COLORADO
Department of Public Health & Environment

Guidelines for Prevention and Control of Influenza Outbreaks in Long Term Care Facilities

2019—2020 Season

Case definition for influenza-associated outbreaks in a long-term care facility

- Influenza-like illness (ILI) case definition for long term care facilities: [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.
- 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 influenza test; among two or more residents with ILI.

Reporting an outbreak

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

Influenza vaccination

Influenza in the community can enter Long Term Care Facilities (LTCF) 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. All residents should receive the influenza vaccine annually before the influenza season begins. If a new resident is admitted after resident vaccinations have been administered, vaccination should be offered to the new resident as soon as possible.

Since 2005, the Centers for Medicare and Medicaid Services (CMS) has required nursing homes participating in Medicare and Medicaid programs to offer all residents influenza and pneumococcal vaccines and to document the receipt of vaccination by residents. The requirements dictate that each resident is to be vaccinated unless there is a medical contraindication, the resident refuses, or the vaccine is not available.

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/board-health-rule-influenza-immunization

Influenza testing

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. Early and late season outbreaks should be confirmed by RT-PCR. RT-PCR testing through the state public health laboratory can be arranged by contacting your local health department.

Once an outbreak has been identified, outbreak prevention and control measures should be implemented immediately.

In order of priority, the following influenza tests are recommended: reverse transcription polymerase chain reaction (RT-PCR); immunofluorescence; rapid influenza diagnostic tests.

Because of the possibility of false positive results, especially outside of influenza season, perform confirmatory testing using RT-PCR if immunofluorescence or rapid influenza diagnostic test results are positive.

Testing for other respiratory pathogens is recommended as well if it's not influenza season.

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
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) Exclude 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 of the 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)
    - 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, healthcare personnel and visitors. 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). Continue tracking ill residents and staff, and monitoring the progression of the outbreak until at least one week after the last case of influenza occurs.

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 Treatment and Chemoprophylaxis: Administer influenza antiviral treatment and chemoprophylaxis to residents and health care personnel according to current recommendations.
    - Two influenza antiviral drugs are currently recommended for use against circulating influenza viruses. These are oseltamivir, available as a pill or suspension, and zanamivir, available as an inhaled powder using a disk inhaler device. It should be noted that some long-term care residents may have difficulty using the inhaled device.
    - Amantadine and rimantadine are NOT recommended for use because of high levels of antiviral resistance among circulating influenza A viruses.

Treatment

- All long-term care facility residents who have confirmed or suspected influenza should receive antiviral treatment immediately.
- Treatment should not wait for laboratory confirmation of influenza.
- Antiviral treatment works best when started within the first 2 days of symptoms. However, these medications can still help when given after 48 hours to those that are very sick, such as those who are hospitalized, or those who have progressive illness.

Chemoprophylaxis

Antiviral chemoprophylaxis is recommended for all eligible residents (regardless of whether they received influenza vaccine) who are not exhibiting influenza-like illness once an influenza outbreak is confirmed. Consideration can be given to restricting antiviral chemoprophylaxis to residents 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.

- Residents that develop ILI while on prophylaxis should be switched to treatment doses of antiviral medications (See Table).
- While CDC recommends judicious use of antiviral medications for chemoprophylaxis to reduce the possibility of development and spread of antiviral resistant influenza viruses, chemoprophylaxis may be considered for all employees, regardless of their influenza vaccination status; if the outbreak is caused by a strain of influenza virus that is not well matched by the vaccine.
- Antiviral chemoprophylaxis should also be considered in personnel for whom influenza vaccine is contraindicated. All other personnel should receive vaccination.
- An emphasis on early treatment is an alternative to chemoprophylaxis in managing certain persons who have had a suspected exposure to influenza virus. Health care personnel who have occupational exposures can be counseled about the early signs and symptoms of influenza and advised to contact their health-care provider immediately for evaluation and possible early treatment if clinical signs or symptoms develop.
- 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 treatment and prophylaxis if an influenza outbreak is confirmed.

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 days

*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.

These guidelines can be found on the CDPHE web site at: https://www.colorado.gov/pacific/cdphe/influenza

The guidelines follow the CDC's Interim Guidance for Influenza Outbreak Management in Long-Term Care Facilities found at: http://www.cdc.gov/flu/professionals/infectioncontrol/ltc-facility-guidance.htm

As of October 2019, it is too early to know for sure which influenza viruses will be circulating during the 2019-2020 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

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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/late 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: _____

Address: _____

City: _____ Zip: _____

County: _____

Phone: _____ Email: _____

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

☐ Skilled Nursing ☐ Assisted Living ☐ Combined Care

☐ Other: _____

Name of reporter: _____

Title: _____

Outbreak Information

Residents

Number of residents in facility:	
Number of residents with ILI: (with or without a positive influenza test)	
Number of residents hospitalized:	
Number of residents vaccinated for flu this season:	
Number of residents tested:	
Number of residents with **positive** tests:	

Influenza **type**: ☐ A ☐ B ☐ A, H3N2 ☐ A, 2009 H1N1 ☐ Unknown ☐ Other _____

Type of test:	☐ Rapid	☐ PCR	☐ Unknown
Qty of tests performed:			

Staff

Number of staff in facility:	
Number of staff with ILI: (with or without a positive influenza test)	
Number of staff hospitalized:	
Number of residents vaccinated for flu this season:	
Number of staff tested:	
Number of staff with **positive** tests:	

Influenza **type**: ☐ A ☐ B ☐ A, H3N2 ☐ A, 2009 H1N1 ☐ Unknown ☐ Other _____

Type of test:	☐ Rapid	☐ PCR	☐ Unknown
Qty of tests performed:			

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

Status of outbreak (see definitions above, 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 staff ☐ Prophylaxis given to residents in the entire facility

Comments:

Contact your local health department with questions or to report an outbreak.
Submit completed form to **Nisha Alden** at CDPHE (nisha.alden@state.co.us | fax: 303-782-0338) *or* to your local health department.