

FLU UPDATE 2018



What is the flu?

- The flu—short for influenza—is an illness of the nose, throat, and lungs caused by influenza viruses
- It spreads easily and can cause serious problems, especially for very young children, older people and people with certain long-term medical conditions like asthma and diabetes



What are the flu symptoms?

- Fever (not everyone with the flu has a fever)
- Chills
- Cough
- Sore throat
- Headache
- Muscle aches
- Tiredness
- Some children with the flu will vomit or have diarrhea.
- Symptoms start about 2 days after contact with the virus. Some people get better in a few days, others can be sick for weeks. People can spread the flu from one day before symptoms begin to 5-7 days after. This can be longer in children and people who are very sick

How serious is the flu?

- Flu illness can be mild or very serious
- Flu seasons also vary in how serious they are from one year to another
- Complications from the flu include:
 - ▣ Pneumonia (lung infection)
 - ▣ Dehydration (loss of body fluids)
 - ▣ Worsening of long-term medical conditions, like asthma and diabetes
- Children with long-term medical conditions, babies and children younger than 2 years old are more likely to end up in the hospital from flu

United States

1. Heart disease
2. Cancer
3. Chronic lower respiratory diseases
4. Accidents (unintentional injuries)
5. Stroke (cerebrovascular diseases)
6. Alzheimer's disease
7. Diabetes
8. Influenza and Pneumonia:
55,227/17.3
9. Kidney Disease
10. Intentional self-harm (suicide)

Nevada

1. Heart disease
2. Cancer
3. Chronic lower respiratory diseases
4. Accidents (unintentional injuries)
5. Stroke (cerebrovascular diseases)
6. Influenza and Pneumonia 687/ 24.2
7. Alzheimer's disease
8. Intentional self-harm (suicide)
9. Chronic Liver Disease
10. Kidney Disease

13. Assault (homicide) 176

- ❑ Most people are being infected with the H3N2 influenza virus
 - more cases, more visits to the doctor, more hospitalizations, and more deaths, especially among older people.

- ❑ This season looking like 2014-15 season where H3N2 predominated.
 - ❑ Geographic spread of flu looks like flu is happening all over the United States.
 - ❑ Flu activity widespread within states/jurisdictions at the same time
 - ❑ Stayed at the same level for 3 weeks in a row, with 49 states reporting widespread activity, each week, for 3 weeks.

- ❑ # of people going in to see a doctor for influenza-like-illness increased to 6.6% (all people coming into the clinics/ED had influenza-like illness)
- ❑ This is the highest level of activity recorded since the 2009 H1N1 pandemic, which peaked at 7.7%.



- ❑ Rapid increase in cases after the winter holidays is higher in children. Later January activity may be flu transmission from kids returning to school.
- ❑ However, there are signs that flu activity may have peaked in some parts of the country. California and other states on the west coast are seeing activity begin to go down.
- ❑ Hospitalizations and deaths however may continue to increase as these data are still coming in to those systems there.



- ❑ For the week ending January 20, the rate of hospitalizations is 41.9/100,000
 - Same as 2014-15.

- ❑ California is about 4x more hospitalizations than this same time in 2014-15
 - California had at least 5 weeks where they were at a higher level of activity so those higher numbers probably reflect having more flu for a longer time.

- ❑ The highest hospitalization rate this season is among people 65 years and older similar to 2014-15.



- ❑ Second most impacted group this season are people 50-64 years of age, with a rate of 44.2/100,000.
 - Young children aged 0-4 years have been the next most impacted group after those of age over 65
 - This season, people 50-64 are now in that spot, so young baby boomers have higher rates than grandchildren right now.
 - Rate for 50-64-year-olds is significantly higher than what was during recent seasons in 2012-13 and 2014-15. And the influenza viruses that are sending these 50-64-year-olds to the hospital this season is not only H3N2 but also other influenza A virus H1N1.



- ❑ Tracking based on death certificates.

- ❑ In the U.S. right now, # of influenza associated deaths have risen rapidly.
 - Pneumonia/influenza deaths went up sharply to 9.1% this week
 - For two of the recent H3N2 seasons (2012-13 and 2014-15)
 - Pneumonia (11.1)
 - Influenza (10.8)

- ❑ In US, # of flu deaths in children is 37.
 - Associated with influenza A(H3N2) and H1N1 viruses as well as influenza B viruses.
 - 65% have been H1N1 viruses.

- ❑ While H3N2 continue to predominate, other flu viruses are contributing to the season. Some states are actually seeing more H1N1 than other states, and we are also hearing reports of influenza B outbreaks in nursing homes, which is less common for this time of year.

CLARK COUNTY INFLUENZA SURVEILLANCE SUMMARY



Overview

- Influenza surveillance for Clark County, Nevada includes the collection of data from 15 local hospital emergency rooms and 63 healthcare providers.



Confirmed Cases in Clark County as of 1/20/2018

- Total number of confirmed cases of influenza during the 2017-2018 season - 753.



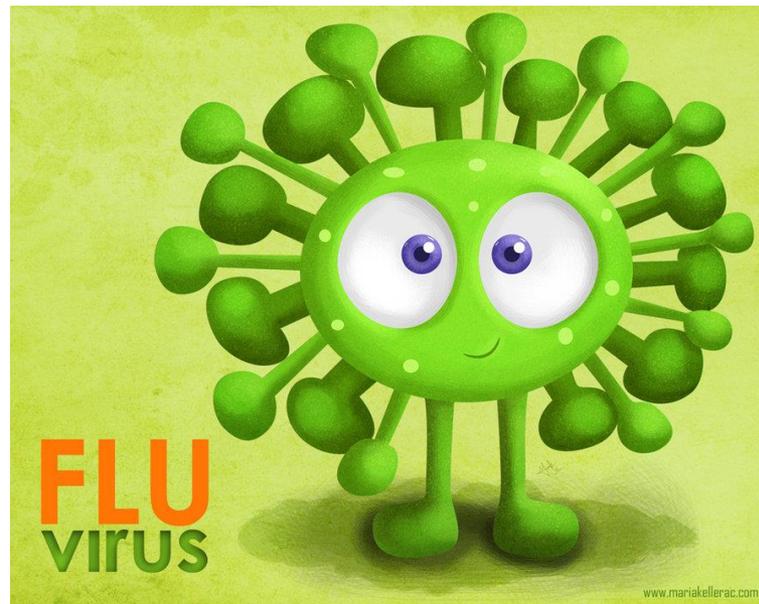
Influenza-associated Deaths

- Total number of influenza-associated deaths – 16
- Pediatric deaths – 3 (US - 27)

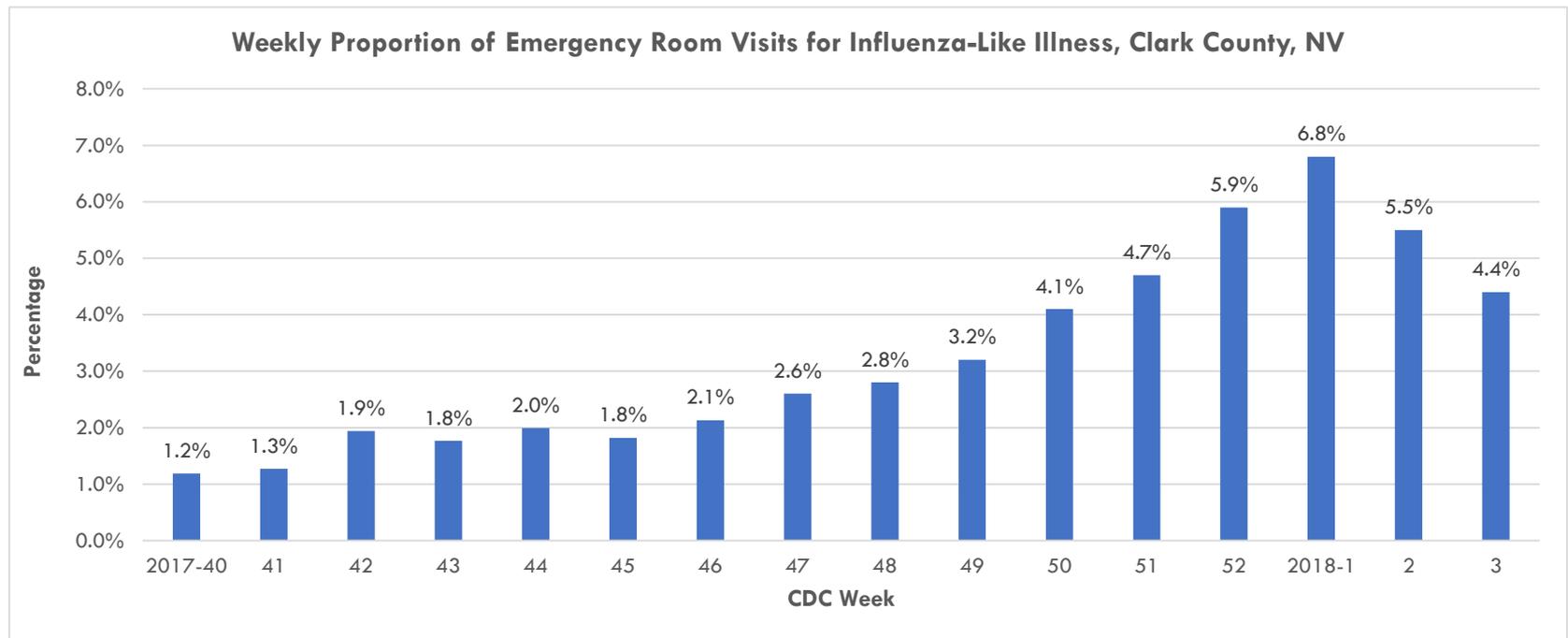


Influenza Type

- Influenza A - 94.4%
- Influenza B - 5.6%



Emergency Room Visits for ILI



Outbreaks of ILI Reported to SNHD During 2017-2018 Season

- Schools - 3
- Long-Term Care/Assisted Living facilities - 2



Prevention

□ Cover Your Cough

- Cover your mouth and nose with a tissue:

- When coughing or sneezing
- Put your tissue into a trash can

- OR

- Cough or sneeze into your upper sleeve **NOT** your hand

□ Proper Hand Washing

- Wash your hands with warm water and rub vigorously to remove any dirt, oils, or germs from your skin

Influenza Vaccination Recommendation

- Annual influenza vaccination is recommended for every person in the United States 6 months of age and older
- Contacts and caregivers of infants under age 6 months (because there is no vaccine approved for children this age)



Influenza Vaccination Recommendation

- Special effort to vaccinate persons at increased risk of complications of influenza & **their close contacts**
 - ▣ Persons with chronic pulmonary (including asthma) and other conditions
 - Cardiovascular (except isolated hypertension), renal, hepatic, neurologic, hematologic, or metabolic disorders (including diabetes mellitus);
 - ▣ Immunosuppressed persons;
 - ▣ Women who are or will be pregnant during the influenza season;
 - ▣ Children and adolescents (aged 6 months–18 years) receiving aspirin therapy
 - ▣ Children at risk for experiencing Reye syndrome after influenza virus infection;
 - ▣ Residents of nursing homes and other long-term care facilities;
 - ▣ American Indians/Alaska Natives; and
 - ▣ Persons who are extremely obese (BMI ≥ 40).



2017-18 Influenza Vaccine Composition

□ **Trivalent vaccines:**

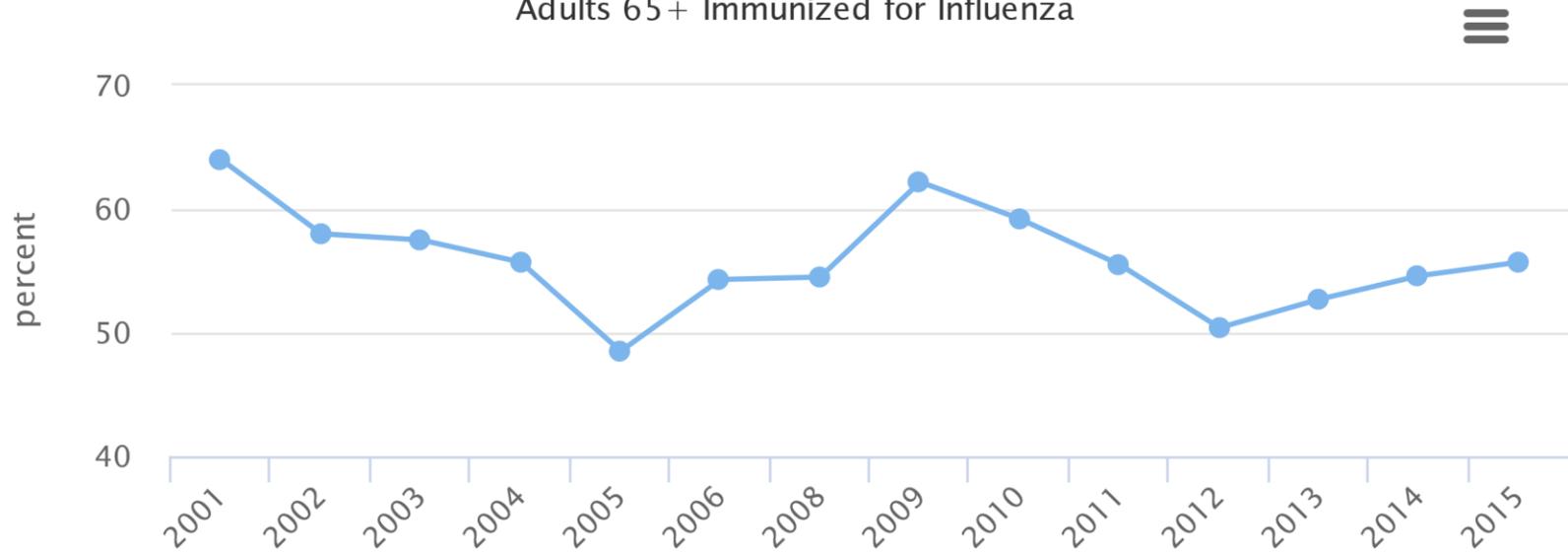
- an A/Michigan/45/2015 (H1N1)pdm09-like virus (new);
- an A/Hong Kong/4801/2014 (H3N2)-like virus; and
- a B/Brisbane/60/2008-like virus.

□ **Quadrivalent vaccines:**

- The above three viruses, and
- a B/Phuket/3073/2013-like virus.

Clark County

Adults 65+ Immunized for Influenza



Types of Vaccine

Inactivated Influenza Vaccine, Trivalent (IIV3) and Quadrivalent (IIV4)

❑ Inactivated Influenza Vaccines:

- ▪ Contain inactivated virus, split or subunit
- ▪ High Dose or Standard Dose or with adjuvant
- ▪ Many brands, some approved for those as young as 6 months of age
- ▪ Most are intramuscular; one intradermal (for 18 through 64 years)

❑ Trivalent (IIV3):

- Contain an A(H1N1) virus, an A(H3N2) virus, and a B virus (from one lineage)

❑ Quadrivalent (IIV4):

- Contain an A(H1N1) virus, an A(H3N2) virus, and 2 B viruses (one from each lineage)
- Designed to provide broader protection by representing both B lineages

<https://www.cdc.gov/flu/protect/vaccine/vaccines.htm>

Types of Vaccine NEW

New for 2017-18: Afluria Quadrivalent IIV4 (Seqirus)

- Standard-dose IIV4
- Indicated for persons aged ≥ 18 years
- Potential for confusion: for 2017-18, Afluria trivalent recommended for ≥ 5 years (previously ≥ 9 years)

New for 2017-18: Flublok Quadrivalent Recombinant Influenza Vaccine, RIV4 (Protein Sciences)

- Indicated for persons aged ≥ 18 years
- Contains recombinant influenza hemagglutinin (HA) protein (produced in insect cell line using a viral vector)
- Egg-free

Types of Vaccine for Older Adults

Vaccines licensed for age ≥ 65 years: High-Dose and Adjuvanted Inactivated Influenza Vaccines

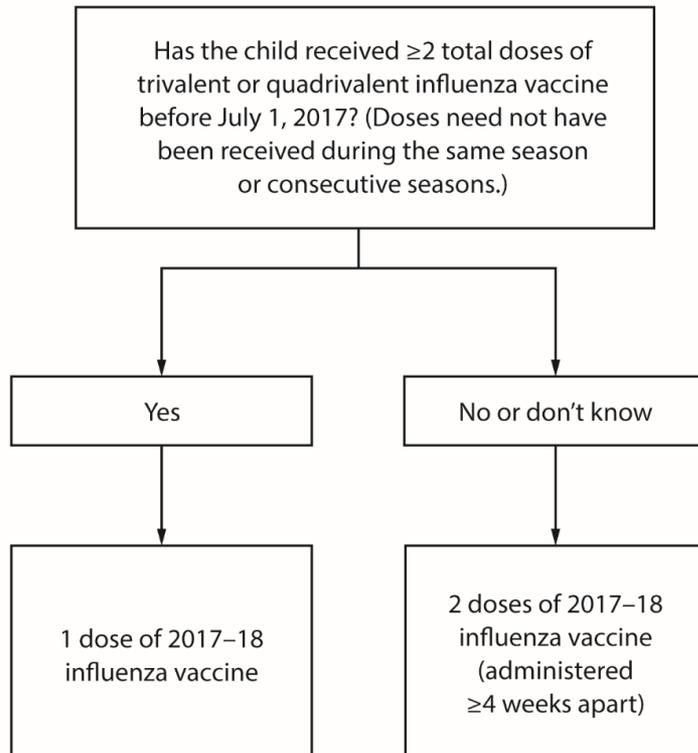
Trivalent, high-dose influenza vaccine (HD-IIV3):

- Contain 60 μ g of hemagglutinin (HA) per virus (4x HA content of standard dose IIV3)
- Fluzone (Sanofi) HD-IIV3 licensed ≥ 65 years
- Observed to provide stronger immune response and have greater efficacy in persons aged ≥ 65 years

Adjuvanted inactivated influenza vaccine (aIIV3)

- Flud (Seqirus)--only currently licensed U.S. influenza vaccine containing adjuvant (new to U.S. in 2016-17)
- Contains MF59, an oil-in-water adjuvant
- Intended to provide better immune response

Children Considerations



Dosing Algorithm for Children aged 6 months through 8 years, 2017-18

- Similar to past two seasons
- If two cumulative doses received prior to July 1, 2017, only one dose needed for 2017-18

Children Considerations

New for 2017-18: FluLaval IIV4 (ID Biomedical)

- ❑ Standard-dose IIV4
 - Now licensed for ≥ 6 months (previously for ages ≥ 3 years)
 - Dose volume is same for all ages (0.5mL)
 - Safety of FluLaval IIV4 (0.5mL) comparable to Fluzone IIV4 (0.25mL)
- ❑ Potential for confusion (***Dose volume is distinct from number of doses needed***)
 - Fluzone (0.25mL) is only other product licensed for 6 through 35 month olds—dose volumes are different for this age group.
 - For those children that need two doses of vaccine, the two doses do not need to be the same type/formulation/brand



Recommendations for flu vaccination of persons with egg allergy have not changed since the 2016-2017 flu season. CDC recommends:

[flu vaccine and people with egg allergies\(https://www.cdc.gov/flu/protect/vaccine/egg-allergies.htm\)](https://www.cdc.gov/flu/protect/vaccine/egg-allergies.htm).

- ❑ Persons with egg allergy & experienced only hives should receive flu vaccine. Any licensed and recommended flu vaccine that is otherwise appropriate for the recipient's age and health status may be used.
- ❑ Persons who report reactions to egg involving symptoms other than hives. May receive any licensed and recommended flu vaccine (i.e., any form of IIV or RIV) that is otherwise appropriate for the recipient's age and health status.
Administered in an inpatient or outpatient medical setting and supervised by a health care provider who is able to recognize and manage severe allergic conditions.
- ❑ A previous severe allergic reaction to flu vaccine (regardless of the component suspected of being responsible for the reaction) is a contraindication to future receipt of the vaccine.

Prevention

***Vaccination is the BEST
means of prevention!!***

Questions

