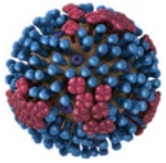
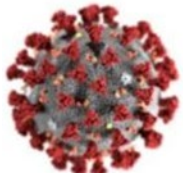




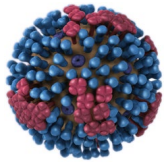
# Influenza Prevention and Outbreak Management in SNF 2021-22

10.27.2021

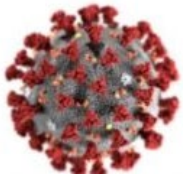
Healthcare-Associated Infections Program
Center for Health Care Quality
California Department of Public Health

# Objectives

- Describe the epidemiology of influenza, SARS-CoV-2, and other respiratory viruses in California
- Describe background and key messages about prevention of influenza during the COVID-19 pandemic
- Describe guidance for planning and managing influenza and SARS-CoV-2 co-circulation in SNF
- Describe the role of the local health department (LHD) in influenza prevention and outbreak management

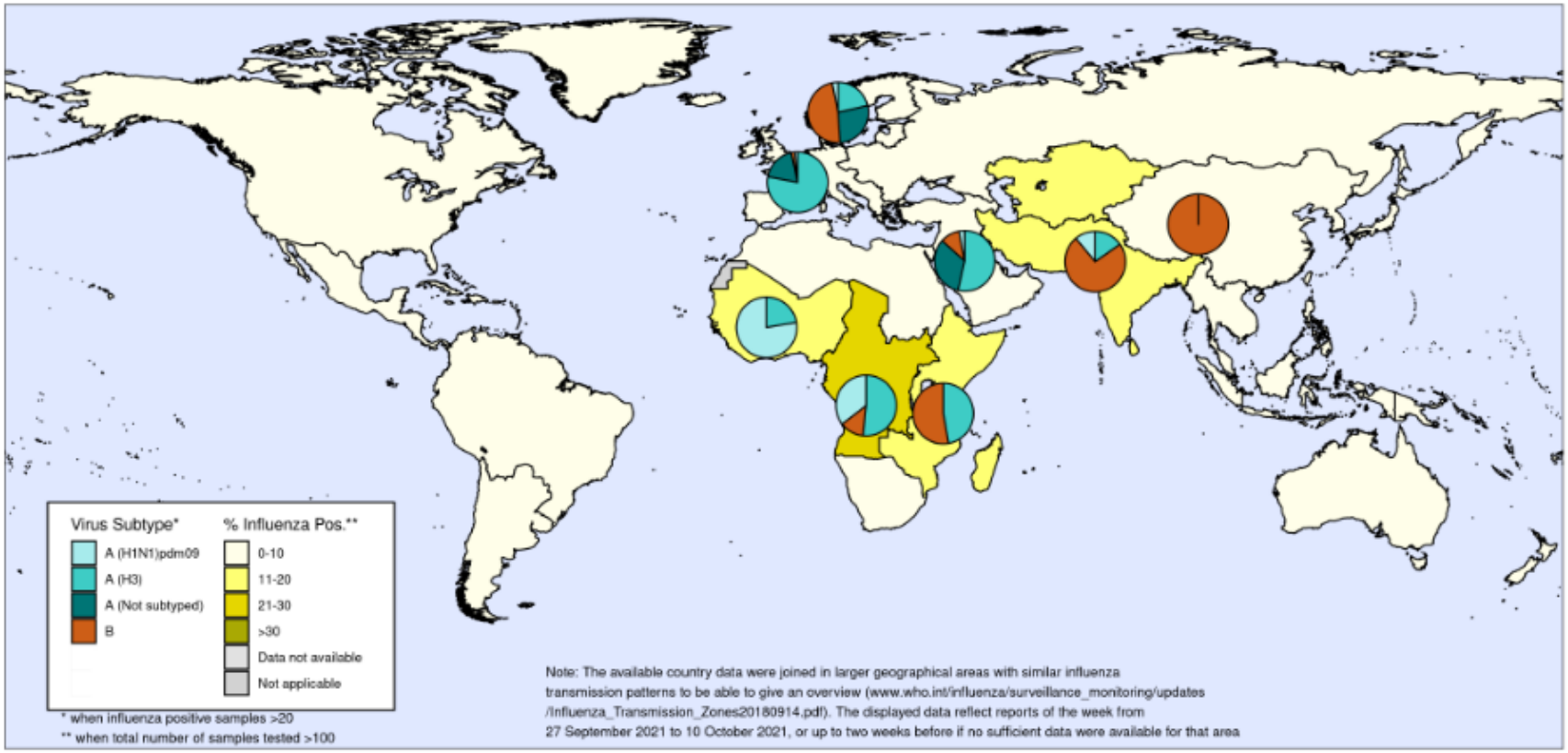


# What will be different this flu season?



- 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 unpredictable
  - Concern about predominance of **A(H3N2)** influenza A strain in the southern hemisphere 2021

# Influenza Activity Up To 10/10/2021 – WHO




Globally: Flu activity lower than expected for time of year

< 1% flu tests 9/27-10/10/21 pos.

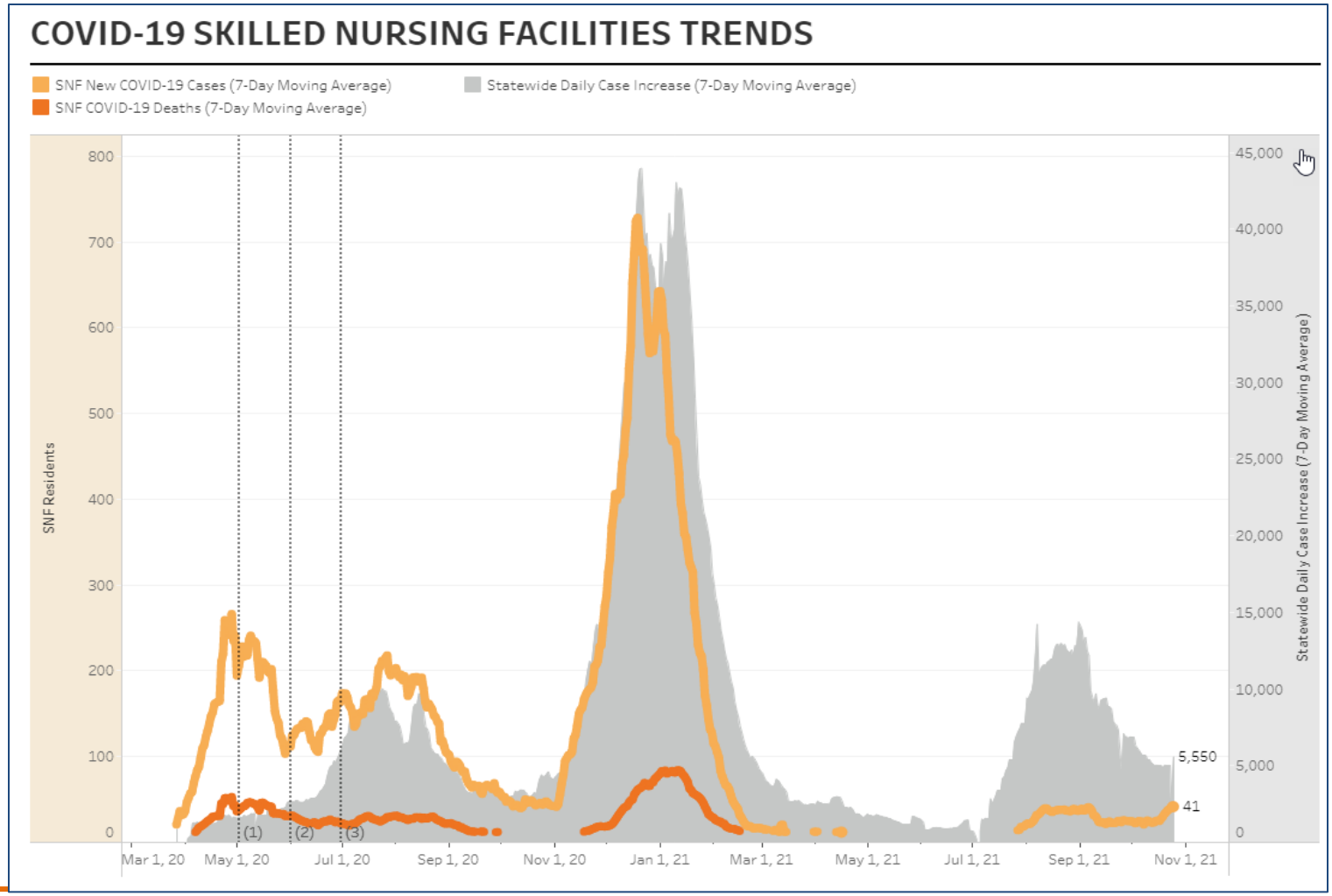
Flu B 66% (Victoria)  Flu A 34%, 66% A(H3N2)

RSV increased in many areas

https://www.who.int/teams/global-influenza-programme/surveillance-and-monitoring/influenza-updates/current-influenza-update

California Department of PublicHealth

# SARS-CoV-2 in California SNF as of 10/25/2021




California Department of PublicHealth

# Influenza and Other Respiratory Viruses Weekly Report

California Influenza Surveillance Program

**Highlights** (Week 41: October 10, 2021 – October 16, 2021)

## Statewide Activity

No Activity | **Sporadic** | Local | Regional | Widespread

**Regions with Elevated Activity**

- **Deaths:** 0* since Oct. 3, 2021
- **Outbreaks:** 0 since Oct. 3, 2021
- **Laboratory:** 0.3% flu positive
- **Hospitalizations:** 0.0% flu admissions
- **Outpatient ILI:** Within expected levels

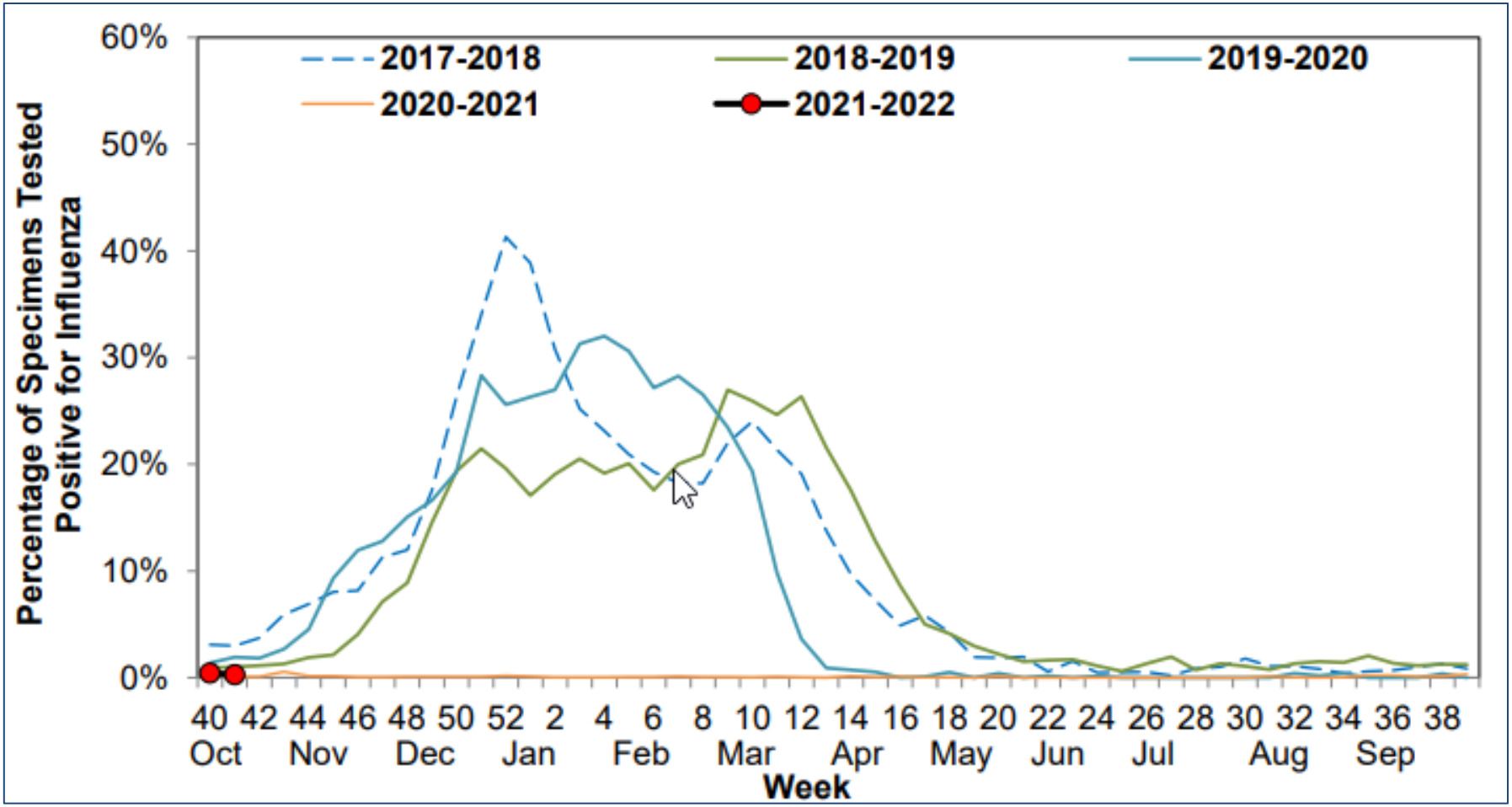
* Influenza-coded deaths from death certificates
*Click on images and links for more information*

## Key messages:

- Influenza activity is low in California.
- Getting a flu shot is the best way to protect yourself against flu, its potentially serious complications, and reduce strain on our healthcare system.
- Respiratory syncytial virus (RSV) activity is unusually high for this time of year.
- Prophylactic palivizumab can prevent serious RSV illness in high risk-infants.

https://www.cdph.ca.gov/Programs/CID/DCDC/CDPH%20Document%20Library/Immunization/Week2021-2241_FINALReport.pdf

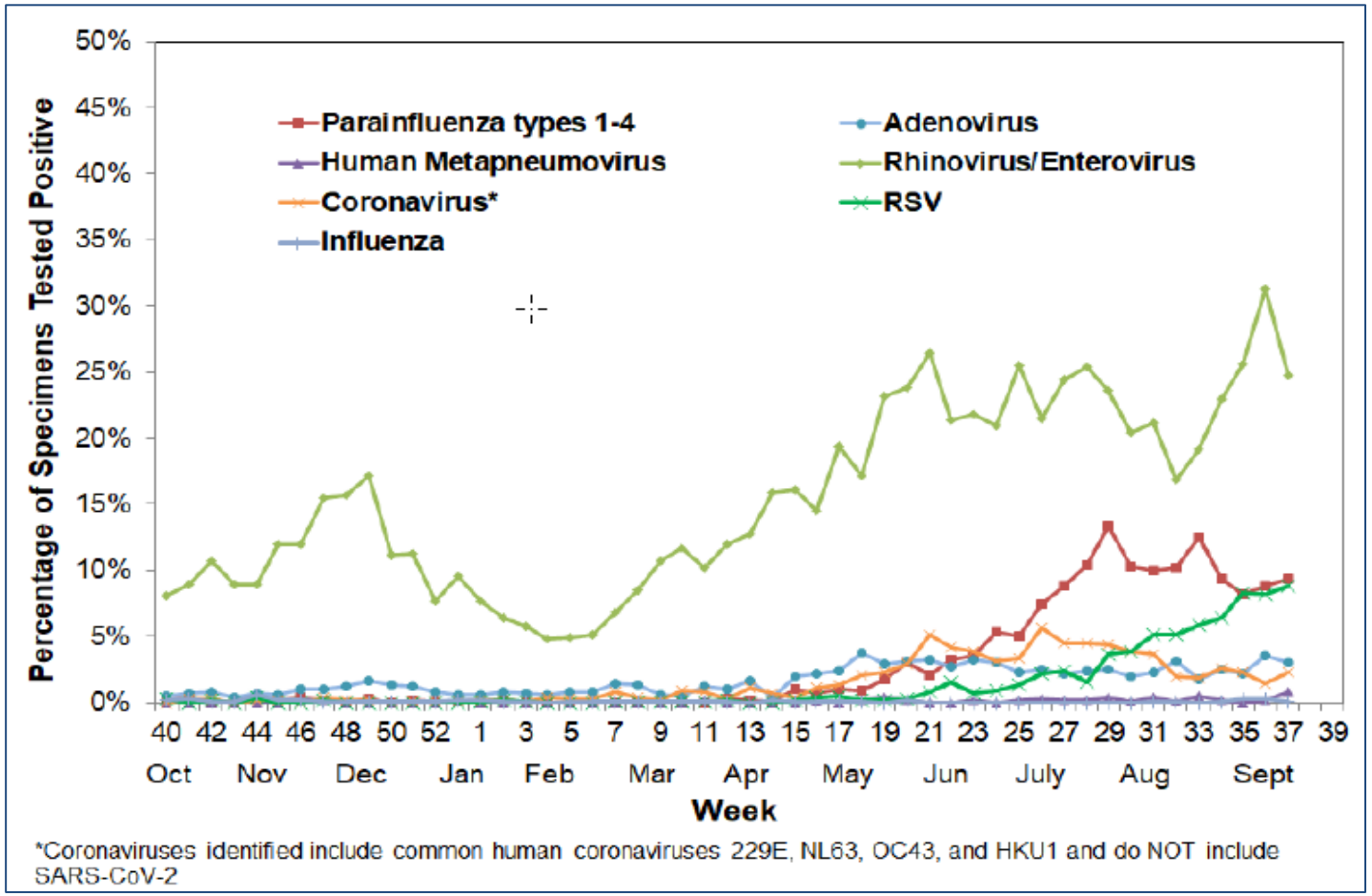
# Percentage of Influenza Detections at Clinical Sentinel Labs 2017-2022




Season to date: pos. 0.4%, sporadic, 3 cases Flu B in 3 different LTCF

California Department of PublicHealth

# Percentage of Respiratory Pathogen Detection at Clinical Sentinel Labs, California 2020-2021




As of 10/16/21: 8.2% RSV pos. (decreasing; usual peak Dec-March pre-COVID
Parainfluenza, non SARS-CoV-2 coronaviruses, rhino/entero increased

# Reasons for Low Influenza Activity During 2020-21 Season

- COVID-19 mitigation measures
  - Wearing face masks
  - Staying home
  - Hand hygiene
  - School closures
  - Reduced travel
  - Increased ventilation of indoor spaces
  - Physical distancing
  - ? Viral interference


- **How will COVID-19 vaccine and changes in behaviors affect influenza circulation this season????**

# Key Message: Nonpharmaceutical Interventions

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


*CDPH FAQs on Face Coverings 9/1/2021: https://www.cdph.ca.gov/Programs/CID/DCDC/Pages/COVID-19/Face-Coverings-QA.aspx

# Key Messages: 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 residents at risk of severe illness and death**
  - **SNF HCP to protect themselves and their vulnerable residents**

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

[1] www.ncbi.nlm.nih.gov/pmc/articles/PMC7300995/pdf

[2] www.medrxiv.org/content/10.1101/2020.06.29.20142505v1.full.pdf

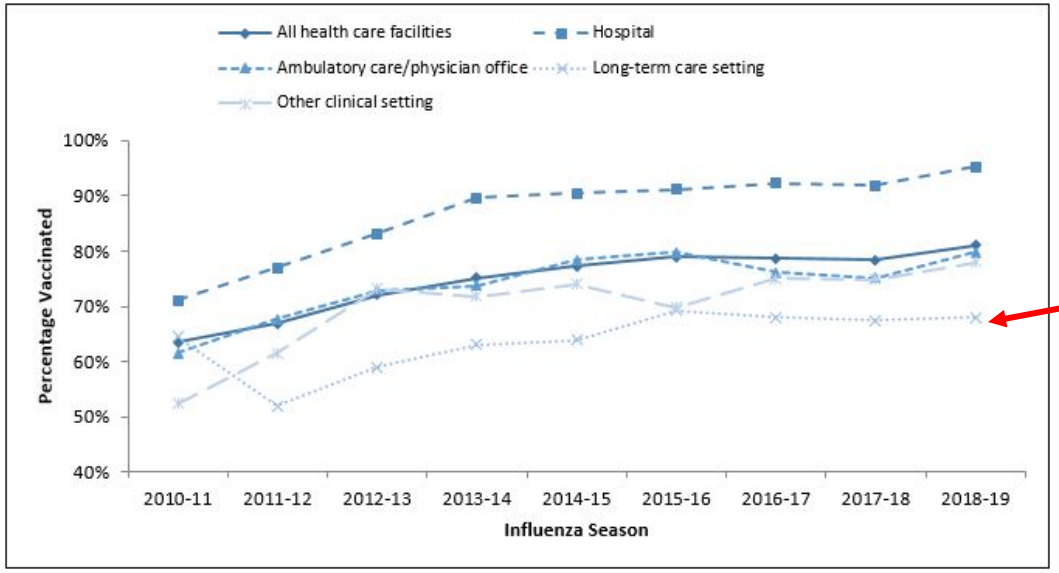
# Key Messages: Influenza Vaccination (cont'd.)

- **Influenza vaccine may be given at the same time as SARS-CoV-2 vaccine**
- Influenza vaccine will neither prevent nor increase the risk of infection with SARS-CoV-2
  - **Data from Italy[1] and Brazil[2] demonstrated a significant reduction in mortality from COVID-19 among influenza vaccine recipients**
- See **CDPH website** for communication tools in Spanish and English, updated 9/21/2021 (https://www.cdph.ca.gov/Programs/OPA/Pages/Communications-Toolkits/Fight-Flu-Together.aspx)
- )

[1] www.ncbi.nlm.nih.gov/pmc/articles/PMC7300995/pdf
[2] www.medrxiv.org/content/10.1101/2020.06.29.20142505v1.full.pdf

# Key Message: Provide Influenza 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/fluvaxview/hcp-coverage_1920estimates.htm#five

# Flu Vaccine Coverage During 2020-21 Season

- Early estimates of flu vaccine coverage during 2020-21 season in the United States
  - Adults: 50-55%
  - Children: 58.2%
  - Pregnant: slight decrease
- HCP in California acute care hospitals: 79%
  - Decreased from 85% pre-pandemic
  - Only 23% of hospitals met goal of 90%

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

California Department of Public Health (CDPH)
Updated October 2020

www.cdph.ca.gov/Programs/CHCQ/HAI/Pages/SNF_DetectAndControlOutbreaks.aspx

# 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

https://www.cdph.ca.gov/Programs/CHCQ/LCP/Pages/AFL-20-80.aspx

# 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:**

| Select Characteristics | Influenza | COVID-19 |
|---|---|---|
| **Peak symptoms** | During days 3-7 of illness | During week 2-3 of illness |
| **Incubation Period** | 1-4 days (median 2 days) | 14 days (median 5 days) |
| **Case-Fatality Rate** | 0.1% | 0.25-3.0% |
| **Primary route of transmission** | Droplet<br>Short-range aerosol possible | Droplet, short-range aerosol<br>Fomite and fecal-oral less important |
| **Recommended PPE** | Surgical mask; gown and gloves if high contact activity | **N95 respirator, eye protection**, gown, gloves<br>AIIR if aerosol generating procedure |

# Key messages: Testing and 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

Respiratory Illness Quicksheet: www.cdph.ca.gov/Programs/CID/DCDC/CDPH%20Document%20Library/Immunization/FluAndRespiratoryIllnessOutbreakQuicksheet.pdf

# Table 2. Planning for Management of Influenza Illness and Outbreaks in SNF During the COVID-19 Pandemic

| ACTIONS | RESIDENTS | HCP | FAMILY MEMBERS/VISITORS |
|---|---|---|---|
| **Educate** | ✓ | ✓ | ✓ |
| Update **influenza vaccination** plan | ✓ | ✓ | |
| Review **pneumococcal vaccination** status of residents | ✓ | | |
| Update plan for daily active **ILI surveillance** | ✓ | ✓ | |
| **PLAN TO TEST RESIDENTS and HCP WITH SYMPTOMS OF COVID OR FLU FOR BOTH VIRUSES** | ✓ | ✓ | |
| Adjust plan for **influenza prevention** and **outbreak management for COVID-19** | ✓ | ✓ | ✓ |
| Update plan for obtaining and using influenza **antiviral agents** | ✓ | | |
| Develop process for after action **evaluation** of plan | ✓ | ✓ | ✓ |

# Before an Outbreak Occurs: Plan Your Influenza Vaccination Program

- Key elements of an influenza vaccination plan
  - SNF are responsible for
    - Providing influenza vaccine to residents and HCP on site
    - Providing rationale and referral to sites for vaccine to families
  - Standing orders
  - Minor illness, SARS-CoV-2 exposure are not contraindications; be alert to diagnostic uncertainty if fever post influenza vaccination (uncommon)
  - Designate a specific influenza vaccination week to complete most vaccination, but continue throughout the season
  - Identify flu vaccine champions
  - Track vaccine administrations

www.cdph.ca.gov/Programs/OPA/Pages/Communications-Toolkits/Fight-Flu-Together.aspx
www.izsummitpartners.org/content/uploads/2019/02/guidance-for-developing-a-flu-vax-reqt-policy-for-hcp-in-post-acute-and-ltcf.pdf

# Table 3. Identifying Influenza Outbreaks in SNF

| ACTIONS | RECOMMENDATIONS |
|---|---|
| 1.Perform daily active **surveillance** for respiratory illness in residents and HCP (Appendix A, B)<br><br>☐ Initiated _____(date)<br><br>☐ Complete _____(date) | • 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)<br>◦ 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 linelist for tracking serial test results<br>◦ Include individuals with current or recovered COVID-19 who have new onset of respiratory symptoms<br>◦ Record specific locations of ill residents and HCP assignments and include information about sick HCP and sick visitors, as available<br>• Review line list daily and take actions needed if suspect influenza cases are identified. |
| 2. Use diagnostic testing *(www.cdc.gov/flu/professionals/diagnosis/overview-testing-methods.htm)* for influenza and SARS-CoV-2:<br>• Multiplex molecular assays<br>○ Influenza A, B, and SARS-CoV-2<br>• Rapid molecular assays<br>• 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.<br>• 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)* 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.<br>• 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.<br>• 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 otherwise) 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
  - Include COVID-19 recovered individuals who develop new onset of respiratory symptoms
  - Review linelist daily to determine if testing or isolation needed, or definition of outbreak is met
  - Review absenteeism of HCP

| Resident Identification | | | | Vaccine History | | Illness description | | | | | | | | | | Influenza Test Results | | | COVID-19 Test Results | | | Pneumococcal Test Results | | Antiviral 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 (Y/N) | Chills/rigors (Y/N) | Sore throat (Y/N) | Arthralgia/ myalgia (Y/N) | Change in respiratory status (e.g., sputum) | Pneumonia (Y/N) | COD confirmed (Y/N) | Date specimen collected | RT-PCR Results | Rapid antigen (+/-/ND) | Date specimen collected | Type of test | Pos/Neg/Ind | Gram stain | Sputum culture | Date started/Date ended | Date started/Date ended | Influenza (Y/N) | Pneumonia (Y/N) | Hospitalized (Y/N) | No. Days hospitalized | Died (Y/N) If yes, date |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
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# Testing SNF Residents with Symptoms During the COVID-19 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.

www.cdc.gov/flu/professionals/diagnosis/table-flu-covid19-detection.html
www.cdc.gov/flu/professionals/diagnosis/overview-testing-methods.html

# Collection of Specimens for Testing

- **Follow directions in test kits used**
- **Influenza**
  - ***When:*** 24-72 hours after symptom onset is optimal
  - ***What:*** A nasopharyngeal or combined throat and midturbinate nasal specimens provide the most accurate results
  - ***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**.

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**
  - PPE practices for SARS-CoV2 will protect against flu, but PPE practices for flu won't protect against SARS-CoV-2
  - **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 cohorted 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 for HCPs, residents, 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

# 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:
  - Roommates, residents on the same floor or unit as residents with active influenza
  - 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

- Ensure vaccination
- Instruct not to work respiratory 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.
  - 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:
  - < 14 days after receiving vaccine (must be > 14 days after LAIV4)
  - Not vaccinated due to contraindications
  - 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 non-pharmaceutical intervention (NPI) practices
- Ongoing surveillance and evaluation will detect unpredicted events
- Communication between LHD and facilities is key