

CHAMBERLAIN RESEARCH LAB

Impact of Flu Vaccines

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Comp150: Computer and Technology Applications in Health  
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## Abstract

The purpose of this assignment, and summary about flu vaccines, is to review how this technology has impacted the health care profession. The flu vaccine potentially influences patient care in a positive manner. The flu vaccine can prevent hospitalization from the flu or prevent the flu from occurring while hospitalized for those that are immunocompromised. With COVID occurrences on the rise, the flu vaccine may be more important than ever to prevent overwhelming numbers of hospitalizations this winter. Susceptible populations require herd immunity and compliance.

## Impact of Flu Vaccines

The flu is caused by the influenza virus. Symptoms of the flu include high fever, runny nose, sore throat, muscle pains, headaches, coughing, sneezing, and a generalized feeling of being tired and weak. The influenza virus typically lasts for about a week before a person starts to feel better. However, some people who are otherwise healthy can go from being able to walk and talk to being on the point of hospitalization up to being hospitalized in the intensive care unit. The flu is spread by droplets sneezed out into the air. Thousands of droplets spread when a person may sneeze. The influenza virus droplets typically land on surfaces like a table, cutting board, computer, or any personal item used very close to someone where they touch it and then touch a portal entry like the mouth or eyes. Once a person is infected, they do not always begin to have the symptoms listed above right away. Instead sometimes they can take one day, leaving a full day or more of sneezing and spreading. The most effective way to stop the spread of influenza is vaccination. One of the ways that the flu vaccine protects

individuals

is through herd immunity. This is important when it comes to infants under six months old who cannot be protected by vaccination.

The vaccination is most done as an injection, although it can be done as a nasal spray. The injection, or nasal spray, contains three weakened strains of influenza that are predicted to be the ones that will dominate the current season. For instance, there are three strains in the 2020-2021 flu season including the A(H1N1) pdm09, A(H3N2) and B/Victoria lineage viruses (Center for Biologics Evaluation and Research, 2020). There is a 10% chance that a person will be infected by influenza each flu season. The predicted strains formulated typically reduce their risk of infection by influenza by half, making the chance of getting infected 5%. In the 2016 to 2017 influenza season it is predicted that the flu vaccine prevented

- 5.3 million cases,
- 2.6 million medical visits,
- 85,000 hospitalizations.

(FDA, 2019)

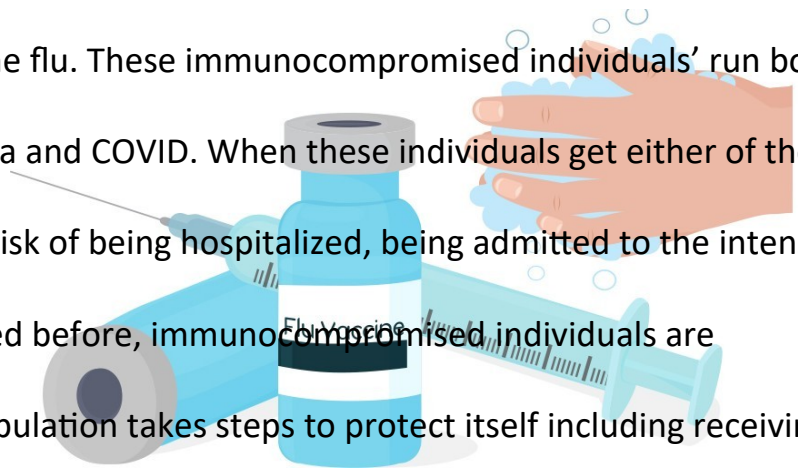


[ CITATION Chr20 \l 1033 ]2019-2020 Flu Vaccine Success Rates	
influenza A and B viruses	45% effective
influenza B/Victoria viruses	50% effective
influenza A (H1N1) pdm09	37% effective

[ CITATION Chr20 \l 1033 ](Crawford, 2020)

Susceptible populations such as pregnant women, those with chronic health conditions or immunocompromised systems, infants under six months old, and those older than 65 years

old run a greater risk of developing the flu. These immunocompromised individuals' run both the greater chance of getting influenza and COVID. When these individuals get either of these disease processes, they run a higher risk of being hospitalized, being admitted to the intensive care unit, or even death. As mentioned before, immunocompromised individuals are protected more when the general population takes steps to protect itself including receiving the flu vaccination. The best way to treat the flu is to prevent it. The best way to protect all members of the community is to utilize prevention methods.



## References

Center for Biologics Evaluation and Research. (n.d.). Influenza Vaccine for the 2020-2021 Season. Retrieved November 13, 2020, from <https://www.fda.gov/vaccines-blood-biologics/lot-release/influenza-vaccine-2020-2021-season>

Crawford, C. (2020). CDC Releases Interim Flu Vaccine Effectiveness Report. Retrieved November 25, 2020, from <https://www.aafp.org/news/health-of-the-public/20200226interimfluve.html>