COLORADO
Department of Public Health & Environment

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Guidelines for Prevention and Control of Influenza Outbreaks in Long Term Care Facilities during the 2015-2016 Influenza Season

October 19, 2015

These guidelines can be found on the CDPHE web site at: https://www.colorado.gov/pacific/cdphe/flu-resources-health-professionals-and-schools

Influenza during the 2015-2016 season

As of October 2015, it is too early to know for sure which influenza viruses will be circulating during the 2015-2016 influenza season. State and local public health agencies can answer questions regarding current circulating influenza strains. Colorado influenza surveillance data (updated weekly from October through May) are posted at: https://www.colorado.gov/pacific/cdphe/influenza.

Influenza vaccination

Influenza in the community can enter LTCFs via infected healthcare personnel, visitors, and residents. Influenza vaccination is the primary means to prevent influenza among residents and staff of LTCFs, limit transmission, and prevent complications. Beginning in 2012, healthcare workers who work in facilities licensed by CDPHE (including long-term care facilities) were required to have proof of influenza immunization or a medical exemption. For more information about this requirement, please contact the CDPHE Immunization Branch at 303-692-2700 or visit: https://www.colorado.gov/pacific/cdphe/influenza

Case definitions

Influenza-like illness (ILI) case definition for LTCFs

- **[Fever (>100 ˚F) or new prostration] AND [new cough or sore throat]**
- When influenza is circulating in the surrounding community of the LTCF, a high index of suspicion should be maintained. The medical director might consider loosening the ILI case definition to [fever OR new prostration OR new cough] for an outbreak highly suspected of being due to influenza in which residents do not manifest multiple signs.

Influenza outbreak in a long-term care facility

Suspected influenza outbreak: two cases of ILI within a 1-week period without a positive test for influenza. During the time when influenza is circulating locally, the occurrence of acute febrile respiratory illness in several residents within a short time frame should be considered highly suspect for influenza until proven otherwise, regardless of whether the affected residents have been vaccinated.

Confirmed influenza outbreak: at least one resident with a positive test for influenza among two or more residents with ILI.
[NOTE: Due to the low influenza activity and the concern of false positive results from rapid antigen tests, confirmation by PCR is recommended for early season outbreaks (October- November)]

Please report all suspected and confirmed influenza outbreaks to your local health department. Outbreaks are reportable conditions in Colorado.

Influenza testing

The most common laboratory test used for influenza diagnosis is the rapid antigen test (or rapid test). Rapid tests might be falsely negative as their sensitivity is less than that of PCR, and because specimen collection and transport techniques are often sub-optimal.

Rapid tests also might be falsely positive, especially when there is little or no circulating influenza virus in the surrounding community. PCR tests, which are highly specific, can help determine whether a positive rapid influenza test is falsely positive.

For the purposes of confirming an influenza outbreak, 2-5 residents with influenza-like illness should be tested for influenza within 1-2 days of symptom onset by rapid testing. Early season outbreaks should be confirmed by PCR. PCR testing through the state public health laboratory can be arranged by contacting the local health department.

Prevention of transmission of influenza: general principles

Healthcare facilities should use a multi-faceted approach to decrease the risk of transmission of influenza to protect residents and staff. This includes: 1) administration of influenza vaccine, 2) implementation of respiratory hygiene and cough etiquette, 3) appropriate management of ill healthcare personnel, 4) adherence to infection control precautions for all patient-care activities, and 5) implementing environmental and engineering infection control measures. More information on these core prevention strategies can be found in CDC's "Prevention Strategies for Seasonal Influenza in Healthcare Settings" at:
http://www.cdc.gov/flu/professionals/infectioncontrol/healthcaresettings.htm

LTCFs should prevent the transmission of influenza using the following strategies. These strategies also prevent the transmission of other respiratory viruses.

1) Maintain communication between LTCFs and acute-care facilities to ensure that transfers are not admitted with unrecognized respiratory infections. Confirmed or suspected influenza cases can be transferred if acute symptoms are resolved or the accepting facility is able to maintain appropriate infection control precautions.

2) Maintain good hand hygiene practices and implement respiratory hygiene and cough etiquette strategies. For further information, see CDC website at http://www.cdc.gov/flu/professionals/Infectioncontrol/resphygiene.htm

3) Promote and provide influenza vaccine for healthcare personnel and residents.

4) Exclude from work healthcare personnel who develop fever and respiratory symptoms until at least 24 hours after they no longer have a fever (without the use of fever-reducing medicines such a acetaminophen).

5) Consider limiting visitors or excluding visitors with symptoms of respiratory infection (e.g. fever, cough, sore throat) when influenza is circulating in the community.

Response to an influenza outbreak

The following recommendations should be followed for all suspected and confirmed influenza outbreaks. These recommendations are also useful in the control of other respiratory viruses.

1) Source control:
Optimally, symptomatic residents should be confined to their rooms (isolated) or limited to the affected unit (cohorted) until antiviral treatment is completed. Symptomatic residents not taking antiviral medication should be confined to their rooms for 5 days after illness onset or until 24 hours after they no longer have a fever (without the use of fever-reducing medicines), whichever is longer. Isolation should not impede resident care or the ability to provide social or rehabilitation services in the resident's room as long as droplet precautions are in place (see below). Additionally, symptomatic residents should wear a surgical mask/facemask when they need to be out of their room or off ofthe affected unit if possible. Avoid transferring residents with symptoms of respiratory infection to unaffected units.

2) Infection Control:
For all residents with suspected or confirmed influenza, the following infection control precautions should be used:

- **Standard precautions** (hand hygiene; use of gloves, gown, mask, eye protection, or face shield, depending on the anticipated exposure)

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- **Droplet precautions** (surgical masks/facemasks should be worn upon entry to the resident's room and during resident care)

Droplet precautions should not impede the care of residents or providing social or rehabilitation services in the resident's room. If resident movement or transport is necessary, have the resident wear a surgical mask or procedure mask, if possible.

3) **Restricting staff movement:**
   Ideally, staff (including healthcare personnel as well as dietary, housekeeping, laundry, and therapy staff) working in units affected by the outbreak should not concurrently work in unaffected units until the outbreak is over.

4) **Surveillance:**
   Implement daily active surveillance for new respiratory illness among all residents and healthcare personnel. Exclude personnel with respiratory symptoms from resident contact until at least 24 hours after they no longer have a fever (without the use of fever reducing medicines such as acetaminophen). Track ill residents and staff, and monitor the progression of the outbreak.

5) **Notification of visitors:**
   Facilities should notify visitors that an outbreak of influenza or ILI is occurring. The notice should advise visitors to protect themselves if they are unvaccinated or at increased risk for complications of influenza. Signage can be an effective way to communicate this information to visitors. Visitors with symptoms of acute respiratory illness (i.e., cough, sore throat, fever) should not visit while symptomatic.

6) **Limiting new admissions:**
   During the outbreak period, new admissions should be limited when possible. If admissions do occur, they should be housed in units or areas unaffected by the outbreak.

7) **Antiviral chemoprophylaxis:**
   Antiviral chemoprophylaxis is recommended for residents and staff when an influenza outbreak is suspected or confirmed, regardless of whether they received influenza vaccine**.** Consideration can be given to restricting antiviral chemoprophylaxis to residents and staff of a particular unit when the outbreak is clearly confined to that unit or care area. **When the outbreak involves multiple units or care areas, or is widespread in the facility, antiviral chemoprophylaxis of the entire facility is recommended.**

   - Antiviral chemoprophylaxis should be administered to all residents (except those receiving antiviral treatment), regardless of vaccination status. Residents that develop ILI while on prophylaxis should be switched to treatment doses of antiviral medications (See Table).

   - Antiviral chemoprophylaxis is also recommended for staff who provide care to residents and have not been vaccinated with the current season's influenza vaccine.

- **Antiviral chemoprophylaxis should be continued for at least two weeks** and until approximately one week after the onset of the last known case.

- To ensure the rapid administration of antiviral medications to residents, physicians should be asked prior to influenza season to sign a facility standing order which allows the facility's Medical Director to order antiviral prophylaxis if an influenza outbreak is confirmed.

- Due to existing antiviral resistance in both 2009 H1N1 and seasonal (H3N2) influenza viruses, neither amantadine nor rimantadine should be used for the treatment or prophylaxis of influenza. **Oseltavivir** (Tamiflu) or **Zanamivir** (Relenza) are recommended for LTCFs if an antiviral medication is used for the treatment or prophylaxis of influenza.

Dosage of Antiviral medications for Treatment and Prophylaxis of Influenza

	Indication	Dose	Duration
Oseltamivir*	Prophylaxis	75 mg once per day	At least 2 weeks and until 1 week after the onset of the last case
	Treatment	75 mg twice per day	5 days
Zanamivir**	Prophylaxis	10 mg (2 inhalations) once per day	At least 2 weeks and until 1 week after the onset of the last case
	Treatment	10 mg (2 inhalations) twice per day	5 dys

***A reduction in the dose of oseltamivir is recommended for persons with creatinine clearance <30mL/min.**

****Zanamivir is NOT recommended for those persons with underlying airway disease**

INFLUENZA OUTBREAK REPORT FORM
For Long-Term Care Facilities

Influenza-like illness (ILI): [Fever (>100°F orally) or Prostration] AND [new cough or sore throat]

Influenza Outbreak: **Suspected** when two or more cases of ILI are detected during a period of 1-week without a positive test for influenza.
Confirmed when at least one resident has a positive test for influenza among two or more residents with ILI.
[NOTE: Confirmation by PCR is recommended for early season outbreaks due to the low influenza activity and the concern of false positive results from rapid antigen tests]

Date of Report:	State Assigned Outbreak #_____	
FACILITY INFORMATION		
Facility name:		
Name of reporter:	Title:	
Address:		
City:	County:	Zip:
Phone #:	Fax #:	
Type of long-term care facility (check only one): ☐ Skilled Nursing ☐ Assisted Living ☐ Combined Care ☐ Other _____		
OUTBREAK INFORMATION		
Residents	**Staff**	
Number of residents in facility:	Total number of staff:	
Number of residents with ILI:	Number of staff with ILI:	
Number of residents hospitalized:	Number of staff hospitalized:	
Number of residents tested:	Number of staff tested:	
Number of residents with positive tests: **Influenza TYPE:** ☐ A ☐ B ☐ Unknown Type of test: ☐ Rapid (number _____) ☐ Influenza PCR (number _____) ☐ H3N2 ☐ 2009 H1N1	Number of staff with positive tests: **Influenza TYPE:** ☐ A ☐ B ☐ Unknown Type of test: ☐ Rapid (number _____) ☐ Influenza PCR (number _____) ☐ H3N2 ☐ 2009 H1N1	
Have specimens been sent to a laboratory for confirmation of influenza: **:** ☐ Yes ☐ No If yes, list the name of the laboratory:_____		
Date of symptom onset/detection for the first case of ILI during the outbreak: _____		
Status of outbreak (see above definitions, check only one): ☐ Suspected influenza outbreak ☐ Confirmed influenza outbreak		
Was prophylaxis given? ☐ Yes ☐ No If yes, check any of the following that apply ☐ Prophylaxis given to residents ☐ Prophylaxis given to residents of selected units only ☐ Prophylaxis given to residents in the entire facility ☐ Prophylaxis given to staff		
Contact your local health department with questions or to report an outbreak.		