# RECOMMENDATIONS FOR THE PREVENTION AND CONTROL OF INFLUENZA CALIFORNIA LONG-TERM CARE FACILITIES

## DEPARTMENT OF PUBLIC HEALTH CENTER FOR HEALTHCARE QUALITY HEALTHCARE ASSOCIATED INFECTIONS PROGRAM

850 Marina Bay Parkway Richmond, California 94804

**Revised December 2011** 

EDMUND G. BROWN JR. Governor State Of California



Diana S. Dooley, Secretary Health and Human Services Agency



Dr. Ron Chapman, Director Department of Public Health

#### **TABLE OF CONTENTS**

Introduct	ion3
Incubatio	on and Communicability3
Sympton	ns3
Transmis	ssion
Influenza	Prevention and Control Program4
Rec	commendations for Long-Term Care Facilities5
	Healthcare Personnel Vaccination5
	Resident Vaccination6
	Respiratory Hygiene and Cough Etiquette6
	Visitor Precautions and Restrictions6
	Surveillance7
	Influenza Definitions7
	Confirm Diagnosis by Laboratory Testing7
	Influenza Outbreak Reporting8
	Enhanced Standard Precautions plus Droplet Recommendations8
	Infection Control Precautions for Residents with Influenza-Like Illness8
	Antiviral Treatment
	Antiviral Chemoprophylaxis, Dosing, Contraindications, Side Effects and Adverse Events
Appendic	ces
1.	Sample Surveillance Case Log of Residents with Acute Respiratory Illness and/or Pneumonia
2.	Sample Surveillance Case Log of Staff with Acute Respiratory Illness and/or Pneumonia

## Recommendations for the Prevention and Control of Influenza California Long-Term Care Facilities

#### Introduction

Influenza, more commonly known as "the flu," can be caused by either a type A or type B influenza virus. These highly contagious respiratory viruses circulate in North America during the fall and winter seasons. Each season the genetic structure of the influenza viruses changes slightly and a new vaccine must be developed to closely match the circulating viral strains. Although the risk of infection is high in all unvaccinated age groups, long-term care facility residents, especially those with chronic diseases, are at increased risk for influenza-related complications such as pneumonia, which can lead to death.

Each year, the California Department of Public Health (CDPH), based on recommendations from the Centers for Disease Control and Prevention (CDC), has developed influenza prevention guidelines specifically for long-term care facilities. As the 2011-2012 CDC recommendations were essentially the same as those published for the previous influenza season, CDPH is publishing abbreviated guidelines that reference, where appropriate, the CDC guidelines. These recommendations will be updated in future years only as needed.

#### **Incubation and Communicability**

The incubation period (i.e., the time from first exposure to onset of symptoms) is generally from 1 to 4 (average 2) days. Individuals are most infectious during the first 3 days of illness; however, the virus can be present in respiratory secretions, and shed beginning the day before and for 7 or more days after the onset of symptoms. Children and persons with severe deficiencies in immune system function may shed virus for longer periods. In addition, infected but asymptomatic persons can also shed viral particles and be infectious to others.

#### **Symptoms**

Influenza, other respiratory viruses, and some bacteria cause similar illnesses, particularly in elderly long-term care facility (LTCF) residents. Therefore they are referred to as influenza-like illnesses (ILI). The difference between influenza and other acute respiratory infections cannot be determined on the basis of symptoms alone and laboratory testing is necessary because the treatment and management of outbreaks are different. In healthy non-elderly persons the onset of influenza symptoms is generally abrupt and range from a mild sore throat, itchy eyes, cough, fever of ≥ 100\*F (37.8\*C), muscle aches, headache, fatigue, and a nonproductive cough. The symptoms in elderly persons can be atypical and subtle, such as a change in mental status, a temperature which may be below normal, and many residents are unable to reliably report symptoms. In most infected persons the symptoms progressively resolve after 3 to 7 days; however, cough and fatigue can last for more than 2 weeks. Complications,

especially in unvaccinated long-term care residents, include pneumonia, worsening of chronic health conditions, and dehydration.

#### **Transmission**

Influenza can be introduced into the facility by new or returning residents, healthcare personnel, and visitors. The virus is primarily spread by viral particles coming into contact with the respiratory tract after they are expelled short distances into the air (approximately 6 feet or less) when an infected person coughs or sneezes (droplet transmission). The virus can survive for 24 to 48 hours on nonporous surfaces such as a table or a telephone, and for 8 to 12 hours on porous surfaces such as paper or cloth. Therefore, transmission may occur by direct or indirect (person-object-person) transfer of the virus from environmentally contaminated hands that touch the mucous membrane of eyes or nose of the uninfected person (self-inoculation). Airborne transmission (inhalation of small droplets expelled into the air when an infected person is coughing or during aerosol-generating procedures), may also occur. The degree to which airborne transmission contributes to influenza transmission is uncertain and has not been adequately studied.

#### **Influenza Prevention and Control Program**

Vaccinating residents and healthcare personnel (HCP)\* is the only truly effective strategy for influenza control. Although vaccination may not be 100% preventative, studies have shown that an affective vaccination program reduces influenza-related complications and deaths, and can also lower HCP absenteeism.

An influenza prevention program should include the following:

- Annual review of the CDC and CDPH influenza vaccination recommendations.
   For more detailed information see the Recommendations of the Advisory Committee on Immunization Practices (ACIP) available at: http://www.cdc.gov/flu/professionals/vaccination/.
- Well-defined influenza policies and procedures to be reviewed with the infection prevention committee prior to the influenza season.
- A designated "Influenza Vaccination Week." Choose one week where influenza
  vaccination is featured to vaccinate as many residents and HCP as possible. The
  CDC currently recommends that vaccination programs begin as soon as flu
  vaccine is available at the facility, even as early as August, and continue through
  the end of April of the following year.
- Education for all residents, visitors, and HCP concerning the importance of vaccination, recognizing symptoms of infection, facility policies regarding work restrictions when ill, visitor restrictions, appropriate respiratory precautions, and hygiene cough etiquette.
- A campaign to encourage employees to vaccinate their family members.
- A campaign to encourage visitors to be vaccinated.

- Free influenza education materials, to be posted throughout the facility.
   Download free influenza education materials:
  - o <a href="http://www.cdc.gov/flu/freeresources/">http://www.cdc.gov/flu/freeresources/</a>
  - o http://www.cdc.gov/flu/protect/covercough.htm
  - o <a href="http://www.cdc.gov/flu/protect/stopgerms.htm">http://www.cdc.gov/flu/protect/stopgerms.htm</a>

\*HCP refers to all persons, paid and unpaid, working in healthcare settings who have the potential for exposure to residents and/or to infectious materials, including body substances, contaminated medical supplies and equipment, contaminated environmental surfaces, or contaminated air. HCP include, but are not limited to, physicians, nurses, nursing assistants, therapists, technicians, emergency medical service personnel, dental personnel, pharmacists, laboratory personnel, autopsy personnel, students and trainees, contractual personnel, home healthcare personnel, and persons not directly involved in patient care (e.g., clerical, dietary, housekeeping, laundry, security, maintenance, billing, chaplains, and volunteers) but potentially exposed to infectious agents that can be transmitted to and from HCP and residents.

#### **Recommendations for Long-Term Care Facilities**

#### Healthcare Personnel Vaccination

- Develop and distribute written information that describes the benefits of influenza vaccination and the possible side effects of the vaccine.
- Strongly encourage influenza vaccination for all HCP including administrative personnel.
- Vaccinate new employees or request proof of vaccination prior to their start date.
- Obtain a signed "Consent to be Vaccinated" form. California law requires that
  acute care hospitals offer influenza vaccine to HCP at no charge and requires
  those who choose not to be vaccinated to sign a declination form. Although not
  yet required, long-term care facilities are encouraged to implement vaccine
  declination documentation. The following forms are available electronically and
  can be used as is or modified as needed:
  - Consent to be Vaccinated:
     <a href="http://www.cdph.ca.gov/programs/hai/Documents/1112InfluenzaVaxConsentF">http://www.cdph.ca.gov/programs/hai/Documents/1112InfluenzaVaxConsentF</a>
     orm forwebsite.docx
  - Vaccination Declination:
     <a href="http://www.cdph.ca.gov/programs/hai/Documents/1112InfluenzaDeclination\_f">http://www.cdph.ca.gov/programs/hai/Documents/1112InfluenzaDeclination\_f</a>
     orwebsite.docx
  - Influenza Vaccination Received Elsewhere:
     <a href="http://www.cdph.ca.gov/programs/hai/Documents/1112InfluenzaVaxElsewher">http://www.cdph.ca.gov/programs/hai/Documents/1112InfluenzaVaxElsewher</a>
     e forwebsite.docx

#### Resident Vaccination

- Vaccinate current residents during the designated seasonal influenza vaccination week.
- Vaccinate new admissions at any time between August and April, if not already vaccinated.
- Consider having residents or the resident's advocate (e.g., a family member, friend, or ombudsman) sign a "Consent to be Vaccinated" form.
- Assess immunization history and ensure that updated pneumococcal vaccination standing orders are in place for residents≥ 65 years.

#### Respiratory Hygiene and Cough Etiquette

- During influenza season, post visual alerts instructing residents, staff, visitors and volunteers to report symptoms of respiratory infection to a designated person.
- Provide tissues or masks to residents who are coughing or sneezing so they can cover their nose and mouth, if possible.
- Encourage coughing persons to remain at least 3 feet away from others, if possible.
- Ensure that hand hygiene supplies are available where sinks are located and/or providing dispensers of alcohol-based hand rubs.
- Exclude HCP and visitors with symptoms of respiratory infection.

#### Visitor Precautions and Restrictions

- Post signs notifying visitors that adults with respiratory symptoms should not visit for 5 days and children with symptoms should not visit for 10 days following the onset of illness.
- Provide written information about influenza-like infections and seasonal influenza to visitors and why the infection control precautions are necessary.
- Provide visitors with written instructions (respiratory hygiene/cough etiquette) about the precautions implemented by the facility.
- Encourage visitors to get vaccinated for influenza.
- Ensure that hand hygiene supplies, tissues and masks are readily available.
- If visitation during an outbreak is necessary (e.g., visitation of a dying resident), instruct symptomatic visitors to: (1) wear a surgical or procedure mask over their mouth and nose while in the resident's room; (2) cough and sneeze into a tissue and discard contaminated tissues in a waste receptacle; and (3) sanitize their hands before entering the resident's room, before and after resident contact and upon leaving the resident's room
- Consider restricting all children from visiting during an outbreak.
- For more information consult *Prevention Strategies for Seasonal Influenza in Healthcare Settings* 
  - http://www.cdc.gov/flu/professionals/infectioncontrol/resphygiene.htm

#### Surveillance

Implement daily active surveillance for influenza-like illness among all residents and HCP throughout the influenza season.

- Educate and instruct HCP to report signs and symptoms of possible influenza including fever, headache, muscle aches, sore throat, chills, fatigue, runny or stuffy nose, cough, and/or mental status changes occurring in residents.
- Initiate the use of a daily active surveillance case log (Appendix 1) and collect data on all newly symptomatic residents until at least one week after the last influenza case occurs.
- Monitor staff absenteeism due to respiratory symptoms in order to track facility influenza activity.
- Instruct HCP to self-report any influenza-like symptoms to their supervisor. Record new symptomatic HCP cases daily using the surveillance case log (Appendix 2).
- Exclude HCP with fever ≥ 100\*F (37.8\*C) and other respiratory infection symptoms from work until at least 24 hours after they no longer have a fever (without the use of fever reducing medicines).
- Develop HCP "working when ill" and sick leave policies. http://www.cdc.gov/flu/professionals/infectioncontrol/healthcaresettings.htm

#### Influenza Definitions

- <u>Influenza-Like Illness (ILI)</u>: Documented fever and cough and/or sore throat in absence of another cause.
- <u>Cluster</u>: Three of more cases of acute respiratory illness occurring within 48--72 hours in residents who are in close proximity to each other.
- Outbreak: A sudden increase of influenza-like illness cases over the normal background rate or when any resident tests positive for influenza. One case of confirmed influenza by any testing method in a LTCF resident is considered an outbreak.

#### Confirm Diagnosis by Laboratory Testing

A true diagnosis of influenza cannot be based on symptoms alone. When a cluster of cases of acute respiratory illness with symptoms suggestive of influenza occurs, it is of critical importance to establish the diagnosis through laboratory testing.

Several commercial rapid diagnostic tests are available that can detect influenza viruses within 15 minutes. These rapid tests differ in the types of influenza viruses they can detect and whether they can distinguish between influenza types. The types of specimens acceptable for use also vary by test. These tests are not very sensitive; they may only detect influenza when it is present half of the time, and are only really useful when they are positive. Physicians should consider confirming negative test results with more sensitive tests such as polymerase chain reaction (PCR) because of the possibility of false-negative rapid test results, especially during periods of peak community influenza activity. False-positive rapid test results are less likely, but can occur during periods of low influenza activity.

Precise identification of the strain of virus can be made by growing the virus from secretions of ill persons. Collect nasopharyngeal-swab specimens from 3 to 4 residents and/or staff with influenza-like illness as soon as possible after symptom onset. Specimens should be submitted for influenza PCR testing and/or viral culture. Your local public health department can provide information about diagnostic specimen collection and submission processes for influenza testing. For additional information: http://www.cdc.gov/flu/professionals/diagnosis/

#### Influenza Outbreak Reporting

Report all suspected and confirmed outbreaks to the following:

- LTCF Medical Director
- Local Public Health Department
- Licensing and Certification (L&C) district office

#### Enhanced Standard Precautions plus Droplet Recommendations

Recommendations for Enhanced Standard Precautions (ESP) were developed by CDPH specifically to prevent the transmission of infectious agents in California long-term care facilities. ESP integrates and consolidates the CDC recommendations for standard precautions with many of the recommendations for transmission-based precautions (contact or droplet) and Intensified Interventions. This guideline is available electronically at: <a href="http://www.cdph.ca.gov/programs/hai/Documents/AFL10-27AttachmentIncluded.pdf">http://www.cdph.ca.gov/programs/hai/Documents/AFL10-27AttachmentIncluded.pdf</a>.

#### Infection Control Precautions for Residents with Influenza-Like Illness

- Implement Standard and Droplet Precautions for any resident 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.
- Confine first symptomatic resident and exposed roommate(s) to their room, restrict them from group activities and serve meals in their rooms.
- If other residents become symptomatic, cancel group activities and serve all meals in resident rooms.
- If symptomatic resident is in a semi-private room, maintain a spatial separation of at least 3 feet between residents and draw a curtain between resident beds.
- If residents are ill on specific wards, do not move residents to other units.
- Limit new and returning residents during a suspected or confirmed outbreak.
- If admissions are necessary, ensure new or returning residents do not have acute respiratory illness or not transferring from a facility with an outbreak.
- Admit asymptomatic new or returning residents to unaffected units.
- Assign staff to work on only one unit, if possible. Restrict staff movement from areas of the facility having outbreaks to areas without symptomatic residents.
- Place a surgical mask on symptomatic residents during transport, if possible.

- Instruct residents to 'cover their cough' or use tissues when coughing and sneezing.
- Assist residents with hand hygiene, especially before leaving and entering rooms and after contact with respiratory secretions and contaminated tissues.
- Communicate information with appropriate personnel before transferring symptomatic residents to other departments or facilities.
- Notify transporting personnel and receiving facility of a suspected or confirmed outbreak prior to transfer.
- Assess potential transfer for influenza vaccination history and symptoms of current respiratory symptoms.
- Perform hand hygiene
  - Before and after resident contact.
  - If contact is made with potential infectious material or contaminated surfaces.
  - Before putting on and after removal of personal protective equipment, including gloves.
- Hand hygiene can be performed by
  - Washing with soap and water.
  - Using alcohol-based hand rubs.
  - Soap and water if hands are soiled.
- Wear gown and gloves when providing direct care to a symptomatic resident or in contact with contaminated surfaces. Change gowns and gloves after each encounter with symptomatic resident and perform hand hygiene.
- Wear a surgical mask when entering a resident's room with suspected or confirmed influenza; remove and dispose of mask in a waste container when leaving the room.
- Consider allowing use of fitted N95 respirators based on HCP preference, for added protection.
- Administer influenza antiviral chemoprophylaxis and treatment to residents and/or HCP according to current recommendations, based on laboratory testing results.
- Use routine cleaning and disinfecting strategies during influenza season. Focus on cleaning frequently touched surfaces in common areas and resident rooms. Special handling of soiled linens and dietary trays is not necessary.
- For additional information, consult Guidelines and Recommendations: Prevention Strategies for Seasonal Influenza in Healthcare Settings http://www.cdc.gov/flu/professionals/infectioncontrol/healthcaresettings.htm

#### **Antiviral Treatment**

- Antivirals should be started as soon as possible for residents with suspected or confirmed influenza who are at higher risk for influenza complications on the basis of their age or underlying medical conditions; Clinical judgment should be an important component of resident treatment decisions.
- Maximum benefit occurs when started within 48 hours of symptom onset. Do not hold antivirals if symptoms began more than 48 hours prior and resident meets criteria for antiviral treatment.
- For current recommendations see: http://www.cdc.gov/flu/professionals/antivirals/index.htm

### Antiviral Chemoprophylaxis, Dosing, Contraindications, Side Effects and Adverse Events

 For current information and recommendations see: http://www.cdc.gov/flu/professionals/antivirals

## Appendix 1 – Sample Surveillance Case Log of Residents with Acute Respiratory Illness and/or Pneumonia

Resident identification			Resident location																		Resident location			Resident State of the location State of the			Resident location																																																													Resident location		Resident location Naccination		Vaccination status		Illness description									te	enza est ults	Pneumo coccal test results		Antivirals	Antibiotics	II	Iness	outo	ome	S
Name	Age	Sex (M/F)	Building	Unit	Room #, bed designation	Influenza (Y/N)	Pneumococcal (Y/N)	Date onset illness	Highest temperature	Cough (Y/N)	Malaise/fatigue (Y/N)	Chills/rigors (Y/N)	Sore throat (Y/N)	Arthralgias/myalgias (Y/N)	Change in respiratory status (e.g., sputum) (Y/N)	Pneumonia (Y/N)	CXR confirmed(Y/N)	Rapid antigen (+/-/ND)	Viral culture	Gram stain	Sputum culture	Date started/Date ended	Date started/Date ended	Influenza (Y/N)	Pneumonia (Y/N)	Hospitalized (Y/N)	Days hospitalized	Died (Y/N), if yes, date																																																																																					

## Appendix 2 - Sample Surveillance Case Log of Staff with Acute Respiratory Illness and/or Pneumonia

Staff identification		Staff p	Influenza	vaccine	Illness description							Influenz resu			viral ıgs	Illness outcomes	
Name	Age	Job title	Job title Location		Date oncet	Date onset Highest temperature		Cough (Y/N)	Malaise/fatigue (Y/N)	Chills/rigors (Y/N)	Sore throat (Y/N)	Arthralgias/myalgias (Y/N)	Rapid antigen (+/-/ND) Viral culture		Date started/Date ended	Date resolved	Date returned to work