Adherence To Standard Precautions in Clinical Setting During the Flu Season
A Descriptive Quantitative Study

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Introduction & Purpose

Influenza is typically caused by viruses that circulate during the winter months. According to the Center of Disease Control and Prevention (CDC, 2022), in the United States, flu season usually occurs in the Fall and Winter and peaks between December and February. The influenza season is often accompanied by highly transmissible upper respiratory viral infections, which prompts infected people to seek medical treatment at doctor's offices. Annual seasonal influenza epidemics result in 290,000–650,000 deaths worldwide, while influenza pandemics have resulted in many more – the A(H1N1) pandemic of 1918–1919 caused 20–50 million deaths (Tyrrell, 2021). Healthcare organizations need to adopt strict measures to prevent the spread of infections in care facilities. Adherence to standard precautions with all direct patient care in clinical settings will protect patients and healthcare providers from the transmission of viral infections during the flu season.

The project focuses on a study to investigate if staff training on standard precautions will improve adherence to standard precautions with all direct patient care in clinical settings during the flu season.

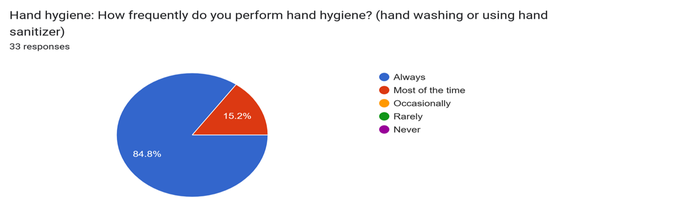
Problem, Research Questions, Key Variables

Health care providers are susceptible to nosocomial infections and should therefore take action to prevent the spread of infections in clinical settings. Standard precautions aim to protect both health workers and patients by reducing the risk of transmission of microorganisms from both recognized and unrecognized sources. When adhered to consistently, standard precautions can prevent the transmission of microorganisms between patients, health workers, and the environment (World Health Organization, 2022).

Research question: Will staff training improve adherence to standard precautions with all direct patient care during the flu season?
Independent Variable: Staff training on components of standard precautions.
Dependent Variable: Improvement on adherence to standard precautions.

Methodology

This study utilized volunteer survey responses, which consists of pre-training and a post-training surveys aimed at assessing participants knowledge and adherence to standard precautions in a clinical setting. Participants were all staff in different roles who work at Neighborhood Health Center, Tanasbourne Clinic in Oregon State. The clinic comprise of medical and dental clinics in the same building. The project was deployed by the use of survey questions which comprise of a combination of multiple answer questions (select all that apply), yes or no questions, and 5-Likert scale questions. The 15 minutes training via Power Point presentation on the components of standard precautions and CDC recommendations for use in a clinical setting, informs staff on the accurate methods of standard precautions utilization in a clinical setting for infection control and prevention.



Outcome & Recommendations

The pre-training survey was sent to about 50 staff at the clinic, but only 66% (33 staff) completed the survey, while 50% (25) completed the post-training survey. The study results was analyzed by comparing the means of correct responses from survey 1 and survey 2, and a t-test was run to determine the level of significance. With the standard deviation of 1.041 and $p>0.005$ (0.883), the test was not statistically significant. Nevertheless, the results in some components of the survey showed improvement to adherence to standard precautions. For instance, for hand hygiene frequency during patient care, the percentage of participants improved from 84.4% to 91.7%, and 93.9% to 99.6% for adherence to wearing gloves. Confidence level in staff understanding and the ability to apply standard precautions increased from 12.1% to 28%.

Limitations and Future Directions: The level of staff participation had a huge impact on the study results; evidence from the study surveys showed the possibility of having a statistically significant result if more staff participated in the second study survey. Also, due to inclement weather, the timeline of staff training was affected, as such staff training occurred at different times which affected the timeline for the second survey. Future studies on this matter should allot the same timeline between survey 1 and training, and between training and survey 2. This would allow for a cohesive study design. Additionally, future studies should assign unique identifiers to study participants as this would trace a participants' performance in the pre and post training surveys.

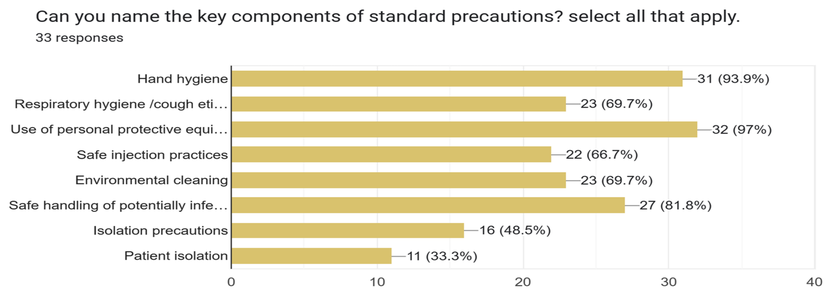
Review of Literature

Globally, infection by seasonal influenza viruses causes 3–5 million cases of severe illness and 290,000–650,000 respiratory deaths each year (Kim et al., 2022). The World Health Organization (2023) indicated that influenza epidemics are estimated to result in about 3 to 5 million cases of severe illness and about 290,000 to 650,000 respiratory deaths worldwide. Most deaths associated with influenza occur among people over the age of 65.

Although most people can recover from influenza infection, it was reported that during the 2019-2020 flu season, around 25,000 people in the United States lost their lives to the disease (Elflein, 2023). Influenza viruses spread easily through aerosolized droplets produced by coughing and sneezing or by hands and fomites contaminated with influenza viruses, and transmission occurs predominantly during the winter seasons in temperate regions and year-round in tropical regions, especially in crowded areas such as schools, nursing homes, or on public transport (Macias et al., 2021).

Symptoms of influenza illness are characterized by fever, cough, headache, muscle and joint pain, malaise, sore throat, and a runny nose that have an abrupt onset and can last for more than 2 weeks (Macias et al., 2021), and people experiencing symptoms often seek medical treatment at healthcare settings. Therefore, preventing the transmission of influenza virus and other infectious agents within healthcare settings is vital and should require a multi-faceted approach which includes the administration of influenza vaccine, implementation of respiratory hygiene and cough etiquette, appropriate management of ill health care providers, adherence to infection control precautions for all patient-care activities and aerosol-generating procedures and implementing environmental and engineering infection control measures (CDC, 2021).

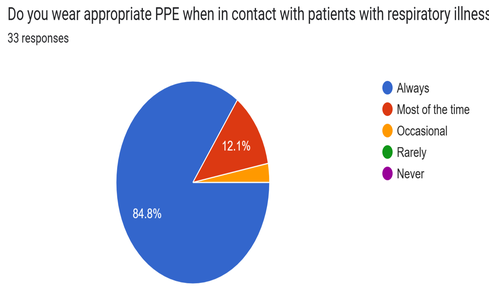
As a result, health care organizations need to adopt measures to protect against influenza infection during the flu season in patient care environments. UpToDate (2022) pointed out that periodical training of healthcare providers on preventing transmission of infectious agents, including influenza virus, is vital during the flu season. Adherence to standard precautions in a clinical setting is important, as the care of patients with influenza has led transmission of disease, and infected healthcare personnel have transmitted the virus to patients and other staff (UpToDate, 2022to nosocomial).



Conclusions

Seasonal influenza infections are unavoidable. Influenza infection is often accompanied by economic burden, high disease morbidity and mortality especially among the elderly, the young and people who are immunocompromised. The role of standard precautions in infection prevention in healthcare settings cannot be over-emphasized, and the evidence collected in the literatures discussed in this paper highlights the importance of adhering to standard precautions in all healthcare settings. Prevention is better than cure. Therefore, making efforts to prevent nosocomial infections is vital and healthcare organizations need to adopt quality improvement measures aimed at minimizing infection transmission in healthcare settings. Adherence to standard precautions with all direct patient care in clinical settings can have a great impact in infection prevention.

Healthcare professionals can take appropriate measures in disinfecting the skin, wearing gloves and masks, changing infusion sets, using cautionary measures, separating sick patients from other patients, using standard precautions, observing hand hygiene, preventing inadvertent contact with the needle sticks, avoiding exposure to infected respiratory secretions, and applying the principles of infection prevention in hospitalized patients (Jeihooni et al., 2018). Regular training of medical staff on the components of standard precautions would improve adherence with all direct patient care during the flu season.



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