

Maine Center for Disease Control and Prevention
Division of Infectious Disease

**Prevention and Control of Influenza
In Long-Term Care Facilities
2011-2012**

September 2011

Background:

Influenza can severely impact long-term care facilities. Each year 5 – 20% of U.S. residents get sick with influenza. Persons living in long term care facilities are considered high risk for complications due to influenza infections. Infection among healthcare workers during outbreaks is also common. Annual influenza vaccination is the most effective method for preventing influenza virus infection and its complications and is recommended for all persons \geq 6 months who do not have a contraindication to vaccination. Antiviral medications are an adjunct to vaccination and are effective when administered as treatment and when used for chemoprophylaxis after an exposure to influenza virus.

This report summarizes a multi-faceted approach to influenza outbreak management in long-term care facilities to enable a timely and effective response. This guidance applies to the 2011-2012 influenza season.

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Section I: Key Recommendations for 2011-2012

1. **Promote and administer influenza vaccine.** Vaccinate all residents and staff against influenza when available. Ensure that all residents have received one dose of pneumococcal (PPV) vaccine.
 - The Centers for Medicaid and Medicare Services (CMS) requires nursing homes to offer all residents seasonal influenza and pneumococcal vaccines and to document results. Each resident is to be vaccinated unless medically contraindicated, the resident or legal representative refuses, or there is a vaccine shortage.
 - Maine requires long term care facilities to offer vaccine to their staff (22 M.R.S.A. §802). This helps protect the staff, their patients, and their families, enhancing patient and worker safety. Every effort should be made to vaccinate all healthcare workers.
 - A Health Care Worker Influenza Toolkit is available at:
<http://www.maine.gov/dhhs/boh/ddc/epi/influenzatoolkkit/>

Each influenza season health care workers become infected with influenza. Influenza is often introduced into or spread through a facility by staff or visitors. Additionally, influenza vaccine may be less effective in the very elderly and although they are immunized, some residents may remain susceptible to influenza. By vaccinating long-term care facility staff, mortality among elderly patients is reduced. The 2011–2012 trivalent vaccines contain an influenza A/H1, influenza A/H3, and an influenza B components. The current vaccine is effective against the 2009 pH1N1 pandemic influenza strain. ACIP recommends that all persons ≥ 6 months receive an influenza vaccine every year.

Vaccine availability

Long-term care facilities are a priority for state-supplied seasonal influenza vaccine for both residents and employees. Maine CDC anticipates being able to fill all long-term care facility orders. To order state-supplied influenza vaccine, contact the Maine Immunization Program (MIP) by calling 207-287-3746.

MIP provides limited doses of pneumococcal vaccine for Maine residents for whom this vaccine is recommended, including all residents of long-term care facilities and those employees with medical conditions that put them at risk of pneumococcal disease. To order state-supplied pneumococcal vaccine, contact MIP by calling 207-287-3746.

2. **Implement respiratory hygiene and cough etiquette**
 - Post visual alerts (e.g. signs, posters) at the entrance and in strategic places to provide patients and health care personnel (HCP) with instructions about respiratory hygiene and cough etiquette.
 - Provide face masks and hand sanitizer.
3. **Monitor and manage ill healthcare personnel**
 - Develop sick leave policies for HCP that are non-punitive, flexible and consistent with public health guidance to allow and encourage HCP with suspected or confirmed influenza to stay home.
 - Establish procedures for tracking absences.
 - HCP who develop fever and respiratory symptoms should be excluded from work until 24 hours after symptoms resolve without the use of fever reducing medication (anti-pyretics).
 - If symptoms begin at work, the staff member should immediately excuse themselves from patient care and notify their supervisor.

4. Adhere to infection control precautions for all patient care activities and aerosol-generating procedures. Standard precautions assume that every person is potentially infected or colonized with a pathogen that could be transmitted in the healthcare setting. Elements of standard precautions that apply to patients with respiratory infections, including those caused by the influenza virus, are summarized below.

Hand Hygiene

- HCP should perform hand hygiene frequently, including before and after all patient contact, contact with potentially infectious material, and before putting on and upon removal of personal protective equipment, including gloves. Hand hygiene in healthcare settings includes washing with soap and water or using alcohol-based hand rubs. If hands are visibly soiled, use soap and water, not alcohol-based hand rubs.
- Healthcare facilities should ensure that supplies for hand hygiene are available.

Gloves

- Wear gloves for any contact with potentially infectious material. Remove gloves after contact, followed by hand hygiene. Do not wear the same pair of gloves for care of more than one patient. Do not wash gloves for the purpose of reuse.

Gowns

- Wear gowns for any patient-care activity when contact with blood, body fluids, secretions (including respiratory), or excretions is anticipated. Remove gown and perform hand hygiene before leaving the patient's environment. Do not wear the same gown for care of more than one patient.

Droplet Precautions

- Droplet precautions should be implemented for patients with suspected or confirmed influenza for 7 days after illness onset or until 24 hours after the resolution of fever and respiratory symptoms, whichever is longer.
- Place patients with suspected or confirmed influenza in a private room or area if possible. If not possible attempt to cohort ill individuals together, or leave with original roommate.
- HCP should wear a facemask when entering the room of a patient with suspected or confirmed influenza. If the patient needs to leave their room, have the patient wear a facemask, if possible, and follow respiratory hygiene and cough etiquette and hand hygiene.
- Communicate information about patients with suspected, probable, or confirmed influenza to appropriate personnel before transferring them to other areas in the facility or to other facilities.

5. Implement environmental and engineering infection control measures

- Standard cleaning and disinfection procedures are adequate for influenza virus environmental control.
- Consider designing and installing engineering controls to reduce or eliminate exposures including installing physical barriers such as partitions or curtains.

Section II: Prevention Measures

1. Vaccinate all residents and staff using a systematic approach to increase immunization levels.

- Vaccinate all residents and staff as soon as vaccine is available (usually September through October).
- Ensure your facility has a written policy on immunizations that includes annual influenza vaccination for all residents and staff, and pneumococcal vaccine (PPV23) for all residents.
- Obtain consent for vaccination from residents or their family members on admission. Include Vaccine Information Statements (VIS) in admission packets.
- Implement standing orders for administration of influenza and pneumococcal vaccines as they become available to long-term care facilities.
- Inactivated influenza and pneumococcal vaccines are safe and effective when administered at the same time by using separate syringes and given at different anatomical sites.
- Perform chart audits to ensure that there is documentation in every chart that the resident has been offered annual influenza vaccine and PPV23 vaccine.
- Consider residents with uncertain immunization histories NOT immunized and vaccinate accordingly. The benefits of vaccination far outweigh any concerns about revaccination.

1. Encourage family members and visitors to receive an influenza vaccine.

- Make them aware of their role in the transmission of influenza to residents.
- To locate a flu clinic, family members may contact their healthcare providers, visit www.maineflu.gov or dial 211.

2. Encourage family members, visitors and all staff to practice respiratory etiquette to prevent the transmission of respiratory illnesses.

- Post education materials on respiratory hygiene.
- Promote frequent hand washing and the use of alcohol-based hand gel.
- Educational materials on respiratory hygiene are available at <http://www.maine.gov/dhhs/boh/Flu%20Posters.htm> and <http://www.cdc.gov/flu>

Section III: Early Detection of Influenza

Despite its clear benefits, vaccination does not offer complete protection against influenza viruses, and outbreaks can still occur. Imperfect matching between the vaccine and circulating strains may limit vaccine effectiveness. Information on current vaccine match is available on the federal CDC website at <http://www.cdc.gov/flu>. The diminished immune response that sometimes occurs with advanced age and underlying medical conditions may further decrease overall vaccine effectiveness.

- Prompt recognition of influenza and the initiation of infection control measures can help prevent influenza from spreading.
- Reliable, timely detection depends upon prompt recognition of clinical signs and symptoms and submissions of respiratory specimens for laboratory diagnosis.

Influenza-like illness (ILI) is defined as fever of $>100^{\circ}$ F AND cough and/or sore throat, in the absence of a known cause.

Suspect an outbreak when:

- A sudden increase of influenza-like illnesses over the normal background rate, or when any resident tests positive for influenza.
- One case of confirmed influenza by any testing method in a long-term care facility resident is an outbreak.
- Three or more cases of influenza-like illness 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).

What to do if an outbreak is suspected or identified?

Follow the checklist for influenza outbreaks in Long Term Care (Appendix 1).

Use of Antiviral Medications

1. Treatment

- Two antiviral medications are recommended for the treatment of influenza.
 - oseltamivir
 - zanamivir (cannot be used by individuals with underlying respiratory conditions)
- Initiate treatment within 2 days of illness onset.
- Recommended duration of treatment is 5 days.

2. Chemoprophylaxis

Chemoprophylactic drugs are not a substitute for vaccination. They can be used as an adjunct in preventing and controlling influenza.

The initiation of antiviral medications for treatment of ILI is approved by Maine Care and should be initiated prior to laboratory confirmation.

- The formulary allows for the use of oseltamivir or zanamivir.
- Maine Care currently does not require a prior authorization for the use of oseltamivir or zanamivir chemoprophylaxis at a long-term care facility.

During an outbreak, chemoprophylaxis should be

- Administered to all residents, regardless of influenza vaccination status.
- Offered to unvaccinated staff who provide care to persons at high risk.
 - Prophylaxis should be considered for all staff if the outbreak is caused by a strain of influenza that is not well matched by the vaccine. Information on current vaccine match is available on the federal CDC website at <http://www.cdc.gov/flu>.
- Continued for a minimum of 2 weeks.
- If new cases continue to occur after the first two weeks of prophylaxis, continue prophylaxis until approximately 1 week from the date when the last case of influenza among either residents or staff was identified.
- The dosage for each resident should be determined individually because recommendations vary by age group and medical conditions (see antiviral manufacturer’s prescribing information).

Drug Resistance

Drug resistance in influenza viruses changes frequently. For the most up to date information see www.maine flu.gov or www.cdc.gov/flu.

Section IV: References and Other Sources of Information

1. Centers for Disease Control and Prevention. Prevention Strategies for Seasonal Influenza in Healthcare Settings. <http://www.cdc.gov/flu/professionals/infectioncontrol/healthcaresettings.htm>.
2. Centers for Disease Control and Prevention. Prevention and Control of Influenza with Vaccines: Recommendations of the Advisory Committee on Immunization Practices (ACIP), 2011. *MMWR* 2011; 60 (33);1128-1132. <http://www.cdc.gov/mmwr/preview/mmwrhtml/mm6033a3.htm>
3. Centers for Disease Control and Prevention. Guidelines for Isolation Precautions: Preventing Transmission of Infectious Agents in Healthcare Settings. http://www.cdc.gov/hicpac/2007IP/2007ip_part4.html#4;
4. Centers for Disease Control and Prevention. Influenza Web Site. <http://www.cdc.gov/flu/> .
5. Maine Department of Health and Human Services. Maine CDC Influenza Web Site. www.maineclu.gov

For questions or consultations or to report an outbreak please call Maine CDC at: 1-800-821-5821.

For downloadable flu materials including posters visit:

<http://www.maine.gov/dhhs/boh/Flu%20Posters.htm>

<http://www.cdc.gov/flu/professionals/flugallery/index.htm>

Appendix 1: Checklist for Influenza Outbreaks in Long Term Care

Recognition, Reporting & Testing

- Upon suspicion of an influenza outbreak, notify Maine CDC by calling 1-800-821-5821
- Obtain an outbreak number from Field Epidemiologists for identification purposes: # _____
- Maintain a line listing of symptomatic residents and staff
- Collect and submit specimens from affected residents and staff as soon as an outbreak is suspected.
- Follow HETL guidelines for specimen collection, handling, and transport; label specimens with outbreak #
- Notify facility medical director that an influenza outbreak is suspected

Control Measures for Facility

Infection Control:

- Re-offer vaccine to all unvaccinated staff and residents
- Institute droplet precautions for symptomatic residents
- Cohort ill residents as much as possible and suspend group activities
- Minimize resident and staff movement between affected and unaffected units/wards
- Enforce strict hand hygiene for all facility staff
- Supplement hand washing with soap and water with ethanol or alcohol-based hand sanitizers
- Begin treatment doses of antivirals to all symptomatic residents and staff, and begin prophylactic doses of antivirals to all residents and unvaccinated staff (within 48 hours)

Environmental Controls:

- Clean all high traffic areas and high touch items (i.e. faucets, door handles, and toilet or bath rails)
- Use EPA-registered disinfectants or detergents/disinfectants approved for use against influenza for routine cleaning and disinfection

Administrative Controls:

- Exclude ill staff from work for at least 24 hrs after symptoms have resolved without the use of anti-pyretics
- Suspend group activities as much as possible until after the outbreak is contained
- Post signage about the outbreak and proper hand hygiene
- Limit new admissions to a non-infected wing, or close to new admissions altogether

Recommendations for Residents & Visitors

- Encourage ill residents to stay in their room/apartment for at least 24 hours after symptoms resolve without the use of anti-pyretics
- Promote good hand hygiene for residents: after using the toilet, having contact with an ill individual, and before preparing food, eating or drinking
- Consider restricting visitation until the outbreak has subsided

Internal and External Communications

- Identify a single point of contact for internal communications
- Identify a single point of contact for external communications
- Notify staff of outbreak and control measures and conduct enhanced surveillance for ill staff
- Notify residents/guardians of outbreak and control measures and request ill residents report to nursing staff
- Consider a final communication to staff, residents, and guardians when the outbreak has resolved

Appendix 2: Sample Line List of Residents with Acute Respiratory Illness and/or Pneumonia

Patient Identification			Patient Location			Vaccination Status		Illness Description				Laboratory Confirmation		Illness Complications		
Name	Age	Sex	Building	Unit	Room #, Bed designation	Seasonal Y/N	Pneumococcal Y/N	Date onset illness	Highest Temperature	Cough (Y/N)	Sore Throat (Y/N)	Rapid antigen (+/-/Not Done)	PCR (+/-)	Pneumonia (Y/N)	Hospitalized (Y/N)	Died (Y/N, if yes, date)