Recommendations for the Prevention and Control of Influenza in California Skilled Nursing Facilities (SNF) during the COVID-19 Pandemic

Updated October 6, 2020
National Influenza Vaccination Week December 6-12, 2020

2019-2020 Flu Season: Burden and Burden Averted by Vaccination

During the 2019-2020 season, CDC estimates flu caused:

- 38 million flu illnesses
- 400,000 flu hospitalizations
- 22,000 flu deaths

It could have been even worse without flu vaccines.

Nearly 52% of the U.S. population 6 months and older got a flu vaccine during the 2019-2020 flu season, and this prevented an estimated:

- 7.5 million flu illnesses
- 105,000 hospitalizations
- 6,300 deaths

Equivalent to saving about 17 lives per day over the course of a year.

Imagine the impact if more Americans chose to get a flu vaccine. Many more flu illnesses, flu hospitalizations, and flu deaths could be prevented.

The estimates for the 2019-2020 influenza season are preliminary pending additional data from the season.

Visit cdpf.ca.gov/fightflu

#FightFluTogether
Objectives

• Describe background and key messages about influenza and SARS-CoV-2 co-circulation

• Describe guidance for planning for influenza and SARS-CoV-2 co-circulation in California SNF

• Discuss considerations for recognizing, confirming and managing an influenza outbreak during the COVID-19 pandemic in California SNF
Organization of the guidance document

- Introduction
- Key Messages
- **Table 1**: Comparison of clinical characteristics of COVID-19 and influenza
- **Table 2**: Planning for influenza illness and outbreaks in SNF
- **Table 3**: Identifying and Controlling Influenza Outbreaks in SNF
- Glossary
- Resources
- **Appendix A**: Sample Surveillance Case Log of Residents with Acute Respiratory Illness and/or Pneumonia
- **Appendix B**: Sample Surveillance Case Log of Healthcare Personnel with Acute Respiratory Illness and/or Pneumonia

[CDPH AFL 20-80](https://www.cdph.ca.gov/Programs/CHCQ/LCP/Pages/AFL-20-80.aspx)
What will be different this flu season?
Co-circulation of influenza and SARS-CoV-2

• Influenza seasons vary in severity from year to year, based on the characteristics of the circulating influenza virus strains and how well the vaccine matches the circulating strains

• Co-circulation of influenza and SARS-CoV-2 viruses has been documented

• Frequency, severity, risk factors, interactions unknown
Patterns of co-circulation of influenza and SARS-CoV-2 vary in different geographic locations

- **China**: Co-infection with influenza and SARS-CoV-2 at the beginning of the pandemic was common
- **England**: Risk of death in patients with co-infection was 6 times greater than among those who tested negative for both influenza and SARS-CoV-2 and 2.3 times greater than in those with COVID-19 only
- **Southern hemisphere** (Australia, Chile, South Africa): Very minimal circulation of influenza viruses was reported while SARS-CoV-2 was predominant during the 2020 influenza season

Yue H. Journal of Medical Virology, June 12, 2020, [https://doi.org/10.1002/jmv.26163](https://doi.org/10.1002/jmv.26163)


**MMWR 2020; 69 (37): 1305-9** (PDF). September 18, 2020
Key Message: Nonpharmaceutical interventions

- Nonpharmaceutical interventions (NPI) such as universal masking, spatial distancing, avoiding group gatherings, staying home when sick, closing schools and limiting travel implemented for prevention of COVID-19 will likely contribute to prevention of influenza, but **do not replace influenza vaccination and chemoprophylaxis with influenza antivirals**
Key Message: Influenza vaccination

- **Vaccination** is the most effective tool to prevent influenza and its serious complications.
- While the effectiveness of influenza vaccines for prevention of all influenza infections varies by season, these vaccines prevent severe disease, ICU admissions, and death.
- **Influenza vaccine is especially important for SNF HCP to protect themselves and their vulnerable residents.**
- There is a robust supply of influenza vaccine for 2020-21.
- Influenza vaccine will neither prevent SARS-CoV-2 infection nor increase the risk of infection with SARS-CoV-2.
- Data from Italy\(^1\) and Brazil\(^2\) demonstrate a significant reduction in mortality from COVID-19 among influenza vaccine recipients.

**CDPH Fight Flu Together** (www.cdph.ca.gov/Programs/OPA/Pages/Communications-Toolkits/Fight-Flu-Together.aspx)

1. [www.ncbi.nlm.nih.gov/pmc/articles/PMC7300995/pdf](www.ncbi.nlm.nih.gov/pmc/articles/PMC7300995/pdf)
2. [www.medrxiv.org/content/10.1101/2020.06.29.20142505v1.full.pdf](www.medrxiv.org/content/10.1101/2020.06.29.20142505v1.full.pdf)
HEALTHCARE-ASSOCIATED INFECTIONS PROGRAM

Key Message: Provide flu vaccine to SNF HCP

• 2018-2019: 67.9% of HCP working in long term care facilities (LTCF) in the U.S. were vaccinated against influenza during the 2018-19 season compared with 95% coverage in acute care hospitals.

• 2019-20: vaccination coverage in LTCF was 69.3%, but 85-89% in LTCF with employer requirement and programs on site.

CDC Influenza Oct.1, 2020 (www.cdc.gov/flu/fluuvaxview/hcp-coverage_1920estimates.htm#five)
Key Message: Influenza prevention

• Prompt initiation of antiviral treatment or prophylaxis can reduce morbidity associated with influenza

• At this time, there is no medication to prevent for SARS-CoV-2 after exposure

• Administration of COVID-19 vaccine to HCP and residents in SNF is anticipated to begin this month; protection is expected to be complete by 6 weeks after the first dose
### TABLE 1. Similarities and Differences Between Seasonal Influenza Virus and SARS-CoV2

**Same:** Fever, chills, cough, shortness of breath or difficulty breathing, fatigue, sore throat, runny or stuffy nose, myalgias, headache, vomiting and diarrhea, cardiac complications

**Differences:**

<table>
<thead>
<tr>
<th>Select Characteristics</th>
<th>Influenza</th>
<th>COVID-19</th>
</tr>
</thead>
<tbody>
<tr>
<td>Peak symptoms</td>
<td>During days 3-7 of illness</td>
<td>During week 2-3 of illness</td>
</tr>
<tr>
<td>Incubation Period</td>
<td>1-4 days (median 2 days)</td>
<td>14 days (median 5 days)</td>
</tr>
<tr>
<td>Case-Fatality Rate</td>
<td>0.1%</td>
<td>0.25-3.0%</td>
</tr>
<tr>
<td>Primary route of transmission</td>
<td>Droplet, short-range aerosol possible</td>
<td>Droplet, short-range aerosol</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Fomite and fecal-oral less important</td>
</tr>
<tr>
<td>Recommended PPE</td>
<td>Surgical mask; gown and gloves if high contact activity</td>
<td><strong>N95 respirator, eye protection,</strong> gown, gloves AIIR if aerosol generating procedure</td>
</tr>
</tbody>
</table>
Key message: Testing, resident placement & cohorting

- **Testing**: Once influenza is circulating in the community, always test residents with symptoms & signs of COVID-19 or influenza for both viruses.

- **Resident placement**: Maintain symptomatic resident in current room and implement COVID-19 transmission-based precautions pending test results.

- **Cohorting**: Avoid movement of residents with suspected or confirmed influenza *between* COVID-19 cohorts.
Table 2. Planning for Management of Influenza Illness and Outbreaks in SNF during the COVID-19 pandemic

<table>
<thead>
<tr>
<th>ACTIONS</th>
<th>RESIDENTS</th>
<th>HCP</th>
<th>FAMILY MEMBERS/VISITORS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Educate</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Update influenza vaccination plan</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Review pneumococcal vaccination status of residents</td>
<td>X</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Update plan for daily active ILI surveillance</td>
<td>X</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>PLAN TO TEST RESIDENTS WITH SIGNS OF COVID OR FLU FOR BOTH VIRUSES</td>
<td>X</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Adjust plan for influenza prevention and outbreak management for COVID-19</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Update plan for obtaining and using influenza antiviral agents</td>
<td>X</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Develop process for after action evaluation of plan</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
</tbody>
</table>
Know how to follow influenza activity in California

- Consult LHD website
- Access CDPH flu reports that are updated weekly (www.cdph.ca.gov/Programs/CID/DCDC/Pages/Immunization/Influenza.aspx)
  - Scroll down to surveillance reports
Before an outbreak occurs: Plan your influenza vaccination program

- SNF are responsible for
  - Providing influenza vaccine to residents and HCP on site
  - Providing education and referral to sites for vaccine to families
- Use standing orders per AB 1711, 2005 (leginfo.legislature.ca.gov/faces/billTextClient.xhtml?bill_id=200520060AB1711)
- Minor illness, SARS-CoV-2 exposure are not contraindications
- Designate a specific influenza vaccination week to complete most vaccination, but continue throughout the season
- Identify flu vaccine champions
- Track vaccine administrations

CDPH Flu Materials (www.cdph.ca.gov/Programs/OPA/Pages/Communications-Toolkits/Fight-Flu-Together.aspx)
Special considerations during the pandemic

• **No data** to inform optimal timing of influenza vaccine for individuals who have COVID-19, are incubating, or recovering

• Timing will be determined by the risk for serious complications associated with influenza and the level of influenza circulating in the community

• Moderate or severe acute illness is a precaution for all vaccines

• Side effects that are self-limited may complicate clinical evaluation of individuals with possible or evolving COVID-19
  - Fever, chills, headache, myalgia after a flu vaccine resolve within 48-72 hours
  - Side effects of vaccine NOT caused by SARS-CoV-2 infection:
    ▪ local reaction at the injection site

Interim Guidance for Routine and Influenza Immunization Services During the COVID-19 Pandemic
(www.cdc.gov/vaccines/pandemic-guidance/)
HEALTHCARE-ASSOCIATED INFECTIONS PROGRAM

Table 3. Identifying and Controlling Influenza Outbreaks in SNF

<table>
<thead>
<tr>
<th>ACTIONS</th>
<th>RECOMMENDATIONS</th>
</tr>
</thead>
</table>
| 1. Perform daily active **surveillance** for respiratory illness in residents and HCP (Appendix A, B) | • During influenza season, usually October-March, 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)  
  ◦ The respiratory illness line lists are different from the line lists used to track serial testing results for COVID-19 (contact covHAI@cdph.ca.gov for COVID-19 line list template); continue to use COVID-19 line list for tracking serial test results  
  ◦ Include individuals with current or recovered COVID-19 who have new onset of respiratory symptoms  
  ◦ Record specific locations of ill residents and HCP assignments and include information about sick HCP and sick visitors, as available |
| □ Initiated __________ (date) | • Review line list daily and take actions needed if suspect influenza cases are identified. |
| □ Complete __________ (date) |  |
| 2. Use **diagnostic testing** ([www.cdc.gov/flu/professionals/diagnosis/overview-testing-methods.htm](http://www.cdc.gov/flu/professionals/diagnosis/overview-testing-methods.htm)) for influenza and SARS-CoV-2:  
  • Multiplex molecular assays  
    ◦ Influenza A, B, and SARS-CoV-2  
  • Rapid molecular assays  
  • Rapid antigen detection assays | • Test residents with onset of respiratory symptoms for both influenza and SARS-CoV-2 at the same time to **confirm the diagnosis**; contact the local health department for assistance obtaining real-time RT-PCR testing for influenza with rapid turn-around time.  
  • Wherever available, use **multiplex influenza A and B and SARS-CoV-2** (Flu SC2) ([www.cdc.gov/flu/professionals/diagnosis/table-flu-covid19-detection.html](http://www.cdc.gov/flu/professionals/diagnosis/table-flu-covid19-detection.html)) tests; multiplex point-of-care (POC) testing for both influenza and SARS-CoV-2 should be considered for rapid evaluation of symptomatic individuals, followed by confirmatory real-time RT-PCR testing for **negative** results.  
  • The lower sensitivity of antigen detection rapid influenza diagnostic tests (RIDTs) increases the risk of not identifying an influenza case; a negative RIDT in a symptomatic individual should be confirmed with real-time RT-PCR testing for influenza, even when the SARS-CoV-2 test is positive.  
  • The lower sensitivity of POC antigen tests for SARS-CoV-2 increases the risk of not identifying a COVID-19 case; a negative POC antigen test for SARS-CoV-2 in a symptomatic individual should be confirmed with real-time RT-PCR testing for SARS-CoV-2, even when the influenza test (RIDT or POC) is positive. |
Surveillance for acute upper respiratory illness (URI) and pneumonia

• Conduct daily active surveillance for acute URI and pneumonia in residents and in HCP
  o Include COVID-19 recovered individuals who develop new onset of respiratory symptoms
  o Review linelist daily to determine if testing or isolation needed, or definition of outbreak is met
  o Review absenteeism of HCP

Excel surveillance templates
(www.cdph.ca.gov/Programs/CHCQ/HAI/Pages/SNF_DetectAndControlOutbreaks.aspx)
Testing: Understanding *multiplex* panels

- Multiplex tests to detect influenza A/B and SARS-CoV-2
  - May be a molecular (Flu SC2) or an antigen test
  - Molecular Flu SC2 available in public health labs; some commercial platforms
  - Antigen test performed with the Quidel Sofia 2 using a special cassette
- Respiratory viral panel (RVP), a PCR assay, that detects many viruses in addition to influenza and SARS-CoV-2
  - Available in Public Health Labs and commercially, expensive
  - Recommended when there is an outbreak of respiratory viral illness and tests for influenza and SARS-CoV-2 are negative
Testing SNF residents with symptoms during the pandemic

- Test any resident with symptoms of COVID-19 or influenza for both viruses to inform infection control practices and treatment
  - Use flu/SARS-CoV-2 multiplex tests (Flu SC2) whenever possible
  - Rapid influenza molecular tests (NAAT) rather than rapid influenza antigen tests (RIDTs) are preferred for improved sensitivity, at least to establish the presence of an outbreak
  - Confirm a negative rapid antigen test for SARS-CoV-2 in a symptomatic individual with RT-PCR
  - A positive test for either influenza or SARS-CoV-2 does not exclude the possibility of a co-infection
  - Use a broad respiratory virus panel (RVP) to test for other respiratory viruses, e.g., RSV, adenovirus, parainfluenza, human metapneumovirus, if influenza and SARS-CoV-2 tests are negative and an outbreak of respiratory illness is suspected.


Overview of Influenza Testing Methods
(www.cdc.gov/flu/professionals/diagnosis/overview-testing-methods.htm)
Collection of specimens for testing

– Follow directions in test kits used

– Influenza
  
  o **When:** 24-72 hours after symptom onset is optimal
  
  o **What:** A nasopharyngeal or combined throat and midturbinate nasal specimens provide the most accurate results
  
  o **How:** Follow directions that accompany the rapid influenza testing kit; use 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.**

Information for Clinicians on Influenza Virus Testing
(www.cdc.gov/flu/professionals/diagnosis/index.htm)
Establish the presence of an influenza outbreak

• Definition
  - > 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 molecular assay (RT-PCR)
  - Consult LHD for guidance
  - *Influenza outbreaks might occur separately or concurrently with COVID-19 outbreaks; the presence of a confirmed influenza outbreak does not preclude the possibility of a COVID-19 outbreak, nor does a COVID-19 outbreak preclude the possibility of an influenza outbreak*
Communication: This is what you have been planning for!

- As soon as an influenza outbreak is established, notify:
  - Facility infection preventionist, administration, medical director, staff
  - Local health department, CDPH L&C district office
  - Residents, family members, visitors
- Post signs at facility entrances: Reminders about vaccine
  - Add tissues and covered waste receptacles to COVID-19 materials and signage at entrance
- Remind HCP of their specific tasks according to the influenza outbreak plan
  - Document assignments and dates initiated and completed
- Restrict visitation and admissions during an active flu outbreak
Transmission-based precautions and cohorting

• General principles
  o PPE practices for SARS-CoV2 will protect against flu, but PPE practices for flu won’t protect against SARS-CoV-2
  o **Do not move residents with suspected or confirmed influenza between COVID-19 cohorts;** for example, do not move a resident with suspected or confirmed influenza from a yellow (COVID-19 exposed or observation) to a green (COVID-19 unexposed or recovered) area
    ▪ Residents with suspected or confirmed influenza may be cohort ed together within the same COVID-19 zone
    ▪ During an outbreak of COVID-19 and flu, each COVID-19 zone (Red, Yellow) may require a separate area for flu
Transmission-based precautions and cohorting

- **Source control**
  - Emphasize masks, cloth face coverings for residents, HCPs, and visitors to prevent transmission of flu, using signage

- **Prioritize single-bed rooms, where available, for residents with suspected flu pending test results**
  - If single rooms are unavailable, ill residents may remain in their room with separation of ≥ 6 feet and privacy curtain between residents

- **Use COVID-19 transmission-based precautions while test results pending**
When influenza only is confirmed: PPE

- Droplet precautions plus face shield
  - Continue for ≥ 7 days after illness onset (24 hours after resolution of fever and respiratory signs)
- Don N95 plus face shield, gowns and gloves for aerosol generating procedures
- Add gloves and gowns per Standard precautions when contact with blood or body fluids is anticipated; add Enhanced Standard precautions for high contact activities with residents at risk for MDRO
- Maintain residents in their rooms when safe 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
When influenza only is confirmed:
Adherence monitoring

• Perform repeated **audits of HCP adherence** to masking for source control, hand hygiene and other infection control precautions
  – Secret Shopper
  – Immediate feedback to HCP when lapses are observed
• Perform audits of residents wearing masks when HCP are in the room with feedback to resident and staff
• Report trends in audit results to SNF administrators and leaders
• Post de-identified adherence monitoring data in HCP break or charting areas
Antiviral agents for influenza: treatment

• Begin anti-viral treatment as soon as possible, but within 48 hours of symptom onset
• When there is ongoing transmission of influenza and not SARS-CoV-2, do not wait for test results before initiating Rx
• Consult resident’s PCP for any necessary dose adjustments in residents with underlying conditions, such as renal impairment
• If illness progresses for 72 hours on therapy, consult LHD for evaluation of possible drug resistance
Antiviral agents for influenza: chemoprophylaxis

• When an influenza outbreak is established, provide influenza antiviral chemoprophylaxis with the currently recommended antiviral agent at the recommended dosage regimen to all non-ill residents in the entire facility or in the building or unit affected, regardless of vaccination status

• Prioritize as follows:
  o Roommates, residents on the same floor or unit as residents with active influenza
  o Residents in the same building with shared HCP

• Duration: > 14 days and > 7 days after the last known case was identified

• Re-test for flu and SARS-CoV-2 any resident who develops signs or symptoms of ILI after receiving an antiviral agent for ≥ 72h
Manage healthcare personnel (HCP)

• Ensure vaccination
• Instruct not to work with respiratory tract infection symptoms
• If symptoms develop at work: ensure face mask in place, notify supervisor, leave promptly, test for SARS-CoV-2 and flu
• If influenza pos. and SARS-CoV-2 neg.
  o HCP follows facility policy for return to work for influenza: at minimum do not return to work until afebrile >24 hours without antipyretic treatment and with improvement in respiratory symptoms or no earlier than 5 days after onset
• Consider referring HCP for antiviral chemoprophylaxis if:
  o < 14 days after receiving vaccine, but must be > 14 days after LAIV4
  o Not vaccinated due to contraindications
  o At high risk for complications
Determine end of influenza outbreak

- Consult LHD
- No new cases of influenza identified for at least 1 week after the last confirmed case of influenza
- Resume new admissions to previously affected units, or as determined by COVID-19 status
- Notify:
  - Facility infection preventionist, administration, medical director, HCP
  - Local health department
  - L&C district office
  - Residents, family members, visitors
- Perform assessment of program and begin plan for next year
Conclusions

• Unprecedented times require preparation for flu and SARS-CoV-2 co-circulation: *Prepare for the worst, hope for the best*

• Planning ahead for prevention of adverse outcomes associated with influenza requires a strong flu vaccination program for residents and staff with education for families

• Continue NPI practices

• Ongoing surveillance and evaluation will detect unpredicted events

• New CDC guidance since CDPH document posted on 10.6.20
  
  - Interim guidance for influenza outbreak management in SNF (11.17.20)  
    (www.cdc.gov/flu/professionals/infectioncontrol/ltc-facility-guidance.htm)
  
  - Testing and management considerations for SNF  
    (www.cdc.gov/flu/professionals/diagnosis/testing-management-considerations-nursinghomes.htm)
Questions?

For more information, email

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