Influenza Vaccination in Skilled Nursing Facilities

County of Los Angeles
Department of Public Health
Overview

• Influenza Facts
• Basics of Influenza Prevention and Infection Control Strategies in Skilled Nursing Facilities (SNFs)
• Influenza Vaccination Mandate for Healthcare Personnel (HCP) in Los Angeles County
• Vaccination and What to do with Decliners
Learning Objectives

1. Provide facts about influenza
2. Review the basics of influenza prevention strategies in SNFs
3. Provide an overview of the influenza vaccination mandate
4. Address strategies in promoting vaccination among decliners in SNFs
Influenza Facts
Influenza Facts

• Annually, influenza causes severe illness and deaths in the United States
  ✓ 6th leading cause of death among US adults¹
  ✓ Accounts for 23,000 deaths
  ✓ More than 200,000 hospitalizations per year

• The Centers for Disease Control and Prevention (CDC) estimates that each year on average 5-20% of the population will get the flu

¹ http://www.cdc.gov/flu/about/disease/index.htm
Influenza Facts

• Influenza or “flu,” is a contagious respiratory illness caused by influenza viruses.

• Spread to others by droplets when people with the flu talk, sneeze, or cough.

• Symptoms include:
  - fever (≥100°F or 38°C)
  - dry cough
  - headache
  - sore throat
  - extreme tiredness
  - runny or stuffy nose and muscle aches
Influenza Facts

• May infect others from 1 day before getting sick to 5-7 days after

• Supportive care and antiviral medication may reduce duration of symptoms, severity, and contagiousness

• The best way to prevent the flu in SNFs is annual vaccination among HCP and residents/patients.
The Flu in Skilled Nursing Facilities

Challenges:

- Elderly are at higher risk for complications
- Atypical flu symptoms
- Vaccination may be less effective in the patients age ≥65
- Less access to diagnostic tests
Patients age ≥65 Vaccination

• Randomized, double-blind trial in patients age ≥65
• High-dose (4x) influenza vaccine provided improved protection against lab-confirmed influenza illness, compared to standard-dose vaccine (relative efficacy 24%, 95%CI 9.7-36.5%)

NEJM 2014; 371: 635-45
Influenza Prevention Strategies
Influenza Prevention Strategies

1. Influenza Vaccination of HCP and among Residents
2. Education/Awareness and Early Recognition of Influenza-like Illness (ILI)
3. Infection Control and Exposure Management
Influenza Vaccination of HCP and among Patients

- Effective in reducing influenza among HCP and residents/patients
- Decreased morbidity and mortality among residents/patients
- Reduction in staff illness and illness-related absenteeism.
- Increased productivity
Prompt Recognition of Influenza-Like Illness (ILI)

- Active screening
- Isolation
- Testing
- Treatment
- Restrictions for sick healthcare workers and visitors
- Encourage reporting
- Involve patients and families
Why do we wear masks?

FOR EVERYONE
Wearing a mask keeps us from catching or spreading germs. Keeping everyone healthy during flu season means...

- Our team gets a flu shot or wears a mask
- If you are a visitor or a patient and you feel sick, like when you have a fever, chills, cough, sore throat, body aches, runny or stuffy nose—tell a healthcare professional on our team.

WE HELP EACH OTHER STAY HEALTHY!
Infection Control

• Standard precautions
• Droplet isolation
• Hand hygiene and isolation supplies
• Single room
• Duration of isolation
• Exposure investigations
• Antiviral Prophylaxis
• Cohorting (grouping) as necessary
Influenza Outbreaks or Clusters in SNF

• **Health care institutions** associated with long term health care (i.e., skilled nursing facilities, intermediate care facility, and intermediate care for developmentally disabled):

  At least one case of laboratory-confirmed influenza in the setting of a cluster (2 or more) of ILI within a 72-hour period
Reporting Diseases and Consulting with ACDC

• To report a case or outbreaks of any disease or reportable condition, contact:
  By telephone (888)-397-3993, or fax (888)397-3778
  Online: publichealth.lacounty.gov/acd/cdrs.htm

• For diseases that require medical consultation, call:
  ACDC (213) 240-7941
  After hours, call (213) 974-1234
  Online: publichealth.lacounty.gov/acd/
Mandatory Influenza Vaccination for Healthcare Personnel in LAC
Healthcare Personnel (HCP) Vaccination Mandates Nationwide: A growing trend

• >300 facilities nationwide enforce mandatory HCP vaccination

• Professional societies support mandatory HCP vaccination:
  – Infectious Diseases Society of America
  – Association for Professionals in Infection Control and Epidemiology
  – Society for Healthcare Epidemiology of America
  – American Academy of Family Physicians
  – American College of Physicians
  – American Hospital Association
  – American Public Health Association
Mandatory Flu Vaccination for Healthcare Personnel in LAC

• On Oct 2, 2013, LAC Health Officer County issued the following health order:

  “Pursuant to my authority under §120175 of the California Health and Safety Code, I hereby order every licensed acute care hospital, skilled nursing facility, and intermediate care facility within the County of Los Angeles public health jurisdiction to implement a program under which healthcare personnel at such facility receive an annual influenza vaccination for the current season or wear a mask for the duration of the influenza season while in contact with patients or working in patient-care areas.”

• Applies to all persons, including paid and unpaid employees, contractors, students, and volunteers

• Effective annually from Nov 1 – Mar 31 (Flu season)
Rationale for the Mandate

• Many HCW (23%) are infected with influenza each season\(^1\)
• Those with influenza may shed virus 1 day prior to symptoms\(^2\)
• Many HCW (46%) continue to work with active flu-like symptoms\(^3\)

\(^1\)Elder AG et al, BMJ 1996; 313: 1241-2
\(^2\)Suess T et al, PLOS One 2012; 12: e51653
\(^3\)Esbenshade JC et al, ICHE 2013; 34: 373-8
Rationale for the Mandate (continued)

• Influenza vaccination reduces the incidence of laboratory-confirmed influenza, particularly in young, otherwise healthy adults\(^4\)

• Reduce doctor visits by 42% and sick days by 32%\(^5\)

• Nosocomial transmission of influenza is well described\(^6\), and has been linked to low rates of vaccinated HCW\(^7\)

\(^{4}\)MMWR 20 Sep 2013
\(^{5}\)Bridges CB et al, JAMA 2000; 284: 1655-63
\(^{6}\)Stott DJ et al, Occup Med 2002; 52: 24953
\(^{7}\)Salgado CD et al, ICHE 2004; 25: 923-8
LAC Survey of Acute Care Facilities Evaluating the Impact of 2013 Health Officer Order

- LAC DPH ACDC Hospital Outreach Unit surveyed facilities to evaluate the impact of the health officer order
- **Inclusion criteria**: 94 LAC acute care facilities (excluding Pasadena and Long Beach)
  - 2 seasons pre-order (2011-2012 & 2012-2013)
  - 1 season post-order (2013-2014)
- **Data collected**:
  - Direct laboratory influenza testing results
  - Survey data from Infection Preventionists (IPs)
  - Absenteeism data from HR directors / staff on employee sick leave
Preliminary Results

- 49 IP surveys completed
- 44 IP line lists completed of cases identified as nosocomial influenza
- 30 Lab Director line lists completed of positive flu test obtained > 72 hours from admit
- 29 Absenteeism forms completed
Preliminary Results

Comparison of 2012-2013 and 2013-2014 seasons:

• **Decreased absenteeism**: average missed days per employee decreased from 5.5 to 12.7

• **Increased vaccination of employees**: percentage of employees vaccinated increased from 75.2% (in 2012-2013) to 86.2% (in 2013-2014)
Common Concerns about Influenza Vaccination...
“I always get sick after the flu shot”

• It is biologically impossible to get influenza infection via the flu shot

• The flu shot does not protect against other (non-influenza) viruses that circulate during flu season

• It is possible to get the flu after vaccination
  
  ✓ Those infected before or immediately after vaccination may still get the flu (immunity may not develop until 2 weeks after vaccination)

  ✓ Circulating flu strains may not match the vaccine strain

  ✓ The vaccine is not 100% effective (though may still reduce severity of infection)
“I never get the flu”

• Influenza infects 5-20% of the US population each year (including HCW)

• HCW work with sick patients
  ✔ Additional responsibility

• Most patients who died from the flu never had it before.
“I don’t want toxins injected into me”

- **Thimerosal** is used as a preservative to prevent contamination.
  - Removed from single-dose vaccines
  - Multi-dose vials = 25 micrograms per dose

- **Formaldehyde**
  - Trace amounts present during manufacturing process (~0.02 micrograms per dose)
  - A pear contains ~10 mg per pear
“I am allergic to egg.”

• An evaluation of 513 patients with severe egg allergy found NO cases of anaphylaxis reported after vaccination (a few mild allergic reactions were observed)\textsuperscript{1}

• Those who experience only hives or a severe reaction after eating eggs may receive
  - Recombinant vaccine (FluBlok®)
  - Inactivated vaccine in the presence of a physician with experience in the management of severe allergic conditions

Contra-indications

- History of severe allergic reaction to any component of the vaccine or after previous dose of influenza vaccine

- Live-Attenuated Influenza Vaccine (Flu Mist) 
  Not recommended for:
    - age <2 years or >49 years
    - pregnant women, or
    - persons with chronic illnesses
Precautions

• History of Guillain-Barre Syndrome within 6 weeks of receipt of influenza vaccine

✓ Risk of Guillain-Barre following\(^1\)
  - Influenza vaccination: 1 per 1 million doses
  - Influenza infection: 17 per 1 million infections

• Moderate or severe acute illness with or without a fever

• Asthma in persons ≥ 5 years of age (LAIV)

\(^1\)Kwong JC et al, Lancet Infect Dis 2013; 13: 769-76)
What to do when HCP decline to get vaccinated?

• Education about influenza
• Dispelling Myths/Misconceptions about Influenza Vaccination
• Address the common concerns about Influenza Vaccination
## In Summary…

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| **Vaccination**        | • The best way to prevent the flu in SNFs is annual vaccination among HCP and patients/residents  
  • HCP vaccination is protective to patients and a critical component of flu prevention efforts                                                                                                           | • Identify strategies to promote vaccinations among HCP and patients/residents  
  • Promote compliance with LA County Health Order                                                                                                                                                                                                                                                                                                     |
| **Education and ILI Recognition** | • Employees, patients, and visitors should be educated on flu symptoms, transmission, and respiratory etiquette  
  • Sick visitors and healthcare workers are an important source of influenza in SNF  
  • Improper collection of flu specimens is common and can lead to false-negative results                                                                                                                                                                                                                                              | • Provide signage and educational materials for patients and visitors  
  • Respiratory etiquette  
  • Establish and enforce policies for visitor screening and sick healthcare workers (designate ILI ambassador)  
  • Conduct daily active screening for ILI symptoms during peak flu season                                                                                                                                                                                                                                                                       |
| **Infection Control**  | • Heighten staff awareness around standard and droplet precautions  
  • Promote hand hygiene compliance  
  • Many free resources through LAC DPH, CDPH, and CDC  
  • Involve the Public Health Department early with any influenza case in SNF                                                                                                                                                                                                              | • Educate staff on proper isolation procedures  
  • Have hand hygiene and isolation supplies readily available  
  • Monitor and feedback compliance with isolation and hand hygiene                                                                                                                                                                                                                                                                              |
Specific Guidance for LTCF

The Los Angeles County Department of Public Health
Acute Communicable Disease Control

RECOMMENDATIONS FOR THE PREVENTION AND CONTROL OF INFLUENZA
CALIFORNIA LONG-TERM CARE FACILITIES

DEPARTMENT OF PUBLIC HEALTH
CENTER FOR HEALTHCARE QUALITY
HEALTHCARE ASSOCIATED INFECTIONS PROGRAM
Other Valuable Resources (1)

• County of Los Angeles Department of Public Health (DPH)
  – Acute Communicable Disease Control Program
    • Influenza Vaccination for HCP Toolkit for SNFs: http://www.ph.lacounty.gov/acd/Flu.htm

• California Department of Public Health (CDPH):
  – The HAI Program and Healthcare Personnel Influenza Vaccination
    http://www.cdph.ca.gov/programs/hai/Pages/InfluenzaVaccination.aspx
  – Influenza Vaccination and Respiratory Disease Prevention Educational Materials http://eziz.org/resources/flu-promo-materials/
Other Valuable Resources (2)

- Centers for Disease Control and Prevention- Influenza Vaccination Information for Health Care Workers
  http://www.cdc.gov/flu/healthcareworkers.htm

- New York State Department of Health: Resources and Guidance – HCP Vaccination
Acknowledgments

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  Cedars-Sinai Medical Center
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  David Geffen School of Medicine, UCLA

• New York State Department of Health: Resources and Guidance – HCP Vaccination
KEEP CALM AND GET YOUR FLU SHOT