



Influenza: Protect Yourself and Others



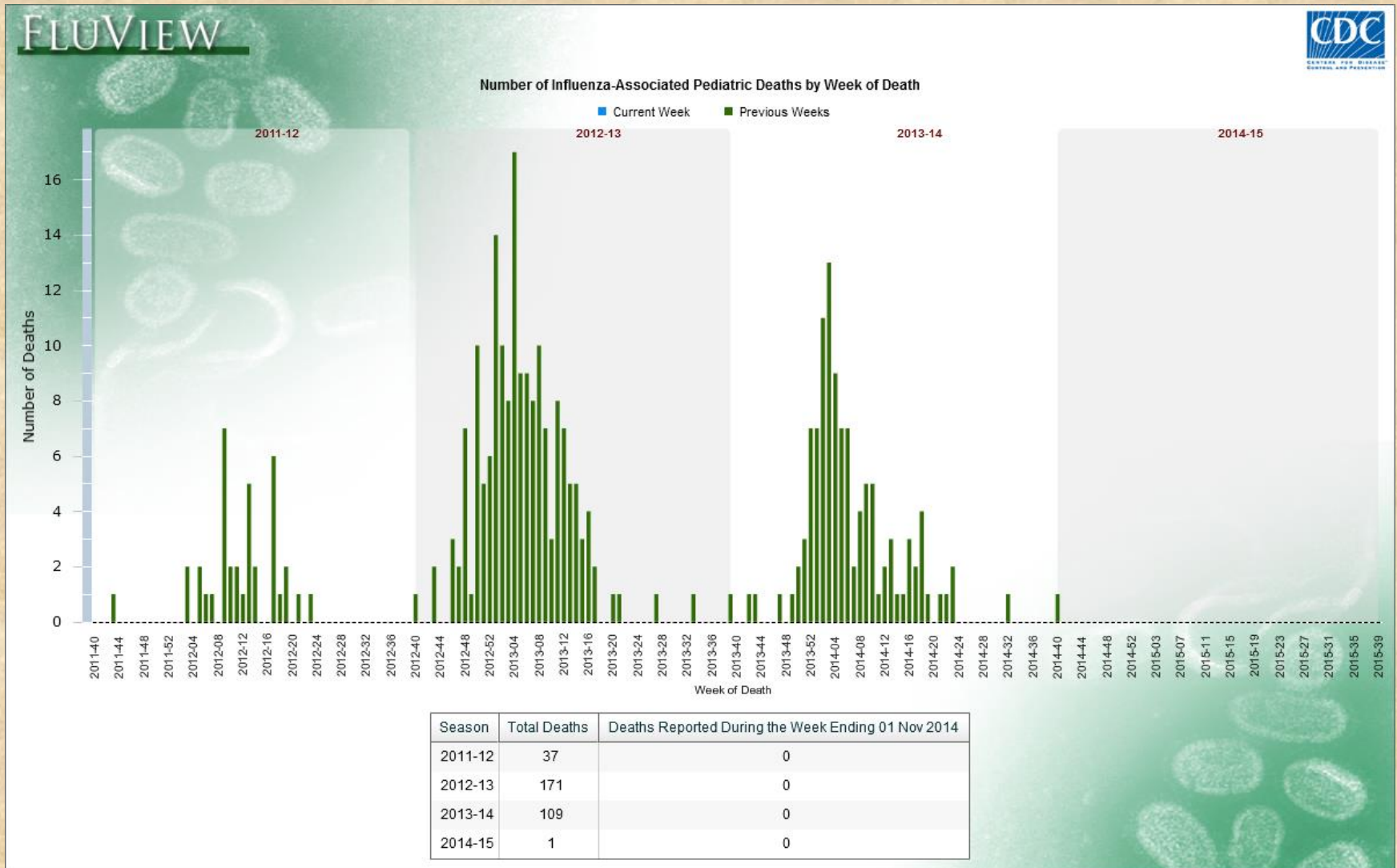
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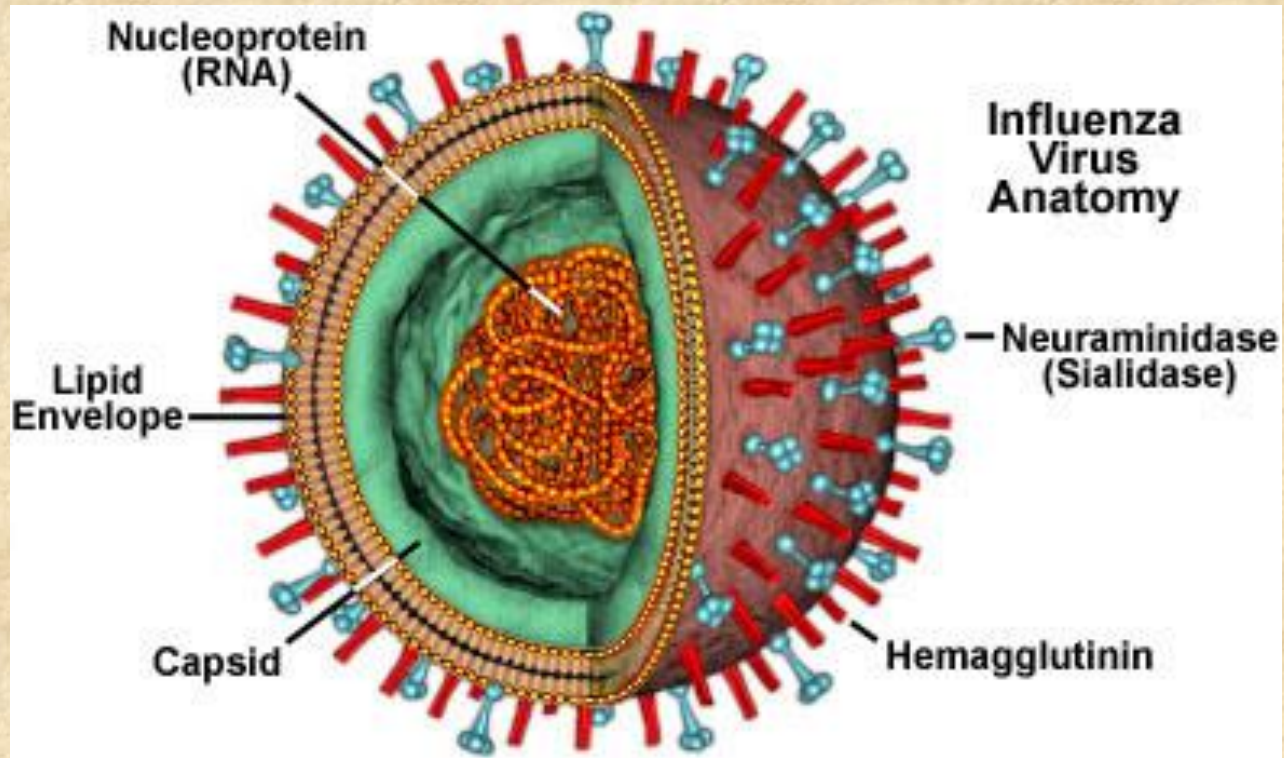
Effects of Influenza

- 5-20% of people each year
- 200,000 Hospitalizations
- Influenza associated deaths range from 3,000-49,000
- 90% of those in adults >65 years old
- Secondary Complications

Pediatric Deaths

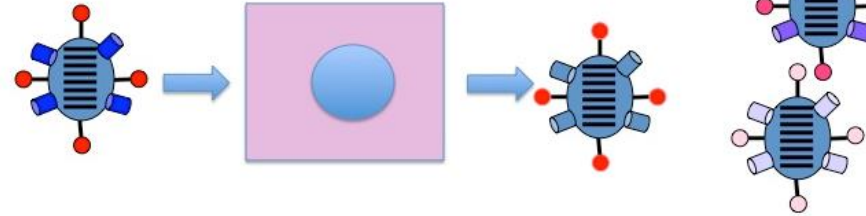


About the Virus



Genetic Drift and Shift

Antigenic Drift

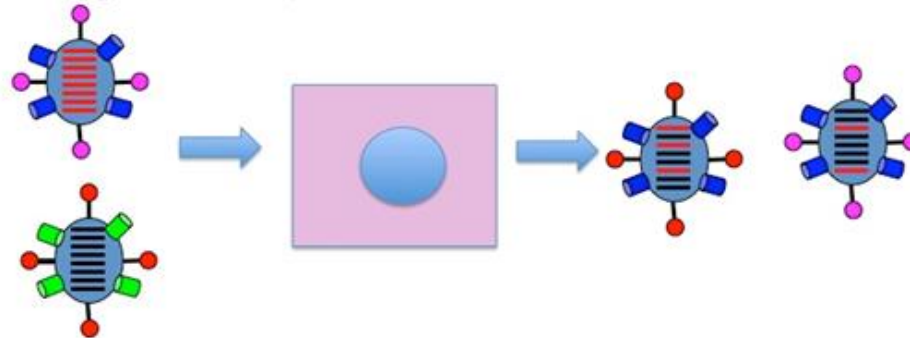


An influenza virus infects a healthy cell

Mistakes made by viral DNA polymerase during replication cause virus with new antigenic variants to be produced

Due to pressure from antibody that host develops against viral antigens, the virus with new antigenic variants is selected and a slightly different strain of virus begins to circulate in the population.

Antigenic Shift/Reassortment



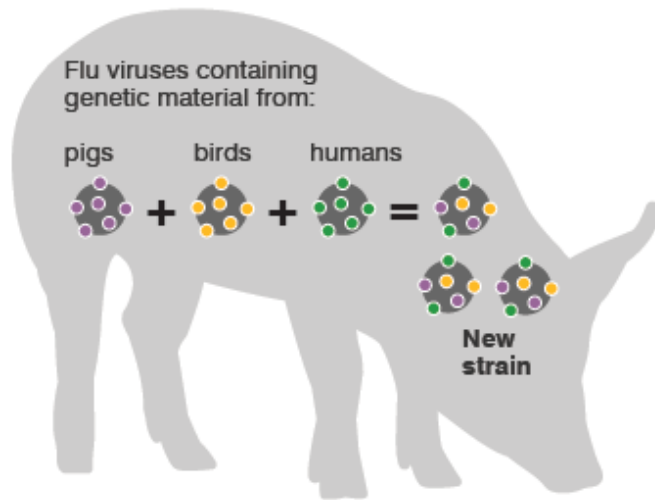
Two different strains of influenza virus (ex. H1N1 and H3N2) infect the same healthy cell

Viral genetic material is exchanged during replication

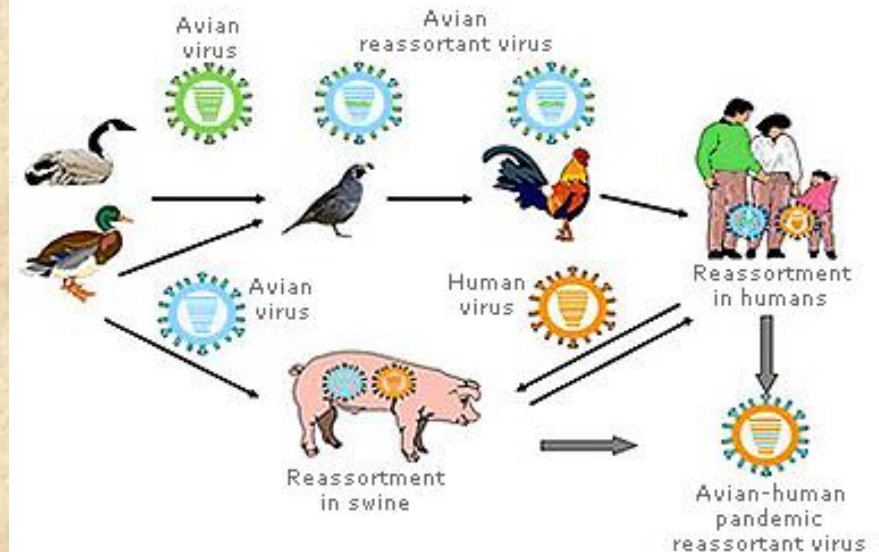
Reassorted virus is released from the cell. This new virus may be capable of cross-species transmission.

Genetic Shift

Antigenic shift in pigs



Generation of a Pandemic Influenza Strain

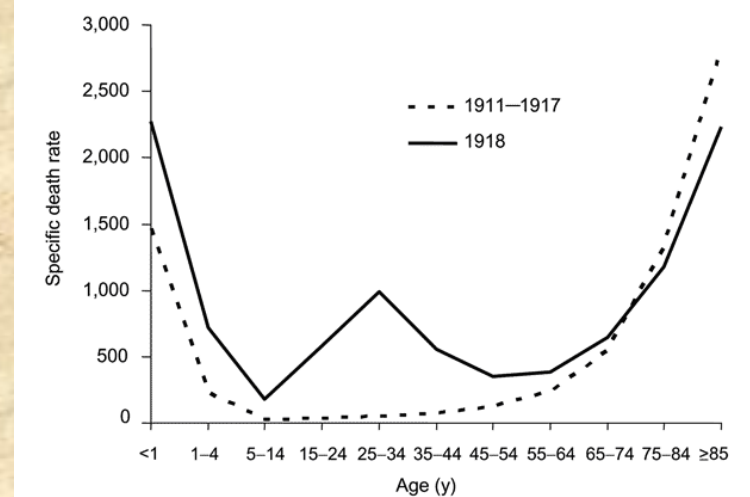


Source: CDC | Influenza Division, Centers for Disease Control and Prevention. Modified from Emergence of H5N1 influenza virus and control options. (Emerging Infectious Diseases ▪ www.cdc.gov/eid ▪ Vol. 12, No. 1, January 2006)

History of Influenza



INFLUENZA PANDEMIC MORTALITY IN AMERICA AND EUROPE DURING 1918 AND 1919



FLU: BRITAIN ORDERS 32M MASKS

Death toll hits 152 and 40% are at risk here



About the Flu

- Transmission
 - Droplet
- Incubation period
 - Very short 1-4 days



Symptoms

Influenza

- High Fever for 3-4 days
- Headaches
- Aches, Pains
- Fatigue
- Sometimes stuffy nose, sneezing, sore throat
- Cough
- Chest discomfort

Cold

- Low Fever or No Fever
- Rare Headache
- Slight Aches
- Mild Fatigue
- Stuffy Nose, Sneezing, Sore throat
- Mild to Moderate Cough

Vaccinations!!!

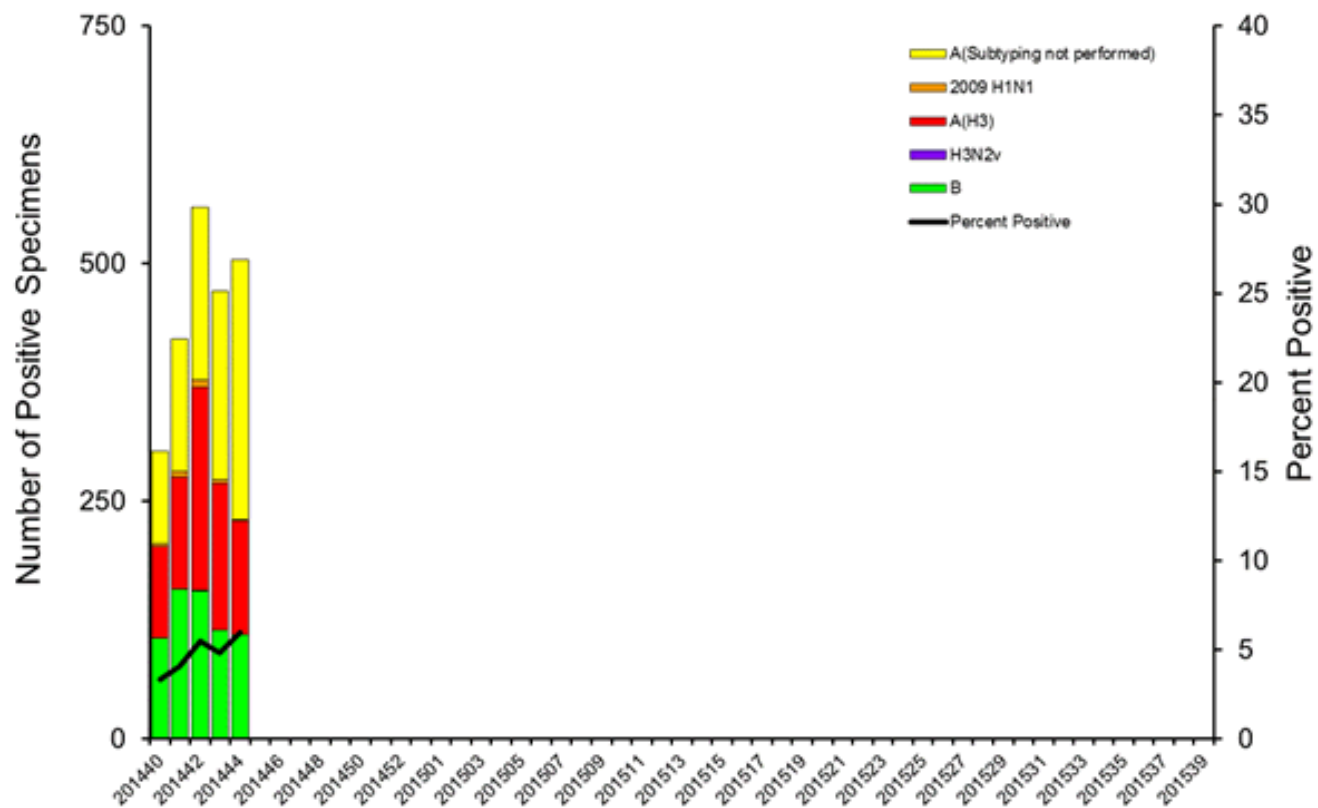
- Everyone >6 months old
- Vaccine Match
- Trivalent: A (H1N1, 2009), A (H3N2), B
- Quadrivalent
- High Dose: ages >65

Table 2. Influenza Vaccination Coverage^a by Age Group, Children 6 months to 17 years—United States,[†] 2011–12 Season

Age Group	Unweighted Sample Size	% [§]	95% CI [¶]
6 months–17 years	96,254	51.5	±1.0
6 months–4 years	25,206	67.6	±1.7
6–23 months	9,115	74.6	±2.5
2–4 years	16,091	63.3	±2.3
5–12 years	40,584	54.2	±1.4
13–17 years	30,464	33.7	±1.6

Type of Influenza 2014-15

Influenza Positive Tests Reported to CDC by U.S. WHO/NREVSS Collaborating Laboratories, National Summary, 2014-15



During flu season:

- Wash your hands
- Cover your mouth
- Stay home if sick



Works Cited

Center for Disease Control. (2014). *Influenza*.

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