

Educating Nurses on the Severity of the Influenza Virus on Cardiac Patients in hope of further promoting the flu vaccine to cardiac patients.

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**Title:** Educating nurses on the severity of the influenza virus on cardiac patients in hope of further promoting the flu vaccine to cardiac patients.

**Background of practice/clinical problem:** On average, it's found that the Influenza causes approximately 49,000 deaths and 200,000 hospitalizations each year (Ludwig et.al. 2015).

Despite the amount of negative outcomes from the flu, many people do not receive the flu vaccine. In fact, 53% of hospitalized patients over 65 answered "no" to planning on getting the flu vaccine in 2018 (Schattner, 2019). Although many of them had comorbidities predisposing them to cardiovascular risk, they claimed not knowing side effects of obtaining the flu with their chronic illness. There was a study done on 163,831 patients that showed an increase of shocks needed while contracting the flu for patients with defibrillators. This in turn, is more dangerous to patients and leads to higher mortality rates (Mohammad Madjid, et al., 2019). The flu also is shown to have higher mortality rates in patient's who've had an Acute Myocardial Infarction and increases cardiac biomarkers in patients who don't even have cardiac problems (Influence of influenza 2020; Ludwig et.al. 2015). Cardiac biomarkers are enzymes released when there is heart muscle damage. An increase in these markers indicates the heart was damaged. One of the biggest nursing responsibilities is educating patients on different diseases, medications, and more. By educating nurses on the severity of the flu on these very ill cardiac patients, they could further educate their patients on risks of having the flu with their cardiac conditions. In turn, this could increase patients' willingness to get the flu vaccine, while also promoting the flu vaccine on cardiac floors in hospitals.

**Project aim:** The aim of this study is to educate nurses on the severe outcomes cardiac patients have from getting the flu, in hopes of increasing promotion and patients willingness to get the Influenza vaccination.

**Method:** The research study method was created after studies were compiled which both suggested the cardiac implications of influenza, as well as the importance of education about vaccination for cardiac patients. It was noted that most of the studies that were compiled were primary research studies, in which the authors had produced and conducted their own hypotheses and research projects. In the event of studies such as *The American Journal of Cardiology* (2020), the studies could be considered meta-analyses, where the research was based on several compiled studies and the statistical findings that they concluded from their own research of different studies. Making sure nurses know these crucial findings could help them educate their patients on how important vaccination against influenza is, especially patients that already have a history of heart disease.

**Findings/conclusions/implications for practice:** Influenza has been an identified component to increased cardiac distress on cardiac patients. Tripathi et al. (2020) was able to correlate that AMI patients were more likely to have symptom complications when patients were also positive for influenza. It was noted that more cardiac disease patients experienced cardiac arrest during flu season than those who didn't have cardiac disease, which means patients that are susceptible to getting the influenza exacerbated further cardiac symptoms and possessed a higher risk of mortality (Madjij et. al 2019). In several studies, there was consistent monitoring of how many patients got the flu, as well as increased biomarkers indicating heart distress in those flu patients (Wu et. al 2019; Ludwig et. al 2015). Ludwig et al. (2015) found that patients that had one or

more risk factors for heart disease were also high risk for developing heart distress when patients also tested positive for influenza. Patient education is the best way a nurse can include patients in their plan of care. The patient-nurse dynamic as a care team increases a trusting relationship between the two, and the patient is more likely to comply with taking care of themselves when they feel as though their care team is working with them. Communication and collaboration between the patient/nurse is most important to boost patient trust and compliance with getting vaccinated to prevent further heart complications.

**Implementation of Plan:** The education will be implemented on a Cardiac floor (R7) at Maine Medical Center. Informational pamphlets and fliers will be distributed on the R7 by the nurses station, in the nurses lounge and in the bathrooms. These pamphlets will include information compiled from prior research about the importance of flu shots for cardiac patients. The nurses will take a three question survey asking how important do you think the flu vaccination is for cardiac patients after viewing the pamphlets and fliers, and will they be educating your patients on the importance of receiving a flu shot?

**Method of evaluating outcome:** The nurses will be assessed using a simple questionnaire with three questions. We will also ask the nurses, “how likely are you to implement these findings into your clinical practice?” As well as; “Do you feel you better understand the importance of flu vaccines for cardiac patients?” These findings will help assess if the sharing of these findings was effective for R7’s cardiac patients. The nurses responses will give insight into the nurses' understanding of their information and the likelihood of this information being implemented on the floor for regular day to day care.

**References:**

- Effect of high influenza activity on risk of ventricular arrhythmias requiring therapy in patients with implantable cardiac defibrillators and cardiac resynchronization therapy defibrillators. (2019). *The American Journal of Cardiology*, 124(1), 44-50.
- Influence of influenza infection on in-hospital acute myocardial infarction outcomes. (2020). *The American Journal of Cardiology*, 130, 7-14. Doi
- Ludwig, A., Lucero-Obusan, C., Shermer, P., Winston, C., & Holodniy, M. (2015). Acute cardiac injury events [less than or equal to]30 days after laboratory-confirmed influenza virus infection among U.S. veterans, 2010-2012. *BMC Cardiovascular Disorders*, 15(1). doi:doi: 10.1186/s12872-015-0095-0
- MacIntyre, R., Heywood, A., Kovoov, P., Ridda, I., Seale, H., Tan, T., . . . Dwyer, D. (2013, August 21). Ischaemic heart disease, influenza and influenza vaccination: A prospective case control study. Retrieved September 27, 2020
- Poulose, S., Cheriyan, E., Cheriyan, R., Weeratunga, D., & Adham, M. (2015). Pharmacist-administered influenza vaccine in a community pharmacy: A patient experience survey. *Canadian pharmacists journal : CPJ = Revue des pharmaciens du Canada : RPC*, 148(2), 64–67.
- Schattner, A. (2019). Cardiovascular-targeted patient education and uptake of influenza

vaccination in elderly patients. Retrieved October 02, 2020, from  
<https://www-clinicalkey-com.une.idm.oclc.org/>

Wu, H. H., Chang, Y. Y., Kuo, S. C., & Chen, Y. T. (2019). Influenza vaccination and secondary prevention of cardiovascular disease among Taiwanese elders-A propensity score-matched follow-up study. *PloS one*, *14*(7), e0219172.