Education of Primary Care Provider and Clinical Staff in Identify At-Risk-Patient for PAD

Abstract

Peripheral Artery Disease (PAD) is a health problem that occurs due to occlusion of arteries and progressive stenosis of the lower extremities due to limited oxygenated blood. The prevalence of PAD is high in the United States, and adults are the most affected population. Increased prevalence of PAD causes increased the cost of care and poor quality of life which presents a significant burden to the healthcare system and patients. As such, the early identification and detection of PAD is necessary to improve the quality of life in the population affected by disease. An educational intervention for healthcare professionals helps to improve knowledge and level of awareness about PAD screening and screening tools for early identification of at-risk patients. The purpose of the DNP project is to examine whether education for PAD screenings of at-risk patients for Lower Extremity PAD (Claudication or CLI) improves early intervention time for at-risk patients. The project is a quality improvement project and a quasi-experiment study will be used. An educational intervention will be implemented and pre and post-test questionnaires will be used as measurement instruments in the study. The questionnaires will be used to measure the knowledge of primary care providers and clinical staff before and after implementation of the educational intervention. The expected outcome is that educational intervention for primary care providers and clinical staff on PAD screening will improve early intervention time for at-risk patients.

*Keywords***:** Peripheral Artery Disease, Intermittent Claudication, Primary Care Provider, Clinical Staff

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Education-Of Primary Care Provider and Clinical Staff in Identify At Risk-Patient for PAD

Introduction

Peripheral Artery Disease (PAD) is a chronic and common health problem that results from the occlusion of arteries and progressive stenosis of the lower extremities due to the lack of enough oxygenated blood. The deficiency leads to degeneration of nerves and vasculature that cause walking impairment and loss of sensation in the extremities (Walker, Bunch, Cavros, & Dippel, 2015). Early recognition of at-risk people with lower extremities PAD is of significant importance because patients with such vascular diseases are at higher risks of cerebrovascular or cardiovascular problems (Tóth-Vajna et al., 2019). Early identification allows for adequate treatment, which is essential to decrease the related risks and mortality rates (Tóth-Vajna et al., 2019). The signs and symptoms of the PAD may not appear for some time and the patients with the disease become asymptomatic and are highly ascribe to innocuous effects (Walker et al., 2015). As a result, most PAD cases are undiagnosed and greater awareness through education for early clinical signs and symptoms is needed (Walker et al., 2015). Healthcare providers and medical staff need to educate or train effectively on the importance of early identification of at-risk patients with lower extremities PAD to improve intervention time (Olin, White, Armstrong, Kadian-Dodov, & Hiatt, 2016).

Definition of the Clinical Problem

The problem in this study is peripheral arterial disease (PAD) that is describe as the clinical manifestation of atherosclerosis that affects circulation in the extremities, particularly the legs. The severity of PAD is classified based on time course, symptoms and anatomical distribution. The condition is prevalent among patients above 60 years at the rate of 20% (Bailey, Griffin, & Scott, 2014). The approximate number of people with PAD globally is over 200

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million with their symptoms ranging from mild to severe. The prevalence of PAD increases with

age. The prevalence of PAD also varies across races with African Americans demonstrating twice

the incidence of PAD as compared to Non-Hispanic whites (Shu & Santulli, 2018).

Background Knowledge/Significance of the Problem

PAD affects most people in the United States, and those with the condition are at higher

risks for adverse effects like myocardial infarction, stroke, limb amputation, and even death

(Walker et al., 2015). These adverse events normally result in a poor quality of life. However, the

majority of patients with PAD are often not diagnosed and undertreated due to lack of awareness,

which increases the prevalence rate in the country (Walker et al., 2015).

The most current data presented by the National Health and Nutrition Examination

Survey showed that about 5.9% of the population in the United States are affected by PAD

(Curry et al., 2018). Among the affected population in the United States, 8.5 million are adults

aged 40 years and older (Afzal et al., 2017). In a 2016 review, it was found that 7 of people with

PAD showed intermittent claudication and about 21% of those with claudication progressed to

limb ischemia (Sigvant, Lundin, & Wahlberg, 2016). Walker et al. (2015) explained that the

increased prevalence of the PAD poses a significant burden to the patient and the healthcare

system, like increased cost of care and poor quality of life. Undiagnosed PAD has health

complications to the patient. Rhee and Kim (2015) cited the National Health and Nutrition

Examination Survey that was conducted to examine the health complications of undiagnosed

PAD. Rhee and Kim (2015) cited that in the United States, about 7.1 million (5.9%) of the total

population are adults with PAD and 4.7% of the adult population having health complications of

cardiovascular disease. Criqui and Aboyans (2015) explained that adults aged 40 years and over

develop diabetes mellitus and hypertension. The middle-aged adults with PAD in the United

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States are mainly the Asian American (25%), African American (about 65%), non-Hispanic

whites (10%), and Hispanics accounting to 25% with women being the most affected population

(Criqui & Aboyans, 2015). Schramm and Rochon, (2018) established that the prevalence of PAD

is high as age increases, and elderly women are the most affected population than men.

Approximately 67% of women population in the United States has PAD during the menopause

and the prevalence increases with age. With increased prevalence of PAD in the United States,

the cost of care remains high. Scully, DeBord Smith, Arnaoutakis, Semel, & Nguyen, (2016)

asserted that in the United States, the PAD cost is high with the annual expenditure per patient

amounting to $12,702. Increased cost of care for PAD patients is attributed to high cost of

medications where a patient spends about $3025 with out-of-pocket expenditure of $903 (Scully

et al., 2016). Consequently, early PAD screening is essential for urgent diagnosis and treatment

(Walker et al., 2015).

Local Knowledge of Problem

Regionally, the prevalence of PAD is high in Florida, Broward County compared to that

of the national level. A study showed that in the Southern part of Florida, the prevalence rate

nearly 38% of the total population (Allison et al., 2015). Among the most affected population in

the region are both men and women from different ethnicity, Cuba Americans (9.1%), South

Americans (4.6%), Puerto Rican (5.9%), Mexican Americans (3.2%), Dominican (4.7%), central

Americans (5.3%), and mixed groups with PAD are approximately 5% (Allison et al., 2015).

Also, PAD cost is high with every patient spending $331 for Medicare, $280 in Medicaid, and

$183 for hospital-based outpatient private insurance cost (Scully et al., 2016). Among those

diagnosed with the disease, 25% develop complications of stroke, heart disease, diabetes mellitus

and hypertension (Criqui & Aboyans, 2015)

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Clinical Practice Setting

The clinical setting of the project is the primary care facility. The facility is a general clinic with 10 healthcare providers and five supporting staff. The majority of the population affected by PAD are older men and women aged 40 years and over. The prevalence of PAD in the facility is approximately 40%. More than 20% of patients diagnosed with PAD have shown complications of coronary artery disease, diabetes mellitus, stroke, and hypertension.

Gap Analysis of Clinical Site

The prevalence of PAD in the United States is alarming with Southern Florida among the leading states with higher prevalence ranging approximately 38% (Song et al., 2019). From the previously conducted studies, more than 200 million people have PAD globally with the prevalence increasing with age (Song et al., 2019). However, there is lack of patient education to identify at-risk patients and initiate early interventions in the healthcare facility. Walker et al. (2015) explained that the majority of patients with PAD are often not diagnosed and undertreated. This is mainly associated with limited education about PAD and associated risks. As such, there is a need to provide education to improve providers' awareness of early signs and symptoms of PAD that would help in early identification and treatment of the disease.

Problem Statement (**PICOT Question)**

In primary care provider and clinical staff, will education for screenings of at risk patients for Lower Extremity PAD (Claudication or CLI), compared to no education on at risk patient for lower extremities (Claudication) improve early intervention time for at risk patients within 10 weeks?

An educational intervention for PAD and screening procedure will be implemented in the project to determine level of knowledge and awareness among primary care providers and

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clinical staff for early identification of at risk patients for PAD. The effectiveness of the educational intervention will be determined by assessing levels of knowledge before and after implementation of the intervention.

Review of Literature

Peripheral artery disease (PAD) constitutes health problem like impaired blood flow in the lower extremity arteries and atherosclerosis. Thus, PAD management with advanced diagnostic and treatment strategies is necessary to improve health outcomes (Morcos et al., 2018). An algorithm for PADF management assists a collaborative approach between the primary care physician and clinicians. This multidisciplinary method has a greater chance to provide optimal care and to ensure an ongoing surveillance of patients' health, which is crucial in improving the quality of care of patients with PAD (Walker et al., 2015).

In this section, a literature search strategy including the search terms, databases, total number of articles found, and the inclusion and inclusion criteria for article selection are discussed. Also, this section provides an in-depth discussion of existing literature related to the topic of this DNP project. The existing body of literature related to PAD and educational intervention is discussed to provide a better understanding of the topic.

Literature Search Strategy

Scholarly articles relating to the topic in question are reviewed. Relevant studies are obtained from reputable search databases like EBSCOHost, CINAHL, and PubMed. Also, Google Scholar and hand searching the reference list of the relevant studies is done to find relevant articles. Different search terms are used to facilitate retrieval of appropriate studies. The search terms used during the literature search process are; Peripheral artery disease, intermittent claudication, educational intervention, and Peripheral artery disease lower extremities. The

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Boolean operators "AND" and "OR" were used during the search process. For instance, PAD screening Peripheral artery disease AND intermittent claudication, OR Peripheral artery disease lower extremities, Peripheral artery disease AND educational intervention, PAD screening AND education.

During the search process the total number of articles retrieved was 30; EBSCOHost (5 articles), CINAHL (10 articles), PubMed (10 articles), Google scholar (3 articles), and hand searching yielded 2 articles. Inclusion and exclusion criteria were used to find relevant studies that best describe the problem in question. For inclusion criteria, articles published between 2010 and 2019 were included. Also, articles published in English language, studies that focused on PAD and intermittent claudication and educational intervention are included. Relating to exclusion criteria, articles published before 2010, written in a non-English language, and do not include PAD, intermittent claudication, and educational intervention for PAD was excluded. This screening process was done by reviewing the abstract of each article and conducting full-text reading. Based on inclusion and exclusion criteria, 26 articles were limited because and only 4 articles were eligible for review. The studies were one systematic mixed-studies review (Abaraogu, Dall, & Seenan, 2016), one qualitative study (Gorely, Crank, Humphreys, Nawaz, & Tew, 2015), and two cross-sectional studies (Davies et al., 2017; Haigh, Bingley, Golledge, & Walker, 2013).

PAD and Educational Intervention

Educational intervention for PAD is essential to improve knowledge and awareness of primary care providers and clinical staff on screening process of PAD and early identification of at-risk patients. The majority of studies that have been conducted focused on patient education for patients with PAD (Abaraogu et al., 2016; Gorely et al., 2015). A systematic mixed-studies

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review by Abaraogu et al. (2016) established that educational intervention is essential to improve physical activity behavior of patients with intermittent claudication. The study by Abaraogu and colleagues indicated that educational intervention increase the ability of patient to engage in healthcare practices that would lead to improved quality of like and improved health outcomes. A qualitative study by Gorely et al. (2015) showed that educational intervention on PAD either through group discussions or experiential learning is an evidence-based practice to improve patient's health outcomes. Additionally, educational intervention is crucial to prevent the progression or delay in identification of PAD. Similar results were obtained in a cross-sectional observational study by Davies et al. (2017), which indicated that educational intervention on screening procedures is essential to prevent progression and delay in screening for PAD. Better education for PAD is required as an evidenced-based practice for early identification of PAD and to adopt risk modification strategies to minimize PAD progression and to reduce the risks of health complications like cardiovascular diseases. Also, educational intervention is essential to improve the primary care PAD screening for at-risk patients (Davies et al., 2017). Similar results were obtained in a cross-sectional study by Haigh et al. (2013) that examined awareness of PAD among general practitioners (GPs) in terms of prevalence of PAD screening and screening tools like ankle-brachial index (ABI). Also, the study examined the barriers of PAD screening in a general practice setting. The study found that the professionals were deficit in PAD screening and use of screening tools like ABI. As such, the study recommended that a better education for GPs is crucial to increase access to screening tools and enhance early identification and detection of PAD (Haigh et al., 2013).

Summary

From reviewed studies that examined educational intervention for PAD and screening

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process for early identification and detection of at-risk patients, limited studies have been conducted on educational intervention for healthcare professionals. This creates a gap this present DNP project seeks to fill. Thus conducting this DNP project will provide the foundation to understand the effectives of educational intervention in knowledge and awareness among healthcare providers on PAD screening and screening tools for early detection and identification of at-risk patients for PAD.

Evidence Based Practice: Support for Chosen Intervention

Education intervention for PAD and screening will is the chosen evidence-based practice for the project. Educational intervention will be useful as an effective process to increase the knowledge and level of awareness of healthcare professionals regarding a particular health problem and to promote their attitudes towards nursing practices. Erkin and Aygün (2019) explained that educating healthcare professionals allow them to acquire practical and theoretical knowledge about a health care condition. In the project, the intervention will be used as a simulation-based learning and effective teaching method to improve theoretical knowledge and skills of nurses relating to patients' health conditions. Two studies supported that implementing an educational intervention assists the professionals to compare the relationship between the theory and practice and apply their skills to improve recognition and management of patient's health status (Haukedal, Reierson, Hedeman, & Bjørk, 2018)

<p align="center">Theoretical Framework</p>

The theoretical framework for the capstone project is Lippitt, Watson, and Westley's Dynamics of Planned Changed theory. Lippit, Watson, and Westley developed the planned change theory in 1985, which majorly addresses the change agent roles and responsibility rather than the real process of change (Robinson, 2009). The changed planned theory expanded the

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Lewin's model of change and introduced key steps; problem diagnosis, motivation assessment

and capacity for system change, resource assessment and motivation of the change agent,

developing change objective and change strategies, maintaining change, and terminating

relationship as the change becomes organizational culture (Mitchell, 2013). The model is

illustrated in Appendix A.

Problem Diagnosis

In problem diagnosis, the framework to implement the change is developed. This step

entails establishing a detailed plan of action, which would be distributed to any person affected

by the problem (Higgins & Bourne, 2018). In the nursing field, the nurse leader and other

healthcare personnel identify and diagnose health and related problems. During change

implementation, other members of staff who can be affected receive a plan of action and are

informed about the need for change in order to meet to deliberate on how to proceed with the

adoption (Mitchell, 2013). Relating to the current capstone project, diagnosing change fits into

the capstone project where primary care provider and clinical staff will receive an action plan on

education intervention for PAD screening. The staff will be informed about the need for the

intervention to improve early identification of at-risk patients with lower extremities PAD.

Motivation Assessment and Capacity for System Change

Assess motivation ensures that those who will be affected by the change are prepared to

allow change to take place. Solution for the problem may be established as a way to motivate

people (Szabla, 2017). Higher motivation is achieved through shared agreement and involving all

people during decision making. For example, the nurse administrator may establish the patient's

complaints and cases of a nurse shortage, and involve all nursing staff to adopt change (Mitchell,

2013). In the capstone project, assess motivation fits the project where it will be used where

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primary care providers and nursing staff will be involved in decisions to adopt education

intervention on PAD screening**.**

Resource Assessment and Motivation of the Change Agent

The change agent is personnel tasked with the process of leading change. Szabla (2017)

explained that the changed agent ensures enough resources and that the team members meet the

qualification such as stamina, experience, and honesty in ensuring that the objectives of the

change project succeed. The change agent makes sure that team members are well equipped to

ensure the project completes. The step fits into the capstone project where the change agent will

be the nurse educator implementing educational intervention on PAD screening. The step will

assist in understanding the resource materials used in the education process.

Establishing Change Objective and Strategies

Establishing change objective and strategic plan entails developing complete steps like

timetables and datelines. The involved parties are assigned duties in ensuring that the change

takes place (Mitchell, 2013). The change agent is responsible for training and coaching to assist

the employees develops character and skills required to continue and successfully implement the

change (Mitchell, 2013). The step is suitable for the project as it will assist in ensuring that the

timeline for the proposed change initiative is presented. This step will provide time the

educational intervention will take, which is ten weeks for the capstone project.

Choosing Roles of Change Agent

Selecting the role of the change agent is an essential phase of the change process. In this

phase, change agents take part in managing the staff and supporting change (Szabla, 2017). This

step ensures that the team members are encouraged to avoid change resistance. Step 5 of the

planned change theory is suitable for the capstone project as it will help the nurse educator to

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manage the behaviors of primary care provider and nursing staff to accept the change process. This step will aim to transform the behaviors of the professionals.

Maintaining the Change

In step six of Lippitts's change theory, change the implementation of the nursing process, and the maintaining change project is the key focus (Mitchell, 2013). In this step, the teamwork, collaboration, communication, and feedback are the key factors of implementing and maintaining nursing change process. This step fits the capstone project concerning the implementation and maintaining educational intervention. The educational levels among providers and nursing staff will be examined.

Terminating Relationship as the Change Becomes an Organizational Culture

Step 7 entails evaluating and withdrawing the change agent. In this step, the effectiveness of the change is evaluated to determine whether it improves the outcomes (Mitchell, 2013). This step suits the capstone project where the effectiveness of the educational intervention in terms of the level of awareness on PAD screening and early identification of at-risk patient will be evaluated.

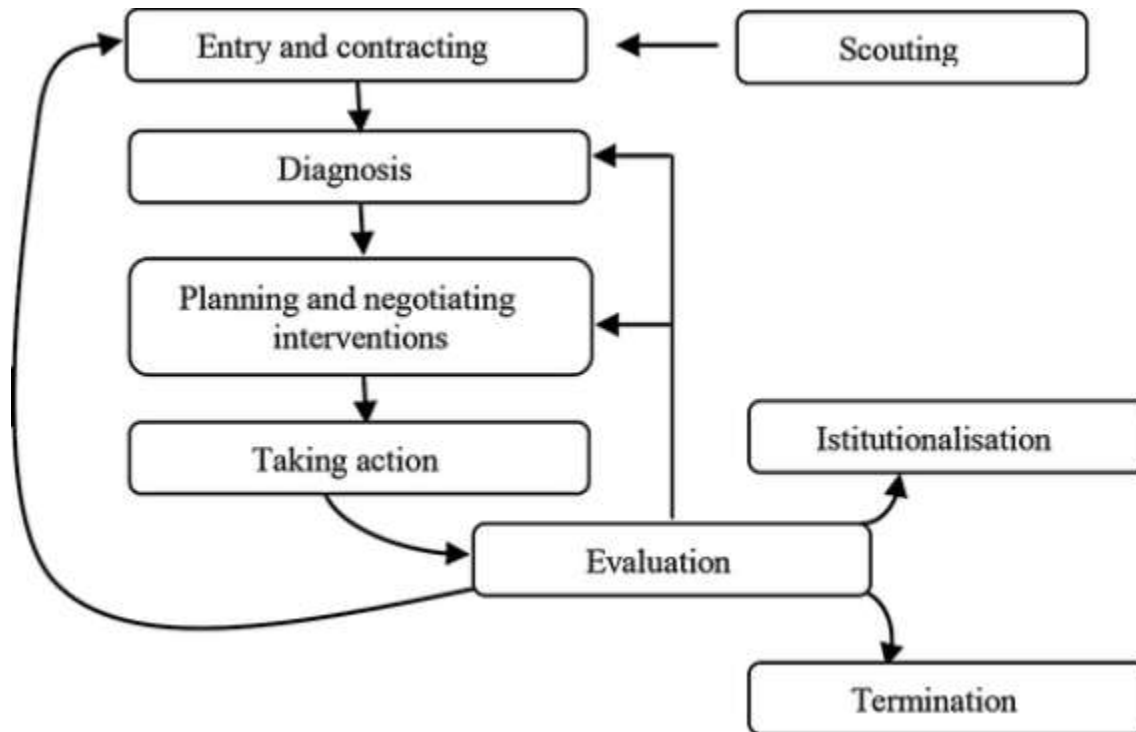A graphical presentation of the theoretical framework is shown in Figure 1.

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Figure 1. Graphical presentation of theoretical framework

Scope of the Project/Planning the Intervention

The section presents a discussion of the methodology that will be used in the project. The sub-sections covered are project design, goals and objectives of the project, and setting, facilitators as well as barriers. Also, covered in this section are the measurement instrument, data collection procedure, data analysis, cost-benefit analysis/budget, and project timeline.

Project Design

The project will be a quality improvement project with a quasi-experiment design. A quality improvement focuses on the use of appropriate healthcare strategies to improve patient safety and reduce harm during the nursing practice (White, Butterworth, & Wells, 2017). A quality improvement is essential towards the implementation of a quality improvement intervention and strategies for improved quality (White et al., 2017). Thus, a quality improvement will be used in the project to implement an appropriate intervention to improve the

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screening process for Peripheral Artery Disease (PAD) among at-risk patients.

Goals, Objectives and Expected Outcomes

The goal of this quality improvement project is to provide a formal education to primary care providers and clinical staff on PAD screening to improve their screening awareness and early identification of patients with PAD within 10 weeks.

The objectives of the project will be:

i.   To educate primary care providers an clinical staff on PAD screening

ii.   To examine whether educational intervention for screening improves early intervention time for lower extremity PAD among at risk patients

iii.   To improve level of awareness among primary care provider and clinical staff on screening procedures and early identification of PAD

The expected outcomes for the project is that educational intervention will improve levels of awareness among primary care providers and clinical staff on PAD screening and early identification of at-risk patients.

Setting, Facilitators, and Barriers

The clinical setting for the project is general clinic with 10 healthcare providers and five supporting staff. The facility provides primary care services including laboratory testing, evaluation of disease symptoms through physical examination, X-ray testing, and prescriptions. In the project, the site personnel, which will be primary care providers and clinical staff, will interact with the researcher through face-to-face communication. The researcher will meet the professionals in the setting to plan for and implementing the project.

Facilitators and barriers in a quality improvement influence the implementation of nursing intervention. They are the primary factors to consider in a quality improvement project for

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successful implementation process (Sommerbakk, Haugen, Tjora, Kaasa, & Hjermstad, 2016). In this quality improvement project, the key facilitator is the accessibility of the research site and participants. The setting chosen for the study is accessible for the researcher to recruit and select potential participants. Another facilitator is the availability of resources to implement the educational intervention. The researcher will ensure that teaching materials to use are enough and available for the chosen participants. Also, the competence and experience of the educator will be a key facilitator. The educator will be competent and have enough experience in PAD and screening procedures.

The main barrier to the project will be the willingness of the chosen participants to take part in the project. The participants chosen from the project may not provide their consent to participate in the project. To address the barrier, the participants will be briefed on the purpose of the project, and they will be instructed that their participation will be essential for their clinical outcomes. Also, the time to complete the study may not be adequate to complete the project; hence additional time will be necessary. This will be addressed by ensuring that adequate time is allocated for each activity. The researcher may seek for additional time for successful completion of the project. Another barrier for the project is the change resistance within the facility. Other primary care providers and clinical staff within the facility may not accept to use the proposed change of PAD screening. To address this challenge, the professionals will be informed about the benefits of the proposed change and the significant contributions to the nursing practice.

Methods

This section provides the instruments to measure the variables of the project, the procedure to collect data, and data analysis. Also, cost-benefit analysis and timeline of the project are presented.

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Measurement Instruments

To measure the outcomes or variables of this quality improvement project, an established tool will be used. Pre-test and post-test questionnaires will be used to determine the overall scores of the participants. Pre and post-tests questionnaires are mainly used to examine knowledge levels of the chosen participants before and after implementation of the educational intervention (Shivaraju, Manu, Vinaya, & Savkar, 2017). Thus, the pre-test and post-test questionnaires will be used in the project to measure knowledge levels of primary care providers and clinical staff before and after implementation of educational intervention of PAD screening. Using the questionnaires will assist in determining the effectiveness of the proposed intervention in improving screening and early identification of PAD among at-risk patients.

Data Collection Procedures

An interview-based survey questionnaire will be used to collect data from the primary care providers and clinical staff (See Appendix A). Pre-test questionnaire will be used where the participants' levels will be measured before implementation of the intervention. Also, post-test questionnaire will be used to assess knowledge and awareness levels of participants after implementing educational intervention. The selected primary care providers and clinical staff will complete self-reported questionnaires with multiple choice questions, and their responses will be used to examine their knowledge levels during the start and after implementation of the intervention. The effectiveness of the educational intervention will be determined by comparing pre and post-survey results of each participant.

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Data Analysis

The data analysis process of this quality improvement project will be a statistical analysis with a paired t-test. Paired t-test is a statistical method mainly used to determine the mean differences between two variables under investigation. The paired t-test assists in testing the hypotheses and to evaluate the differences between two independent groups (Pandis, 2015). In this quality improvement project, the paired t-test will be used to test whether educational intervention improves PAD screening and early identification of at risk patients by determining the mean differences between the pre and post-tests results.

Cost-Benefit Analysis/Budget

In a quality improvement project, cost benefit analysis provides an estimation of the required costs to achieve project goals and objectives. Cost-benefit analysis assists in evaluating the necessary resources and to make decisions on resource allocation (Svensson & Hultkrantz, 2017). The teaching and learning materials needed to complete the project will cost $3000. Also, the is need for traveling cost which is estimated to be $2000, and cost for lunch and break for all the participants, which is estimated to account for $3000. A summary Table of the cost-benefit analysis/budget for this quality improvement project is presented in Appendix B Table 1.

Timeline

The quality improvement project will be a 10-week project. After proposal approval, data collection process will commence. After data collection, the data will be analyzed and interpreted, and discussions of findings will be presented as the final part of the project. The timeline is presented using a Gantt chart in Appendix C Table 2.

<center>**Ethical Considerations/Protection of Human Subjects**</center>

Before initiating the project, Approval from South University Internal Review Board

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(IRB) will be obtained. Also permission from the research setting and informed consent from the participants will be obtained prior to initiating this quality improvement project. Additionally, the confidentially and privacy of all the participants will be protected under Health Insurance Portability and Accountability Act of 1996 (HIPAA). The participants' identifiable information like their names, profession, and place of work will be kept confidential using pseudonyms or numbers. The standards of care will be followed throughout the project to maintain safety of the participants. Also, data collected in the project will be kept confidential by storing any storing any hardcopies in al lockable wardrobe only accessible to the student. Any softcopies will be stored in a password protected folder in the computer machine for security purposes.

Conclusion

PAD is a health condition that requires effective management and treatment strategies. Educational intervention is one of the effective strategies for PAD. Implementing Educational intervention for healthcare professionals is crucial to achieve better health outcomes. Despite limited studies on educational intervention for healthcare professional, implementing the intervention for PAD screening and screening tools for primary care providers and clinical staff will be an evidence-based practice to improve early detection of PAD and early identification of at-risk patients.

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Appendices

Appendix A:

Questionnaire

Questionnaire for the study: "An Interview-based Survey to Assess Knowledge of Peripheral Arterial Disease among Medical Students"

Part I: Demographic information.

1. **Gender**
   ☐ Male
   ☐ Female

2. **Year in medical school**
   ☐ First
   ☐ Second
   ☐ Third
   ☐ Forth
   ☐ Fifth

Part II: PAD knowledge.

3. **Have you heard about peripheral arterial disease (PAD)?**
   ☐ Yes
   ☐ No (concludes the interview)

4. **What are the symptoms of PAD?**
   ☐ Do not know
   ☐ No symptoms
   ☐ Intermittent claudication (cramping leg pain while walking)
   ☐ Rest pain
   ☐ Ulcer
   ☐ Coldness
   ☐ Numbness
   ☐ Paralysis

5. **What are the risk factors for PAD?**
   ☐ Do not know
   ☐ Old age
   ☐ Smoking
   ☐ Diabetes
   ☐ Hypertension
   ☐ Hyperlipidaemia
   ☐ Male gender
   ☐ Personal/Family history

6. **What are the preventive measures of PAD?**
   ☐ Do not know
   ☐ Smoking cessation
   ☐ Dietary changes
   ☐ Lifestyle changes
   ☐ Diabetes control
   ☐ Hypertension control
   ☐ Medications (risk reduction therapy)

7. **How can PAD be treated?**
   ☐ Do not know
   ☐ Surgery
   ☐ Medical treatment
   ☐ Both

8. **What are the complications of PAD?**
   ☐ Do not know

Local complications:
   ☐ Tissue loss
   ☐ Amputation

Al

Systemic complications:
   ☐ Myocardial infarction
   ☐ Stroke
   ☐ Renal artery stenosis

Appendix B

A Cost-Benefit Analysis/Budget

Table 1.

A Budget for Educational Intervention at XX Facility for a Period of 10 Weeks

Budget	Cost
Teaching and learning materials	$3000
Travelling cost	$2000
Participants (Lunch, break etc.)	$3000
Total Cost	$8000

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Appendix C

Timeline

Table 2.

Gantt Chart For Project Timeline

Activities	Week 1	Week 2	Week 3	Week 4	Week 5	Week 6	Week 7	Week 8	Week 9	Week 10
Proposal approval	■	■								
Evaluating educational intervention			■	■						
Data collection					■					
Pre-test and Analysis of outcomes						■	■			
Post-test and Analysis of outcomes								■		
Presentation of findings									■	
Discussion of project findings										■

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