

INFLUENZA AWARENESS IN THE WORKPLACE

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ABSTRACT

The United States has been actively researching Western medicine and disease prevention. Influenza is a common viral infection that it is widely known can be fatal. Nonetheless, complacency has become common. Not all workplaces and community training centers outside medical facilities properly train employees on the hazards associated with contracting influenza. However, standard training procedures and a wide variety of resources are used to disseminate awareness of seasonal influenza (flu). The United States Centers for Disease Control (CDC) publish morbidity and mortality rates and alert the public to any pandemics. Its estimates of influenza cases are delivered in three age categories: <19 years, 19–64 years, and ≥65 years (CDC, 2010). This study aims to incorporate prevention methods that have not been used to help protect American workers.

KEYWORDS

Influenza; Vaccination; Pandemic; Workplace; Infection; Mortality; CDC.

1. INTRODUCTION

A lack of self-awareness could explain how influenza is transmitted—poor hygiene and employees not staying home during and after the incubation period. Influenza is highly contagious, putting infants, children, pregnant women, the elderly, and people with chronic diseases or compromised immune systems at high risk (Vicarò, 2018). Beating influenza each year entails protection through annual vaccinations by one's healthcare provider (Steele, 2019). Flu immunization decreases a person's chances of contracting the flu by up to 60% and protects against three to four flu strains (Steele, 2019). However, it can take up to 2 weeks for a person to start developing antibodies after getting an immunization (Steele, 2019). According to the National Institute of Safety and Health (NIOSH), the most common reasons for not getting the flu vaccine were that it did not work, employees did not need it, and they did not have time to get vaccinated (Edwards, 2016). Twelve percent of total sick leave each year is reported to be for influenza, and annual production losses due to influenza in Europe have been estimated at £1,465 million and £131 million in France and Norway, respectively (Edwards, 2016). In the United States, sick days and lost production have cost an estimated \$17 billion per year (Steele, 2019).

The focus of this study is on influenza awareness in the office workplace and understanding of the different types of influenza. The aim is to encourage workers to take preventive measures to combat influenza. The first piece of evidence is the number of Americans who contract the virus. The CDC reports that an estimated 9% of Americans get sick annually, for a total of 26,176,000 Americans (Steele, 2019). In the United States, it is projected that 31.5 million people will visit their healthcare provider annually, with a projected 250,000 ending up in the emergency room (Steele, 2019). Mortality rates in 2010–2019 were estimated at 337,170 (Edwards, 2016) (Figure 1). To attract employee engagement, companies need to develop health programs that fit their needs.

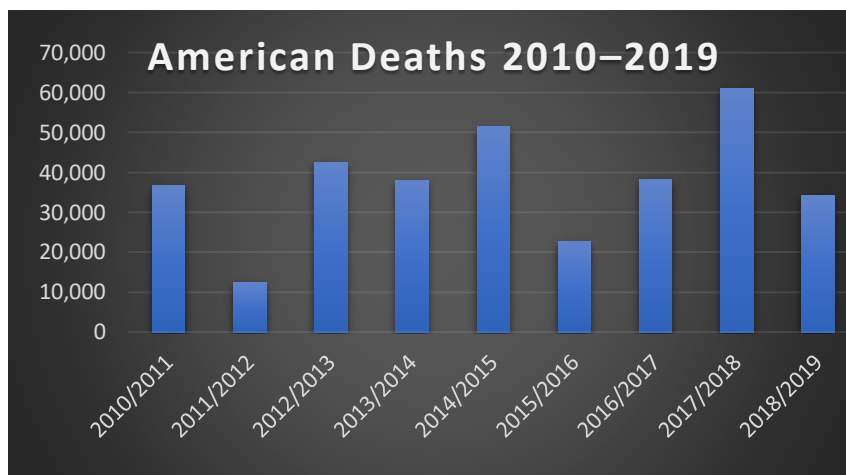


Figure 1. Mortality rates from 2010–2019; deaths during the period were estimated at 337,170.

Influenza causes severe illness, mortality, and financial impacts (Edwards, 2016). In 2009, the world faced the H1N1 pandemic; that year, it was estimated by the CDC that between 151,750 and 575,450 people worldwide died from the disease (Medical News Today, 2020). The CDC sent out alerts, initially recommending that employees take off 7 days of work or until they were asymptomatic for 72 hours without using any fever medications (Steele, 2019). Also, in 2010, the World Health Organization (WHO) recommended that persons with influenza remain quarantined until their symptoms decline (Edwards, 2016). The simple solution is to tell sick employees to stay home until they recover, but contrary to popular belief, most employees feel obligated to work even when sick. Many companies offer sick leave programs that ensure that an employee will have time to recover and is legally covered. Nevertheless, this can be costly, and a company can lose some of its overall production. Then again, employees who continue to work while ill can spread the virus and cause their company to lose even more production (Edwards, 2016). Therefore, employees staying home from work when experiencing flu-like symptoms may help decrease the influenza rate in the workplace (Edwards, 2016). This study proposes accumulating current knowledge on workplace prevention methods, management engagement, and companies that host on-site clinics by offering immunization.

2. THEORY

Influenza is the most serious of the common viral respiratory infections. In the temperate climate zone, influenza is diagnosed every year in the winter months (Doniec, 2019). Influenza season in the northern hemisphere falls from October to April, reaching its peak usually at the end of February (Doniec, 2019). Meanwhile, in tropical regions, influenza infections may occur all year (Meštrović, 2018). Influenza is most common among children aged 5–14, but deaths associated with the disease are most frequent among older adults (CDC, 2019). According to the CDC (2019), influenza types A and B are the primary causes of seasonal epidemics of the disease (known as the flu season) almost every fall/winter in the United States. Influenza A viruses are the only ones known to cause influenza pandemics (CDC, 2019). A pandemic can occur when a new and extremely different influenza A virus both infects and spreads efficiently throughout the population. Type C viruses generally cause mild illness but do not lead to human epidemics. Influenza D viruses typically only affect cattle and are not known to infect or cause illness in humans (CDC, 2019). Each type has strains that peak at different times each year. If a person has flu signs or symptoms, which include muscle aches, fever, fatigue, dry cough, headache, nasal congestion, sore throat, and runny nose, they should self-isolate and contact their physician (CDC, 2019). They will undergo a confirmatory exam and perhaps a swab test that detects

influenza viruses (Mayo Clinic, 2020). Influenza symptoms can fluctuate depending on immune status, age, and underlying medical conditions (CDC, 2019). A person can experience fever and body aches for up to 5 days and cough and fatigue for up to 2 weeks (CDC, 2019). Influenza does not need to be diagnosed for all patients with symptoms. A physician has five different types of tests to see if a patient is positive: rapid antigen testing, reverse transcription polymerase chain reaction (RT-PCR), viral culture, serology assays, and rapid molecular assays (CDC, 2019).

Office employees must be empowered to communicate with management to host a flu vaccination clinic at the workplace. Companies with programs in place assign an influenza vaccination director and assemble a team with defined tasks (CDC, 2019). The directors and the influenza team will need to hire an experienced outside healthcare team to administer the flu vaccinations. Employees need to be informed via e-mail regarding flu vaccination to encourage their participation (CDC, 2019). The team needs to determine a date each year when they will host a vaccination clinic; it is best to do it before the fall to stay ahead of the influenza curve (CDC, 2019). They must also talk with leadership about allowing employees to attend the vaccination clinic as part of their shift and not before or after work (CDC, 2019) and consider offering flu vaccination to employees' families to ensure the entire family is immune (CDC, 2019). As a primary way to incentivize workers and show them that their participation matters, companies must offer more vacation days, so employees do not show up to work sick. Each year, they must increase the number of employees who participate in the program. They must offer incentives for flu vaccination to increase participation, such as offering vaccines at no cost, providing free information and handouts at the on-site clinic, or holding a contest among departments for the highest percentage of vaccinated employees (CDC, 2019). According to Margaret Dayhoff-Brannigan, PhD, a patient network project manager at the National Center for Health Research, annual influenza costs include (Steele, 2019)

- 17 million missed days of work
- \$7 billion in sick days and lost production
- \$10 billion in medical bills
- An average of 3–5 missed school days for children

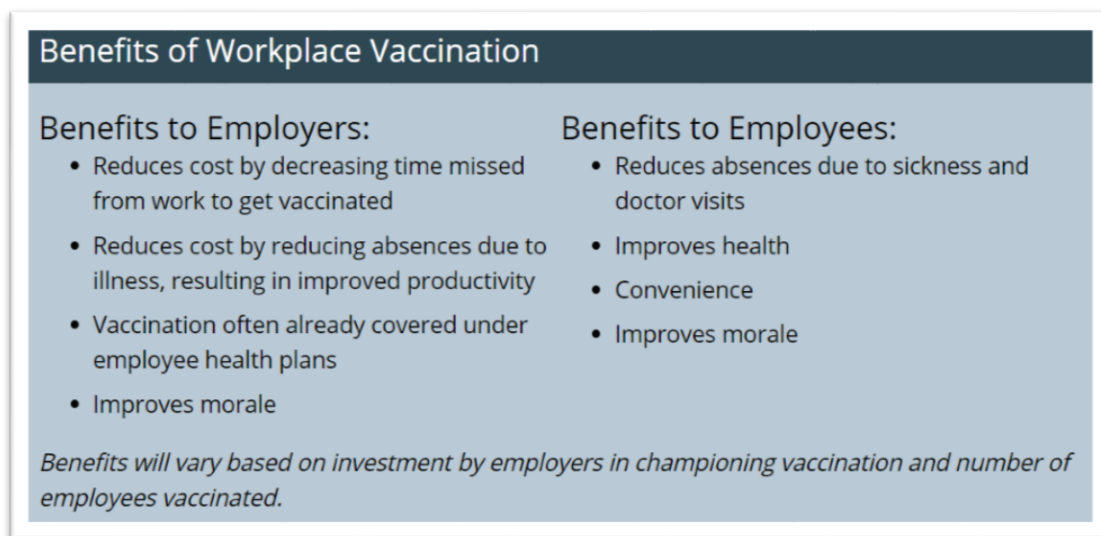


Figure 1.2 Benefits of workplace vaccination (Steele, 2019).

3. HYPOTHESIS

Null Hypothesis:

Increased training will increase influenza awareness (one-tail test).

Alternative Hypothesis:

Increased training will not improve influenza awareness.

4. METHODS

Target groups were selected based on employment status (employed, unemployed, and self-employed). Selecting a quantitative design, we selected 500 targets on LinkedIn who worked for all kinds of different companies as health and safety professionals and gave them a survey based on their knowledge of influenza awareness in the workplace. LinkedIn serves as a platform for professional networking and independent studies. One hundred twenty people agreed to participate, of whom 81 were men and 38 were women; they had an average age of 39.5, all were tenured employees with 4 years of employment, and 113 were currently employed. The key results will show how many would want to see their employer pay for their flu shot as well as be incentivized to receive an annual flu shot. The instrument used to pull data was Survey Monkey. Small samples were used with a 5-point Likert scale; this gave us a broader range of answers.

The second portion of the study estimated how many companies have influenza incentive programs including immunization clinics where employees can get annual immunizations. Another survey using a 5-point Likert scale was sent out on LinkedIn. Surveys were started on June 1, 2020, and ran for 14 days. Participants were asked to partake in a short survey on influenza in the workplace. No more guidance was given at that time unless participants had questions. Surveys took 1 minute and 33 seconds on average to complete. There were 10 questions total. No human research ethics were used to retrieve survey results.

5. RESULTS

1. Do you think your employer should pay for your annual flu shot?
2. Do you believe flu vaccinations work?
3. Should your employer incentivize you for receiving an annual flu shot?
4. Does your employer perform adequate training on seasonal influenza?
5. Should your employer offer Kleenexes, hand sanitizer, etc.
6. Does the flu shot help protect you?
7. Would you be more willing to get a vaccination if your employer paid for it?
8. Do you know the signs and symptoms of the flu?
9. Would it be important to know the number of sick days used companywide?
10. Would knowing company profit lost due to sick days interest you?

Questions	Total Participants	Strongly Agree %	Agree %	Undecided %	Disagree %	Strongly Disagree %	Total
Question 1	123	20.33%	28.46%	25.20%	13.82%	12.20%	100.00%
Question 2	123	20.33%	39.02%	22.76%	10.57%	7.32%	100.00%
Question 3	123	12.20%	27.64%	21.14%	27.64%	11.38%	100.00%
Question 4	123	9.76%	23.58%	17.89%	32.52%	16.26%	100.00%
Question 5	123	41.46%	43.90%	7.32%	1.63%	5.69%	100.00%
Question 6	123	19.51%	38.21%	28.46%	9.76%	4.07%	100.00%
Question 7	123	19.51%	30.08%	15.45%	20.33%	14.63%	100.00%
Question 8	123	44.72%	51.22%	3.25%	0%	0.81%	100.00%
Question 9	123	17.07%	36.59%	19.51%	22.76%	4.07%	100.00%
Question 10	123	17.07%	43.39%	17.07%	14.63%	7.32%	100.00%

Figure 1.3

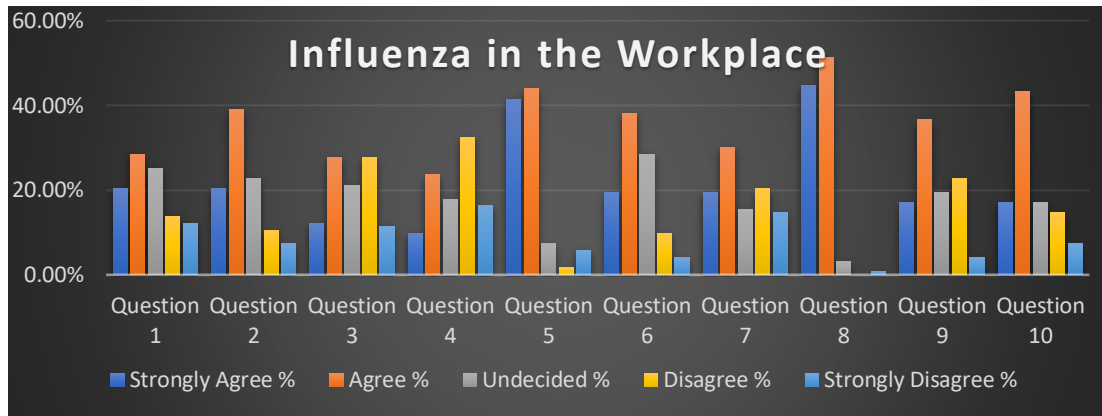


Figure 1.4

Table 1 One-Way Analysis of Variance of Influenza in the Workplace

Source of Variation	SS	df	MS	F	P	F crit
Between Groups	0.428986	4	0.107247	13.20294	3.41	2.578739
Within Groups	0.365532	45	0.008123			
Total	0.794518	49				

6. ANALYSIS

Although overall awareness was moderate, the analysis shows that employees want to know more about the topic of influenza awareness. The subject of whether influenza vaccinations work was subject to a high level of agreement. No direct implications of answers were measured on the theory of incentivizing employees. The largest subgroup was question 8, “Do you know the signs and symptoms of the flu?” Question 8 had a 44.72% rate of strong agreement. This demonstrates that self-awareness from work or self-study leads to knowing the signs and symptoms.

7. CONCLUSION

Based on the questions presented in the survey, we can conclude that influenza awareness is high among employees, but training is needed to better educate employees. It was also found that several companies have developed guidelines but lack any type of incentive program for their employees. More studies are needed to better understand what direct training is needed to follow influenza awareness polices. ANOVA is 95% confidence; we do not reject the null hypothesis and conclude that the average score it takes to process applications is 95% confident.

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