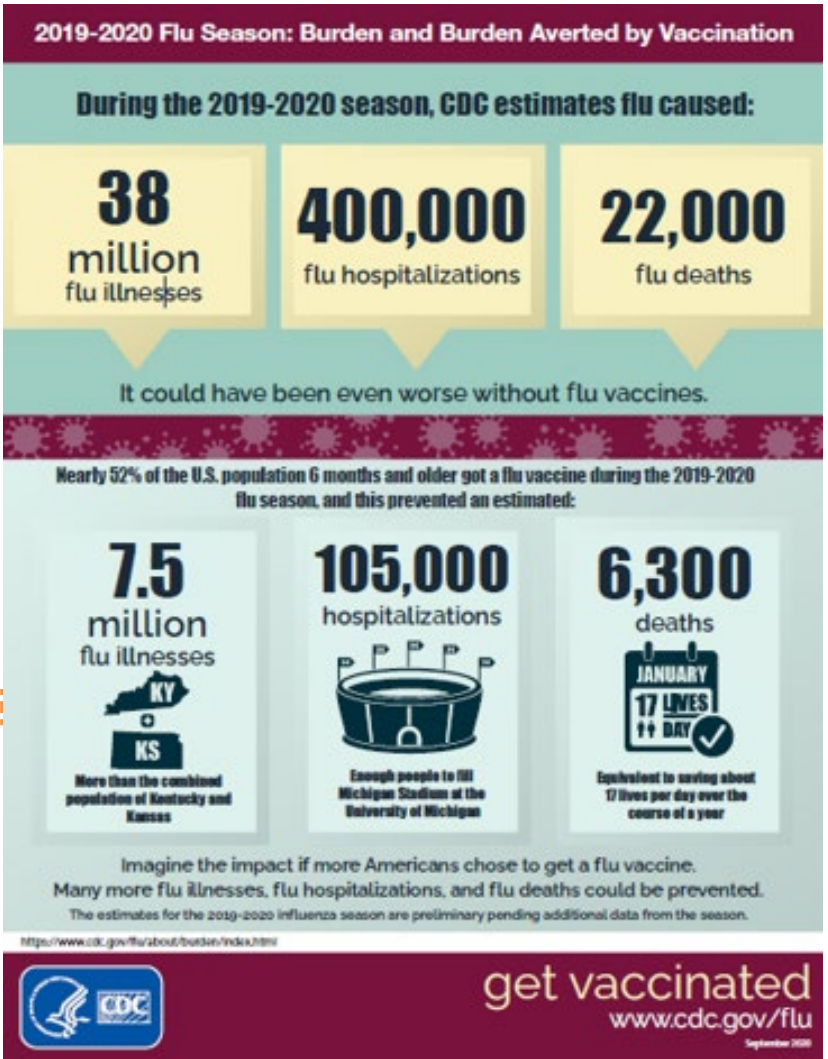
Recommendations for the Prevention and Control of Influenza in California Skilled Nursing Facilities (SNF) during the COVID- 19 Pandemic

Updated October 6, 2020

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

National Influenza Vaccination Week December 6-12, 2020



Objectives

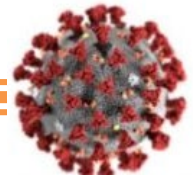
- Describe background and key messages about influenza and SARS-CoV-2 co-circulation
- Describe guidance for planning for influenza and SARS-CoV-2 co-circulation in California SNF
- Discuss considerations for recognizing, confirming and managing an influenza outbreak during the COVID-19 pandemic in California SNF

Organization of the guidance document

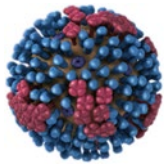
- Introduction
- Key Messages
- **Table 1**: Comparison of clinical characteristics of COVID-19 and influenza
- **Table 2**: Planning for influenza illness and outbreaks in SNF
- **Table 3**: Identifying and Controlling Influenza Outbreaks in SNF
- Glossary
- Resources
- **Appendix A**. Sample Surveillance 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)

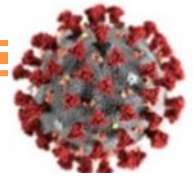
What will be different this flu season? Co-circulation of influenza and SARS-CoV-2



- 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

Stowe J. MedRxiv preprint doi: https://doi.org/10.1101/2020.09.18.20189647. September 18, 2020. MMWR 2020; 69 (37): 1305-9 (PDF). September 18, 2020

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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

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

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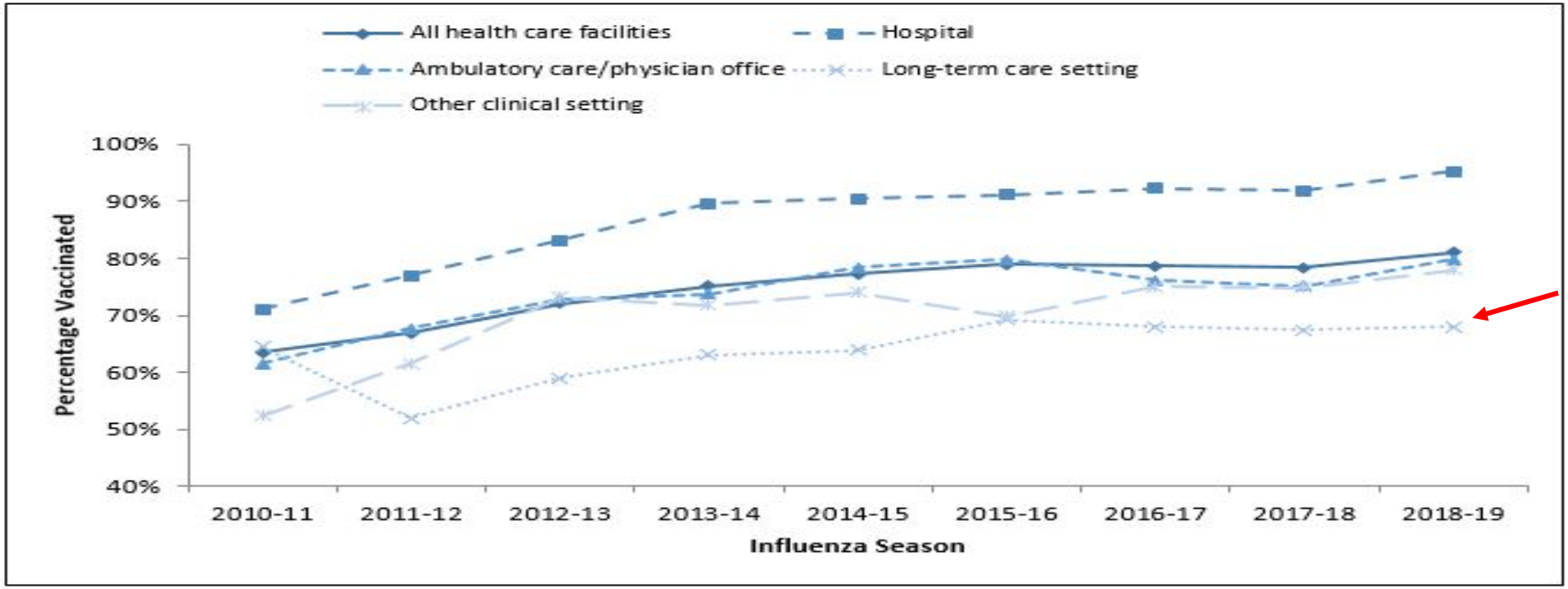
Key Message: Provide flu vaccine to SNF HCP

- 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/fluvaxview/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:

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 Short-range aerosol possible	Droplet, short-range aerosol Fomite and fecal-oral less important
Recommended PPE	Surgical mask; gown and gloves if high contact activity	**N95 respirator, eye protection**, gown, gloves AIIR if aerosol generating procedure

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

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

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

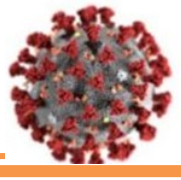
Before an outbreak occurs: Plan your influenza vaccination program

- 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)

Guidance for Leaders/Administrators in Post-Acute and LTCs Who Plan to Improve Staff Influenza Vaccination Compliance through Vaccination Requirement Policies (PDF) (www.izsummitpartners.org/content/uploads/2019/02/guidance-for-developing-a-flu-vax-reqt-policy-for-hcp-in-post-acute-and-ltcf.pdf)

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/)

Table 3. Identifying and Controlling Influenza Outbreaks in SNF

ACTIONS	RECOMMENDATIONS
1.Perform daily active **surveillance** for respiratory illness in residents and HCP (Appendix A, B) ☐ Initiated _____(date) ☐ 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) ◦ 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 ◦ 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 • 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: • 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)* 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

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

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

Resident Identification				Vaccine History		Illness Desriptions						
Name	Age	Sex (M/F)	Building/ Unit/Room	Influenza (Y/N)	Pneumococcal (Y/N)	Date onset illness	Highest temperature	Cough (Y/N)	Malaise/ fatigue (Y/N)	Chills/ rigors (Y/N)	Sore throat (Y/N)	Arthra myal (Y/

Excel surveillance templates
(www.cdph.ca.gov/Programs/CHCQ/HAI/Pages/SNF_DetectAndControlOutbreaks.aspx)

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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.

Table 4. Multiplex Assays Authorized for Simultaneous Detection of Influenza Viruses and SARS-CoV-2 by FDA (www.cdc.gov/flu/professionals/diagnosis/table-flu-covid19-detection.html)

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**
  - ***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**.

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**
  - 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, 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:
  - 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 (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.
  - 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, but 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 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?

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