**VENOUS THROMBOEMBOLISM PREVENTION**

**How the researcher addresses the five following areas of the selected journal article, using the attached “Evidence Table”:**

*Table 1: Evidence table*

| **A1 *Quantitative* Article:** Tsai, J., Grant, A. M., Beckman, M. G., Grosse, S. D., Yusuf, H. R., & Richardson, L. C. (2015). Determinants of venous thromboembolism among hospitalizations of US adults: a multilevel analysis. *PloS One*, *10*(4), e0123842. | |
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| **Background or Introduction** | Regarding the background of this study, the researcher explains that venous thromboembolism is the main etiology of morbidity and deaths in patients that have been hospitalized even though the condition can be controlled. However, measures to reduce the disease burden of venous thromboembolism have targeted on bettering the physician’s prescription of the prophylaxis and accorded little emphasis on educating patients. Therefore, it would be objective to adopt a patient-centered approach that focuses on imparting knowledge to patients together with their families regarding the risk factors benefits and adverse effects of venous thromboembolism. |
| **Review of the Literature** | In this section, the research denotes that, many factors have been depicted to dictate whether a patient receives the appropriate venous thromboembolism prophylaxis and the formulated strategies solely focus on the prescriber. Given the many identified knowledge gaps and the high number of patient that decline to take prophylaxis of the at-risk patients, educating and involving patients in their care is likely to be a powerful tool in the prevention of venous thromboembolism.  Literature as well reveals that Venous Thromboembolism prevention is important in healthcare. The American College of Chest Physicians Antithrombotic Therapy and Prevention of Thrombosis guidelines advised that patients’ preferences should be considered when prescribing VTE prophylaxis. According to the researchers of this study, Najafzadeh et al., very little is known about patients preferences, and the aim of this study was to learn more about patient knowledge and preferences related to VTE prophylaxis (Tsai et al., 2015). |
| **Discussion of Methodology** | Procedures involving human participation and the need to treat information with confidentiality was first approved and reviewed by the ethics review board. Patient data was identified before analysis to avoid breaching the confidentiality of the study participants  The data source utilized was from NIS: one of the largest inpatient public databases with patients with different characteristics. This helped to improve the randomness of the study sample. To add on that NIS also allows for up to 25 fields of diagnosis based on international diseases classification for each particular population sample.  The researchers performed in-person interviews with patients who were status post orthopedic surgery to the knee or hip. The researchers then organized the info obtained from the interviews using the constant comparative method. |
| **Data Analysis** | Potential determinants of VTE diagnosis was done at both levels of hospitalization and hospital levels. In the hospitalization level, demographics, insurance and clinical status, primary expected payer insurance and other pre-existing 29 comorbid conditions. The AHRQ 29- was used to adjust to the risk that results from using health administrative data at the hospital level, hospital characteristics were assessed and classified in sizes.  Percentages distribution of diagnostic rates of VTE among hospitalizations were calculated among hospitalization and classified by age, sex, race, ethnicity, days and hospital stays. A multilevel approach was employed to address clustered data and in that the outcome of concern was correlated in this case. A construct of model 0 was used to divulge the possibilities of VTE in hospitals. Backward elimination of procedure was used to eradicate any predictor with the highest p-value. Odds ratios were adjusted to measure the association’s strengths. To add on, weighted analyses were done to come up with a nationally representative estimate of percentages.  The data analysis revealed that a low number of patients were invited to the study and less than half of those responded. Of those that did respond to the interview invitation, most of them did understand the reasons that antithrombotic medications were prescribed on a very simple level. However, less than half of these people understood DVT and PE. Further, the patients did not appear to understand the significance of the risk of bleeding and the possible repercussions. |
| **Researcher’s Conclusion** | Research findings from this study reveal that specific comorbidities and hospital-related factors account for the increased probabilities of VTE diagnoses among adults that have been hospitalized. This study too proves the significance of patient teaching on venous thromboembolism other than just focusing on clinical aspects of treatment. While patients did understand the risks of blood clot formation, they did not understand the risks associated with of antithrombotic therapy as well. |

**A critique of whether the evidence presented in each section of the journal article supports the researcher’s conclusion.**

**Background**

The background tries to bring out the aspect that VTE is a threat to man. The author tries to formulate a recipe for factors that he thinks can be an etiology. This background augers well with the conclusion that at the end the researcher proofs some of those factors as being causative.

**Review of literature**

This part provides known information to the reader regarding VET. Here we are able to acquaint ourselves with factors such as gender, age, race, and hospitalization environment that are known to cause VET. It is related to the conclusion that some of the factors are proven to be causative. There are however some variations from the new findings that conflict the existing knowledge body.

**Methods**

The method used is cross-section approach. This study design is not effective in studying the cause-effect relationship that the conclusion seeks to identify.

**Data analysis**

In the data analysis, figures were calculated, and percentages are given all to show the existence of certain comorbidities and hospital-related factors as contributing to the increased incidence of VTE diagnosis. The findings here are the ones that have been used to assert the conclusion.

1. **Explanation of the protection of human subjects and cultural considerations of the journal article.**

Human subjects’ rights have been taken care of properly in this journal bearing in mind that all procedures done to man were initially approved and reviewed by the ethics review board research agency. Patient data obtained during the study that could provide leads to a given participant were anonymized prior releasing it to the public for scrutiny. To wrap it all analysis of data that has not been de-identified from the NIS is a violation of the federal rules all to protect human taking part in research studies.

1. **Identification of strengths and limitations of the study**

**Strengths**

The study results in this research actually coincided with the prior existing evidence that claimed: factors like age, gender, race and a prolonged hospital duration significantly increased the risk of venous thromboembolism. It was also noted that variations in the clinical setting regarding VTE prophylaxis among healthcare providers affect the risk.

VTE determinants that included demographic, clinical and insurance status, pre-existing comorbid conditions and hospital characteristics were reported and characterized as compared to previous research conducted on the same topic.

**Weakness**

Despite the strengths of this study, it cannot be established whether VTE was present on admission or it occurred in the course of hospital stay. Differences in the hospitals that people seek care were found to impact on the health outcomes while the exact reason as to why VTE diagnoses were higher in the urban hospitals than those in rural ones could not be accounted for. The research was based on a cross-sectional study method that cannot demystify a cause-effect relationship and the units analyzed were hospitals and hospitalizations. The rate of VTE diagnoses among the hospitalized does not reflect the true rates per patient as some may have been hospitalized severally.

1. **Description of how the evidence informs nursing practice.**

Nurses need to discuss with patients about VTE prevention prior to and after their hospitalization and adherence to treatment as recommended. This also calls for public health efforts in order to prevent admitted patients from getting VTE. In order to achieve this, we need to create and implement evidence-based prevention measures.

**References**

Tsai, J., Grant, A. M., Beckman, M. G., Grosse, S. D., Yusuf, H. R., & Richardson, L. C. (2015). Determinants of venous thromboembolism among hospitalizations of US adults: a multilevel analysis. *PloS One*, *10*(4), e0123842.