly. Persons known to have anaphylactic hypersensitivity to eggs or to other components of the influenza vaccine should not receive the vaccine without first consulting a physician.

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[1] In situations where influenza is not known to be circulating in the community, and a single patient is diagnosed with influenza on the basis of a rapid test, consultation with the local health department regarding obtaining confirmatory PCR testing at IDPH is warranted, prior to making the determination that an outbreak is occurring in the facility.

Pneumococcal vaccine should be given on admission to all unvaccinated residents ≥ 2 years of age. Previously vaccinated residents who are ≥ 65 years of age should receive a second dose of pneumococcal vaccine if: a) it has been more than 5 years since their first dose and b) they were younger than 65 years of age when they received the first dose.

Medicare reimburses both for the cost of influenza and pneumococcal vaccines and for administration of vaccines. For more information go to: http://www.cms.hhs.gov/AdultImmunizations/, or call (312)886-6432

2. Vaccination of Health-Care Personnel

Influenza vaccine may be less effective in the very elderly, and although immunized, some LTCF and ALF residents may remain susceptible to influenza. Influenza vaccination of all staff reduces mortality in elderly patients. All staff, including housekeeping and dietary staff, consultants and volunteers in LTCFs and ALFs should receive flu vaccine every year, unless contraindicated. (Note: some studies have shown that ~ 25% of all healthcare workers are infected with influenza every flu season.)

- Inactivated influenza vaccine is preferred for vaccinating health-care personnel who are >50 years old and health-care personnel of any age who have close contact with severely immunosuppressed persons (e.g., patients who have recently had a hematopoetic stem cell transplant and require a protected environment).
- Live attenuated influenza vaccine (LAIV) (FluMist®) may be given to health-care personnel <50 years old who do not have contraindications to receiving this intranasal vaccine. These health-care personnel include those who care for immunocompromised residents who do not require care in a protective environment.

Flu vaccine for employees may be available for purchase from the manufacturers below:

Sanofi pasteuer	800-822-2463	Inactivated influenza vaccine (for people > 6 months of age)
Novartis Vaccine	800-244-7668	Inactivated influenza vaccine (for people > 4 years of age)
GlaxoSmithKline	866-475-8222	Inactivated influenza vaccine (for people > 18 years of age)
MedImmune	877-358-6478	Live, attenuated vaccine (for healthy people 2-49 years of age)

3. Vaccination of Family Members and Visitors

Family members and visitors should be informed about their role in the transmission of influenza to patients and they should be encouraged to receive influenza vaccine. To find out where to get their flu shots, family members can call their health care provider, or local health department, or visit the American Lung Association website at http://www.flucliniclocator.org/.

B. Infection Control Measures

In addition to influenza vaccination, the following infection control measures are recommended to prevent person-to-person transmission of influenza and to control influenza outbreaks in long-term care and assisted living facilities:

1. Surveillance

Conduct surveillance for respiratory illness and use influenza testing to identify any increased incidence of ILI among patients, so that infection control measures can be promptly initiated to prevent the spread of influenza in the facility.

2. Education

Educate health-care personnel about the importance of vaccination, signs and symptoms of influenza, control measures, and indications for obtaining influenza testing.

3. Influenza Testing

If influenza is suspected in any resident, influenza testing should be done promptly. Develop a plan for collecting respiratory specimens and performing influenza testing when ILI clusters occur or when influenza is suspected in a resident. [An ILI cluster is three or more ILI cases occurring within 48 to 72 hours, in residents who are in close proximity to each other (e.g., in the same area of the facility).]

4. Infection Control

a. Respiratory Hygiene/Cough Etiquette Programs

Respiratory hygiene/cough etiquette (information available at http://www.cdc.gov/flu/professionals/infectioncontrol/longtermcare.htm) should be implemented whenever residents or visitors have symptoms of respiratory infection to prevent the transmission of all respiratory tract infections in long-term care and assisted living facilities. Respiratory hygiene/cough etiquette programs include:

- Posting visual alerts instructing residents and persons who accompany them to inform health-care personnel if they have symptoms of respiratory infection and discouraging those who are ill from visiting the facility.
- Providing tissues or masks to residents and visitors who are coughing or sneezing so that they can cover their mouth and nose.
- Providing tissues and alcohol-based hand rubs in common areas and waiting rooms.
- Ensuring that supplies for hand washing are available where sinks are located and providing dispensers of alcohol-based hand rubs in other locations.
- Encouraging coughing persons to sit at least 3 to about 6 feet away from others, if possible. Residents with symptoms of respiratory infection should be discouraged from using common areas where feasible.

b. Standard Precautions

During the care of any resident with symptoms of a respiratory infection, health-care personnel should adhere to Standard Precautions (information available at: http://www.cdc.gov/ncidod/dhqp/gl_isolation_standard.html):

- Wear gloves if hand contact with respiratory secretions or potentially contaminated surfaces is anticipated.
- Wear a gown if soiling of clothes with a resident's respiratory secretions is anticipated. Do not reuse gowns, even for repeated contacts with the same resident.
- Change gloves and gowns after each resident encounter and perform hand hygiene as discussed below.
- Decontaminate hands before and after touching the resident, after touching the resident's environment, or after touching the resident's respiratory secretions, whether or not gloves are worn.
- When hands are visibly soiled or contaminated with respiratory secretions, wash hands with soap (either plain or antimicrobial) and water.
- If hands are not visibly soiled, use an alcohol-based hand rub for routinely decontaminating hands. Alternatively, wash hands with soap (either plain or antimicrobial) and water.

c. Droplet Precautions

In addition to Standard Precautions, health-care personnel should adhere to Droplet Precautions (information available at: http://www.cdc.gov/ncidod/dhqp/gl_isolation_droplet.html) during the care of a resident with suspected or confirmed influenza for at least 5 days after the onset of illness:

- Place resident in a private room. If a private room is not available, place (cohort) suspected influenza residents with other residents suspected of having influenza; cohort residents with confirmed influenza with other residents confirmed to have influenza.
- Wear a surgical or procedure mask upon entering the resident's room or when working within 6 feet of the resident. Remove the mask when leaving the resident's room, dispose of the mask in a waste container, and perform hand hygiene.
- If resident movement or transport is necessary, have the resident wear a surgical or procedure mask, if possible.

d. Other Considerations

In addition to Standard and Droplet Precautions, the following procedures also may be considered for long-term care and assisted living facilities:

- To maintain residents' ability to socialize and have access to rehabilitation opportunities during periods when influenza infections are unlikely and no influenza is suspected or confirmed, residents with symptoms of respiratory infections can be permitted to participate in group meals and activities if they can be placed 3 to about 6 feet from other residents and can adhere to respiratory hygiene/cough etiquette
- Confine symptomatic residents with suspected or confirmed influenza and their exposed roommates to their rooms or group them together in rooms or on one unit (i.e., cohorted) for 5 days following the onset of symptoms. Personnel should work on only one unit, if possible.

5. Restrictions for Ill Visitors and Health-care Personnel

If no or only sporadic influenza activity is in the surrounding community:

- Discourage persons with symptoms of a respiratory infection from visiting residents. Implement this measure through educational activities.
- Monitor health-care personnel for symptoms of respiratory illness and consider removing those with symptoms from duties that involve direct resident contact. If excluded, they should not provide resident care for 5 days after the onset of symptoms.
- Monitor residents for symptoms of respiratory illness.

If widespread influenza activity is occurring in the surrounding community:

- Notify visitors (e.g., via posted notices) that adults with respiratory symptoms should not visit the facility for 5 days and children with symptoms for 10 days following the onset of illness.
- Evaluate health-care personnel with ILI and perform rapid influenza tests to confirm the causative agent is influenza and exclude those with influenza-like symptoms from patient care for 5 days following onset of symptoms, when possible.
- Monitor residents for symptoms of respiratory illness to determine need for Droplet Precautions.

6. Antivirals

Antiviral chemoprophylaxis should be given to residents and offered to health-care personnel in accordance with current CDC recommendations. Persons receiving antiviral chemoprophylaxis should be actively monitored for potential adverse effects, and for possible infection with influenza viruses that are resistant to antivirals.

- Due to antiviral resistance identified during previous influenza seasons, it is currently recommended that neither amantadine nor rimantadine be used for the treatment or prophylaxis of influenza A in the United States.
- In outbreak settings, antiviral prophylaxis should typically be administered to at-risk residents, regardless of whether they received influenza vaccine. Depending upon the size and configuration of the facility, staffing arrangements, patient and visitor movements, etc, it is not always necessary to administer antiviral chemoprophylaxis to all residents in the facility.
- In outbreak settings, chemoprophylaxis also can be offered to unvaccinated staff who provide care to at-risk residents. Prophylaxis should be considered for all employees, regardless of their vaccination status, if the outbreak is caused by a variant strain of influenza that is not well-matched by the vaccine.
- Antiviral prophylaxis should be continued for at least 2 weeks, and as long as 1 week after the last resident case occurred.
- Residents receiving antiviral treatment for influenza should continue to be confined until treatment is completed because residents may still be infectious and rarely may be shedding antiviral resistant viruses.

Both oseltamivir and zanamivir are approved for treatment and prophylaxis of influenza A and B; oseltamivir may be used for treatment or prophylaxis in those $\geq$ 1 year of age, and zanamivir may be used for treatment in those > 7 years of age and for prophylaxis in those $\geq$ 5 years of age. Dosage recommendations vary by age group and medical condition. For more information about the use of antivirals to control influenza, visit the CDC website on antivirals at http: www.cdc.gov/flu/professionals/treatement/ and consult package inserts. Dosage for each resident should be determined based on age, renal function, liver function, and other pertinent factors.

Pre-approved medication orders, or plans to obtain physicians' orders on short notice, should be in place to ensure that chemoprophylaxis can be started as soon as possible. Antiviral medications have not been shown to be effective if administered more than 48 hours after symptom onset.

October 2008: Control of Influenza Outbreaks in Long-Term Care and Assisted Living Settings

1. Have a high index of suspicion for influenza outbreaks and be prepared to perform diagnostic testing. Develop a plan for collecting respiratory specimens and performing influenza testing (e.g., rapid diagnostic test, immunofluorescence and viral cultures) for influenza when influenza-like illness (ILI) clusters occur or when influenza is suspected in a resident. [An ILI cluster is three or more cases of acute febrile respiratory illness -- defined as fever > 100ºF orally or prostration AND new cough or sore throat -- occurring within 48 to 72 hours, in residents who are in close proximity to each other (e.g., in the same area of the facility).] The local health department has influenza testing kits and will facilitate submission to the IDPH state laboratory.

2. If your facility has an influenza outbreak, the following measures should be taken to limit transmission. (Outbreak: A sudden increase of ILI cases over the normal background rate for a 24-72 hour period, or when any resident tests positive for influenza. One case of confirmed influenza by any testing method in a LTCF or ALF resident is typically considered an outbreak[2]):

- Inform local and state health department officials within 24 hours of outbreak recognition. (See attached report form.) Determine if the health department wants clinical specimens or viral cultures.
- Implement daily active surveillance for respiratory illness among all residents and health-care personnel until at least 1 week after the last confirmed influenza case occurred. It is important to collect information that will assist in development and targeting of outbreak control strategy.
- Institute the facility's plan for collection and handling of specimens to identify influenza virus as the causative agent early in the outbreak by performing rapid influenza virus testing of residents with recent onset of symptoms suggestive of influenza. In addition, based on consultation with your local health department, obtain specimens for PCR testing and to determine the influenza virus type and influenza A subtype. Ensure that the laboratory performing the tests notifies the facility of tests results promptly.
- For the purposes of documenting an influenza outbreak involving multiple residents, 3-6 residents with influenza-like illness should be tested within 1-2 days of symptom onset by rapid antigen testing, and if feasible, viral culture. Once an outbreak is confirmed, additional testing is not typically indicated.
- Implement Droplet Precautions for all residents with suspected or confirmed influenza.
- Confine symptomatic residents to their rooms or group (cohort) them in the affected unit.
- Confine the first symptomatic resident and exposed roommate to their room, restrict them from common activities and serve meals in their rooms.
- If other residents become symptomatic, cancel common activities and serve all meals in resident rooms. If residents are ill on specific wards, do not move residents or personnel to other wards, or admit new residents to the wards with symptomatic residents.
- Limit visitation, exclude ill visitors, and consider restricting visitation of children via posted notices.
- Monitor health-care personnel absenteeism due to respiratory symptoms and exclude those with influenza-like symptoms from patient care for 5 days following onset of symptoms, when possible.
- Restrict health-care personnel movement from areas of the facility having outbreaks to areas without residents with influenza.
- Limit new admissions.
- **Administer the current season's influenza vaccine to unvaccinated residents and health-care personnel.** Follow current vaccination recommendations for nasal and intramuscular influenza vaccines. Have a system in place to readily identify unvaccinated residents and staff.
- Administer influenza antiviral chemoprophylaxis and treatment to residents and health-care personnel according to current recommendations.
- Consider antiviral chemoprophylaxis for all health-care personnel, regardless of their vaccination status, if the health department has announced the outbreak is caused by a variant of influenza virus that is a sub-optimal match with the vaccine.

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[2] In situations where influenza is not known to be circulating in the community, and a single patient is diagnosed with influenza on the basis of a rapid test, consultation with the local health department regarding obtaining confirmatory PCR testing at IDPH is warranted, prior to making the determination that an outbreak is occurring in the facility.

LONG TERM CARE FACILITIES/ASSISTED LIVING FACILITIES INFLUENZA OUTBREAK REPORT FORM

Fax to Local Health Department after Completion

Facility Name		
Name of Reporter	**Title:**	
Date of Report		
Address:		
City	**County**	**Zip**
Phone #	**Fax #**	

FACILITY INFORMATION	
Total # of residents in the facility at the time of the outbreak:	**Total number of staff:**

Number of residents in the facility currently with influenza like illness:

Number of staff in the facility currently with influenza like illness:

Date of symptom/onset detection for the first case of ILI during the outbreak:

Dates of symptom/onset detection for additional cases of ILI during the outbreak:

Type of long-term care facility (check only one):

☐ **Skilled Nursing** ☐ **Assisted Living** ☐ **Combined Care** ☐ **Other**____________________

Have specimens been sent to a laboratory for confirmation of influenza: ☐**Yes** ☐ **No**

If Yes, names of laboratories:____

Influenza Test results to date:	**Influenza Test results to date:**
Name of test:	**Name of test:**
Number of positive tests	**Number of positive tests**
Number of negative tests:	**Number of negative tests:**

Updated November 2007

Thank you for your assistance with influenza surveillance in Illinois.
Contact your local health department, or IDPH Immunization Section 1-800-526-4372
(After hours: 1-800-782-7860 or 1-217-782-7860) if you have questions