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Venous Thromboembolism Prevention Education for Practitioners in the Acute Care Setting

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This is to certify that the doctoral study by

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has been found to be complete and satisfactory in all respects,
and that any and all revisions required by
the review committee have been made.

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2019

Abstract

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Eppie Ann LaBiche

MS, University of Phoenix, 2001

BS, William Carey College, 1986

Project Submitted in Partial Fulfillment

of the Requirements for the Degree of

Doctor of Nursing Practice

Walden University

May 2019

Abstract

During the last several decades, venous thromboembolism (VTE) has been identified as a preventable health condition. The gaps in clinical practice have led to an increased incidence of VTE. The lack of using existing evidence-based VTE prevention guidelines in practice has limited the implementation of VTE risk assessment stratifications and affected the appropriateness and timeliness of addressing pharmacologic and mechanical prophylaxis. The purpose of the scholarly project was to educate practitioners on existing VTE prevention practice guidelines. The practice-focused question explored whether an educational learning activity on evidence-based VTE prevention guidelines improved the awareness, knowledge, and compliance with existing evidence-based VTE guidelines of practitioners that assess and treat patients at risk for VTE. The theoretical framework for the project was Lewin's change process theory. A total of 38 participants comprised registered nurses (82%), physicians (5%), nurse practitioners (2%), and nonclinical personnel (11%). A program evaluation was provided to determine the effectiveness of the project. The findings showed that practitioners participated in the learning activity to improve knowledge (48%), increase VTE awareness (43%), and would change the management and treatment of patients at risk for VTE (39%). Hospitalized patients at risk for VTE can benefit from the results of this project through a change in clinical practice that might decrease the incidence of VTE and potentially bring about social change by reducing the number of preventable deaths.

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Dedication

To God, I dedicate this project in His Glory for the many blessings He has bestowed upon me and the courage to complete the project with gratefulness and grace. This project is dedicated to the future researchers that are crusading in the prevention of VTE to save lives globally. To my family for the genuine love and support they have shown during each milestone of this project and for their tireless efforts in supporting my educational endeavors and helping me to care for our parents during their last months before departing to heaven. In memory of my Dad and Mom for believing in me, teaching me the importance of loving humanity, never be mediocre, and always take a leap of faith to be part of the difference that positively impacts the lives of others.

The project is in memory of my friend, Marcus Poulliard. At the age of sixty-one he succumbed to a fatal event – multiple pulmonary embolisms, a potentially preventable death. His death was both unexpected and devastating for his family, friends, and colleagues. I dedicate this project to his wife and dear friend Mirtha Poulliard and their children Piper, Emily, and Jeffrey with a message of hope that this project will reach many practitioners to improve awareness of VTE prevention.

Acknowledgments

I want to acknowledge and thank the expert panel, data analyst, and the leadership team for their support in the implementation and evaluation phase of the project. Your time, energy, and expertise are both admirable and appreciated. To the practitioners who attended the educational activity, I thank you for your passion and commitment to patient safety and VTE prevention.

I want to acknowledge and thank Chair Dr. Barbara Barrett for her commitment to the DNP program as a mentor. It was through her contributions of providing detailed feedback, support, and encouragement that kept me focused on achieving each milestone of the project. To committee member Dr. Diane Whitehead, I thank you for the guidance you have offered every step of the way. Your insight and feedback were essential to the success of the project. To URR Dr. Geri Schmotzer, I thank you for the reviews and posing critical questions that allowed for clarification on what I hope to accomplish with this project. Program coordinator Dr. Cheryl McGinnis, I thank you for the support to the DNP program.

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Section 1: Nature of the Project

Introduction

Hospital-associated venous thromboembolism (VTE) is a significant health problem and one of the leading causes of preventable deaths globally (Maynard, 2015; Riback & Wessels, 2012). The development of VTE can occur during or after a hospital stay (Streiff et al., 2014). It is a significant cause of morbidity and mortality during the perioperative period, post cardiovascular events such as myocardial infarction and stroke, and hospitalized patients who are high-risk (Elisha, Heiner, Nagelhout, & Gabot, 2015). Studies have shown evidence that there are a proportion of hospitalized patients for which VTE pharmacologic prophylaxis was underutilized.

Furthermore, there is a lack of timely assessment and protocols classifying patients at risk during a hospital stay (Cohen et al., 2008; Maynard, 2015; Riback & Wessels, 2012). It is evident that there was a need for evidence-based practice VTE prevention guidelines education among healthcare practitioners that assess and treat patients at risk for VTE within the acute inpatient setting. The significance of the project was the potential impact it would have on social change and outcomes.

Problem Statement

Propelled by the need to influence change in practice to save lives, this doctoral project offered practitioners in the project setting an opportunity to explore existing evidence-based practice guidelines that impact patient outcomes across the continuum of care. The project setting was a full-service, 167-bed acute-care hospital located in the

southern United States that provides inpatient and outpatient healthcare services with more than 240 physicians and 800 employees.

Relevance

Hospital-associated venous thromboembolism is a significant health problem among hospitalized patients. VTE is an economic burden of $1.5 billion - $10 billion direct cost and combined direct and indirect cost in the United States range from $9.8 - $52 billion annually (Mahan et al., as cited in Casciano et al., 2015). Casciano et al. (2015) suggested that the total economic burden, considering cost due to VTE complication, may be much higher. In the United States alone, the incidence of VTE affects an average of 900,000 patients with an estimated 300,000 deaths annually. Other sources indicated that the impact of VTE affects approximately 300,000 – 900,000 patients with a mortality of 100,000 – 300,000 deaths annually if not treated (Maynard, 2015; Streiff et al., 2014). The incidence of deep vein thrombosis (DVT) and pulmonary embolism (PE) is higher with an extended inpatient length of stay, associated with an increased rate (10-15%) of fatality (Maynard, 2015).

Significance in the Field of Nursing

Currently, there is a lack of awareness, knowledge, and compliance among practitioners with existing evidence-based VTE prevention guidelines affecting the appropriateness and timeliness of addressing VTE prophylaxis (Maynard, 2015). In the project setting, there was limited use of existing clinical practice guidelines including limited VTE risk assessment stratifications and prevention protocols. Furthermore, the execution of VTE prevention orders was not always timely resulting in concerns about a

possible lack of awareness and knowledge among practitioners. Therefore, conducting an educational activity that aligned with existing prevention guidelines could promote awareness, knowledge, compliance, and reduce the incidence of VTE (Al-Hameed, Al-Dorzi, & Aboelnazer, 2014; Duff, Walker, & Omari, 2011; Kahn et al., 2013).

Purpose

The purpose of this practice project was to educate practitioners that assess and treat patients at risk for VTE on existing evidence-based VTE prevention practice guidelines to improve awareness, knowledge, and compliance to reduce the incidence of VTE. Practitioners included physicians, nurse practitioners, physician assistants, and registered nurses employed at the facility. The project followed the Walden University Doctor of Nursing Practice (DNP) Manual for Staff Education.

Gap in Practice

The gap in practice that the doctoral project addressed was the lack of awareness, knowledge, and timely implementation of existing evidence-based VTE practice guidelines. Patient safety is the responsibility of all who deliver care whether directly or indirectly. During the last decade, public agencies and private organizations have developed and endorsed patient safety programs across the healthcare continuum to reduce this preventable condition. Because VTE can develop during or after discharge from a hospital stay, the issue is both a public health and a patient safety problem (Strieff et al., 2014). To ensure patients are provided with the necessary care safely and effectively, there was a critical need for VTE awareness and knowledge of existing evidence-based guidelines among practitioners.

Practice-Focused Question

The practice-focused question asked:

1. Can an educational learning activity on evidence-based VTE prevention guidelines among practitioners that assess and treat patients at risk for VTE improve their awareness, knowledge, and compliance with existing evidence-based VTE guidelines in practice?

Addressing the Gap-in-Practice

As healthcare continues to evolve rapidly and because of performance linking to reimbursement, practitioners must be able to innovatively control cost and provide quality care (Murray, 2014). They must be able to drive processes through collaboration and partnership to positively impact change, which leads to the implementation of existing evidence-based practice guidelines. This doctoral project had the potential to close the gap in practice through an educational learning activity on existing evidence-based VTE prevention guidelines among practitioners.

Nature of the Doctoral Project

The nature of the practice project was to educate practitioners that assess and treat patients at risk for VTE on existing evidence-based VTE prevention practice guidelines. The term *practitioners* included physicians, nurse practitioners, physician assistants, and registered nurses. The goal was to improve practitioners' awareness, knowledge, and compliance with existing VTE prevention, evidence-based guidelines.

Approach

The approach of the doctoral project was an educational learning activity designed to educate practitioners on existing VTE practice guidelines. The design of the educational activity was a one-hour classroom-based presentation. Offering two sessions provided practitioners with the opportunity to attend the learning activity during the day or evening hours. The content included a brief overview of VTE current issues and trends, existing evidence-based VTE prevention practice guidelines, and an introduction to the Caprini VTE Risk Assessment Model that consists of both assessment and suggested treatment modalities based on the risk score, and pharmacologic prophylaxis (see Appendix A) (Caprini, 2005). Written permission was granted by the Senior Clinician Educator and Emeritus of the School of Medicine and institution respectively to reproduce the model. The risk assessment model was essential for practitioners to grasp an understanding of the tool to ensure appropriate treatment and timeliness among patients at risk for VTE or PE for VTE prevention.

An evaluation tool was provided to each practitioner to evaluate the education program at the completion of the presentation (see Appendix B). The goal was to determine if the program improved the practitioners' awareness, knowledge, and compliance with existing evidence-based VTE guidelines in practice. The design of the evaluation tool followed an ordinal level of measurement such as the Likert Scale. Written permission was granted to adopt a program evaluation from an institution's, Office of Continuing Education. Both written permission documents were submitted to Walden's IRB for approval.

Significance

Stakeholders

Stakeholders were an intricate component in the implementation and success of the doctoral project. Interprofessional collaboration is critical for quality and safe delivery of care within the healthcare arena. The value of collaboration was both significant and necessary. All professionals brought vast amount of knowledge, skills, and ideas to improve or develop a process. What made each different was the interpretation of terminology and their perspective on the subject matter (Vickers, 2014). The support and buy-in for practice change from the leadership team was essential. There was a need to change current VTE prevention clinical practices that would reduce the rate of hospital-acquired VTE (Maynard, 2015). Change is not always easy and can be complicated (Garon, 2014). Practitioners, including physicians, physician assistants, nurse practitioners, and registered nurses are the stakeholders that were impacted the most by the focus problem due to a potential change in practice relevant to VTE prevention. Additional stakeholders that were influential in the success of the project included senior leadership, pharmacy staff, information technology (IT) department staff, subject experts, and the education and quality management departments.

Potential Contributions

The contributions the doctoral project may have to nursing practice was the transition of evidence to a practice setting. The practice project aligned with the American Association of Colleges of Nursing (AACN) DNP Essential I – Scientific Underpinnings for Practice and Essential VII – Clinical Prevention and Population Health

for Improving the Nation's Health. (AACN, 2006). Essential I provided the DNP candidate with knowledge from sciences as a preparatory to address both current and future practice issues (AACN, 2006). It is the guiding principles, values, and beliefs of individuals, in addition to sciences, that create the foundations of practice. Essential VII engaged the DNP graduate in both clinical prevention and population health (AACN, 2006). Educating practitioners on existing evidence-based VTE prevention practice guidelines, to reduce the incidence of VTE, was in direct alignment with population health.

Potential Transferability

Transferability of the project had the potential to expose practitioners outside of the acute care setting to VTE prevention practice guidelines. One channel to assist in disseminating the doctoral project to other practice areas was through collaboration with other practitioners including physicians and nursing staff. When practitioners understand why they do what they do, they become more engaged and proactive in being part of the difference. Providing practitioners with evidence-based research that supports their practice and impact patient outcomes had the potential to improve their awareness and knowledge regarding VTE prevention.

Implications for Social Change

The evidence-based practice project positively influenced social change through the health care system in our nation because the results of the project can "improve the human and social conditions" that can save lives globally (Walden University, 2011, para 4). The prevalence of VTE is problematic, globally, due to the complexity of the patient's

condition during hospitalization, lack of standardized policy and protocol including a VTE risk assessment, and the complications that may result with the use of anticoagulants (Pinjala, 2012; Streiff et al., 2014). Practitioners play a pivotal role in patient safety through policy and protocol development that include VTE risk assessments, and timely interventions (Cohen et al., 2008; Woodward-Stammers & Ponto, 2017). Incorporating evidence-based research in practice provided practitioners with innovative interventions to meet the health care needs of patients at risk for VTE and drive processes with innovation that affect change and again, can save lives (Zaccagnini & White, 2014).

Summary

VTE is a preventable condition with evidence to be a leading cause of avoidable deaths (Maynard, 2015; Riback & Wessels, 2012). The incidence of VTE in the United States alone leads to mortality if not treated (Streiff et al., 2014; Tocco, Martin, & Stacy, 2016). Studies have shown evidence that evidence-based practice guidelines were underutilized among hospitalized patients (Cohen et al., 2008; Maynard, 2015; Riback & Wessels, 2012). It is evident that there was a need for VTE prevention education among practitioners that assess and treat patients at risk for VTE within the acute inpatient setting. The doctoral project sought to determine if an educational learning activity on VTE prevention among practitioners improved their awareness, knowledge, and compliance with existing evidence-based VTE guidelines in practice.

Section 2: Background and Context

Introduction

VTE is a significant patient safety and public health issue across the continuum of care. Many lives are negatively impacted including premature death due to a preventable condition. It is essential for practitioners that assess and treat patients at risk for VTE to understand the significance of prevention and actively engage in practice change supported by evidence-based practice standards.

Concepts, Models, and Theories

The framework, model, and instruments selected for the project are significantly relevant to the practice problem. The project offers an opportunity to change cultural and clinical practices related to evidence-based practice that could decrease the risk of developing a VTE and reduce the incidence of preventable deaths.

Framework

Kurt Lewin's change process theory was the selected theoretical framework for the DNP project. The concept of the change theory builds on Lewin's force field analysis that during a situation, there are driving, and restraining forces caused by human behaviors that influence change, both positively and negatively, impacting the equilibrium known as status quo (Garon, 2014; Kaminski, 2011). Change takes place when the balance is interrupted by driving forces that are stronger and more resilient than restraining forces. It is necessary to weaken restraining forces for change to be successful (Kaminski, 2011). Incorporating the change theory in an education program shows the

alignment of each stage with the learning activities that support and sustain a change in practice (see Appendix C).

Lewin's change process theory encompasses three stages. Unfreezing is the first stage of change characterized as *thawing out* (Garon, 2014). It is the first step in exploring a current process or practice and assessing the need for change. Furthermore, it prepares the team through awareness and motivation as they embark on an identified need that requires change (Garon, 2014). Team members have an opportunity to collect information in the first stage that could generate new ideas and perspectives. Moving is the second stage of change with a focus on planning and implementation. Team members begin to perceive the new ideas as being a better process or practice than the old way. Refreezing is the last stage of the change process. Refreezing promotes the integration and stability of new behaviors (ideas) that requires reinforcement to hardwire the new process (Garon, 2014). Relevant to the project, the framework maximized the efforts in assessing the problem (VTE), planning and implementing change through an educational program and evaluating the impact the learning activity had on improving the practitioners' level of awareness, knowledge, and compliance.

Evidence-based VTE Prevention Model

The content of the education program included an introduction to the Caprini VTE Risk Assessment Model that consists of both assessment and suggested treatment modalities based on the risk score (Caprini, 2005). The risk assessment model provides the practitioners with existing practice standards for VTE prevention. The Caprini

individualized point-based VTE risk assessment model is one of several models that are available for practitioners to understand current VTE guidelines.

Relevance to Nursing Practice

History

In 2008, the Surgeon General set forth the initiative *Call to Action to Prevent Deep Vein Thrombosis and Pulmonary Embolism* that advocates the need for all stakeholders to collaborate in the action to prevent VTE including hospital network, healthcare payers, clinicians, families, patients, and communities (Office of the Surgeon General, 2008; Streiff et al., 2014). To ensure that patients are provided the necessary care safely and effectively, policies and protocols are essential to minimize preventable deaths (Maynard, 2015). A review of the literature using the CINAHL Plus with Full Text, EBSCO, MeSH database, and the Cochran Database of Systemic Reviews, revealed a multitude of VTE risk assessment models, tools, policies, protocols, and pharmacologic interventions that support the DNP project. Additionally, some studies validated the need for education, standardized tools, and evidence-based practice (Agency for Healthcare Research ansd Quality [AHRQ], 2016; Maynard, 2015; Riback & Wessels, 2012).

Current State of Nursing Practice

Currently, VTE prevention is considered an international patient safety issue that requires ongoing efforts urging practitioners to be proactive in utilizing existing risk assessment stratifications and resource tools to reduce the risk of VTE (Adams, 2015). The lack of utilizing existing resources and guidelines on an organizational level and globally presented potential barriers leading to lack of awareness, knowledge, and

compliance among practitioners to reduce the incidence of VTE (Jun, Kovner & Stimpfel, 2016).

In a review of the literature, using CINAHL Plus with Full Text, EBSCO, MeSH database, and the Cochran Database of Systemic Reviews, there is evidence that supports the need for VTE prevention in clinical practice. Studies have shown the significance of pharmacologic utilization to prevent VTE as well as the lack of timely assessment and protocols for patients at risk during their hospital stay (Maynard, 2015). As previously mentioned, VTE is a global health problem that leads to long-term complications and a significant cause of morbidity and mortality among patients who are high-risk (Elisha et al., 2015).

Strategies Addressing the Gap-In-Practice

During the last decade, public agencies and private organizations have developed and endorsed patient safety programs across the continuum of healthcare to reduce a preventable condition. Because a VTE can develop during or after discharge from a hospital stay, the issue becomes both a public health and patient safety problem (Strieff et al., 2014). In 2013, The Centers for Disease Control and Prevention (CDC) presented VTE prevention during the public health grand rounds supporting the need for collaboration among public health and patient safety stakeholders (Streiff et al., 2014). The AHRQ within the U. S. Department of Health & Human Services, developed a framework, toolkits, and resources for healthcare providers to utilize in the prevention of VTE acquired in the acute care setting (Maynard, 2016). The Joint Commission and the National Quality Forum (NQF) collaborated in the *National Consensus Standards for the*

Prevention and Care of Deep Vein Thrombosis project that originated in 2005 in the development of VTE practice measures (The Joint Commission, 2017). Despite the existing strategies to reduce the incidence of VTE, the practice problem still exists.

Local Background and Context

In the current practice area, patients have developed hospital-acquired VTE within a short period for which some have succumbed to a fatal event, a potentially preventable death. Patient mortality is the driving force for practitioners to take a closer look at current practice and integrate existing VTE prevention practice guidelines to reduce the rate of preventable deaths. Practitioners have an opportunity to lead evidence-based clinical practice across the healthcare continuum by transitioning VTE guidelines evidence into practice.

Practice Area

The setting for the doctoral project was an acute care hospital. The practitioners included physicians, physician assistants, nurse practitioners, and registered nurses. Lack of awareness and knowledge of existing evidence-based VTE prevention guidelines was evident. In a recent study evaluating hospital nurses' perceived knowledge and practices relevant to VTE prevention, it was found that approximately 30% of registered nurse participants reported their knowledge of VTE risk assessment as either fair or poor (Lee et al., 2014). Furthermore, 31% lacked the completion of a VTE risk assessment among their patients (Lee et al., 2014). That lack affects the appropriateness and timeliness of addressing VTE prophylaxis needs across the continuum of care (Maynard, 2015).

In the practice setting, there was limited use of existing clinical practice VTE prevention guidelines including risk assessment stratifications and prevention protocols. To improve awareness, knowledge, and compliance, presenting education on existing practice guidelines can foster a supportive and safe environment. Practitioners have an opportunity to lead the crusade of VTE prevention interventions as they meet the health care needs of patients at risk that can impact change and save lives (Zaccagnini & White, 2014).

Definitions of Terms

The following keywords are incorporated and support this DNP project:

Practitioner: An individual who actively participates in the art and science of nursing or medicine as a profession (Oxford Dictionary, 2018). The profession includes physicians, nurse practitioners, physician assistants, and registered nurses that assess and provide care for patients at risk for VTE.

Venous thromboembolism (VTE): A deep-vein thrombosis (DVT) and a pulmonary embolism (PE) in which the latter is considered a severe complication of a VTE (Cardoso et al., 2016).

Hospital-associated venous thromboembolism: A VTE that is acquired in the hospital setting and both are interchangeable in this study.

Educational program and learning activity: Terms used interchangeably and described as a classroom-based, one-hour learning presentation.

Role of the DNP Student

Before selecting the practice problem for the project, my colleague's husband, and friend died from multiple pulmonary embolisms within two weeks of undergoing a laparoscopic procedure. At the age of 61 years, his life ended, his death was both unexpected and devastating for his family, friends, and colleagues. Were there risk factors that were indicative of mechanical and pharmacologic VTE prophylaxis treatment during the perioperative and postoperative period? Was there a window of opportunity during the two weeks including additional hospitalizations that diagnostics were ordered to rule out any underlying conditions resulting in the development of a PE or DVT? Were the practitioners caring for this gentleman aware and knowledgeable of current evidence-based VTE practice guidelines for prevention during the perioperative, postoperative, and recovery period? These were some of the questions that were asked every day to understand how a simple laparoscopic procedure resulted in a poor outcome–a potentially preventable death.

I decided to explore the literature and current practices within the organization and initiate dialogue with practitioners on their understanding of current VTE practice standards for prevention. To my surprise, the overall consensus among practitioners was a clear understanding of VTE treatment modalities, but limited awareness of existing evidence-based VTE prevention guidelines including the Caprini or other VTE risk assessment tools.

As a DNP candidate, quality resource nurse, and professional, I believed that I was appropriately equipped with the knowledge and tools to conduct the educational

activity that can improve awareness and knowledge among practitioners of existing evidence-based VTE guidelines for prevention. I believed that it was necessary to expose practitioners to current evidence-based practice for VTE prevention to impact social change. However, they must be willing to change the culture from *what we have always done* to *what we can do better* aligned with evidence-based practice. Awareness can be the first step in supporting compliance with existing evidenced-based VTE prevention guidelines among practitioners and in building a solid foundation of knowledge that is essential for supporting future research and improving outcomes.

Role of the Project Team

The project team played an intricate role in the development and implementation of the educational activity for the success of the doctoral project. All professionals brought a vast amount of knowledge and experience to the round table discussions in preparatory for the planning, implementation, and evaluation of the project. The doctoral project leader and her colleague met with the project team initially to share background information and evidence. After that, the entire team met weekly, for five consecutive weeks to collaboratively design the curriculum for the education program after IRB approval. The project team was assigned tasks aligned with the level of expertise that included four team members presenting information at both sessions of the learning activity. The quality management department and leadership team received the program evaluation results four weeks after the education presentation.

Summary

Practitioners play a pivotal role in patient safety through hospital process interventions, policies, and protocols (Cohen et al., 2008). Incorporating existing evidence-based research in practice would provide practitioners the opportunity to integrate innovative interventions as they meet the health care needs of patients at risk for VTE (Zaccagnini & White, 2014). The education program may have been the first step to improve awareness, knowledge, and compliance with existing VTE guidelines to close the gap in clinical practice. Moving to chapter three, the collection and analysis of evidence continued to support the need for the education program relevant to evidence-based VTE prevention guidelines in practice.

Section 3: Collection and Analysis of Evidence

Introduction

The doctoral project offered opportunities to explore existing evidence-based practice to promote VTE prevention. Hospital-acquired venous thromboembolism is a significant health problem and one of the leading causes of preventable deaths in the United States (Maynard, 2016; Riback & Wessels, 2012). VTE is problematic on a local and global level due to the complexity of hospitalized patients and the lack of existing evidence-based prevention guidelines used in practice. The nature of the evidence-based practice project was to educate practitioners that assess and treat patients at risk on existing evidence-based practice guidelines to reduce the incidence of VTE.

In the project setting, there was limited use of existing evidence-based VTE prevention, clinical practice guidelines resulting in a lack of timeliness in addressing the VTE prophylaxis needs of patients at risk. There was clinical evidence that shown statistical significance in the use of education and practice tools that improved timeliness and appropriateness of VTE prophylaxis in hospitalized medical-surgical patients at risk for VTE (Kahn et al., 2013). Therefore, the aim was to provide practitioners with an evidence-based education program that could improve awareness and knowledge in the campaign of VTE prevention.

Practice Focused Question

The gap in practice that the doctoral project addressed was the lack of awareness, knowledge, and compliance of existing VTE practice guidelines that currently exist in the acute care setting. Patient safety is the responsibility of all practitioners, and public

agencies and private organizations have developed and endorsed patient safety programs across the healthcare continuum to reduce this preventable condition. To ensure patients are provided with the necessary care, safely and effectively, there was a critical need for VTE awareness and current evidence-based guidelines among practitioners.

As performance links to reimbursement, practitioners must be able to innovatively control cost and provide quality care (Murray, 2014). Collaboration and partnership are key factors that have the potential to positively impact change, leading to the implementation of evidence-based practice guidelines that protect patients from harm. The doctoral project has the potential to close the gap in practice through further research to study the impact an educational learning activity on existing evidence-based VTE prevention guidelines among practitioners have on their awareness, knowledge, and compliance with current practice guidelines.

The practice-focused question asked:

1. Can an educational learning activity on evidence-based VTE prevention guidelines among practitioners that assess and treat patients at risk for VTE improve their awareness, knowledge, and compliance with existing evidence-based VTE prevention guidelines in practice?

Sources of Evidence

The organization has a multifaceted reporting system that provides triggers on patient safety indicators. The reporting system includes, but is not limited to, readmission rates, mortality report, hospital-acquired conditions (HAC) report, and peer

and medical reviews. In a personal interview with the director of quality and risk management, the medical record must indicate a hospital-acquired VTE to trigger the condition on readmission or other reporting systems (J. Johnson, 2018). The cited name was changed to protect the disclosure of the organization and director.

For the DNP project, the need for an educational program on current VTE prevention did not link to data from the mentioned reporting systems. Instead, the practice problem became a personal priority when a friend died from multiple pulmonary emboli within two weeks of undergoing a laparoscopic procedure at the age of 61 years. Collaboratively, three members of the quality resource team began a series of discussions that explored current practices within the organization and initiated dialogue with practitioners on their understanding of current VTE practice standards for prevention. The overall consensus among practitioners was a clear understanding of VTE treatment modalities, but limited awareness of current evidence-based VTE prevention guidelines including the Caprini or other VTE risk assessment tools.

E**vidence Generated for the DNP Project**

The organizational practices for VTE prevention were in direct alignment with global evidence that has proven the lack of utilizing practice guidelines, tools, and resources among practitioners who assess and treat patients at risk for VTE. The approach to the doctoral project was an educational program designed to educate practitioners on existing evidence-based VTE prevention practice guidelines. The program addressed current clinical practice relevant to VTE prophylaxis in the acute care setting. Therefore, the purpose of this evidence-based practice project was to educate

practitioners on current VTE practice guidelines to improve their awareness, knowledge, and compliance to reduce the incidence of VTE.

Participants – Contributing Evidence

Six individuals were selected to contribute evidence to address the practice-focused question. The six contributing participants are:

DNP candidate. The DNP candidate is the student who initially designed and delivered the overview, gap in clinical practice, evidence-based VTE prevention, and lead the reflection time and questions/answers with the audience.

Patient/family experience. A nurse manager and colleague whose husband died from multiple pulmonary embolisms within two weeks of undergoing a laparoscopic procedure shared a personal and profound experience with the audience. This opportunity also offered her a way to walk through her grief.

Quality team leader. The quality team leader had a vast amount of knowledge and experience with quality measure indicators including VTE prophylaxis and educating practitioners. Within the last year, she worked with the Caprini Risk Assessment Model and implemented a pilot using the tool and identifying patients at risk for VTE.

Pharmacist. The pharmacist provided expertise on the knowledge of pharmacologic prophylaxis that may affect timeliness and appropriateness of treatment for VTE prevention.

Leadership. The fifth individual represented leadership. Following the guidelines of the Walden University Manual for Staff Education Project, the organization was required to oversee the staff education activity (Walden University, 2017). The plan was

for the leader to oversee the completion of the program evaluation to ensure the collected data is handled appropriately and with integrity. Due to limited availability, the DNP candidate and data analyst assumed that responsibility. An added role for the leader was to open the educational activity with a welcome and introduction to support the significance of VTE prevention awareness. The DNP candidate collaborated and drew from the experience and expertise of leadership to provide the highest quality of the curriculum design.

Data analyst specialist. The data analyst specialist selected from the Quality Management department incorporated her extensive knowledge and skills in collecting and analyzing data. Her contributions to the DNP project were significant in that the data obtained from the program evaluations required expertise and the highest level of integrity during analysis and interpretation.

Procedures

The material for designing the curriculum and handouts for the education activity was selected based on the organization's sources that supported patient safety programs. The sources, including frameworks, toolkits, and resources were gathered from the AHRQ, CDC, and the Office of the Surgeon General website (AHRQ, 2016; CDC, 2016; Maynard, 2016; Office of the Surgeon General, 2008). Evidence into practice is a standard that supports a safe and cost-effective healthcare environment that improve the quality of health and outcomes of patients (Makic & Rauen, 2016).

The design of the educational activity was a one-hour classroom-based presentation. Practitioners had the option to attend either a morning or an evening session. The content of the learning activity included the following components:

1. Brief Introduction – learning activity purpose, learning objectives.
2. Brief Overview – current issues and trends, practice problem, supportive data, and existing research.
3. Patient/Family Experience.
4. The Gap in Clinical Practice – problem statement, relevance to practice.
5. Evidence-based VTE Prevention – practice guidelines, impact on social change.
6. Risk Assessment Models – introduction to the Caprini VTE risk assessment model (assessment and suggested treatment including considerations for patients identified at risk for bleeding).
7. A Closer Look at Pharmacological Prophylaxis for VTE Prevention.
8. Open Floor for Questions and Answers.
9. Program Evaluation.

The Caprini individualized point-based VTE risk assessment model is one of several models available for practitioners to understand current evidence-based VTE prevention guidelines in practice. The model includes the prophylaxis treatment regimen

based on a total risk factor score. The quantitative assessment tool has four subsets with specific risk factors that score as one, two, three or five-points based on the level of severity (Caprini, 2005). Once the total risk score is determined, the tool includes a suggested list of treatment regimens for the practitioner to choose from for VTE prophylaxis with consideration for patients identified at risk for bleeding.

The benefit of the chosen model was the high predictability of VTE risk. Pannucci et al. (2011) conducted a study and validated that the model was both a useful and efficient tool in *stratifying* the VTE risk among the plastic and reconstructive surgery patient population. Bilgi et al. (2016) examined the validity and reliability of an adapted Caprini scoring in the risk stratification for VTE prophylaxis. Their findings supported the need for further study on the high-risk group that scores >7 to ensure the appropriateness of the VTE prophylaxis. However, the study concluded that the Caprini model was a practical tool that can determine the VTE risk of general surgical patients (Bilgi et al., 2016, p. 72). Another advantage of the instrument is the model offered an inclusive list of risk factors compared to other models making the tool more sensitive and reliable. Furthermore, the tool can be easily adaptable and amenable to other patient populations such as medical and obstetrics (Maynard, 2016).

An evaluation tool was provided to each practitioner to evaluate the educational program at the completion of the presentation. The goal of the program was to determine if it improved the practitioners' awareness, knowledge, and compliance with existing evidence-based VTE guidelines in practice. The design of the evaluation tool followed an ordinal level of measurement with keywords to evaluate if the educational program and

objectives increased awareness, knowledge, and compliance of current evidence-based VTE guidelines in practice. The program evaluation, adapted from an institution's Office of Continuing Medical Education, was selected for the learning activity. Written permission was granted via email to use the tool as appropriate to the educational activity (see Appendix E). Before the program evaluation was issued, the DNP candidate reviewed and provided a copy of the consent form for anonymous questionnaires to the audience (Walden's IRB Approval #2018.08.1 5 18:16:12 -05'00').

Protections

The project followed the criteria outlined in the DNP Walden University Staff Education Project Process Manual. There were no identified ethical issues that hindered the completion of this project. Upon completion of the oral defense of the proposal, the ethical review process provided by the Walden University Institutional Board (IRB) was followed.

The DNP project did not involve any form of incentives, consent process, or required identification for participants. The recruiting efforts to promote practitioners' attendance included email, flyers, and face-to-face communications. The DNP candidate reached out to the medical staff coordinator to assist with the delivery of an invitation to practitioners to attend the educational program.

Analysis and Synthesis

The program evaluation was a paper tool used to collect evidence for the DNP project. The name of the practitioner completing the evaluation remained anonymous and was not included in the evaluation form. Including the level of discipline rather than the

name of the practitioners created a conducive learning environment that allowed them to complete the evaluation with honesty and integrity and without any perceived punitive feedback. The completed program evaluations were managed by and the integrity upheld by the DNP candidate and the data analyst. A count at the end of each education session validated the number of participants with the number of evaluations. The completed evaluations were delivered to the data analyst by the DNP candidate. An internal system was used to record, track, organize, and analyze the evidence. The potential for data collection problems can be significant and may include issues with samples, people or subject attrition that may result in outliers or missing information (Grove, Burns, & Gray, 2013).

One issue that occurred during the learning activity was the need for a practitioner to leave during the presentation for an urgent matter in the patient-care area. At that point, the practitioner was excluded from the study (Grove, Burns, & Gray, 2013). Another issue that may result in missing information on the program evaluation was related to time. It was essential that the educational learning activity follow the allotted time of one hour to present the content, floor discussions, practice scenario, and complete the program evaluation. The DNP candidate was responsible for maintaining control of the learning environment to protect the validity and integrity of the project (Grove, Burns, & Gray, 2013).

Inferential statistics allowed the DNP candidate to draw conclusions when analyzing data (Grove, Burns, & Gray, 2013). The evaluation tool followed an ordinal level of measurement with keywords to evaluate the education program and objectives

aligned with the level of awareness, knowledge, and compliance with existing VTE prevention guidelines.

Summary

Incorporating evidence-based research in practice provides practitioners an opportunity to incorporate innovative interventions and drive processes to improve outcomes among patients at risk for VTE that can impact change (Zaccagnini & White, 2014). The education program was the first step for clinicians to improve awareness, knowledge, and compliance with existing evidence-based VTE guidelines in practice and to analyze collected data to determine the program effectiveness. The goal was to close the gap in clinical practice for VTE prevention. Moving to chapter four, the findings supported the need for the project including suggested recommendations.

Section 4: Findings and Recommendations

Introduction

VTE is global public health, economic burden, and a patient safety issue. VTE is a significant health issue among hospitalized patients and a leading cause of preventable deaths in the United States. The need for practice change was essential among practitioners who assess and treat patients at risk for VTE (Maynard, 2015; Streiff et al., 2014). There are existing evidence-based VTE prevention practice guidelines available to practitioners to ensure appropriateness of assessment and treatment for patients at risk. The gap in practice identified in the project was the lack of awareness, knowledge, and compliance with existing VTE practice guidelines. The purpose of the project was to educate practitioners who assess and treat patients at risk within the acute care setting on existing VTE prevention practice guidelines.

The practice-focused question asked:

Can an educational learning activity on evidence-based VTE prevention guidelines among practitioners that assess and treat patients at risk for VTE improve awareness, knowledge, and compliance with existing evidence-based VTE guidelines in practice?

The practice-focused problem was generated by the recent loss of a friend who died as a result of multiple pulmonary embolisms (PE) as well as by supportive researched evidence that validated the significance of VTE across the continuum of healthcare. Also guiding the project was a composition of personal interviews and an internal review of current practices among practitioners who assess and treat patients at

risk for VTE within the organization. This approach was essential to determine the level of awareness of existing practice guidelines and to validate the significance of VTE within the organization supported by evidence. The analytical strategy used to obtain evidence included an in-depth exploration of current practices and processes at the project site that determined current practice, awareness, and knowledge. This approach validated evidence of limited awareness of existing evidence-based VTE prevention guidelines including knowledge of risk assessment tools and the lack of policies and protocols.

In a review of the literature using the CINAHL Plus with Full Text, EBSCO, and Cochran Database of Systemic Reviews, the findings supported the existence of evidence-based VTE risk assessment models, tools, and pharmacologic interventions. There was evidence in the literature including patient safety programs developed and endorsed by public and private agencies that supported the need for practice change by incorporating evidence into practice (AHRQ, 2016; Maynard, 2016; Riback & Wessels, 2012). The analytical strategies used were selecting publications that included current practice guidelines, policies and protocols, VTE risk assessments models, peer-reviewed nursing journals, and work authored by medical experts acquainted with current VTE practice standards and prevention. The MeSH database and terms from the practice-focused question were used conjointly to acquire a sizeable collection of evidence.

Findings and Implications

The learning activity was a one-hour classroom-based presentation that offered the option for participants to attend a morning or evening session. Pareto charts and other

graphs were used to graphically display and summarize the relative importance of the data retrieved from the program evaluations (see Appendices F, G, and H). The Pareto charts ranked responses from most to least significant. The methodology was necessary to gain a clear snapshot of what the project validated including improved awareness and knowledge.

Findings

There were 38 participants. The most represented were registered nurses (82%), physicians (5%), nurse practitioners (2%), and nonclinical personnel (11%). The exclusions were four practitioners that left for a patient emergency and did not complete the learning activity and the program evaluation. Table 1 illustrates the total number of participants from both sessions of the learning activity, the number of participants excluded from the project, and the total number of program evaluations collected at the end of the learning activity. The discipline labeled as *other* were the nonclinical staff of which two were management, one was a student, and one was an unidentified participant. The "other" individuals were allowed to complete the program evaluation to gain perspective on the impact the learning activity had on improved awareness and knowledge among nonclinical staff for potential future projects.

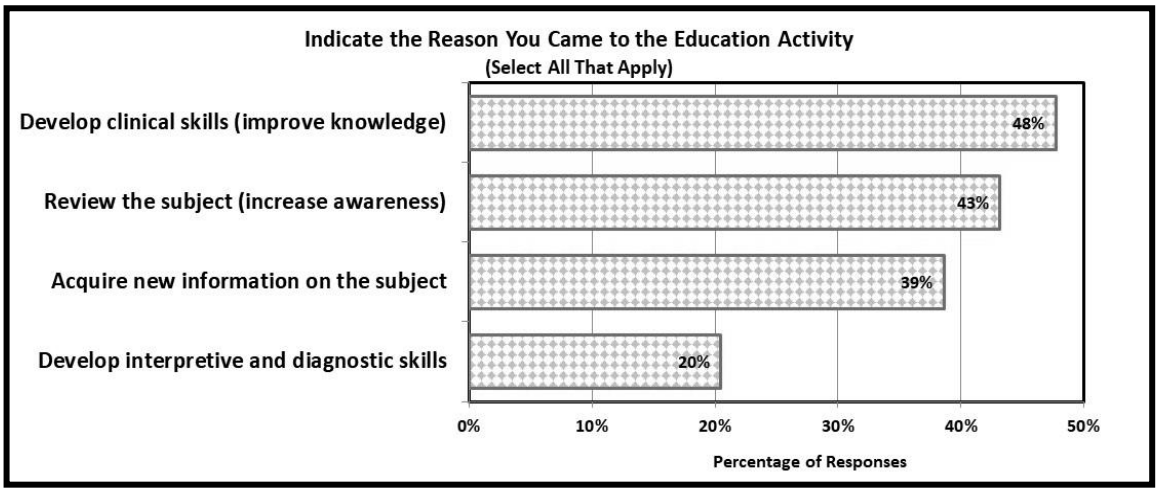
Table 1

Participation by discipline, exclusions, and number of program evaluation

Discipline	Number of Participants	% of Participation	Exclusions from Project	Number of Participants Completing Program and Evaluation
Nurse Practitioner (NP)	1	2%	1	0
Registered Nurse (RN)	31	82%	3	28
Physician (MD)	2	5%	0	2
Physician Assistant (PA)	0	0%	0	0
Other (2-Management, 1-Student, 1-Unidentified)	4	11%	0	4
	Total = 38	Total = 100%	Total = 4	Total = 34

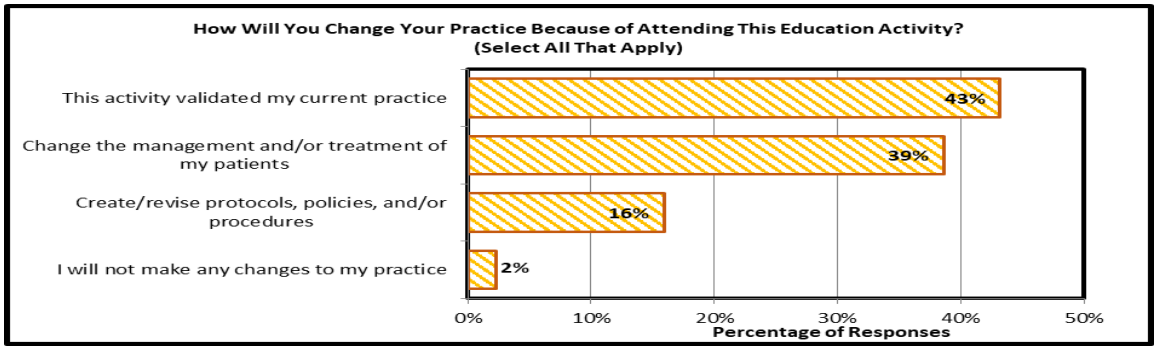
In reviewing the reasons cited for attending the education, 48% of practitioners who completed the program evaluation participated in the learning activity to improve knowledge, and 43% wanted to increase awareness of current VTE practice guidelines. Figure 1 illustrates the reasons the practitioners participated in the learning activity.

Figure 1. Program evaluation responses, reason for participation.



The responses regarding how the practitioners will change their mentioned practice as a result of attending the education activity indicated that 43% agreed that the learning activity validated their current practice and 39% would change the management and treatment of patients at risk for VTE. Figure 2 illustrates how practices may potentially change as a result of attending the learning activity.

Figure 2. Program evaluation responses - how practice may potentially change.



The overall quality of the learning activity rated as above average and outstanding, 17.6% and 81.8% respectively using a Likert Scale. Table 2 illustrates the overall impact of the six learning activity objectives with the most significant aim rating the highest. The rating of 91.2% for recognizing an improved level of awareness, knowledge, and compliance with existing VTE prevention practice guidelines supported the practice focus question that an educational learning activity improved awareness and knowledge.

Table 2

Program Evaluation Overall Impact of Learning Objectives (highest impact)

Overall Impact of Learning Activity Objectives	Rating
Identify Mechanical and Pharmacological Prophylaxis Treatment Modalities Available for VTE Prevention Including Risks, Benefits, and Monitoring Requirements.	91.2%
Recognize an Improved Level of Awareness, Knowledge, and Compliance with existing Evidence-Based VTE Prevention Guidelines in Practice	91.2%
Discuss Current Issues and Trends Relevant to the Incidence of VTE, Practice Problems, and Existing Research.	85.3%
Describe the Gap in Clinical Practice Relevant to VTE.	85.3%
Articulate the Key Components of the existing Evidence-Based VTE Prevention Practice Guideline Recommendations to Minimize the Risk of VTE in Clinical Practice.	82.3%
Translate Evidence into Practice Through Evidence-Based VTE Prevention Practice Guidelines Influencing Social Change	79.4%

Implications

Individuals. The project was designed to educate practitioners who assess and treat patients at risk for VTE on existing evidence-based practice guidelines. Because knowledge is power and most practitioners indicated an interest in learning, education was an integral step to improve individual awareness and knowledge to enhance a

decrease in the rate of VTE. The project findings alluded to the low participation of prescribing practitioners who participated in the learning activity. Prescribing practitioners make up a large portion of the hospitalist groups within the organization. In retrospect, the practice-focused question intended to determine the effectiveness of the learning activity, especially for prescribing practitioners. Having more prescribing practitioner representation may have generated more feedback supporting a decrease in the rate of VTE from this cohort. Practitioners who completed the program evaluation indicated the reason for attending the learning activity was to improve knowledge and increase awareness of VTE.

Relevant to participation, the results unveiled the significance of extending the education program to nonclinical staff. The learning activity would influence practice change through improved knowledge and awareness of VTE of nonclinical staff impacting policy change at the institution. In brief, the project team suggested to include another discipline on the program evaluation labeled as *other*. The label would identify nonclinical personnel to ensure the data collected could be separated to reflect the clinical or practitioners' perspective. The significance was that the two participants representing management were influential in policy and practice change among the hospitalist groups and the patient care areas. In hindsight, also extending the invitation to nonclinical staff would have improved awareness and knowledge of VTE prevention ultimately impacting the response rate of those involved in creating and revising protocols, policies, and procedures.

Exposure to an evidence-based learning activity allowed the practitioners to reflect on their current practice of VTE prevention and the discovery of evidence that supported the project. The information was relevant given that knowledge and awareness guided the practitioners on how they perceived their practice could change as a result of the learning activity.

Institution and System. One implication on an institutional level was the impacts on policy and practice change that aligned with existing evidence-based practice guidelines. With the behavioral practice change focus, the design of the learning activity provided the opportunity to influence practitioners to make changes in the management and treatment of their VTE and at risk VTE patients. Changing practice behaviors coupled with current practice guideline recommendations would decrease the number of deaths from a preventable condition and save lives. As a health care system, the success and movement of an evidence-based project started with buy-in from leadership. As leaders and practitioners engage as partners, practice change supported by evidence would ultimately lessen the VTE practice gap and reduce the incidence.

Community. One implication of the project relevant to the community was the future policy change on a local, state, and national level. With the desire to improve knowledge and increase awareness of existing practice guidelines for VTE prevention as revealed in the project, practitioners can network, collaborate, and be proactive in health policy and politics. It can be one of many strategies to make a difference in the delivery of care to keep patients safe.

Providing resources to the audience during the learning activity including public website tools and mobile applications sparked more VTE awareness. The tools can be provided to patients, families, and friends to keep the community abreast of how to minimize the risk of developing a VTE. Extending education to nonclinical staff is another opportunity to improve awareness and knowledge of VTE prevention.

Social Change. Practitioners play a pivotal role in practice change to keep patients safe. The opportunity for practitioners to influence social change within the health care system begins with their awareness of existing evidence-based VTE prevention guidelines. As the findings of the project demonstrated, education improved awareness and practitioners have gained knowledge and exposure to resources necessary to appropriately assess and treat patients at risk for VTE. The most significant social change implication is that by increasing awareness and knowledge, the change in practice can potentially decrease the incidence of VTE thereby reducing preventable deaths. Through increased awareness, there is further opportunity for practitioners to change a current practice that aligns with existing guidelines and take a proactive stance in policymaking and process change to protect patients from a preventable condition. Throughout this organization, practitioners and leadership has the ability to circulate the education to multisystems across the health system continuum.

Unanticipated Outcomes

An unanticipated outcome identified in the analysis was the low participation rate among prescribing practitioners paired with the exclusion of four practitioners from the program evaluation that included one nurse practitioner (a prescribing provider). In

retrospective consideration of the practice-focused question, the focus was to improve awareness, knowledge, and compliance with existing evidence-based VTE practice guidelines among practitioners. Therefore, low participation of prescribing practitioners lessened the opportunity to validate how the learning activity improved awareness and knowledge of those practitioners.

Another unanticipated outcome identified was the low response rate of changing practice through creating and revising protocols, policies, and procedures. Not aligned with the practice-focused question, this finding merits a brief discussion as it would potentially influence future implementation of new VTE prevention guidelines. In review, most practitioners that participated in the learning activity were registered nurses. As the team examined the evidence, the findings revealed that on an organizational level, process changes might not include all registered nurses. Furthermore, the team recognized the importance of nonclinical personnel attending the educational activity. Nonclinical personnel like the participants that represented management may be influential in VTE policy, which can also positively impact practice change.

Recommendations

Improving Participation

The project findings yielded several proposed recommendations that would address the VTE practice gap. Due to the low participation of prescribing practitioners, it was recommended to consider redefining *practitioners* as prescribing practitioners for future educational activities to support VTE prevention education and improve awareness and knowledge on existing practice guidelines. Because most practitioners who attended

the education activity were registered nurses, they can implement and monitor VTE prophylaxis treatment but not prescribe the treatment regimen for patients at risk of developing a VTE. Therefore, registered nurses would be included and defined as *clinicians* rather than as *practitioners*.

A recommendation to capture more participation among prescribing practitioners is to make the education a mandate. For example, the organization's practice policy should mandate that all prescribing practitioners complete training about hospital-acquired conditions such as VTE. The recommendation is for practitioners to complete the required learning activities annually and when patients acquire a condition specific to a VTE impacting reimbursement. The mandate would include active participation by the practitioner(s) in a root cause analysis and an action plan to improve future outcomes.

Expanding the Education

As previously mentioned, in hindsight, extending the invitation to non-clinical staff who are actively involved in policy and practice changes such as organizational and nursing leadership can improve awareness and knowledge of VTE prevention. The participation could ultimately impact the response rate of creating and revising protocols, policies, and procedures as presented in figure 2. Improving awareness through an educational activity should be an ongoing strategy to gain more support for VTE prevention education and to capture the attention of practitioners newly hired or new to the profession, prescribing practitioners, quality improvement staff, and nonclinical staff who are influential in practice and policy change.

Framework

Incorporating a change theory in the design of future learning activities as a framework for VTE prevention is recommended. Lewin's change process theory was the selected framework for the education learning activity (see Appendix I). The value of the framework aligned the design of the educational program. The change theory framework was an integral component that aligned the learning activity with the program goals, objectives, and program evaluation. Incorporating the theory in the design of the curriculum aligned each element of the theory to the learning activities that supported the need to improve awareness and knowledge and sustain a practice change. The framework maximized the efforts in assessing the practice problem, planning and implementing change through an educational program and evaluating the impact the learning activity had on improving the practitioners' awareness and knowledge of existing practice guidelines. Furthermore, linking the finding that 39% of participants would consider changing the management or treatment of patients validated the value of the selected framework suggesting improved knowledge and awareness that impacted behavioral changes.

Building an Interdisciplinary Team

This recommendation is for the organizational and nursing leadership team along with representation from practitioners, to engage in the development of workforce groups to explore current risk assessments, policies, protocols, and procedures for VTE prevention. The interdisciplinary team would include pharmacy, nursing, information technology (IT), and representation from disciplines working with computerized physician order entry (CPOE) and evidence-based clinical documentation (EBCD). There

are many possibilities for the team to create a practice environment that embraces existing VTE practice standards available to address every patient, every time. For example, as a sub-group, CPOE, EBCD, and IT could take an in-depth look at the electronic documentation platforms and have a VTE risk assessment embedded within the documentation fields in the nursing assessment or standalone screens along with the history and physical, and progress notes for the practitioners.

There are specific corporate-driven systems that are not editable. However, communicating an innovative, evidence-based idea that improves the gap in practice can build momentum and interest in possible revisions. Also, members from the pharmacy and medical staff could collaboratively adapt a tool such as the Caprini individualized risk assessment model, which predicts the patient's risk with suggested pharmacologic prophylaxis treatment modalities and mechanical prophylaxis interventions.

Shared governance is recommended to improve the gap in practice at the patient's bedside. Shared governance is one way to improve staff engagement through effective communication that is considered a valuable strategy that impacts both patient and nurse outcomes (Kutney-Lee et al., 2016). Furthermore, nursing's voice is an integral component of shared governance that supports nursing knowledge for VTE care. With a participation rate of 82.3% of practitioners being registered nurses, there is a window of opportunity to continue the awareness of VTE prevention at the bedside that will lend further dialog with other practitioners when assessing and treating patients at risk for VTE during their hospital stay.

Contribution of the Doctoral Project Team

The contribution of the project team was the most insightful experience in this scholarly project. In appraising change theories and frameworks for translation, the common theme was the need for teams to think, collaborate, build working relationships, and possess a readiness for change (White, Dudley-Brown, & Terhaar, 2016). The value of collaboration was significant because all professionals brought a different perspective to the discussions. It was evident during each session of the educational activity how the presenters complemented each other. There was a sense of professional balance and tranquility in the delivery of the information to the audience. The selected presenters demonstrated their passion for VTE prevention and extensive knowledge and expertise with existing evidence-based practice guidelines.

Processes and Responsibilities

Due to the fast-paced environment and the multitude of current projects in progress, the DNP candidate chose to approach the project that would minimize any added workload on the team to complete the project. Each team member was assigned a specific role as it aligned with their level of expertise and provided feedback in the design of the education plan along with other aspects of the project. The team reviewed and approved the project approach. The DNP candidate was required to use alternative methods of communication such as group meetings, email, text messaging, and one-on-one sessions to ensure all members received the same information. Team meetings were initiated along with email communications weekly and a practice run of the presentation one week before the educational learning activity. The DNP candidate met with each

team member face-to-face before the implementation of any activities to ensure a clear understanding of the purpose and direction of the project. As a team, we coordinated time and efforts to meet the requirements of the project design and satisfied the roles and responsibilities initially assigned as noted.

DNP candidate. The DNP candidate orchestrated the team meetings including proposed dates/times along with additional meeting times to meet on an individual basis. The teaching plan, flyer, and presentation was designed and provided to each team member for review and feedback. The team offered incredible insight into the design of the curriculum for the learning activity that aligned the teaching plan with the PowerPoint presentation. The presenters conducted the learning activity efficiently and with ease. The DNP candidate requested the meeting location and met with the representative from IT to review the necessary technology for the presentation. A copy of the Walden University Staff Education Project Manual was provided to each member to ensure all expectations were satisfied throughout the education plan. The DNP candidate presented evidence of current issues and trends, need for practice change, and addressing the gap in practice.

Patient/family experience. The nurse manager and colleague engaged in the development of the learning activity who presented the patient/family experience. Her role was the recruitment of practitioners through mobile/internet communications and posting flyers. The support shown for this project infiltrated more passion and the highest level of commitment of the team to press forward beyond the project that will model the way for VTE prevention among practitioners and across the continuum of health care.

Quality team leader. The quality team leader demonstrated a vast amount of knowledge and experience with quality measure indicators including VTE prophylaxis and educating practitioners. Her role included addressing the national standards of VTE prevention. She was provided with the critical components of the PowerPoint by the DNP candidate. The quality team leader researched further and supported the project with additional data that offered further support and evidence of VTE prevention. She provided insightful feedback and assisted with the revisions to organize the flow of the information and validated the accuracy of the content.

Pharmacist. The pharmacist demonstrated an extensive amount of knowledge during her presentation. Her role entailed capturing patient populations at risk for VTE and a discussion on common pharmacologic prophylaxis agents available for consideration in treating patients at risk for VTE. Furthermore, she provided a brief discussion on bleed risk contraindications, offered feedback relevant to the education plan, and reviewed revisions.

Leadership. The leader supervised the development, implementation, and evaluation of the scholar project. The leader was delegated the task to manage the program evaluations. It was necessary to follow the initial contingency plan for the DNP candidate and the data analyst to resume the leadership role in collecting and managing the program evaluations due to limited availability of the leader. An added function for the leader was to open the educational activity with a welcome and introduction. The presence of leadership relayed the message of the significance and buy-in of VTE prevention awareness.

Data analyst specialist. The data analyst had a keen eye and experience in working with microsoft office applications. Her role in this project included reviewing content for format and accuracy of information. She was assigned the responsibility of tracking time during the presentation to ensure all presenters stayed on task for the duration of the learning activity. Her most significant role was that of preparing the data for analysis. She utilized microsoft excel to conduct the review and develop the graphs illustrating the findings. She presented the data along with challenging questions for the DNP and team to consider in the quest for validation and opportunities.

Role of Team in Final Recommendations

In the development of the final recommendations of the project, the team engaged in conversations that offered insight into the next step of VTE prevention. There were several post education debriefings with the team in sub-groups and individually. Debriefing is a reflective process that provides feedback to team members or learners (Lowenstein & Harris, 2014). Debriefing guided our team to take a step back to reflect on the strengths and limitations of the educational activity such as what went well and what opportunities presented that could be changed to improve the project implementation.

Extending the DNP Doctoral Project

The driving force that will extend the project beyond the doctoral project within the organization rests on organizational and nursing leadership as they move forward in supporting ongoing VTE prevention education. One avenue to extend the doctoral project includes developing a quality improvement initiative to determine the rate of compliance with existing practice guidelines incorporated into practice. It will require an ongoing

partnership between leaders and practitioners and a level of commitment to practice change that would impact compliance. As a DNP candidate, the initial plan was to extend the project including working collaboratively with all stakeholders in the monitoring process. The second plan was to engage in community outreach that can offer VTE prevention awareness information and education through local organizations. Lastly, extending the project that includes education modules on VTE prevention, such as VTE risk assessments, would be developed and potentially published.

Strengths and Limitations of the Project

Strengths

There were several strengths of the scholarly project. Leadership buy-in was a critical component in the development and implementation of the project. The support of leadership conveyed the message to practitioners why awareness, knowledge and practice change was essential to VTE prevention. Another strength of the project was the theoretical framework. The change theory maximized the efforts in assessing the problems associated with VTE. Furthermore, the framework was valuable in developing a learning activity that would improve awareness and knowledge of practice guidelines supporting behavioral change in clinical practice.

The presentation followed a structured teaching plan outline that did not include any form of bias or personal opinion. However, to account for any potential personal bias of team members directly affected by personal loss from a VTE, scripting was utilized, and practice sessions were conducted before the learning activity. The project validated the evidence that VTE was a global issue and that through educating practitioners on

existing practice guidelines improved awareness and knowledge. The implementation of the project was presented by an expert panel that demonstrated their passion for the subject matter. The contributions of the team added credibility to the design of the education program.

Another strength of the project was the participation of nonclinical staff in the learning activity. As a recommendation from the project team, it was suggested to add to the program evaluation a field labeled *other* indicating a level of discipline to identify practitioners from non-clinical staff for data collection. However, the strength was also a limitation in that the practice-focused question only included practitioners as the target audience. As previously mentioned, a recommendation to consider was extending an invitation to nonclinical staff to participate in the future educational programs relevant to VTE prevention.

Limitations

The scholarly project had several limitations. First, with nurse practitioners making up a large portion of the hospitalist group within the organization that assesses and treats patients at risk for VTE, the sample size was small and did not represent the total number of practitioners. Secondly, the majority of participants were registered nurses with one being a nurse practitioner who was excluded from the project due to an emergency demanding her attention. She did not complete the learning activity and program evaluation in its entirety. Furthermore, there was a low participation rate among prescribing practitioners. Contributing factors for low attendance may have been

attributed to a cumbersome workload with a higher patient census or urgent matters during the timeframe of the presentation.

Third, the program evaluation did not offer the practitioners a means to identify an area of specialty. The significance of this limitation is that practitioners may have responded to the questions based on their specialty rather than the level of discipline. For example, a physician specializing in cardiology may have indicated no need for additional knowledge or practice change whereas a nurse practitioner specializing in trauma services may have shown a need to improve awareness and knowledge and change practice addressing patients at risk for VTE.

Lastly, email recruitment was not an effective strategy to invite practitioners to the education learning activity. Possible contributing factors included limited email use and access, not acknowledging and reading email timely, and limited interest in attending the learning activity. As a recommendation, it would behoove the project team to coordinate email recruiting efforts with a member of authority for distribution.

Recommendations for Future Projects

A recommendation for future educational learning activities would be to include an experienced member from the education department with the expertise in program evaluations and teaching plans. Having that competency may have raised specific questions of inclusion and exclusions in the program evaluation to improve effectiveness. Another recommendation relevant to recruitment efforts is to reach out to leaders who conduct medical staff meetings that would advocate the need for participation to enhance awareness and practice on the subject matter. Using technology such as text messaging

the flyer that includes reminders was a strategy used to increase attendance. Rather than having one team member responsible for recruitment efforts, it is recommended to designate several people on the team with the same task to extend efforts.

Section 5: Dissemination Plan

Dissemination of results from a scholarly project is essential in impacting practice change. It is an opportunity to translate evidence to close the gap in practice. The channels that would aid in the dissemination of the findings from this scholarly project would begin with the quality management department. The first opportunity to disseminate the project results would be through a partnership with additional employees including the leadership team, the organization's board of directors, physicians, and nursing staff. When practitioners and nursing staff understand why they do what they do, they become more engaged and proactive in being a part of the difference. Providing employees with data through a poster presentation, newsletter, and unit meetings that support their practice and impact patient outcomes can influence their level of awareness regarding existing practice guidelines for VTE prevention. Furthermore, providing data could change the staff's perception of what constitutes a preventable condition and how it financially affects healthcare across the continuum of care.

Other opportunities that would disseminate the findings from the project include presenting the learning activity to multisystems across the health system, local health care systems and clinics, and local and state nursing organizations. Relevant to community support and outreach, a learning activity tailored to reach high risk populations would be an effective way to disseminate VTE prevention project findings as a community outreach endeavor.

Audiences and Venues

As previously discussed, there are risk assessments and treatment modalities tailored to a specific patient population that would extend the audience in VTE prevention awareness. For example, obstetrics and mental health practitioners would benefit from the educational activity and findings due to the populations who are at higher risk of developing a DVT. One venue that has the potential to provide a valuable forum for disseminating results are among our practitioners during the monthly medical staff meeting. It has the potential to open discussion forums relevant to the current practices and existing evidence-based practice guidelines for VTE prevention.

Analysis of Self

Role of Practitioner, Scholar, Project Manager

Aligning the scholarly project experience with the self-analysis pertinent to the role of practitioner, scholar, and project manager, I have gained extensive insight for professional development. The knowledge acquired included principles of transitional leadership along with an appreciation and perspective of the challenges in an evolving and complex healthcare environment. I gained an understanding of the importance of building relationships as a way to create a successful and strategic alliance with employees, practitioners, nursing leadership, and organizational leadership. The success in the role of practitioner, scholar, and the project manager was achieved through a personal commitment to impact change. I developed a better understanding of my own beliefs and values as I prepared to take a leadership role in the scholarly project. Working collaboratively with the project team established a platform to build professional relationships and also provided the opportunity to work collaboratively with the team to

develop, implement, and evaluate a learning activity, and disseminate the results. The practice project allowed me to align my 32 years of nursing experience and expertise with evidenced-based practices and research to effectively and successfully lead a team and guide current and future providers in patient care practices.

As I reflect on where I have been in my career and where I am going, my vision is to continue my transformation as a scholarly professional who will offer more of a global approach to teaching others. It is essential that scholars guide practitioners in practice change through evidence translation that I believe will be the cornerstone of practice that impacts patient outcomes. Translating evidence-based research into clinical practice becomes an essential component to the delivery of quality healthcare (White et al., 2016).

As I prepare for the next twenty years and retirement, a long-term professional goal is to pinnacle my career in a leadership role, one that guides clinicians in professional development and in supporting patient safety enhancements that will continue to impact social change.

Once I have completed my DNP at Walden University, another long-term professional goal is to publish as a scholar on topics regarding leadership and nursing education. As a leader and scholarly writer, I hope to convey the message that from novice to expert knowledge and skills are paramount. Regardless of what we want to achieve, learning specific skills such as critical thinking, time management, and organization are essential to the success of an effective leader.

Challenges and Solutions

The challenges that emerged during this scholarly journey included the initial buy-in from leadership, the complexity of the IRB process, and the recruitment of practitioners in a fast-paced environment. During the last two years, there were changes in leadership including the acquisition of the organization by a more extensive health system. The complexity of the Institutional Review Board (IRB) process was powered by the lack of knowledge among several disciplines regarding IRB including the health system, the local organization, leadership, and the DNP candidate. Through a lengthy process that included meeting with administration and communicating with multi-level departments, issues unfolded and resolved, which led to a better understanding of the process. Through it all, leadership remained overwhelmingly committed to the project, the educational activity, and project team.

The recruitment efforts to ensure practitioners were invited to participate in the learning activity was quite extensive. As mentioned, recruitment strategies included verbal invitations, flyers (posted throughout the institution), emails, and texts. As I reflected on the outcome of the recruitment process, I considered that potential solutions to improve recruitment efforts might not be solely related to recruitment, but that low participation transpired from the timing of the learning activity rather than the type of recruitment interventions. In retrospect, early morning scheduling may have been more appropriate rather than early afternoon when discharges commonly occur.

During the personal journey of working toward an earned DNP degree, the greatest challenge was balancing personal obligations and responsibilities with professional and advanced education obligations. As a primary caregiver of my mother,

her support in the journey was both significant and meaningful. When she passed away in the Spring of 2018, the momentum faded and the project came to a standstill. Even though the family support was ongoing, it was my mother who embraced the journey with such grace. She gave me the comfort that only a mother can give unconditionally. She would always say *with your degree, you will see the world differently and be part of the difference that will embrace the love of humanity*. That said, the milestones and challenges opened the door for future clinicians to take a journey within the organization embraced by clear direction and support.

Summary

As healthcare continues to evolve focusing on patient safety, evidence-based practice has become more of a practice standard across the continuum of care. This practice standard supports a safe and cost-effective healthcare environment that incorporates interventions that improve the quality of health and outcomes of patients (Makic & Rauen, 2016). The scholarly project attempted to do just that – improve patient outcomes through awareness. It is likely that awareness might be an integral step in translating evidence into practice relevant to existing practice guidelines for VTE prevention. The project findings satisfied the practice focused question on the effectiveness an educational activity on existing VTE prevention practice guidelines had on improving awareness and knowledge. The most significant implication of this project relevant to social change was through increasing awareness and knowledge; the change in practice would likely decrease the incidence of VTE reducing preventable deaths.

Ongoing education is needed to gain more support and commitment for VTE prevention among providers to drive positive patient safety and outcomes.

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Appendix A: Caprini Individualized Point-Based Risk Assessment Model

Deep Vein Thrombosis (DVT)
Prophylaxis Orders
(For use in Elective General Surgery Patients)

BIRTHDATE

NAME

CPI No.

Thrombosis Risk Factor Assessment (Choose all that apply)

Each Risk Factor Represents 1 Point

- ☐ Age 41-60 years
- ☐ Swollen legs (current)
- ☐ Varicose veins
- ☐ Obesity (BMI >25)
- ☐ Minor surgery planned
- ☐ Sepsis (<1 month)
- ☐ Acute myocardial infarction
- ☐ Congestive heart failure (<1 month)
- ☐ Medical patient currently at bed rest
- ☐ History of inflammatory bowel disease
- ☐ History of prior major surgery (<1 month)
- ☐ Abnormal pulmonary function (COPD)
- ☐ Serious Lung disease including pneumonia (<1 month)
- ☐ Oral contraceptives or hormone replacement therapy
- ☐ Pregnancy or postpartum (<1 month)
- ☐ History of unexplained stillborn infant, recurrent spontaneous abortion (≥ 3), premature birth with toxemia or growth-restricted infant
- ☐ Other risk factors_____

Subtotal:

Each Risk Factor Represents 5 Points

- ☐ Stroke (<1 month)
- ☐ Multiple trauma (<1 month)
- ☐ Elective major lower extremity arthroplasty
- ☐ Hip, pelvis or leg fracture (<1 month)
- ☐ Acute spinal cord injury (paralysis) (<1 month)

Subtotal:

Each Risk Factor Represents 2 Points

- ☐ Age 61-74 years
- ☐ Arthroscopic surgery
- ☐ Malignancy (present or previous)
- ☐ Central venous access
- ☐ Major surgery (>45 minutes)
- ☐ Laparoscopic surgery (>45 minutes)
- ☐ Patient confined to bed (>72 hours)
- ☐ Immobilizing plaster cast (<1 month)

Subtotal:

Each Risk Factor Represents 3 Points

- ☐ Age 75 years or older
- ☐ History of DVT/PE
- ☐ Positive Factor V Leiden
- ☐ Elevated serum homocysteine
- ☐ Heparin-induced thrombocytopenia (HIT)
  (Do not use heparin or any low molecular weight heparin)
- ☐ Elevated anticardiolipin antibodies
- ☐ Other congenital or acquired thrombophilia
  If yes: Type_____
- ☐ **Family History of thrombosis***
- ☐ Positive Prothrombin 20210A
- ☐ Positive Lupus anticoagulant

*** most frequently missed risk factor**

Subtotal:

TOTAL RISK FACTOR SCORE:

FACTORS ASSOCIATED WITH INCREASED BLEEDING

Patient may not be a candidate for anticoagulant therapy & SCDs should be considered.

Active Bleed, Ingestion of Oral Anticoagulants, Administration of glycoprotein IIb/IIIa inhibitors, History of heparin induced thrombocytopenia

CLINICAL CONSIDERATIONS FOR THE USE OF SEQUENTIAL COMPRESSION DEVICES (SCD)

Patient may not be a candidate for SCDs & alternative prophylactic measures should be considered.

Patients with Severe Peripheral Arterial Disease, CHF, Acute Superficial DVT

Total Risk Factor Score	Risk Level	Prophylaxis Regimen
0	VERY LOW	☐ Early ambulation
1-2	LOW	☐ Sequential Compression Device (SCD)
3-4	MODERATE	Choose **ONE** of the following medications +/- compression devices: ☐ Sequential Compression Device (SCD) - Optional ☐ Heparin 5000 units SQ TID ☐ Enoxaparin/Lovenox: ☐ 40mg SQ daily (WT < 150kg, CrCl > 30mL/min) ☐ 30mg SQ daily (WT < 150kg, CrCl = 10-29mL/min) ☐ 30mg SQ BID (WT > 150kg, CrCl > 30mL/min) (Please refer to Dosing Guidelines on the back of this form)
5 or more	HIGH	Choose **ONE** of the following medications **PLUS** compression devices: ☐ Sequential Compression Device (SCD) ☐ Heparin 5000 units SQ TID **(Preferred with Epidurals)** ☐ Enoxaparin/Lovenox **(Preferred):** ☐ 40mg SQ daily (WT < 150kg, CrCl > 30mL/min) ☐ 30mg SQ daily (WT < 150kg, CrCl = 10-29mL/min) ☐ 30mg SQ BID (WT > 150kg, CrCl > 30mL/min) (Please refer to Dosing Guidelines on the back of this form)

☐ Ambulatory Surgery - No orders for venous thromboembolic prophylaxis required

☐ VTE Prophylaxis Contraindicated, Reason: _____

Joseph A. Caprini, MD, MS, FACS, RVT
VTE Risk Factor Assessment Tool

Physician Signature	Dr. #	Date	Time
Processed By:		Date/Time:	
	White-Medical Record Yellow-MIS Pink-Pharmacy	University of Michigan Health System	DVT Prophylaxis Regimen

Appendix B: Program Evaluation

VTE Prevention Education for Practitioners in the Acute Care Setting Program Evaluation
Date: _____

Thank you for participating in this educational activity. We would like to know how valuable this learning experience was for you in bridging the gap in practice for VTE prevention; and would appreciate your responses to the following questions.

1. Please rate the overall aspects of this educational activity by selecting one score based on:

	1 Poor	2 Below Average	3 Average	4 Above Average	5 Outstanding
Educational Content	1	2	3	4	5
Relevance to Practice	1	2	3	4	5
Questions and Discussions	1	2	3	4	5
Oral Presentations	1	2	3	4	5
Quality of Presenters	1	2	3	4	5
Selection of Topics	1	2	3	4	5
Overall Quality of Learning Activity	1	2	3	4	5

2. Please rate the overall impact of the following learning activity objectives:

OBJECTIVES – At the end of the presentation, the participant will be able to:	Not Applicable	No Impact	Moderate Impact	High Impact
1. Discuss current issues and trends relevant to the incidence of venous thromboembolism (VTE), practice problem, and existing research.	☐	☐	☐	☐
2. Describe the gap in clinical practice relevant to venous thromboembolism (VTE).	☐	☐	☐	☐
3. Translate evidence into practice through evidence-based VTE Prevention practice guidelines impacting social change.	☐	☐	☐	☐
4. Articulate the key components of the evidence-based VTE prevention practice guideline recommendations (example: Caprini Risk Assessment Model) to minimize the risk of VTE in clinical practice.	☐	☐	☐	☐
5. Identify mechanical and pharmacological prophylaxis treatment modalities available for VTE prevention including risks, benefits, and monitoring requirements.	☐	☐	☐	☐
6. Recognize an improved level of awareness, knowledge, and compliance with evidence-based VTE prevention guidelines in practice.	☐	☐	☐	☐

3. Did you have an opportunity to discuss practice-relevant issues with the speakers? ☐ YES ☐ NO

4. How will you change your practice because of attending this education activity? Select all that apply

☐ Create/revise protocols, policies, and /or procedures	☐ This activity validated my current practice
☐ Change the management and/or treatment of my patients	☐ I will not make any changes to my practice

5. Has this education activity met your identified needs and professional practice gap, and improved your level of awareness and knowledge relevant to existing (VTE) prevention practice guidelines? ☐ YES ☐ NO

6. Indicate the reason you came to the education activity: Please check all that applied

☐ Develop clinical skills (improve knowledge)	☐ Develop interpretive and diagnostic skills
☐ Acquire new information on the subject	☐ Review the subject [increase awareness]

7. Indicate your level of discipline:

☐ Physician (MD)	☐ Physician Assistant (PA)	☐ Nurse Practitioner (NP)	☐ Registered Nurse (RN)

☐ Other: _____

Program Evaluation adapted from Suny Downstate Medical Center, Office of Continuing Medical Education

Appendix C: Incorporating Lewin's Change Theory in an Education Program

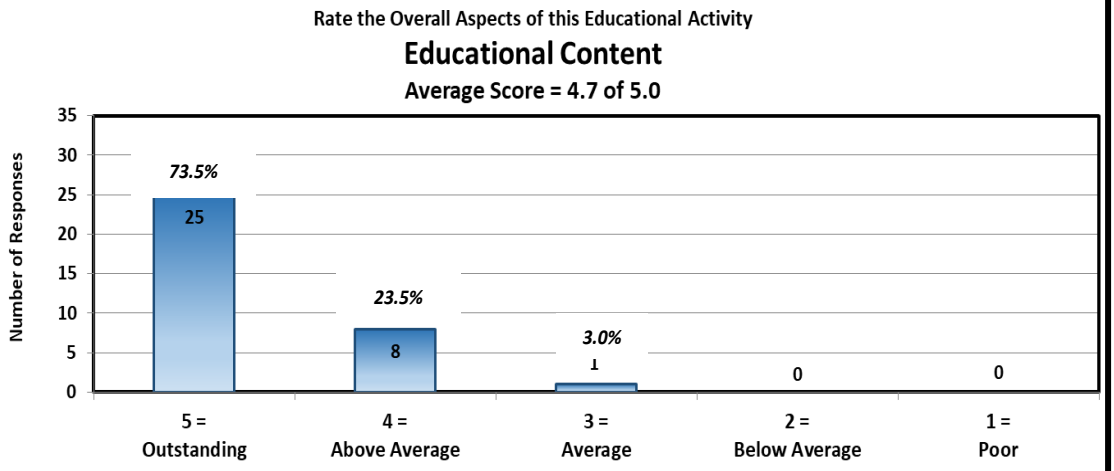
	Stage 1: UNFREEZE	Stage 2: CHANGE	Stage 3: REFREEZE
LEWIN'S CHANGE PROCESS THEORY	▪ Raise awareness to current venous thromboembolism (VTE) prevention practice standards. ▪ Raise awareness to current practice problem of lack of lack of use of existing evidence-based Venous Thromboembolism practice guidelines when assessing and treating patients at risk for VTE development. ▪ Recognize a need for incorporating existing evidence-based VTE prevention guidelines into practice. Motivation to change from current VTE practices to adopting existing evidence-based guidelines.	• The identified change is to incorporate existing evidence-based VTE prevention guidelines into practice to reduce the rate of VTE. Identify what needs to change. • Provide a one-hour education activity on VTE Prevention including essential tools and resources. Practitioners will develop new practice behaviors.	▪ Practice change becomes permanent through new knowledge and awareness of existing VTE prevention practice guidelines. ▪ Program evaluation results will validate new knowledge and awareness of existing VTE prevention practice guidelines and evidence of the practitioners' intention of utilizing the resources and tools when assessing and treating patients at risk for VTE.
	LEARNING ACTIVITIES	**LEARNING ACTIVITIES**	**LEARNING ACTIVITIES**
EDUCATION PROGRAM LEARNING ACTIVITIES	• Educate practitioners on the current issues and trends relevant to Venous Thromboembolism across the continuum of care. • Educate practitioners on need for practice change in VTE prevention through current research and supportive data. • Educate practitioners on current practice problem of lack of use of existing evidence-based Venous Thromboembolism practice guidelines in practice including pharmacological prophylaxis and timely assessment and protocols classifying patients at risk during a hospital stay. • Expose practitioners to a patient/family experience impacted by the current practice problem.	• Highlight the gap in clinical practice relevant to venous thromboembolism within the current clinical setting and identify the specific change that is needed to reduce the gap. • Introduce practitioners to current national evidence-based practice standards for Venous Thromboembolism (VTE) prevention including mechanical and pharmacological VTE prophylaxis. • Introduce practitioners to evidence-based Caprini VTE Risk Assessment Model as a guide to assessment and suggested treatment including considerations for patients identified at risk for bleeding. • Engage practitioners in an open forum that support the need to improve current practice in VTE prevention. • Educate practitioners on the impact venous thromboembolism prevention guidelines has on social change and saving lives.	• Present a case study demonstrating how to incorporate existing evidence-based VTE prevention guidelines in practice. • Engage practitioners in an open forum to validate understanding of new knowledge, potential practice changes, and how to access resource materials presented in the learning activity. • Provide each practitioner with a program evaluation to determine if the learning activity improved the practitioner's perception of their awareness, knowledge, and compliance with existing evidence-based VTE guidelines in practice.

Adaption of Kurt Lewin's Change Process Theory. The design is in three stages including unfreezing, change, and refreezing. Source of information retrieved from Garon, M. (2014). Change and innovation. In D. L. Huber (Eds), *Leadership and nursing care management* (5th ed, pp. 37 – 54). Maryland Heights, Missouri: Saunders Elsevier.

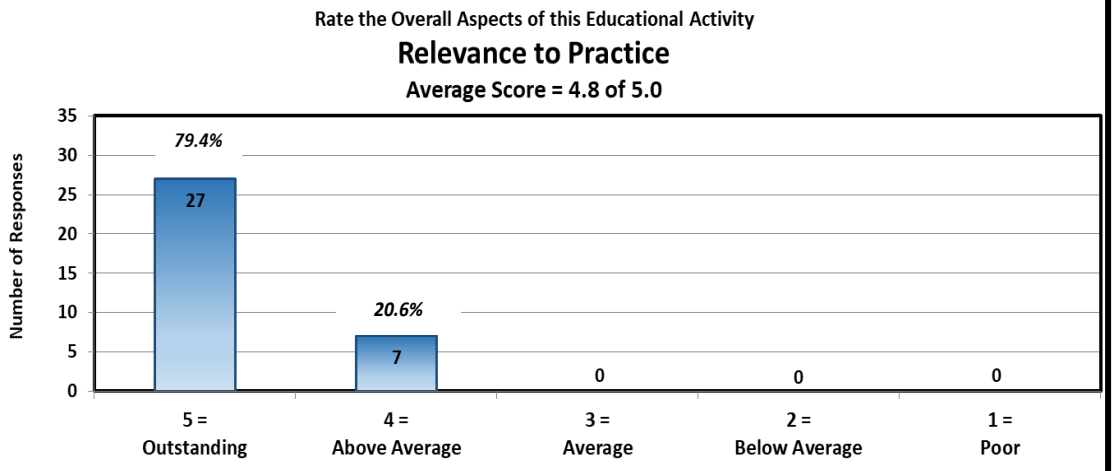
Appendix D: Program Evaluation Responses of the Learning Activity

Program Evaluation Responses of Learning Activity

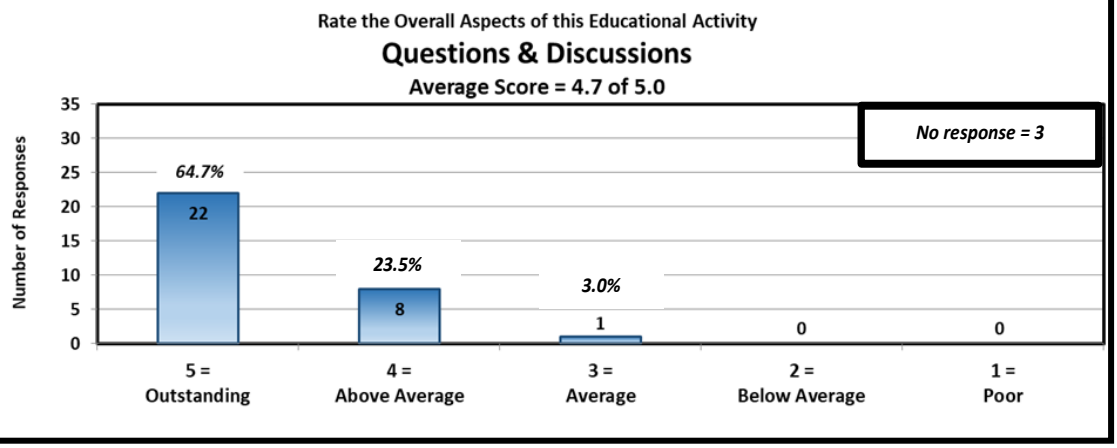
Graph D1: Rate the overall aspects of this educational activity – Educational Content.



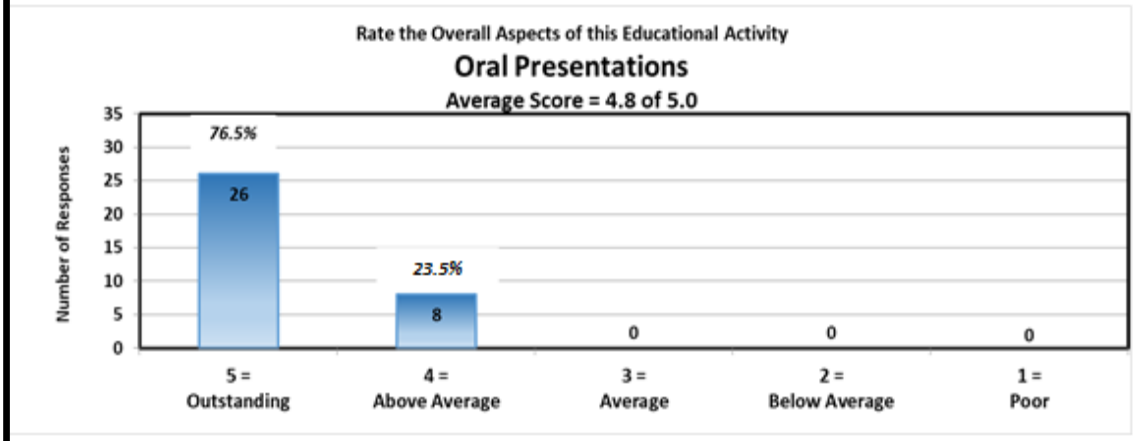
Graph D2: Rate the overall aspect of this educational activity – Relevance to Practice.



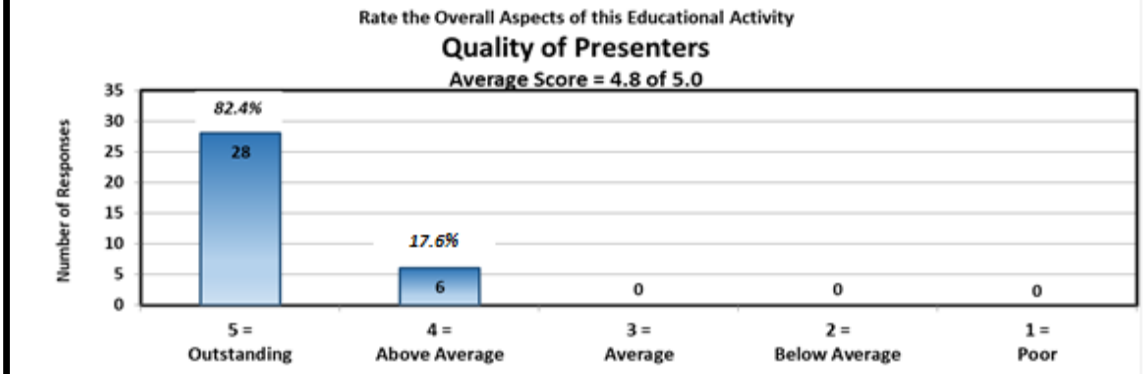
Graph D3: Rate the overall aspect of this educational activity – Questions & Discussions



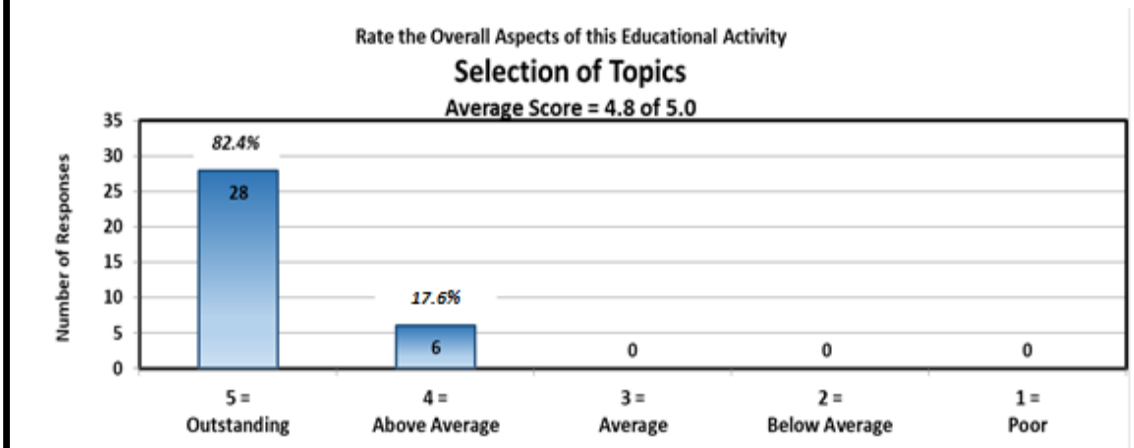
Graph D4: Rate the overall aspect of this educational activity – Oral Presentation



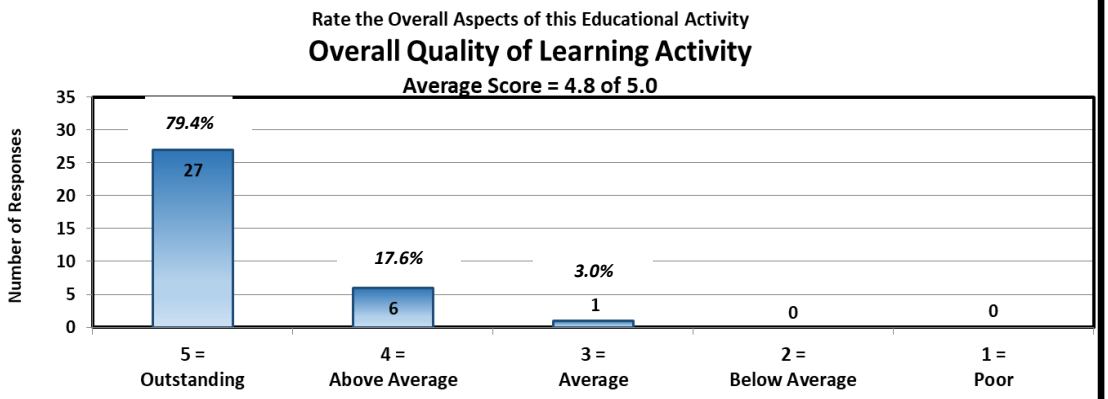
Graph D5: Rate the overall aspect of this educational activity – Quality of Presenters



Graph D6: Rate the overall aspect of this educational activity – Selection of Topics.



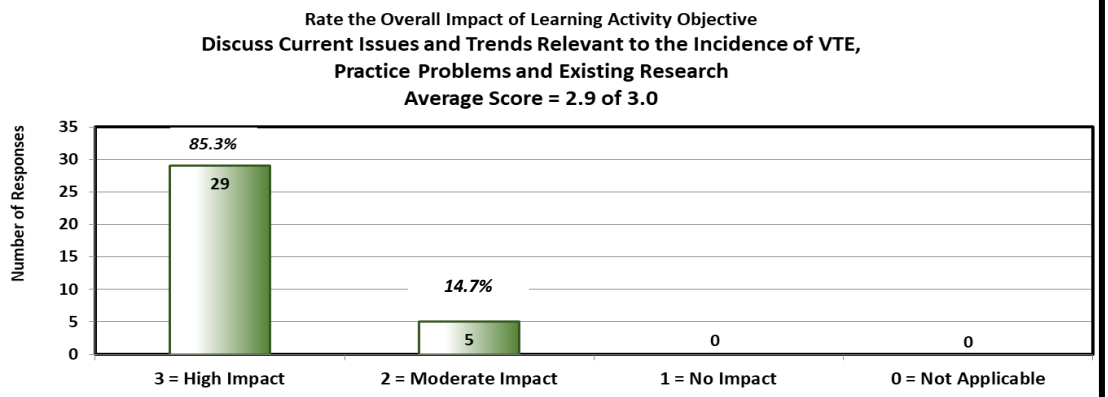
Graph D7: Rate the overall aspect of this educational activity – Overall Quality of Learning Activity



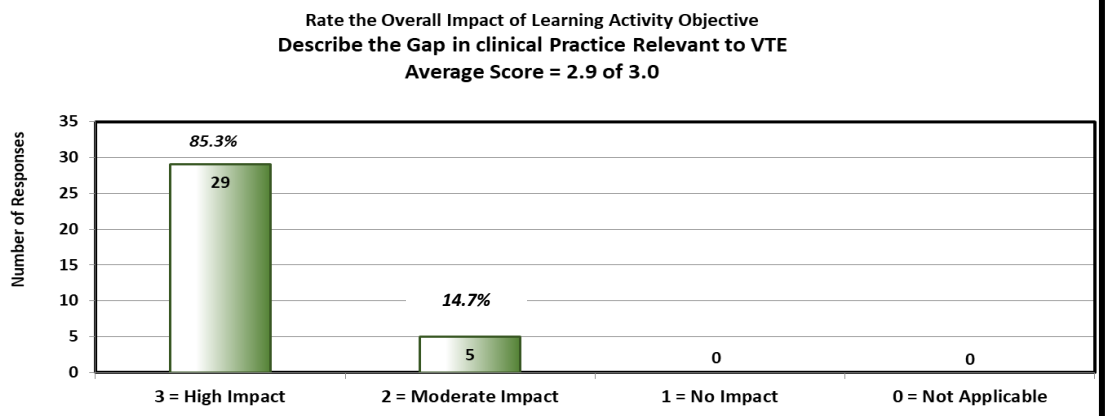
Appendix E: Program Evaluation Responses of the Learning Activity Objectives

Program Evaluation Responses of Learning Activity Objectives

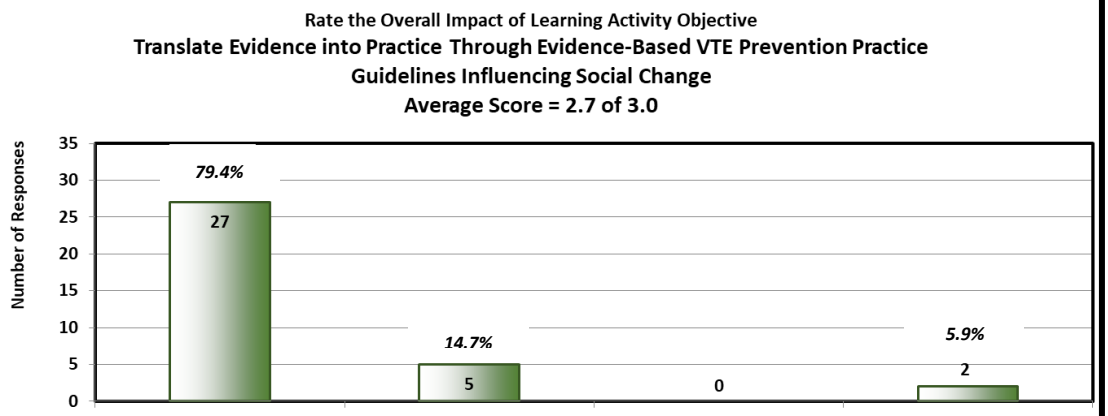
Graph E1: Overall Impact of Objective #1



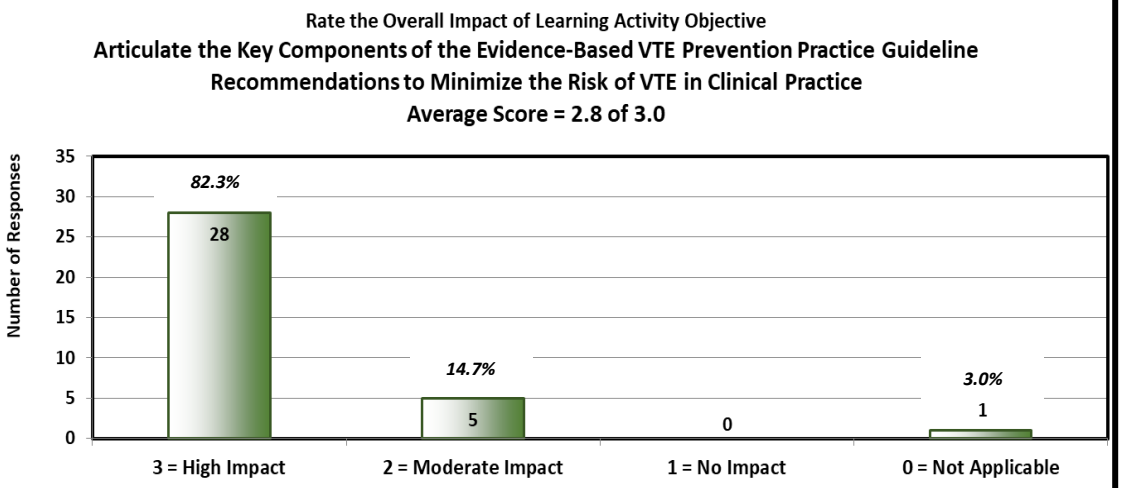
Graph E2: Overall Impact of Objective #2



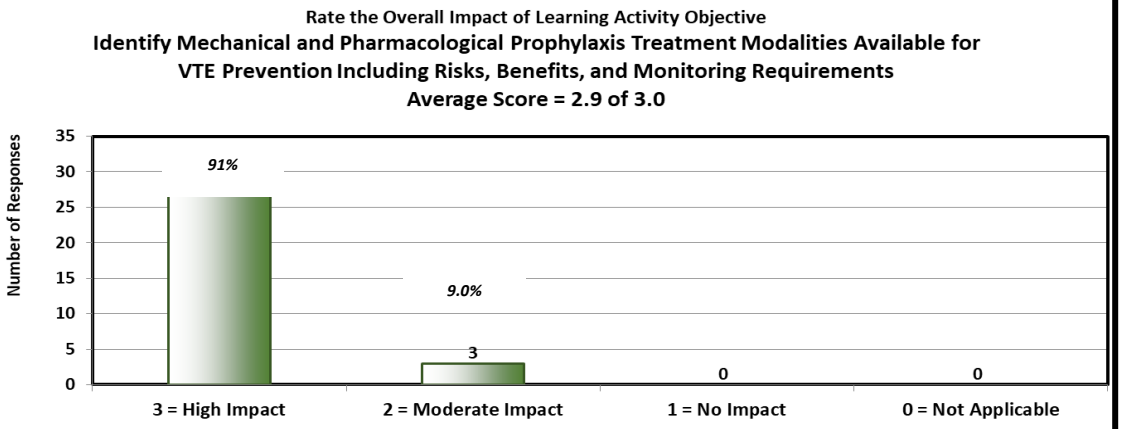
Graph E3: Overall Impact of Objective #3



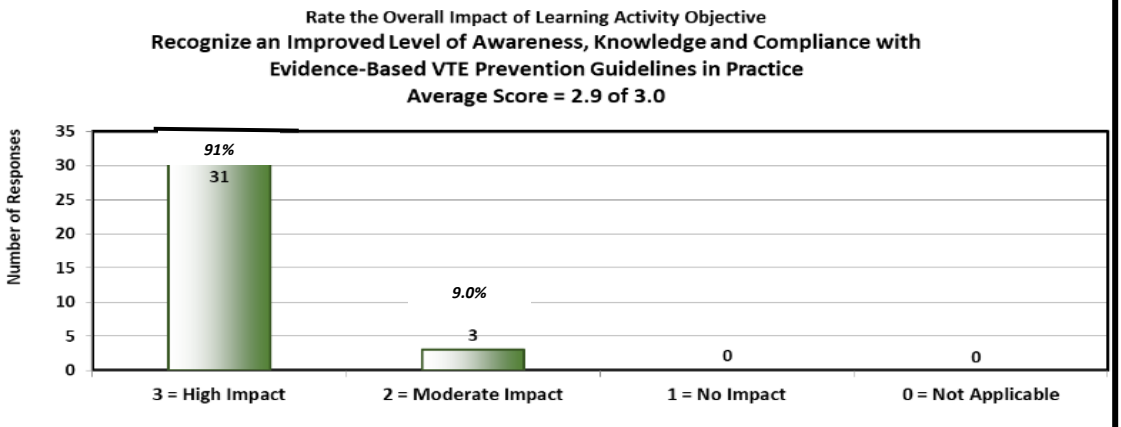
Graph E4: Overall Impact of Objective #4



Graph E5: Overall Impact of Objective #5



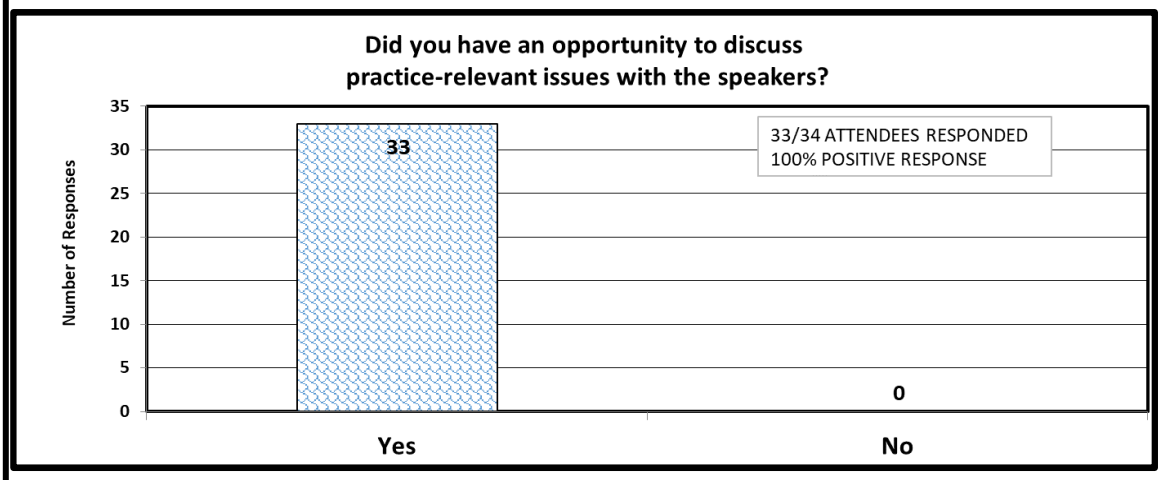
Graph E6: Overall Impact of Objective #6



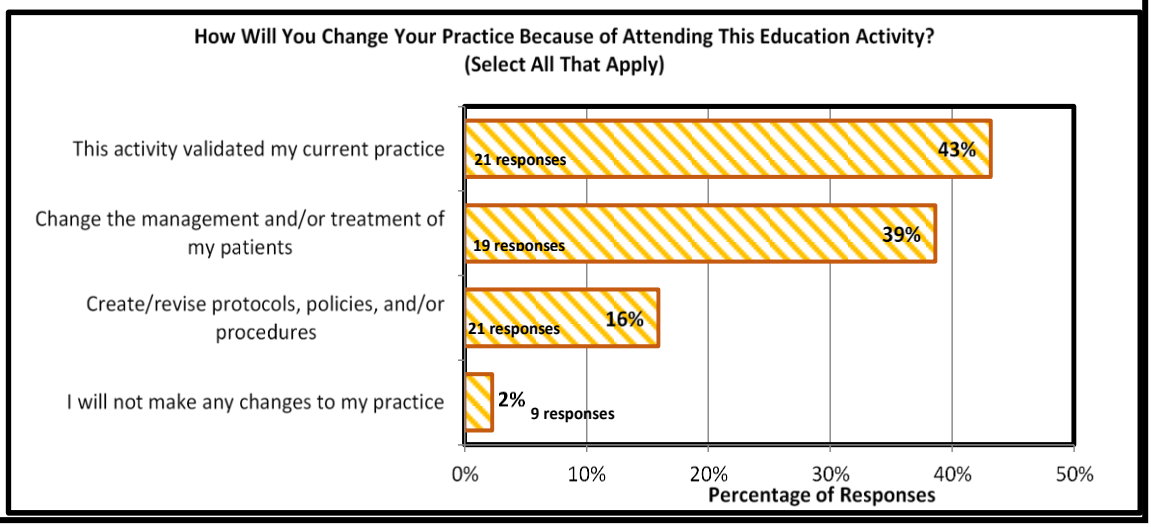
Appendix F: Program Evaluation Responses – Questions 3 – 7

Program Evaluation Responses -Questions 3 – 7

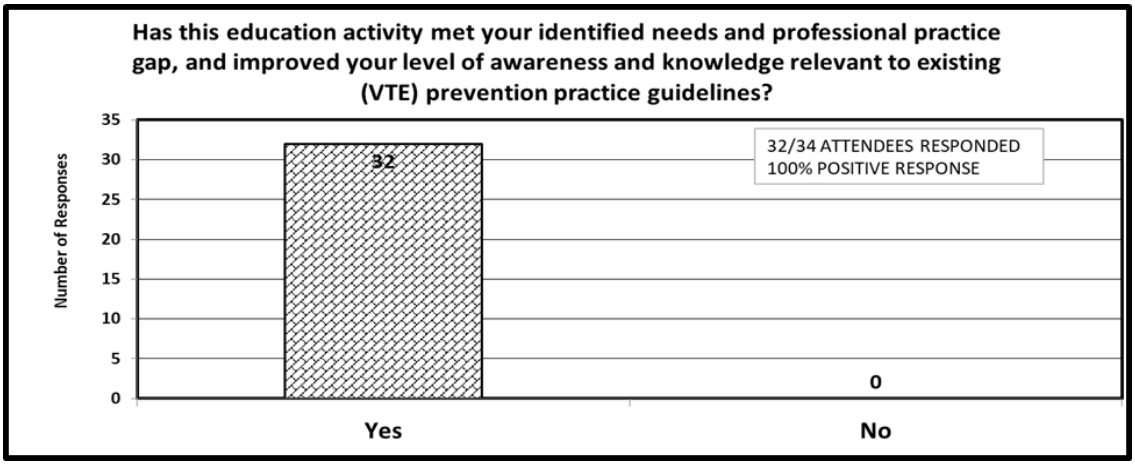
Graph F1: Question 3 – Did you have an opportunity to discuss practice-relevant issues with the speakers?



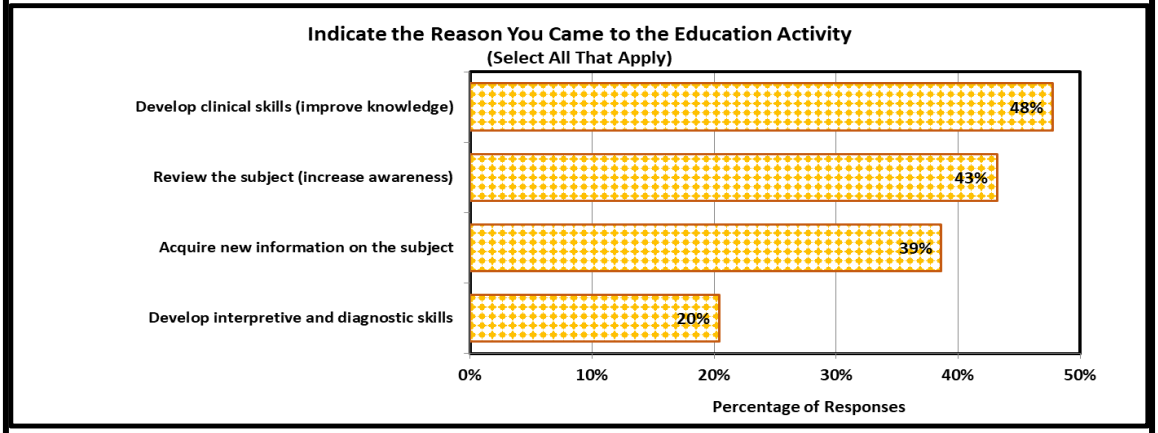
Graph F2: Question 4 – How will you change your practice because of attending this education activity?



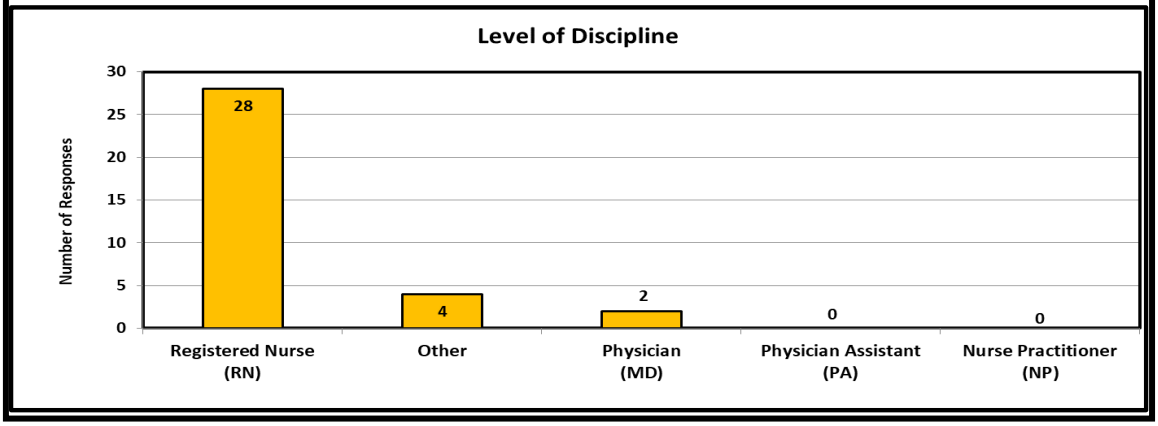
Graph F5: Question 5 - Has this education activity met your identified needs and professional practice gap, and improved your level of awareness and knowledge relevant to existing VTE prevention practice guidelines?



Graph F6: Question 6 – Indicate the reason you came to the education activity.



Graph F7: Question 7 – Indicate your level of discipline.



Appendix G: Learning Activity Design

Learning Objectives	Framework Lewin's Change Process Theory	Learning Activity
1. Discuss current issues and trends relevant to the incidence of venous thromboembolism (VTE), practice problem, and existing research.	Stage 1: Unfreeze	1. Current issues and trends relevant to VTE across the continuum of care: • Prevalence • Incidence • Economic Burden • Major cause of morbidity and mortality. 2. Need for practice change in VTE prevention: • Significance • Problematic globally • Evidence of underutilization and lack of timeliness of pharmacologic/mechanical prophylaxis.
2. Describe the gap in clinical practice relevant to venous thromboembolism (VTE).	Stage 2: Change	1. Gap in practice: • Potential lack of awareness • Public health and patient safety issue • Lack of adherence to the 2016 American College of Chest Physicians (ACCP) Guidelines and the National Institute for Health and Care guidelines 2. Supporting Evidence: • ***Study #1*** • ***Study #2***
3. Translate evidence into practice through evidence-based VTE Prevention practice guidelines influencing social change.	Stage 2: Change Stage 1-Unfreeze	1. Addressing the gap in practice – how to close the gap. • Increase awareness • Collaboration and partnership • Influence social change through the health care system local, state, national, and globally. 2. Expose practitioners to a patient/family experience impacted by the current practice problem. • Shared experience.
4. Articulate the key components of the evidence-based VTE prevention practice guideline recommendations (example: Caprini Risk Assessment Model) to minimize the risk of VTE in clinical practice.	Stage 2: Change Stage 3 – Refreeze	1. National evidence-based practice standards for VTE Prevention. • History • VTE Risk Assessment Models; Mechanical Prophylaxis; Pharmacologic Prophylaxis • Qualitative Model - Caprini Individualized Point-Based VTE Risk Assessment Model (RAM) • Introduction to additional Risk Assessment Models 2. Brief Case Study Sample • TEST YOUR KNOWLEDGE – CASE STUDY

5. Identify mechanical and pharmacological prophylaxis treatment modalities available for VTE prevention including risks, benefits, and monitoring requirements.	Stage 2 - Change	1. Mechanical Prophylaxis: • Types • Indications • Contraindications. 1. A Closer Look at Pharmacologic Prophylaxis and Bleed Risks Considerations: • Patient Populations requiring pharmacologic prophylaxis • All patients should be assessed for risk of VTE. • Agents of Pharmacological Prophylaxis • Length of therapy depends on patient's individual risk • Bleed Risk Consideration.
6. Recognize an improved level of awareness, knowledge, and compliance with evidence-based VTE prevention guidelines in practice.	Stage 3: Refreeze	1. Conclusion – closing the gap and influencing social change. • Awareness may be the first step in supporting compliance with existing evidence-based VTE prevention guidelines among practitioners. • An opportunity to influence social change and save lives • Open Forum to validate understanding of new knowledge, potential practice changes, and how to access resource materials presented in the educational activity. • Evaluation • Consent – Anonymous Questionnaire.