Surveillance
- Influenza vaccine protects against three prominent virus strains, which must first be identified before production can begin each year.
- Ongoing global surveillance is key to predicting which three strains will circulate each influenza season.

Strain Selection
- World health officials analyze and identify the dominant circulating strains.
- The strains are submitted to the Food and Drug Administration (FDA) to recommend which three to include. The FDA distributes seed viruses to manufacturers to begin the production process.
- Manufacturers’ scientists predict the circulating strains for the coming season and begin preparing vaccine at risk before final FDA selection.

Manufacturing and Production
- Each virus strain is produced separately and later combined to make one vaccine.
- Millions of specially prepared chicken eggs are used to produce the vaccine. For seven months, fertilized eggs are delivered to the manufacturer. Each egg is cleaned with a disinfectant spray and injected with one strain.
- The eggs are incubated for several days to allow the virus to multiply. After incubation the virus-loaded fluid is harvested.
- The virus fluid undergoes multiple purification steps and a special chemical treatment to ensure the virus is inactivated, or “killed.”
- Viral fragments from all three strains are collected from different batches, and combined upon completion of quality control tests.
- Manufacturers and the FDA test the vaccine concentrate to determine amount and yield of the virus to ensure concentrate is adequate for immunization.

Vaccination
- The CDC recommends particular high-risk populations at risk for influenza and related complications to be immunized every year. Other persons who wish to reduce their risk for influenza may choose to be immunized.
- Immunization generally begins in October or as soon as vaccine becomes available and continues through the influenza season which typically ends in March.
- Immunity develops approximately two weeks following vaccination.

Additional notes:
1. The World Health Organization and Centers for Disease Control and Prevention (CDC)
2. All strains must be selected before manufacturers can produce vaccine for the coming season.
3. To ensure safety and purity, vaccine is produced in a clean environment where quality control experts enforce strict standards, continuously monitoring the process.
4. The majority of time for steps 3 and 4 dedicated to testing and FDA approval.
5. This process makes it impossible to contract influenza from the vaccine upon administration.
6. Children younger than 9 years of age receiving vaccination for the first time need two doses one month apart.