Recommendations for the Prevention and Control of Influenza in California Skilled Nursing Facilities (SNF)

California Department of Public Health (CDPH)

Updated October 2019

TABLE OF CONTENTS

OCTOBER 2019 UPDATE

Note the following additions/clarifications in the October 2019 update:

- Table 2, Section 9, Manage Healthcare Personnel (HCP), page 17: Detailed guidance for management of HCP who develop respiratory illness during influenza season. These recommendations are consistent with the Clinical Practice Guidelines by the Infectious Diseases Society of America (IDSA): 2018 Update on Diagnosis, Treatment, Chemoprophylaxis, and Institutional Outbreak Management of Seasonal Influenza.
- Tables 1 and 2: Clarification of the recommendation to provide influenza vaccine to healthcare personnel at no cost and at a reasonable time and place during working hours, per the Cal OSHA Aerosol Transmissible Diseases Standard.
- Additional reference that was published after the CDPH recommendations October 2018 were posted, include a published May 2019 correction to the 2018 IDSA Clinical Guideline 2018.
- Additional resource: National Adults and Influenza Immunization Summit. Guidance for Leaders/Administrators in Post-Acute and Long-Term Care Facilities Who Plan to Improve Staff Influenza Vaccination Compliance through Vaccination Requirement Policies.

All other recommendations are unchanged from the October 2018 document.

INTRODUCTION

Recommendations for the Prevention and Control of Influenza in California Skilled Nursing Facilities (SNF) provides and clarifies recommendations to prevent and manage influenza outbreaks in skilled nursing facilities (SNF). The recommendations may also apply to other long-term care facilities (LTCF), for example, congregate living health facilities and intermediate care facilities. This guidance document replaces *Recommendations for the Prevention and Control of Influenza California Long-Term Care Facilities* (updated January 4, 2018). It also incorporates the recommendations in AFL 18-08: Influenza Outbreaks in Long-Term Care Facilities, January 10, 2018.

What is new about this document?

The guidance has been reformatted into tables that can be used as stand-alone documents and checklists to improve user friendliness. The document includes specific guidance for SNF leaders to develop a plan for an effective influenza prevention program in advance of the influenza season (October 1-March 31) and for evaluating a season's experiences upon completion of influenza season. CDPH is now recommending a distance of 6 feet between patients with influenza in multi-bed rooms based on research that demonstrates that respiratory droplets may travel as far as 6 feet. The Centers for Disease Control and Prevention (CDC) recommends that health care personnel don a facemask when within 6 feet of a patient with suspected or confirmed influenza. In facilities that do not have the space for the 6-foot separation, CDPH recommends separation as close to 6 feet as possible, but no less than 3 feet between patients. A glossary of terms is included.

How should SNF use this guidance document?

This document is intended to provide SNF guidance for developing and implementing an influenza prevention and control plan applicable to all influenza seasons. For the most up-to-date guidance on influenza vaccine, SNF staff should refer to CDC and Advisory Committee on Immunization Practices (ACIP) recommendations that are published annually before each influenza season[1]. Refer to use of antiviral agents for updates on influenza treatment and chemoprophylaxis.

Planning for influenza in SNF begins by providing information to residents and families at the time of admission, and to health care personnel (HCP) at the time of hire and during annual performance reviews. Facilities must be ready when influenza emerges within a community

[1] In 2018-2019, the live attenuated influenza vaccine administered as a nasal spray (LAIV4, FLUMIST®) is available after being unavailable in the United States for the previous two years. This vaccine is not likely to be given to residents in SNF, but HCP may have received this vaccine off-site. Although persons receiving LAIV may shed the live attenuated vaccine virus for several days, it is shed in low quantity, is not transmitted to others, and does not cause disease; therefore, there is no need to restrict individuals who have received LAIV from contact with residents (1).

with the necessary vaccine; hand hygiene, personal protective equipment (PPE), and medication supplies; antiviral medication orders; and established lines of communication and communication tools. Establishing a strong collaborative relationship with the local health department facilitates needed actions in the event of an outbreak, vaccine or antiviral agent shortages, or if unanticipated events emerge within a given season. Evaluating the experiences at the conclusion of each influenza season will inform the plan for the following year.

CDPH guidance and recommendations are presented in two tables:

Table 1: Planning for Influenza Illness and Outbreaks in SNF provides guidance relevant to three groups of individuals: residents, facility HCP, and family members and other visitors. SNF may use Table 1 as a guide to develop, review, and update a plan in advance of the influenza season. Facility HCP include all paid and unpaid persons who work in a healthcare setting and provide care or support the delivery of care; also referred to as staff members (see glossary).

Table 2: Identifying and Controlling Influenza Outbreaks in SNF contains recommendations for determining the presence of an influenza outbreak and implementing the plan developed according to Table 1. SNF may use Table 2 to find specific recommendations for infection control measures and accepting and transferring residents during an outbreak.

What are the most important messages for SNF leaders to understand about influenza?

1. Every year, influenza viruses circulate in the U.S. and cause outbreaks that vary in severity based on the circulating strains and how well the vaccine matches the circulating strains. SNF residents are at increased risk for severe disease, hospitalization, and death.

2. Successful influenza prevention programs in SNF include:
   - Immunization (1-3)
   - Surveillance
   - Effective infection control practices (2, 4, 5)
   - Prompt use of antiviral agents for treatment and prophylaxis (6, 7)

3. Vaccine is the most effective tool for prevention of influenza and its serious complications (1, 2).
   a. While the effectiveness of influenza vaccines to prevent all influenza-associated illnesses is less than desired and varies by season, these vaccines can prevent severe disease, ICU admissions, and death (8 - 10).
   b. Immunizing HCP and family members against influenza provides additional protection for the very vulnerable patients in SNF who may not respond well to vaccine (1, 3, 11). California is the first state to enact regulations requiring LTCFs to provide influenza vaccine to HCP at **no cost** and at a reasonable time and place for employees during

working hours.

c. Several studies indicate that vaccine-induced immunity may wane over time during the influenza season. Since influenza activity in the U.S. peaks in February during most years, SNF can consider administering influenza vaccine in October or early November (1, 12). Re- vaccination late in the influenza season is not recommended.

4. Ensuring protection against pneumococcal infections according to the current ACIP Immunization Schedule for Adults in the pre-season planning phase can help prevent poor outcomes from pneumococcal pneumonia when an individual is also infected with influenza.

5. Implementing Enhanced Standard Precautions by using gown, gloves, and performing frequent hand hygiene while caring for residents at increased risk of transmitting infectious agents is necessary year-long and especially during influenza season.

6. SNF must develop plans to be able to accept new admissions during influenza season while maintaining capacity to care safely for other residents. This requires planning for implementing Transmission-Based Precautions and other infection control measures.

7. *Respiratory hygiene/cough etiquette* is necessary for all individuals year-long. Influenza virus is transmissible to others for 24 hours before an individual has typical signs and symptoms of influenza. Additionally, older individuals and those who are immunocompromised may not present with classical signs of influenza (2, 4, 5). Containing all respiratory secretions (source containment) at all times is therefore necessary.

8. When an influenza outbreak in a SNF is suspected (2, 13), prompt and simultaneous implementation of interventions (https://academic.oup.com/cid/article/68/6/e1/5251935) can minimize the size and scope of the outbreak and adverse impact on resident health. Outbreak management requires a collaborative effort among all HCP with specific task assignments and tracking their completion.
    a. Prompt administration of antiviral agents for treatment and prophylaxis will shorten an outbreak (6, 7).
    b. Communicating with residents, HCP, and families, during an outbreak provides needed reassurance.
    c. Communicating with the local health department will facilitate additional guidance during an outbreak.

Table 1. Planning for Management of Influenza Illness and Outbreaks in SNF

ACTIONS	RESIDENTS	HEALTH CARE PERSONNEL (HCP)	FAMILY MEMBERS/VISITORS
1.**Educate** about the impact of influenza on residents and importance of preventing illness and outbreaks using specific information for each of the three audiences: residents, HCP, family members/ visitors	• Discuss influenza at time of resident admission • Prepare resident educational materials such as information sheets and signs • Schedule educational sessions with opportunities for questions and discussion ☐ Complete _____(date)	• Schedule HCP educational sessions on facility influenza prevention plan, including high risk nature of the population and HCP responsibilities; provide opportunities for questions and discussion ☐ Complete _____(date)	• Discuss influenza prevention with family members at the time of resident admission • Include an influenza prevention information brochure in the admission packet provided to families • Prepare information sheets and signs for posting during influenza season and during outbreaks • Prepare to answer family/visitor questions ☐ Complete _____(date)
2.Develop or update the **influenza vaccination** plan for residents and HCP according to ACIP recommendations for the current season	• Obtain standing vaccination orders from providers for each resident before influenza season begins • Vaccinate residents ◦ Designate an *Influenza Vaccination Week* in October or early November ◦ Continue to vaccinate throughout the influenza season	• Discuss HCP influenza vaccine requirements at time of hire and during annual performance evaluations • Prepare information sheets for HCP describing HCP influenza vaccination requirements, roles and responsibilities, and HCP staffing plan during influenza season, and signs for posting in HCP break rooms	• Notify families of facility influenza prevention plan at time of resident admission, including vaccination of residents and HCP before the beginning of influenza season. • Recommend influenza vaccination for families/visitors; SNF is not responsible for providing vaccine to this group.

ACTIONS	RESIDENTS	HEALTH CARE PERSONNEL (HCP)	FAMILY MEMBERS/VISITORS
2.Develop or update the **influenza vaccination** plan for residents and HCP according to ACIP recommendations for the current season (continued)	• Track each resident's vaccination status and room location; calculate resident vaccination rates • If vaccine shortage, consult local health department and communicate revised plan to residents ☐ Complete _____(date)	• Obtain standing vaccination orders from providers for SNF HCP before influenza season begins • Vaccinate HCP ◦ Designate an *Influenza Vaccination Week* in October or early November and vaccinate HCP at no cost and at a reasonable time and place; designate different times to accommodate HCP work shifts ◦ Continue to vaccinate throughout the influenza season • Involve facility leadership and HCP thought-leaders to encourage HCP to accept vaccine • Determine acceptable documentation required for HCP vaccination obtained off site • Develop policy for HCP vaccine exemptions • Track vaccination status of each HCP, including location of assignment and role; calculate vaccination rates and provide feedback to SNF leaders and HCP throughout influenza season	• Prepare signs for families/visitors that include vaccination recommendations, referral to primary care provider (PCP) for vaccine and how to find sites in specific geographic areas to obtain vaccine • If vaccine shortage, consult local health department and communicate revised vaccination plans to families/visitors ☐ Complete _____(date)

ACTIONS	RESIDENTS	HEALTH CARE PERSONNEL (HCP)	FAMILY MEMBERS/VISITORS
2.Develop or update the **influenza vaccination** plan for residents and HCP according to ACIP recommendations for the current season (continued)		• Develop plan with local health department for possible vaccine shortage; communicate to HCP • Review local health department policy for masking unvaccinated HCP and communicate to HCP ☐ Complete _____(date)	
3. Review **pneumococcal vaccination** status of residents	• Obtain standing orders for pneumococcal vaccines for residents from their PCP • Ensure that all residents have received pneumococcal vaccines according to current ACIP recommendations; usually done at the time of admission, but if not done then, complete at the start of influenza season • Schedule additional doses of pneumococcal vaccine as needed. ☐ Complete _____(date)	• SNF are not responsible for providing pneumococcal vaccines to HCP; refer to PCP or clinic if questions	• SNF are not responsible for providing penumococcal vaccines to families/visitors; refer to PCP or clinic if question

ACTIONS	RESIDENTS	HEALTH CARE PERSONNEL (HCP)	FAMILY MEMBERS/VISITORS
4.Develop or update plan for conducting daily active **surveillance for influenza-like illness (ILI)** during influenza season and until at least 1 week after last confirmed influenza case	• Develop process to conduct daily active surveillance for ILI during influenza season and until at least 1 week after last confirmed influenza case in the facility, using resident log (Appendix A) • Define responsibility for daily review and implementation of actions when needed • Develop plan for influenza diagnostic testing of residents (Table 2) • Develop surveillance plan to identify residents who develop influenza after receiving antiviral chemoprophylaxis for 72 hours or more and report to local health department to assess for antiviral resistance ☐ Complete _____(date)	• Develop a process for tracking HCP absenteeism during influenza season, using HCP log (Appendix B); evaluate cause of absence during influenza season and until at least 1 week after last confirmed influenza case in the facility ☐ Complete _____(date)	• Develop a process for identifying and recording possible introductions of influenza into the facility by ill family members or visitors ☐ Complete _____(date)

ACTIONS	RESIDENTS	HEALTH CARE PERSONNEL (HCP)	FAMILY MEMBERS/VISITORS
5.Develop or update **influenza infection control precautions** and **outbreak management plan** (see Table 2)	• Prepare to implement Transmission-Based Precautions and other infection control measures when needed for single cases and during outbreaks (see Table 2 for specific recommendations). • Define decision-making process for accepting and transferring residents during influenza season (Table 2). ☐ Complete _____(date)	• Prepare extra supplies that will be needed by HCP throughout the facility during influenza season such as PPE, tissues, waterless hand gel for hand hygiene, soap, and paper towels • Train and remind all HCP of infection control measures that reduce the risk of influenza transmission • Prepare for increased environmental services needs during influenza season • Share outbreak plan with HCP before the beginning of influenza season • Update and review policy for sick HCP and communicate policy to HCP • Identify contacts in the local health department and CDPH Licensing & Certification (L & C) district office for outbreak reporting, assistance when vaccine or antiviral shortages occur, and when assistance with diagnostic testing is needed • Provide weekly updates to HCP on status of influenza activity in facility and in community during influenza season, based on California	• Provide respiratory hygiene/ cough etiquette information and materials (tissues, masks, supplies for hand hygiene, waste receptacles) at facility entrances year-round. • Prepare outbreak communication letter for distribution to families/visitors when outbreak occurs • Prepare outbreak signage for facility entrances. • Develop plan for screening family members/visitors for signs/symptoms of ILI and restricting sick visitors if needed ☐ Complete _____(date)

ACTIONS	RESIDENTS	HEALTH CARE PERSONNEL (HCP)	FAMILY MEMBERS/VISITORS
		Department of Public Health influenza reports during influenza season ☐ Complete _____(date)	
6.Develop or update plan for obtaining and using **antiviral agents** for influenza treatment and chemoprophylaxis	• Define indications and mechanism for obtaining antiviral agents for resident treatment, chemoprophylaxis, and dose adjustments as needed for underlying conditions, (for example, renal impairment) ☐ Complete _____(date)	• Define indications and mechanism for obtaining antiviral agents for HCP chemoprophylaxis and dose adjustments as needed for underlying conditions ☐ Complete _____(date)	• SNF are not responsible for providing antiviral agents to family members or visitors; refer to PCP or clinic ☐ Complete _____(date)
7.Develop process to **evaluate** experiences after influenza season complete: • Illnesses in residents and HCP • Successful strategies • Barriers • Lessons learned • Needs for the following season	• Develop process for tracking and evaluating: ◦ Number (%) of residents vaccinated; ill; received antiviral treatment or chemoprophylaxis; transferred to acute care hospital; and deceased ◦ Number and duration of outbreaks ◦ Successes, Challenges ◦ Lessons learned • Obtain feedback from residents ☐ Complete _____(date)	• Develop process for tracking and evaluating: ◦ Number (%) of HCP vaccinated; absent due to ILI; required antiviral chemoprophylaxis or treatment ◦ Lessons learned • Obtain feedback from HCP ☐ Complete _____(date)	• Develop process for tracking and evaluating: ◦ Number of suspected introductions of influenza by visitors ◦ Family/visitor understanding and acceptance of messaging related to influenza in SNF ◦ Lessons learned • Obtain feedback from families/visitors ☐ Complete _____(date)

Table 2. Identifying and Managing Influenza Outbreaks in SNF

ACTIONS	RECOMMENDATIONS
1.Perform active **surveillance** for respiratory illness in residents and HCP ☐ Initiated _____(date) ☐ Complete _____(date)	• During influenza season, conduct daily active surveillance for acute upper respiratory illness and pneumonia among residents and HCP until at least 1 week after the last confirmed case of influenza using a line list (see Appendices A and B for examples of line lists). Record specific locations of ill residents and HCP assignments and include information about sick HCP and sick visitors, as available • Review line list daily and take actions needed if suspect cases are identified.
2. Use diagnostic testing for influenza ☐ Complete _____(date)	• Test residents with suspected influenza to confirm the diagnosis • Molecular assays (RT-PCR preferred) are strongly recommended for influenza testing to confirm outbreaks. The lower sensitivity of rapid influenza diagnostic tests (RIDTs) increases the risk of not identifying an influenza case. • Collect specimens as follows: 24-72 hours after symptom onset by obtaining a nasopharyngeal specimen using a swab with a synthetic tip (e.g., polyester or Dacron®) and an aluminum or plastic shaft. Specimens collected with swabs made of calcium alginate are NOT acceptable
3. **Establish presence of an outbreak** ☐ Suspected _____(date) ☐ Confirmed _____(date)	• Confirm the results of rapid antigen tests (RIDTs) with molecular assays (RT-PCR preferred) for initial cases • When working to establish the presence of an outbreak, contact the local health department for assistance in obtaining RT-PCR testing with rapid turn-around time • Confirm presence of an outbreak, defined as at least 2 residents with onset of influenza-like illness within 72 hours of each other AND at least 1 resident with laboratory confirmed influenza, preferably by a molecular assay (RT-PCR preferred) • Consult with the local health department to confirm the presence of an outbreak if uncertain, especially if not during the usual influenza season, and to determine the number of individuals with suspected influenza who need to be tested to confirm the diagnosis once an outbreak is established

ACTIONS	RECOMMENDATIONS

4. **Communicate**
 	
☐ Complete _____(date)
	• As soon as presence of an outbreak is established, notify:
	  ◦ Infection preventionist
	  ◦ Facility administration
	  ◦ Medical director
	  ◦ HCP of facility
	  ◦ Local health department
	  ◦ CDPH L&C district office
	  ◦ Residents, family members, visitors
	• Distribute outbreak communication letter to residents and their families
	• Post signs at facility entrances
	• Remind HCP of their specific tasks according to the influenza outbreak plan. Document assignments and dates initiated and completed

5. Implement appropriate **Transmission-Based Precautions** and other infection control measures	• Emphasize respiratory hygiene/cough etiquette for residents, HCP, family members, and visitors
	  ◦ Distribute signs and related materials throughout the facility
	• Use Droplet Precautions + Standard or Enhanced Standard Precautions (as appropriate) for residents with suspected or confirmed influenza
	• HCP perform hand hygiene and don facemask upon entry into the room
	  ◦ Don gowns and gloves upon entry into the room or at any time in the room when exposure to resident secretions likely
	  ◦ Remove PPE, discard, and perform hand hygiene upon completion of contact with a resident or when leaving the room
	• Placement in a single-bed room is preferred. If single rooms are unavailable, cohort ill residents in the same room with spatial separation of at least 6 feet and privacy curtain between residents. In facilities that do not have the space for the 6 foot, separation should be as close to 6 feet as possible, but no less than 3 feet
	• Remove PPE and perform hand hygiene between contacts with each resident in a multi-bed room

ACTIONS	RECOMMENDATIONS
5. Implement appropriate **Transmission-Based Precautions** and other infection control measures (continued) ☐ Implemented _____ (date)	• Increase frequency of environmental cleaning with focus on high touch surfaces and common areas • Maintain residents on Droplet Precautions in their rooms and restrict from activities in common areas including meals • Place facemask on resident and have resident perform hand hygiene and don clean clothes if he/she needs to leave room for medical reasons • Continue Droplet Precautions for 7 days after the resident's illness onset or 24 hours after the resolution of fever or respiratory signs, whichever is longer • Restrict HCP movement from areas of sick residents to well residents as much as possible • Plan workflow from asymptomatic to symptomatic residents, always observing hand hygiene and other infection control precautions (such as using gowns and gloves) between resident contacts • Perform audits of HCP adherence to hand hygiene and other infection control precautions and provide immediate feedback to HCP if deficiencies are observed • Report trends in audit results to SNF administrators and leaders. Post de-identified data in HCP break areas
6. **Treat with antiviral agents** as recommended ☐ Complete _____(date)	• Treat all residents with confirmed or suspected influenza with the currently recommended antiviral medication as soon after symptom onset as possible, but ideally within 48 hours of onset, for maximum benefit • Do NOT wait for confirmatory test results to initiate treatment • Consult resident's PCP for any necessary dose adjustments in residents with underlying conditions, such as renal impairment • Be aware of the possibility of resistance to the antiviral agent used if resident has continued progressive illness after 72 hours of treatment. Consult local health department for information on resistance and for alternative treatment recommendations

ACTIONS	RECOMMENDATIONS
7. **Administer antiviral chemoprophylaxis** as recommended ☐ Initiated _____(date) ☐ Complete _____(date)	• Obtain orders from primary care providers for influenza chemoprophylaxis when it is indicated • As soon as the presence of an outbreak is established, provide antiviral chemoprophylaxis with the currently recommended antiviral agent at the recommended dosage regimen to all non-ill residents in the facility, regardless of vaccination status. If there is a limited supply of antiviral agents: ◦ Give top priority for chemoprophylaxis to roommates and residents on the same floor or unit as residents with active influenza ◦ Prioritize residents in the same building with shared HCP ◦ Consult with medical director and local health department for further guidance • CDC recommends antiviral chemoprophylaxis for at least 2 weeks, and continuing for at least 7 days after the last known case was identified • Obtain influenza testing for any resident who develops signs or symptoms of ILI after receiving an antiviral agent for at least 72 hours and report positive result to the local health department due to possibility of antiviral resistance. Consult local health department for current information on resistance and recommendations for alternative chemoprophylaxis agents • Consider antiviral chemoprophylaxis for HCP in any of the following circumstances: ◦ If vaccinated and the circulating influenza strain is not well matched with vaccine strains ◦ If recently vaccinated and exposure to influenza occurred within 2 weeks of receiving injectable vaccine; do NOT give antiviral chemoprophylaxis until at least 14 days after the intranasal live- attenuated (LAIV) vaccine was received ◦ HCP who were not vaccinated due to a medical contraindication
8.Define process for **accepting and transferring residents**	• SNF must develop plans for managing new admissions and providing care for residents with influenza who require Droplet Precautions, while still maintaining capacity to provide care safely for other residents • Do not place new admissions on units with symptomatic residents • Do not transfer asymptomatic residents to units with residents who have active influenza

ACTIONS	RECOMMENDATIONS
8.Define process for **accepting and transferring residents** (continued) ☐ Initiated _____(date) ☐ Complete _____(date)	• Consult with the medical director and local health department to determine if the facility should be closed to new admissions due to an influenza outbreak ◦ Determine the duration of closures or limiting admissions for each situation individually. Consider the effectiveness of the influenza control measures implemented within the facility. Facility-wide and prolonged closures are not necessary if transmission is controlled and there is an unaffected location available where new admissions can be placed • Hospitalized patients with influenza should be discharged when they no longer require the level of care provided in an acute care setting. Discharge from hospital and admission or re-admission to SNF should not be determined by the period of potential virus shedding or recommended duration of Droplet Precautions • Ensure that new or returning residents with acute respiratory illness are evaluated medically by the SNF to determine room placement and needed infection control precautions • Develop plan to implement Droplet Precautions for returning residents who were hospitalized with influenza and are ready clinically for discharge from the acute care setting, but are still within the 7 day or longer period of required Droplet Precautions • Before transferring residents with suspected, probable or confirmed influenza to other departments or facilities, communicate all relevant information to transport personnel and other HCP accepting the resident in another department or facility. Information should include test results, date of illness onset, antiviral treatment, and needed infection control precautions
9.Manage **healthcare personnel (HCP)**	• Encourage well HCP who have not received annual influenza vaccine to accept vaccine. ◦ Provide at no cost and at a reasonable time and place for employees during working hours. • Instruct HCP who develop respiratory symptoms when away from facility to contact supervisor and not come to work until afebrile >24 hours without antipyretic treatment and with improvement in respiratory symptoms or no earlier than 5 days after illness onset

ACTIONS	RECOMMENDATIONS
9. Manage **healthcare personnel (HCP)** (continued) ☐ Complete _____(date)	• Instruct HCP who develop respiratory symptoms during the work shift to ○ Don a facemask, report to supervisor and promptly leave the facility ○ Not return to work until afebrile >24 hours without antipyretic treatment and with improvement in respiratory symptoms or no earlier than 5 days after illness onset. • Offer or refer ill HCP for influenza testing and empiric antiviral treatment as described above in #7.
10. Manage **visitors** ☐ Complete _____(date)	• Educate and encourage influenza vaccination for visitors • Encourage respiratory hygiene/cough etiquette • Encourage visitors to use a facemask for their protection when in the room of a resident on Droplet Precautions • Implement screening of visitors for signs of acute respiratory illness and exclude symptomatic visitors • Consider implementing visitor restrictions, such as limiting the number of visitors, excluding young children
11. Review **vaccine records** a. Influenza vaccine (residents, HCP) b. Pneumococcal vaccines (residents) ☐ Complete _____(date)	• Verify that the influenza vaccination plan from Table 1 has been implemented • Encourage and vaccinate residents and HCP who declined previously. Focus on areas with groups of unimmunized individuals and the highest risk residents, (for example, those who require ventilator therapy or have complex underlying medical conditions) • Ensure that residents admitted during an outbreak have received pneumococcal vaccines as per current ACIP recommendations and schedule reminders for providing any additional indicated doses

ACTIONS	RECOMMENDATIONS
12. Determine **end of outbreak** ☐ Completed_____(date)	• If no new cases have been identified for at least 1 week after the last confirmed case of influenza, it is reasonable to consider the outbreak over and resume new admissions to previously affected units • Consult the local health department to assist in determining the outbreak endpoint • As soon as end of outbreak is confirmed, notify: ◦ Infection preventionist ◦ Facility administration ◦ Medical director ◦ HCP of facility ◦ Local health department ◦ L&C district office ◦ Residents, family members, visitors
13. Perform **assessment** of outbreak control measures: • Successful strategies • Barriers • Lessons learned • Needs for the following season ☐ Complete _____(date)	• Upon completion of the influenza season, evaluate outbreak control processes and experiences: ◦ Number (%) of residents vaccinated; ill; received anti-viral treatment or chemoprophylaxis; transferred to acute care hospitals; and deceased ◦ Number and duration of outbreaks ◦ Number (%) vaccinated and ill HCP ◦ Successes ◦ Challenges • Obtain feedback from residents, HCP, families/visitors

GLOSSARY

Cohorting: The practice of grouping patients infected or colonized with the same infectious agent together to confine their care to one area and prevent contact with susceptible patients. Individuals who are suspected to have the same infection (for example, influenza) may be cohorted during an outbreak without confirmatory testing; therefore, it is important to treat each bed space in a cohort separately, performing hand hygiene and changing PPE between contacts with individuals in the cohort.

Diagnostic tests for influenza: There are three types of laboratory tests used for diagnosis of influenza on respiratory tract specimens from a nasopharyngeal (NP) swab:

1) Rapid diagnostic influenza test (RIDT)
    a. Widely available, detects influenza antigens with results within 15 minutes
    b. Sensitivity 50-70%, specificity 90-95%; therefore, 30-50% of influenza cases will not be detected
    c. Some RIDT will not distinguish influenza subtypes A and B
2) Molecular assays including reverse transcription polymerase chain reaction, RT-PCR; RT-PCR is the preferred test.
    a. Results available in 1-8 hours
    b. Very high sensitivity
    c. Single or multiplex; detects influenza subtypes (A and B)
    d. Preferred test to confirm the presence of an outbreak
3) Viral culture
    a. Not readily available and rarely performed
    b. Results available in 1-10 days

Droplet Precautions: A set of practices to prevent transmission of pathogens through close respiratory or mucous membrane contact with respiratory secretions. A single patient room is preferred for patients who require Droplet Precautions. When a single patient room is not available, assess the risks associated with other patient placement options such as cohorting or keeping the patient with an existing roommate. For patients in multi-bed rooms, maintain spatial separation of at least 6 feet and draw the privacy curtain between patient beds. Health care personnel don a surgical mask upon room entry (a respirator is not necessary). Facemasks should be changed when wet and between patient contacts. Residents on Droplet Precautions who must be transported outside of the room should wear a mask if tolerated and follow respiratory hygiene/cough etiquette.

Enhanced Standard Precautions: The use of gowns, gloves and frequent hand hygiene, based on resident characteristics that increase the risk of colonization and transmission of multi-drug resistant organisms (MDRO); for example, total dependence on others for assistances with activities of daily living (ADLs), presence of indwelling devices, ventilator dependence, presence of wounds, habitual incontinence and frequent soiling with urine/stool. If there is suspected or

confirmed ongoing transmission of an MDRO within a facility, Contact Precautions is recommended for individuals known to be colonized or infected with the MDRO.

Facemask: A loose-fitting, disposable device that creates a physical barrier between the mouth and nose of the wearer and potential contaminants in the immediate environment. Facemasks are not to be shared and may be labeled as surgical, isolation, dental or medical procedure masks. Facemasks may come with or without a face shield. If worn properly, a facemask is meant to help block large-particle droplets, splashes, sprays or splatter that may contain germs (viruses and bacteria), keeping it from reaching the mouth and nose of the person wearing it. Facemasks may also help contain and reduce exposure of an individual's saliva and respiratory secretions to others. Facemasks are not intended to be used more than once. If the mask is damaged, soiled, or wet, or if breathing through the mask becomes difficult, remove it, discard it safely, and replace it with a new one.

Hand hygiene: A general term that applies to any one of the following:

- Handwashing with plain (non-antimicrobial) soap and water);
- Antiseptic hand wash (soap containing antiseptic agents and water);
- Antiseptic hand rub (waterless antiseptic product, most often alcohol-based, rubbed on all surfaces of hands); or
- Surgical hand antisepsis (antiseptic hand wash or antiseptic hand rub performed preoperatively by surgical personnel to eliminate transient hand flora and reduce common hand flora).

Healthcare personnel (HCP), also referred to as healthcare workers (HCWs): All paid and unpaid persons who work in a healthcare setting; for example, any person who has professional or technical training in a healthcare-related field and provides patient care in a health care setting or any person who provides services that support the delivery of health care such as dietary, housekeeping, engineering, maintenance personnel.

Influenza-like illness (ILI): Fever (oral or equivalent temperature of 100 °F or greater) and cough and/or sore throat in the absence of a known cause other than influenza. This definition is used for influenza surveillance worldwide.

Influenza Outbreak within a residential facility: At least two residents with onset of influenza-like illness (ILI) within 72 hours of each other AND at least one resident has laboratory confirmed influenza by a molecular test (RT-PCR preferred).

Long-term care facilities: Institutions, such as skilled nursing facilities (SNF), nursing homes and facilities that provide health care to people including children, who are unable to manage independently in the community. This care may represent custodial or chronic care management or short-term rehabilitative services. In California, long term care facilities are licensed by CDPH Licensing and Certification (L&C), including skilled nursing facilities (SNF),

congregate living health facilities, intermediate care facilities (ICF), ICF/developmentally disabled (DD), ICF/DD Continuous Nursing, and ICF/DD – Habilitative, and ICF/DD – Nursing

Personal protective equipment (PPE): A variety of barriers used alone or in combination to protect mucous membranes, skin, and clothing from contact with infectious agents. PPE includes gloves, masks, respirators, goggles, face shields, and gowns.

Respiratory hygiene/ cough etiquette: A combination of measures to minimize the transmission of respiratory pathogens via droplet or airborne routes in healthcare settings. Respiratory hygiene/cough etiquette includes:

- Covering the mouth and nose during coughing and sneezing.
- Using tissues to contain respiratory secretions with prompt disposal into a no-touch receptacle.
- Turning the head away from others and maintaining spatial separation, ideally ≥6 feet, when coughing.
- Performing hand hygiene after contact with respiratory secretions or items contaminated with respiratory secretions.
- Offering a facemask to persons who are coughing to decrease contamination of the surrounding environment.

REFERENCES

1. CDC. Annual Recommendations for Prevention and Control of Influenza with Vaccines. https://www.cdc.gov/flu/professionals/index.htm
2. Uyeki TM, Bernstein HH, Bradley JS, et al. Clinical Practice Guidelines by the Infectious Diseases Society of America: 2018 Update on Diagnosis, Treatment, Chemoprophylaxis, and Institutional Outbreak Management of Seasonal Influenza. Clinical Infectious Diseases 2019; 68 (6) March 15: e1-47 https://academic.oup.com/cid/article/68/6/e1/5251935***;*** correction published May 15, 2019 https://doi.org/10.1093/cid/ciz044
3. National Adult and Influenza Immunization Summit. Guidance for Leaders/Administrators in Post-Acute and Long-Term Care Facilities Who Plan to Improve Staff Influenza Vaccination Compliance through Vaccination Requirement Policies https://www.izsummitpartners.org/content/uploads/2019/02/guidance-for-developing-a-flu-vax-reqt-policy-for-hcp-in-post-acute-and-ltcf.pdf. Accessed September 27, 2019.
4. Siegel JD, Rhinehart E, Jackson M, Chiarello L, and the Healthcare Infection Control Practices Advisory Committee, 2007 Guideline for Isolation Precautions: Preventing Transmission of Infectious Agents in Healthcare Settings. https://www.cdc.gov/infectioncontrol/guidelines/isolation/index.html
5. FDA. Masks and N95 Respirators. http://www.fda.gov/MedicalDevices/ProductsandMedicalProcedures/GeneralHospitalDevicesandSupplies/PersonalProtectiveEquipment/ucm055977.htm. Accessed September 12, 2018.
6. Fiore AE. Antiviral Agents for the Treatment and Chemoprophylaxis of Influenza: Recommendations of the Advisory Committee on Immunization Practices (ACIP). MMWR Recomm Rep 2011; 60 [No. RR-1], January 21, 2011. Antiviral Agents for treatment and prophylaxis of Influenza. MMWR 2011.pdf
7. Singh D, Jiang D, Van Caeseele, Loeppky C. The effect of timing of oseltamivir chemoprophylaxis in controlling influenza A H3N2 outbreaks in long-term care facilities in Manitoba, Canada, 2014-2015: a retrospective cohort study. Infect Control Hosp Epidemiol 2018; 39:955-960.
8. Arriola C, Garg S, Anderson EJ, Ryan PA et al. Influenza Vaccination Modifies Disease Severity Among Community-dwelling Adults Hospitalized With Influenza. Clin Infect Dis. 2017 Oct 15; 65(8):1289-1297.
9. Flannery B, Reynolds SB, Blanton L, Santibanez TA, et al. Influenza Vaccine Effectiveness against Pediatric Deaths 2010-2014. Pediatrics. 2017 May; 139(5):e2016-4244.
10. Thompson MG, Pierse N, Huang QS, et al. Influenza vaccine effectiveness in preventing influenza-associated intensive care admissions and attenuating severe disease among adults in New Zealand 2012–2015. Vaccine 2018; 36: 5916-5925.
11. Black CL, Yue X, Ball SW, Fink RV, et al. Influenza Vaccination Coverage Among Health Care Personnel — United States, 2017–18 Influenza Season. MMWR 2018; 67:1050-54.
12. Rambhia KJ and Rambhia MT. Early bird gets the flu. What should be done about waning intraseasonal immunity against seasonal influenza? Clin Infect Dis 2019; 68: 1235-40.
13. McFadden DR. Use of Genome Sequencing to Define Institutional Influenza Outbreaks, Toronto, Ontario, Canada, 2014–15. EID 2018; 24:492.

ADDITIONAL RESOURCES

CDC Respiratory hygiene, cough etiquette
(https://www.cdc.gov/flu/professionals/infectioncontrol/resphygiene.htm)

CDC Adult immunization schedule
(https://www.cdc.gov/vaccines/schedules/hcp/adult.html)

California Department of Public Health (CDPH) influenza surveillance
(https://www.cdph.ca.gov/Programs/CID/DCDC/Pages/Immunization/Flu-Reports.aspx)

CDPH Licensing and Certification District Offices
(http://www.cdph.ca.gov/certlic/facilities/Pages/LCDistrict Offices.aspx)

CDC resource to assist in finding sites to obtain flu vaccine by zipcode
(https://www.cdc.gov/flu/freeresources/flu-finder-widget.html)

CDC Influenza Home Page
(https://www.cdc.gov/flu/)

CDC Influenza information for health professionals
(https://www.cdc.gov/flu/professionals/)

CDC toolkit for long- term care facility employers
(https://www.cdc.gov/flu/toolkit/long-term-care/)

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

Resident Identification				Vaccine History		Illness description										Influenza Test Results			Pneumococcal Test Results		Anti-viral Treatment	Antibiotic Treatment	Illness Outcome				
Name	Age	Sex (M/F)	Building, Unit, Room, Bed	Influenza (Y/N)	Pneumococcal (Y/N)	Date onset illness	Highest temperature	Cough (Y/N)	Malaise/fatigue (Y/N)	Chills/rigors (Y/N)	Sore through (Y/N)	Arthralgia/myalgia (Y/N)	Change in respiratory status (e.g., sputum) (Y/N)	Pneumonia (Y/N)	CXR confirmed (Y/N)	Rapid antigen (=/-/ND)	RT-PCR	Viral culture	Gram stain	Sputum culture	Date started/Date ended	Date started/Date ended	Influenza (Y/M)	Pneumonia (Y/N0	Hospitalized (Y/N)	No. Days hospitalized	Died (Y/N0 if yes, date

Appendix B - Sample Surveillance Case Log of Health Care Personnel (HCP) with Acute Respiratory Illness and/or Pneumonia

HCP identification		Position on staff and location		Influenza Vaccine	Illness description							Influenza test results			Antiviral drugs		Illness outcomes
Name	Age	Job title	Location	Influenza (Y/N)	Date onset	Highest temperature	Cough (Y/N)	Malaise/fatigue (Y/N)	Chills/rigors (Y/sN0	Sore through (Y/N)	Arthralgia/myalgia (y/N)	Rapid antigen (+/-/ND)	RT-PCR	Viral Culture	Date started/Date ended	Date resolved	Date returned to work