Improving Healthcare Financial Literacy in Nurse Practitioners with Concise, Applicable Healthcare-Focused Financial Education

By

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A Directed Scholarly Project Submitted to the

Department of Nursing

in the Graduate School of

Bradley University in

partial fulfillment of

the requirements for the

Degree of Doctor of Nursing Practice

Peoria, Illinois

2018

Abstract

Problem Statement: Nurse practitioners (NPs), as direct healthcare providers, have a substantial effect on the success of various healthcare reform efforts that influence the organization's financial indicators (Muller, 2013; Schur & Sutton, 2017). The United States healthcare system is enduring the most significant pay-for-performance initiative in history, as value-based care and cost containment replace the traditional fee-for-service reimbursement (Nuckols, 2017; Squitieri, Bozic, & Pusic, 2017). Decisions are no longer based solely on the volume of services; rather, cost value analysis of quality care is continually assessed (McClenathan & Rickert, 2013). Nonetheless, nurse leaders who are literate in finance appear to be the exception rather than the rule (Douglas, 2010).

Purpose: The aim of this scholarly project is to improve healthcare financial literacy in nurse practitioners by using a concise, applicable healthcare-focused online financial education intervention.

Methods: A quality improvement design will be used, which involves implementing a publicly accessible healthcare financial literacy education intervention video. Pre- and post-education intervention qualitative questionnaires will be used to determine the impact of the intervention on voluntary NP participants' capability to identify, define, and apply pay-for-performance concepts. Self-perceived attitude, ability, and behavior of healthcare finance will also be evaluated via pre-and post-education intervention quantitative questionnaires.

Significance: Direct care providers who enhance their proficiency and familiarity with finance are more sufficiently able to influence decisions in future healthcare delivery as well as advocate for patients and the nursing profession (Muller, 2013).

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Chapter I

An extensive change in the United States (U. S.) healthcare system is placing greater importance on improving the quality of patient care and controlling costs rather than the historic fee-for-service reimbursement (Squitieri, Bozic, & Pusic, 2017). Providers are expected to provide high-quality, cost-effective, and financially accountable care for their patients (Schur & Sutton, 2017). Nurse leaders need to take responsibility to be involved in, engaged in, and consider taking a leadership role in decision making and implementation of health care reform efforts (IOM, 2010). The Network for Regional Healthcare Improvement (2018) candidly stated that an element must be measured in order to be managed, which appears to be the new focus in the U. S. healthcare system. The Centers for Medicare and Medicaid Services (CMS) implemented Advanced Payment Models that reward organizations for health outcomes and/or penalize organizations for failing incentive measures (Finison et al., 2017). Quality measures and cost cutting measures are being evaluated by peers, payers, and patients in order to improve quality of care and contain costs (Manchikanti, Helm II, Colodney, & Hirsch, 2017).

The healthcare system is interconnected, and changes and challenges affect every segment of the system (Sherman, Bishop, Eggenberger, & Karden, 2007). Healthcare providers involved with direct patient care are responsible for quality improvement and cost containment measures by identifying and eliminating inappropriate care, improving care coordination, and making the needed adjustments to meet the established organizational goals (IOM, 2010; Schur & Sutton, 2017). Healthcare providers, therefore, have a considerable impact on the overall success or failure of these reform efforts; these efforts, in turn, have an impact on the organization's financial viability and ability to provide services and resources to the population (Schur & Sutton, 2017). Exceptional nurse leaders are needed in the increasingly complex

healthcare system, and leaders in healthcare require competencies in finance (Sherman et al., 2007). Nurse practitioners (NPs) should attain a sufficient healthcare financial literacy level in order to competently understand financial literacy in the ever-changing healthcare system if this growing population of providers plans to be effective and efficient leaders amongst healthcare professionals. In order to enhance NP leadership in this environment, the lacking healthcare financial literacy qualities, such as knowledge, ability, attitude, and behavior, must be identified in order to determine concise, applicable educational needs (Noh & Lim, 2015).

Background and Significance

Financial literacy is defined as attaining a combination of knowledge, ability, attitude, and behavior that is essential to make financial decisions (Potrich, Vieira, & Mendes-Da-Silva, 2016). As increased numbers of NPs progress into autonomous leadership positions, attaining healthcare financial literacy will become imperative in order to properly apply knowledge, ability, attitude, and behavior to healthcare financial discussions and decisions. Financials are the core of any organization, and financial indicators are a way to assess which direction the organization is going (Muller, 2013). The evolving healthcare system is changing how finances are received, and providers' influence on how patient care is managed has significant impact on the success or failure of financial health of the institution or organization (Muller, 2013; Schur & Sutton, 2017). Financial discussions and decisions are increasing in the practice setting as performance-based reimbursements and an increased focus on population health necessitate providers' active involvement (Manchikanti et al., 2017). Practicing providers must understand the how and why to improve care quality, eliminate inappropriate care measures, and contain costs within their environment in order to enhance sustainability in their organization. If these providers are not willing to take responsibility to provide high-quality, cost-effective, and

financially responsible care for their patients, the effect may have a negative impact on the ability of their organization to financially ensure their mission and improve population health (Muller, 2013; Schur & Sutton, 2017).

Despite the expanding need for financial literacy in the evolving healthcare system, a significant lack of healthcare financial literacy exists in various healthcare professional groups (McClenathan & Rickert, 2013). Historically, assorted groups of healthcare professionals have participated in studies to determine financial literacy. On a five-point questionnaire given to physical therapist students, only 24% of Millenials were able to answer at least four out of five answers correctly, whereas 48% of their Baby Boomer counterparts were able to answer the same four out of five questions correctly (Loria, 2017). Similarly, in a study of doctor of chiropractic students, low levels of financial literacy were also noted through less-than adequate levels of basic financial understanding, unrealistic future salary predictions, and underestimation of risk tolerance (Lorence, Lawrence, Salsbury, & Goertz, 2014).

The current healthcare system in the U. S. is enduring the most significant pay-for-performance initiative in history, as value-based care and cost containment replace the traditional fee-for-service reimbursement (Nuckols, 2017; Squitieri et al., 2017). The Centers for Medicare and Medicaid Services are progressing toward the pay-for-performance initiative, which involves paying for quality of services rather than the volume of services (Brooks, 2017). Value-based care is an important part of pay-for-performance, as health outcomes are now the focus of reimbursement rather than the sheer volume of services (Finison et al., 2017). Waste and partitioned financing in healthcare organizations has been a historic problem in the U. S., and measures to contain these factors, referred to as cost containment, have been initiated under the pay-for-performance initiative (McWilliams, 2016). Nurse leaders must take responsibility for

identifying areas of such waste and should be able to utilize necessary critical thinking skills, including financial literacy, to implement and monitor improvement plans under the pay-for-performance initiative (IOM, 2010). Examples of long-term cost containment measures in the pay-for-performance initiative in which NPs are directly responsible include screening for and providing cessation counseling for tobacco users, medication reconciliation for patients year 18+, and documenting advance care plans or surrogate decision makers for all patients years 65+ ("ACO Quality Measure Reporting," 2016). Performing these cost containment measures is imperative, but understanding the benefits and impacts of the performance seems increasingly vital as performance foundation. Thus, NPs should be aware that completing cost containment measures can influence revenue and are aimed to minimize long-term expenses in the healthcare system; the intended results are viability of the organization, job retention, maintaining capability to purchase equipment, and continued ability to serve patients and the community (Muller, 2013). Schur and Sutton (2017) state that the willingness of the providers to involve themselves in change initiatives is key to providing quality care and cost containment. Financial impact may be significant to healthcare organizations that fail to fulfill set performance incentives; consequently, personnel and resources for patients and the community may be reduced (Stanowski, Simpson, & White, 2015). In the current dynamic healthcare system, it is imperative to determine the healthcare financial literacy levels in NPs and whether this growing population of healthcare providers possess the understanding of where or how to acquire such healthcare financial education if needed (LaFevers, Ward-Smith, & Wright, 2015). All members of the healthcare team are experiencing a push to understand organizational goals, pay-for-performance rewards and penalties, budgetary allocations, and how their activities may overlap with others; the NP profession must keep pace or risk marginalization if basic healthcare

financial literacy concepts and goals are not understood (LaFevers et al., 2015; Nuckols, 2017; Walsh, 2016).

Nurse practitioners are in a progressively robust position to make strong, pertinent contributions in care as local leaders in the dynamic healthcare system (Swartwout, 2016). Current and future healthcare trends, such as the Triple Aim initiative, the Medicare Access and CHIP Reauthorization Act (MACRA), and the Merit-Based Incentive Payment Systems (MIPS), prompt the comprehensive acquisition of leadership competencies under leadership competency models ("Leadership Competencies," 2008; Manchikanti et al., 2017). The Triple Aim is a healthcare initiative designed to reduce health care costs, improve population health, and improve the care experience (Seow & Sibley, 2014). The MACRA replaced the sustainable growth rate act formula; MIPS is a quality improvement program that focuses on pay for performance and is an incentive that uniquely involves both rewards and penalties (Manichikanti et al., 2017; Nuckols, 2017). Strictly speaking, healthcare organizations require short- and long-term revenue; healthcare professionals in diverse roles must understand and apply the pay-for-performance models in order to achieve the necessary financial resources to accomplish the organizational mission, secure jobs, and serve the population (Muller, 2013).

The Medicare Accountable Care Organization (ACO) program is a health delivery initiative that contains groups of health care providers working collaboratively to implement high-quality, cost-effective, and financially accountable care for patients (Schur & Sutton, 2017). Due to the central roles that primary care providers play in managing care, all ACOs, whether part of a large organization or a network of provider practices, rely on providers to eliminate irrelevant care, improve care coordination, and contain costs (Schur & Sutton, 2017). Primary care providers have a significant impact on the success or failure of the aforementioned health

reform efforts (Schur & Sutton, 2017). Developing an effective strategy for organizational viability and success is important within the evolving healthcare system under the aforementioned programs, and understanding why and how to implement a coalition of high quality, medically appropriate, and cost effective care appears to be the key for this viability and success (Bosko & Koenig, 2016; Muller, 2013; "Provider Manual," 2016). Quality performance is an essential component in reimbursement and improving population health, and clinical leadership appears vital to enhancing quality performance and improve the efficiency and/or expenditure of public funds; knowledge of basic business management, as well as the ability to achieve and maintain healthcare financial literacy, are fundamental concepts in successful clinical practice and leadership (Kvas, Seljak, & Stare, 2013; LaFevers et al., 2015). Quality care along with sensible expenditure choices can result in healthier individuals and populations as well as organizational viability and success; therefore, disassociations between nursing and finance need to be terminated in order for NPs to properly understand and perform in the evolving healthcare system (Johnson & Gavin, 2017; Muller, 2013). Enhancing healthcare financial knowledge and attitude have beneficial effects on financial behavior, and these skills are seen as progressively vital to be a successful leader in the pay-for-performance evolution to the healthcare system (Bai, Gu, Chen, Xiao, Liu, & Tang, 2017; Potrich et al., 2016). Nurses from all levels, including students, direct care providers, and senior leaders, agree that finance is the next concept to conquer in order to successfully shape the dynamics of the future of healthcare (Muller, 2013).

Problem Statement

Traditional graduate-level healthcare education lacks adequate content in business concepts, including healthcare financial literacy (LaFevers et al., 2015). This inadequate literacy

in business practice concepts can create financial uncertainty and instability and have an overall impact on the ability to provide patient care (LaFevers et al., 2015). Nurse practitioners are encountering an increased need to obtain adequate healthcare financial literacy due to the growing demand for primary care providers, potential business plan development, a need for departmental budget understanding, and performance-based incentives (Elliot et al., 2016; Loria, 2017). Most NPs likely understand the importance of financial performance, but few understand the direct impact of their daily clinical decisions (McClenathan & Rickert, 2013). Nonetheless, there is scant data and limited research evidence to recommend how or where NPs should acquire this healthcare financial literacy (LaFevers et al., 2015).

Nurse practitioners, as direct healthcare providers, have a substantial effect on the success of various healthcare reform efforts that influence the organization's financial indicators (Muller, 2013; Schur & Sutton, 2017). Despite the ongoing focus in the field of healthcare to make financially informed decisions, there continues to be a serious deficiency in healthcare financial literacy amongst healthcare professionals; nurse leaders who are literate in finance appear to be the exception rather than the rule (Douglas, 2010; McClenathan & Rickert, 2013). Decisions are no longer based solely on the volume of services nor the patient's satisfaction of perceived quality care; rather, cost value analysis of quality care is continually assessed, which poses the question of whether NPs can be proficient nurse leaders in an evolving healthcare system that has an increased focus on healthcare financial literacy (McClenathan & Rickert, 2013). Nurse practitioners' leadership roles seem to warrant an enhanced need to attain healthcare financial literacy in order to be competent and successful in the evolving healthcare environment. Nurse practitioners should utilize their leadership position to make decisions and be engaged in health care reform efforts; their ability to directly manage patient care quality and cost containment

measures calls for NPs to assume responsibility in healthcare transformation (IOM, 2010; Schur & Sutton, 2017). Direct care providers who enhance their proficiency and familiarity with finance are more adequately able to influence decisions in future healthcare delivery as well as advocate for patients and the nursing profession (Muller, 2013).

Project Aims and Objectives

The aim of this scholarly project was to improve healthcare financial literacy in nurse practitioners by using a concise, applicable healthcare-focused online financial education intervention. The ideal overall outcome was for the participating NPs to use the knowledge acquired from the financial education intervention to positively influence their ability, attitude and behavior toward healthcare finance in order to benefit themselves and the organization through attaining necessary leadership competencies. The online education intervention was given in an attempt to improve basic understanding of healthcare financial terms and concepts, recognize how performance-based payment systems are affecting practice, enhance ease of collaboration with the finance and quality service departments based on healthcare financial content awareness, and increase the ability to improve population health while reducing long-term health care costs. As a means to achieving the study aims, volunteer NPs were given an online education intervention that described and discussed applicable financial literacy concepts. Participants were assessed both before and after the intervention for financial knowledge, ability, attitude, and behavior that specifically pertained to their organization. Knowledge of healthcare financial terms was assessed as well the participants' perceived importance of learning financial terms. Participants' attitude toward obtaining financial knowledge and their perceptions of organizational promotions or barriers to obtaining financial knowledge were evaluated. The participants were also assessed for their perception of how the pay-for-performance initiative

has, or will, affect their current and future roles as NPs. Specific needs were determined prior to the education intervention in order to determine gaps in knowledge that were flagged as relevant in their organizational environment.

The aims of the project were as follows:

1. After the intervention, participants will improve healthcare financial knowledge by demonstrating the ability to name and define one additional healthcare financial term that is relevant to the organization. This ability was measured by comparing the participants' pre- and post-education questionnaire.
2. After the intervention, participants improve healthcare financial knowledge by identifying and describing one additional quality improvement measure that has direct influence on performance-based payment systems. This ability was measured by comparing the participants' pre- and post-education questionnaire.
3. Participants will relate the quality measure influencing performance-based payment systems identified in question two to his/her practice by providing one applicable example.
4. After the intervention, participants will improve healthcare financial knowledge by listing one additional measure used to improve population health that can reduce overall health care costs. This aim was measured by comparing the participants' pre- and post-education questionnaire.
5. Participants will improve their scores on self-perceived ability, attitudes, and behavior measured on a 7-point Likert-type scale.

Clinical Question

The clinical question is: Does completing (T) a concise, applicable healthcare-focused education program (I) improve financial literacy (O) in Nurse Practitioners (P) compared to not receiving the financial education program (C) evaluated using a pre- and post-education self-report questionnaire evaluation tool?

Congruence of Organization's Strategic Plan

A Critical Access Hospital (CAH) in Midwestern Illinois has been a participant a high-performing Accountable Care Organization (ACO) since 2016. Medicare ACOs are made up of groups of providers that work collaboratively to provide high quality, cost-effective, and financially accountable care for the population they serve (Schur & Sutton, 2017). Due to being a smaller, rural health system, this agency's ACO is part of a network, or an accumulation of healthcare organizations that collaborate as a single ACO. Therefore, quality improvement and cost containment measures are submitted to the CMS as one inclusive ACO entity in order to determine reimbursement; this requires each individual community to strive toward improving care quality and decrease CMS costs ("ACO 101," 2017). The participating organization is one of six organizations involved in their ACO. Amidst the changes in the healthcare system, the agency's strategic plan involves evaluating continued participation in the ACO as well as determining Rural Health Clinic Status (RHC) versus Critical Access Hospital status. Attaining both ACO membership and RHC status are being considered in combination rather than an either/or scenario. Being part of an ACO assists in focusing process changes to improve quality outcomes and reduce costs while also improving patient satisfaction. Changing to RHC status requires NPs to be in the clinic 50% of the time that the clinic is open. Achieving RHC status has heightened financial reimbursement incentives for the organization. Thus, NP involvement

appears to be an important element in the potential change to RHC status, and NPs should take ownership to understanding the how and why healthcare reform efforts are being conducted and actively strive to provide high-quality care that is also cost-effective and financially accountable (Schur & Sutton, 2017). Attaining the financial literacy concepts may increase the ability to understand, apply, and successfully sustain healthcare reform efforts.

Various process changes have been endured at this CAH in response to the pay-for-performance evolution in healthcare. The Merit Based Incentive Payment System (MIPS) involves the Centers for Medicare & Medicaid Services (CMS) appointing performance scores based on quality of care, the use of electronic health record (EHR) systems, the cost of care, and overall participation in practice-oriented improvement endeavors (Nuckols, 2017). According to the organization's ACO committee, a challenge to adhering to the MIPS was altering the way results were entered in the EHR; various results had historically been entered in diverse locations, creating a barrier to comprehensive data submission, which could potentially lead to financial penalties. A thorough Health Maintenance Record was devised as a central location for all applicable results to be recovered and submitted with greater ease; this also made the recognition of missing/needed data (testing, screening, etc.) more apparent, which in turn increased the clinicians' ability to detect necessary preventive care measures necessary to increase quality of care. This ability to recognize needed quality measures, inappropriate care delivery, and cost containment opportunities aligns with the pay-for-performance initiatives. The providers must, however, show willingness and accountability to changing their care processes in order to improve performance, avoid inappropriate care delivery, and contain costs ("Measuring Healthcare, 2018). Accordingly, providers proficient and familiar with finance are more suitable to influence future healthcare delivery decisions (Muller, 2013). Thus, NPs that

achieve financial literacy may be more inclined to adapt in the dynamic healthcare system and develop appropriate changes by using rational financial concepts rather than simply maintaining past decision-making processes.

Two additional clinical staff members were reportedly hired with a sole focus on enhancing annual well visits (AWVs); AWVs are pertinent for population health and are a substantial preventive measure and quality of care component under MIPS. Populating health maintenance records and detecting missing data, improving medication reconciliation, enhancing patient satisfaction, improving access to primary care, and managing chronic conditions are just a portion of measures that are progressing under the pay-for-performance methodology, which has resulted in organizational improvement of population health and financial reimbursements based on recent data. Stanowski et al. (2015) advise perceiving pay-for-performance programs as an investment in quality improvement rather than solely the collection of incentive payments, which appears to link quality care to healthcare financials.

Care coordination has been linked to improving outcomes and lowering Medicare costs (McWilliams, 2016). Care coordination aims to assist the patient in navigating the complicated healthcare system as a means to decrease their cost of care by keeping them as healthy as possible through AWVs, closing gaps in care delivery and transitions of care, assisting with end-of-life planning, and focusing on overall wellness promotion ("Clinician's Role," 2017). Patients with five or more chronic conditions comprise 79% of Medicare costs ("Clinician's Role," 2017). In alignment, the participating organization assigned an NP as the lead ACO Care Coordinator in 2016; her role entails understanding and applying quality, outcome, and high-priority measures in the management of chronic conditions to enhance quality of care and decrease healthcare costs. Care coordinators, as direct managers of patient care, can better

influence delivery decisions by acquiring an increased proficiency and familiarity of finance (Muller, 2013).

Quality is considered a core value at the participating organization and is reportedly achieved through, "Insuring the highest standards of excellence and professionalism" ("Core Values," 2018). As a mission, the organization is committed to its values in caring for needs of patients, families, the community, and one another; holistic care is provided with dignity and compassion ("Mission," 2018). Achieving the highest standards in the healthcare system implicates the procurement of leaders who can succeed in the increasingly complex healthcare environment; healthcare financial literacy is an essentiality to success in an increasingly complex environment (Potrich et al., 2016).

This project aims to improve financial literacy in volunteer NPs within the organization. Financial indicators and strategic plans vary by organization; therefore only NPs from the participating organization will be included in the intervention (Muller, 2013). Quality improvement with a quasi-experimental pilot design will be applied to determine the outcome of implementing a healthcare financial literacy education program intervention. Quality improvement projects are interactive and adaptive, and the project goal is to implement an intervention as an attempt to address the noted financial literacy gap in the system ("BSN-DNP Projects," 2016). Quality improvement measures are necessary in projects that pinpoint improvement and innovation (Harris, Roussel, Dearman, & Thomas, 2016). Outcome measures will include the ability to identify, define and apply pay-for-performance concepts, as well as self-perceived knowledge, ability, attitude, and behavior of healthcare finance. The agency's strategic plan, mission, and values to holistically care for individuals and the community, establish the quality of professionalism and excellence. Efforts to maximize reimbursement are

directly correlated to NPs and their role in the organization. Nurse practitioners' health care decisions can directly influence patient quality outcomes and associated costs; therefore increasing financial literacy could positively influence these decisions.

Review of Literature

Methods of Research

A search for evidence was conducted through Web database searches of Cumulative Index to Nursing and Allied Health Literature, Google Scholar, Ovid, Public Medical Literature Analysis and Retrieval System Online, and ABI/INFORM Global. Keywords included: finance, financial, financial literacy, financial understanding, financial education, financial competency, nurse practitioners, nurse leaders, nursing-finance gap, Triple Aim, pay-for-performance, performance-based reimbursement, MIPS, and MACRA. Keywords were used in various combinations and sequences to enhance the search for relevant references. Limitations were given to articles from 2012 to 2018 with exceptions given to articles with an informative structure that continue to hold relevance in the current health care system. In order to decrease the sheer number of articles that discussed financial literacy across disciplines, articles specific to occupations outside of healthcare were omitted. Relevant articles that involved general financial discussion were included if applicable to the study question. Titles were briefed for pertinence and exclusions were made based on the aforementioned criteria as well as duplication. Abstracts were read to determine further pertinence and application to the study question. A total of 53 articles were read in full and 30 articles were analyzed based on relevance to the study question and diversity of material. Relevant content from organizational Web resources have also been utilized and cited appropriately as references.

Gaps in Knowledge and Support for the Project

Change in the field of healthcare is occurring at a remarkable rate, and health care expenditures are a continuous concern (Kvas et al., 2013; McLenathan & Rickert, 2013). Initiatives, such as the Triple Aim and the Merit-Based Incentive Payment System, are demanding changes in how healthcare professionals deliver care; healthcare decisions are increasingly being analyzed for their economic impact (McClenathan & Rickert, 2013). Healthcare professionals, however, continue to be deficient in basic healthcare financial literacy (McClenathan & Rickert, 2013). While some organizations are pushing to invest more in financial education for nurses, reports continue that inadequate financial training is implemented prior to nurses entering their leadership roles (Bai et al., 2017; Douglas, 2010).

Financial literacy has been perceived as a necessity for individuals to succeed in increasingly complex environments, such as the evolving healthcare system (Potrich et al., 2016). Organizations are recognizing the importance of healthcare financial literacy in healthcare professionals and are encouraging and/or implementing classes to enhance interdisciplinary financial literacy. Strickler, Bohling, Kneis, O'Conner, & Yee (2016) introduced a four-tiered performance-based clinical ladder used at the University of North Carolina Medical Center (UNCMC), in which nurses are promoted and undergo courses to become nurse leaders. A course in nursing finance was implemented with a purpose to improve understanding of the financial terms used within the healthcare organization as well as the calculations used to determine key statistics (Strickler et al., 2016). The leadership courses generated positive feedback and indicated that the emerging leaders were more comfortable in and dedicated to their leadership roles; the courses were also found to increase staff satisfaction, retention, and commitment to the hospital (Strickler et al., 2016). Similarly, Children's National

Medical Center in Washington, DC, devised a plan to build a strong workforce of registered nurse (RN) leaders by implementing business management and budget boot camp programs (Talley, Thorgrimson, & Robinson, 2013). The increased importance placed on patient safety, quality of outcome initiative, and financial literacy led to enhanced organizational success and individual growth at Children's National (Talley et al., 2013). McClenathan & Rickert (2013) also describe the necessity of building financial literacy in staff at all levels with the intention to enhance financially informed decision making and recognize ways to improve budget funds, improve quality of care, increase productivity, and reduce costs.

It is presumably common, and potentially warranted historically, for various healthcare professionals to consider financial literacy a specialty for the financial operations staff. However, current reforms in healthcare are creating an enhanced need for all perceived leaders or even aspiring leaders in healthcare to be financially literate (McClenathan & Rickert, 2013; Talley et al., 2013). The Triple Aim initiative was designed to measure health system performance by promoting three goals: reduce health care costs; improve population health; and improve the care experience (Seow & Sibley, 2014). Quality indicators in healthcare are increasingly connected to the health system cost (Seow & Sibley, 2014). Healthcare professionals may understand the importance of improving financial performance and reducing healthcare costs but may not understand the key concepts involved nor his/her involvement (McClenathan & Rickert, 2013). For example, there is a growing concept of the healthcare system migrating away from the historical fee-for-service reimbursement process and moving toward a pay-for-performance system, fixed and bundled payments; there also appears to be a dwindling concept of direct primary care clinics ("Direct Primary Care," 2017; McClenathan & Rickert, 2013). Clinical leaders in healthcare may recognize that these types of news releases

have a direct effect on the entire healthcare society as well as individual professionals, but the financial concepts being discussed in the articles likely appear less meaningful than the quality care concepts; however, these concepts must be considered interconnected in the current evolving healthcare system. Pay-for-performance initiatives, such as MIPS, assigns performance scores based on various criteria including quality of patient care, the use of EHRs, cost of care, and practice-based improvement endeavors (Nuckols, 2017). Performance scores are then used to provide financial rewards and/or penalties to the organization, which can affect all potential stakeholders (Nuckols, 2017). Bundled payments make the hospitals responsible for total quality and cost of care from the time the patient is admitted until 90 days after discharge from the hospital. Quality scores become progressively important, as patients may not be willing to pay a proposed bundle payment to a provider with high complication rates when an alternative provider offers a similar bundle payment system but subsumes lower complication rates (Cryts, 2016). Therefore, the patient care experience as well as health improvement have a direct effect on the concept of bundled payments. In other words, the quality directly affects the proposed overall service cost and potential reimbursement rate. The concept of direct primary care clinics, which are practices that do not accept insurance but rather allow patients to consult with their provider as often as needed for around $100 per month, is deteriorating. A cost-containment problem with direct primary care clinics is that the patients still have a regular insurance plan for hospital services and specialists, and the plan likely has a high deductible. Consequently, patients are getting stuck paying more out of pocket expenses when other services must be utilized under the direct primary plan ("Direct Primary Care," 2017). A lack of data regarding the quality of care within direct primary care clinics is also a concern, and United HealthCare intends to discontinue membership in the direct primary care clinics by the end of the year

("Direct Primary Care," 2017). Cost and quality again appear to be the two measures of healthcare performance being analyzed.

Traditional fee-for-service reimbursement has seemingly encouraged each patient's health conditions to be managed separately, which has led to delays in care access, redundant treatment methods, and increased cost (Chen et al., 2018). Consequently, fee-for-service care can be linked to less quality, dissatisfied patients, and a decrease in cost effectiveness (Chen et al., 2018). Pay-for-performance initiatives, such as value-based care, are focused on population health promotion as well as the interaction, rather than the segregation, of health conditions (Chen et al., 2018). While the purpose of healthcare reform may appear to be based solely on benefiting the patient through increased quality of care, associated financial motives must also be recognized for significance in any presented alteration and/or developments to the healthcare system.

Previous quality measures were inconsistent across organizations; MIPS consolidated existing federal quality aims to create one program with an overall focus on the cost of quality care and improved health (Manchikanti et al., 2017; van den Heuvel, Niemeijer, & Does, 2013). Understanding financial implications as a leader in healthcare is imperative; an estimated $200 billion is predicted to be wasted annually on excessive testing and treatment ("Unnecessary Medical Tests," 2017). Providers order the same grouping of tests out of habit rather than based on evidence, venipunctures are repeated due to the provider's inability or lack of perceived responsibility to access earlier results, and providers may be practicing defensive medicine out of concern for malpractice litigation ("Unnecessary Medical Tests," 2017). The summation of these concepts depicts the need for nurse leaders to be literate in healthcare financials including

enhanced knowledge and attitude toward finance. The Triple Aim, MIPS, and similar initiatives being implemented apply this cost-for-quality-and-health objective.

Improving population health outcomes, as part of the Triple Aim and MIPS initiatives, is a vital element of cost containment in the U. S., and NPs are an essential component to these initiatives (Nuckols, 2017; Swartwout, 2016). Various levels of government are recognizing the necessity and usefulness of NP leaders in the healthcare system, which is evident as full-practice laws continue to take effect across the U. S. ("Nurse Practitioner State Practice," 2018). Nurse practitioners, as well as other advanced practice registered nurses, are endorsed to be permitted to practice to the full extent of training and education (IOM, 2010). However, the question remains whether NPs can be competent leaders in the dynamic healthcare system that involves an increasing focus on finance. Efforts should be taken to develop and promote nursing leaders that possess all of the necessary skills to advance their profession and improve the healthcare system (IOM, 2010). Ownership of reform efforts are necessary to develop such leaders, and financial literacy will improve NPs ability to regulate future delivery decisions in the healthcare system (IOM, 2010; Muller, 2013).

An important concept for healthcare leaders is the key financial drivers that affect results and how those results affect their practice and performance capabilities (McClenathan & Rickert, 2013). Proficiency in both analyzing and implementing healthcare financial information can improve financial performance at all levels of practice (Noh & Lim, 2015). Noh and Lim (2015) surmised that financial elements and issues have yet to be adequately approached in either undergraduate or graduate nursing curriculums, and understanding the definition of finance as well as key concepts for healthcare financials can reduce the gap between nursing and finance. Through nominal group technique, Noh and Lim (2015) identified major financial education

needs of nurses including: basics in accounting in the hospital, financial statements, and basics in financial management. Further explanation was included in the findings but the ultimate conclusion was that nurses clearly have a wide range of needs in healthcare finance.

Barriers

Multiple barriers exist to attaining adequate healthcare financial literacy in healthcare professionals; these barriers may be responsible for the significant gap between nursing and finance, which appears to have global application. Bai et al. (2017) performed a qualitative study on 18 nurse leaders from the top three hospitals in Changsha, China, to determine challenges in financial management. The main challenges included lack of motivation, insufficient training and education on financial management and nursing economics, lack of desire for cross-unit communication and cooperation, and insufficient reference tools. Douglas (2010) listed the following as potential causes for the gap between nursing and finance: the evolution of the nurse leader role to mandate greater business and financial skills, lack of nursing's ownership of financial performance, the nursing orientation and education process, nurses' conflicted feelings between role of caregiver and business and money analysis, and lack of understanding toward finance language and roles. According to Lim & Noh (2015), a key consideration for the financial gap between nursing and finance is that financial education for clinical nurses has not been thoroughly developed.

The antecedents to financial literacy appear to be education and application; appropriate education to build financial literacy can lead to the acquisition of the knowledge necessary to understand monetary funds, the skills to manage the funds, and the confidence to make accurate healthcare financial decisions or recognize the need for more professional assistance. Financial education has many benefits for clinical leaders, including gained financial knowledge, enhanced

confidence in financial knowledge and ability, and impetus to take action (Xiao & Porto, 2017). A healthcare-focused financial education program should be tailored to the needs of healthcare professionals in order to enhance applicability and overall understanding of clinicians. Financial education designed to strengthen competency factors is essential in order to construct leaders in healthcare that can utilize healthcare financial concepts to make sound assessments of the financial strength of both their decisions and overall organizational environment while adhering to the cost-for-quality-and-health purpose in the dynamic healthcare system (Stichler, 2008; Xiao & Porto, 2017). Thus, implementing an educational program is vital to amend the noted gaps in financial literacy.

Collins (2012) implemented a randomized control trial of low-income families to determine the effects of financial education on knowledge and behavior. Education was offered in a classroom setting for a total of 12-hours over two months through a five-course study of relevant basic personal finance concepts. A control group was prohibited from attending classes for 12-months while the study group completed a self-reported survey at baseline and 12-months later. Collins (2012) found that self-reported behaviors increased in the treatment group, especially in reference to financial planning. An exception to the reported improvements was the ability to save; however, consideration must be given to the low-income status of the participants and their ability to contribute to savings. While this study does not involve the health care system, the financial education effects on financial knowledge and behavior are significant to the study question of utilizing a financial education program to improve financial literacy in NPs.

Twenty-three states to-date have implemented full practice laws for NPs under the licensure authority of the state board of nursing ("Nurse Practitioner State Practice," 2018). Full practice and licensure laws allow NPs to evaluate, diagnose, order/interpret tests, and initiate and

manage treatments including prescribing medications ("Nurse Practitioner State Practice," 2018). Allowing NPs to practice within their full scope of practice without entering into a written collaborative agreement with a physician is the recommended practice by both the Institute of Medicine as well as the National Council of State Boards of Nursing ("Nurse Practitioner State Practice," 2018). On September 20, 2017, Illinois governor, Bruce Rauner, signed House Bill 313, to amend the Nurse Practice Act and allow NPs to practice without a written physician-collaborative agreement following the completion of educational and training prerequisites (Korte, 2017). As flourishing current and future clinical leaders, NPs must attain all necessary competencies, including healthcare financial literacy, to thrive in the dynamic healthcare system.

Theoretical Framework

The leadership competency model depicts necessary competencies for leading self, leading others, leading an organization, and leading globally ("Leadership Competencies," 2008). The leadership competency model was developed in 2007 with the purpose of identifying necessary competency behaviors for the next generation of nurse leaders (Sherman, Bishop, Eggenberger, & Karden, 2007). Lucia and Lepsinger (1999) established the framework that guided the competency model; competency was defined as the assemblage of knowledge, skills, and attitudes that can be related to job performance and improved upon through training and developmental efforts. Competencies, therefore, are not simply a skill, but rather the connection of knowledge to performance ability that can potentially be improved upon. Accordingly, Sherman et al. (2007) grouped knowledge, skills, attitude, and behaviors into competency categories, which created the building blocks for their Leadership Competency Model. Personal mastery, interpersonal effectiveness, human resource management, financial management, caring, and systems thinking were the six competency categories that emerged from research

(Sherman et al., 2007). The majority of participants indicated that financial management was their weakest competency area. Systems thinking is also an important consideration in the current healthcare system as reimbursement has become directly linked to quality measures; the healthcare system and healthcare organization are interrelated, and changes to the system and organization will impact every sector (Sherman et al., 2007). Corresponding to the competency criteria by Lucia and Lepsinger (1999), improvement methods could be applied to enhance these financial-related competencies in nurse leaders. An online education intervention would be an appropriate improvement method because it can offer a convenient approach to learning while also being tailored specifically to the financial literacy needs within a particular organization.

The National Center for Healthcare Leadership developed the Health Leadership Competency Model (HLCM) to evaluate leadership skills across disciplines, including health management, medical, and nursing (Calhoun et al., 2008). Behavioral and technical competencies were noted across these disciplines that distinguished outstanding leadership performance from typical performance. The three domains depicted in the HLCM are transformation, execution, and people. Despite emphasis placed on any particular domain at any given time, all domains were considered important during performance assessment. Transformation competencies include achievement orientation, analytical thinking, community orientation, financial skills, information seeking, innovative thinking, and strategic orientation. Execution competencies include accountability, change leadership, collaboration, communication, impact and influence, information technology management, initiative, organizational awareness, performance measurement, process management and organizational design, and project management. The people competencies involve human resources management, interpersonal understanding, professionalism, relationship building, self-

confidence, talent development, and team leadership. Each competency is described further by Calhoun et al. (2008), and the importance of financial literacy in a leadership position appears to be directly expressed in the following competencies; financial skills, communication, performance measurement, and project management competencies. Other competencies, such as analytical thinking, change leadership, impact and influence, organizational awareness, and human resources management, appear to imply the importance of financial literacy through the skills and knowledge necessary to achieve each particular competency. Therefore, improving financial literacy with concise, applicable healthcare-focused financial education can potentially enhance multiple leadership competencies within the HLCM.

Both the Leadership Competency Model and the HLCM coincide with Doctor of Nursing Practice (DNP) Essential I by optimizing potential NP function through acquiring and/or improving a new competency in healthcare financial literacy ("The Essentials of Doctoral Education," 2006). The evolving healthcare environment today challenges the knowledge and skills of even the best nurse leaders (Sherman et al., 2007). Obtaining healthcare financial literacy will conceivably enhance NPs' ability to describe actions needed for quality, outcome, and high-priority measures under the MIPS system as well as improve NPs' ability to describe the progressive strategies utilized to achieve high performance scores. These acquired/improved leadership competencies can ultimately improve NPs' ability to apply healthcare financial knowledge, ability, attitude, and behavior in the evolving health care delivery phenomena under payment-for-performance incentives program as well as toward organizational systems thinking and communication ("The Essentials of Doctoral Education," 2006).

Chapter II

Needs Assessment

Healthcare financial literacy needs in nurse leaders has motivated an innovative education intervention. This intervention was proposed to improve participating NPs' application of acquired knowledge to positively influence their ability, attitude, and behavior toward healthcare finance. Attaining necessary leadership competencies can potentially benefit both the participants and the organization. The concept of connecting population health with reimbursement seems to be the new phenomena in the healthcare system that is requiring an enhanced level of financial understanding from various levels of the healthcare staff. The ACO committee at the participating organization is attempting to instill these newer concepts in all employees, particularly clinical providers. According to the Leadership Competency Model and the Health Leadership Competency Model, outstanding leadership skills in nurse leaders must include financial competencies (Calhoun et al., 2008; Sherman et al., 2007). Healthcare financial literacy involves attaining a combination of knowledge, ability, attitude, and behavior that is essential to make financial decisions (Potrich et al., 2016). Understanding and applying performance-based material will be a significant factor to linking population health with financial reimbursement, and improving upon this need will presumptively enhance applicability to clinical staff and improve basic healthcare financial literacy. Leadership competencies that specify financial literacy needs were assessed in participants with the intention to link the leadership competency models with the distinct needs deficient in the participating nurse leaders. In this project, additional needs for healthcare financial literacy in the NP participants were determined by utilizing a pre- and post-education intervention questionnaire. The pre-education intervention questionnaire was a new tool developed by the project team to assess previously

researched financial literacy needs as well as organization-specific financial literacy needs. The post-education intervention questionnaire was also a new tool to analyze the effectiveness and perceived usefulness of the education intervention. The education intervention took about 30 minutes to complete.

Project Design

This project design involved a quality improvement quasi-experimental pilot design that involved implementing a healthcare financial literacy education intervention. The pre- and post-education intervention tool was used to determine the impact that the intervention had on participants' strength in identifying, defining, and applying pay-for-performance concepts. Self-perception of ability, attitude, and behavior of healthcare finance was also evaluated pre- and post-education intervention. The quasi-experimental design is a practical approach in the clinical sector to determine change in qualitative and quantitative measures following the implementation of an education intervention because it permits each participant to be their own control (Moran et al., 2017).

Quality is defined as the way work is accomplished, and is specifically aligned with an organization's approach to service delivery of high quality, medically appropriate, and cost-effective health care (Harris et al., 2016; "Provider Manual," 2016). Quality improvement projects are interactive and adaptive; the ultimate objective is to implement knowledge in an attempt to address gaps in a process or system ("BSN-DNP Projects," 2016). Quality improvement measures are essential for projects that focus on improvement and innovation, and improving healthcare financial literacy in NPs is a project that involves quality improvement measures within the participating organization (Harris et al., 2016).

The Vice President of Quality and Community Services at the participating organization was consistently utilized as an intricate resource to provide information as well as network with potential participants. The Vice President of Quality and Community Services was sent an email with a direct link to the project leader to every NP employed by the participating organization. The link provided a route for participants to voluntarily reach out to the project leader requesting to participate, since participation was entirely voluntary. The pre- and post-education intervention questionnaire components were implemented via contact with the project leader. Participation was confidential, questionnaires were numerically coded, all identifying elements were removed from documents, and the key to link the numeric coding with participants' identifiable information is to be kept in a password-protected computer within the project leader's home for five years then destroyed.

The pre-education intervention questionnaires were distributed by the project leader to each of the voluntary participants during DNP practice seminar III. Participants were given a maximum of one week total to complete the quantitative and qualitative questionnaires. Once pre-education intervention questionnaires were collected, the healthcare-focused education intervention was designed to reflect the project aims of improving healthcare financial in nurse practitioners. An attempt was made to include identified trends from the qualitative questionnaires into the educational intervention in order to maximize applicability and to respond to expressed needs of participants.

The education intervention was designed to be concise and applicable and was estimated to take participants about 30 minutes to complete. YouTube, a publicly accessible online source, was utilized due to its broad accessibility for both the project team and the participants. A publicly accessible online source is also an appropriate means to minimize project costs. The

education intervention was devised by the project leader with informational assistance from the project mentor and the participating organization's Vice President of Quality and Community Services. The intervention included a visual presentation with recorded audio by the project leader. The focused goal of this intervention was to improve healthcare-focused financial knowledge specific to the project aims and potential qualitative data trends with a desired outcome to improve quantitative scores of perceived healthcare financial ability, behavior, and attitude.

The participants were notified by the project leader when the education intervention was available. At that time, the post-education intervention qualitative and quantitative questionnaires were delivered via each participant's preferred route of delivery. Each participant was given about one week to complete both the education intervention and the post-intervention questionnaires. Grouping completion of the intervention and the post-education intervention questionnaires into the same time period minimized the potential for various participants' time gaps between intervention and post-assessment. Minimizing variations in time gaps increased post-assessment reliability.

Setting and Population

Data were collected from clinical locations associated with the participating Critical Access Hospital in Midwestern Illinois. The study population included any full time or part time voluntarily engaged NPs employed by the organization. The participating Critical Access Hospital includes various clinical locations; thus, the specific clinical locations that comprised the project setting were based on the NPs that volunteered for the project. The accessible population included ten NPs employed by the participating organization. Due to the small

sample size, the demographic variables of volunteer participants were omitted to strengthen confidentiality.

Tools/Instruments

New pre- and post-education intervention questionnaires were utilized to determine the participating NPs' healthcare financial literacy needs and to evaluate actual and perceived improvement in healthcare financial literacy concepts. The project leader sought to evaluate healthcare financial literacy concepts of knowledge, ability, attitude, and behavior with the aim of achieving project objectives aligned with the organization's goals.

In addition to asking questions pertaining directly to the project objectives, the pre-education intervention questionnaire were designed to allow for participants to determine gaps in knowledge that were flagged as relevant within their organizational environment. The post-education intervention questionnaire included participants' perceptions of the pertinence of the healthcare financial literacy education program. As a quality improvement project, the questionnaires must be interactive and adaptable to address the gaps found in the participants' responses ("BSN-DNP Projects," 2016). To increase questionnaire reliability and to maintain consistency in implementation, the project leader was the sole person to distribute and collect the questionnaires (Moran, Burson, & Conrad, 2017). The same questionnaire instructions were included in all questionnaire envelopes, and the same scale was utilized for all questionnaires. See Appendix A for pre-education qualitative and quantitative intervention questionnaires. See Appendix B for post-education intervention qualitative and quantitative questionnaire.

Project Plan

The Vice President of Quality and Community Services, who is a member of the organization's accountable care organization (ACO) committee, assisted the project leader to

network with all potential practicing NPs employed by the organization in order to solicit volunteer participants. The email contained a direct link to the project leader in order to provide a route for NPs to voluntarily request project participation. The pre- and post-education intervention questionnaire components were implemented via contact with the project leader. Numeric assignment was applied to each questionnaire, and names were purposefully omitted to protect participants' identities. The project leader was the sole person to have access to the key connecting an individual's identity with their number; the key was secured on a password-protected computer in the project leader's home and is intended to be kept for five years and then destroyed. Participants were given approximately one-week to complete pre-education intervention questionnaires in order to provide consistency of data collection and adhere to a necessary timeline.

A concise, applicable healthcare financial literacy education program was devised by the project leader with informational assistance from the primary mentor and the participating organization's Vice President of Quality and Community Services (See Appendix D). An attempt was made to include identified trends from the qualitative questionnaires into the educational intervention in order to maximize applicability. A publicly accessible online source (youtube.com) was utilized to implement the healthcare financial education intervention. The participants were notified by the project leader when the education intervention was available, and the post-education intervention questionnaires (See Appendix B) were delivered. Each participant was given about one week to complete both the education intervention and the post-intervention questionnaires. Grouping completion of the intervention and the post-education intervention questionnaires into the same timeframe minimized the possibility of various time gaps created by the participants between intervention and post-assessment. The post-education

questionnaire was similar to the pre-education questionnaire with applicable alterations to post-education intervention perceptions of effectiveness, learning materials, and potential improvement recommendations. Participants who completed the 3-step project process received a $10 Starbucks gift card in appreciation for their participation as well as study outcome results.

In addition to the specific, measurable, achievable, relevant, and time-specific project aims, qualitative data in the form of short answers to questions were collected in written narrative form. Qualitative data were used to determine perceived desires, collaborative efforts, and barriers were related to financial literacy concepts. Qualitative data were also be obtained to determine NPs' perceptions of financial literacy usefulness and applicability to their current and future roles in their organization and the healthcare system. The goal of collecting qualitative data was to identify patterns and seek further understanding about the financial literacy phenomenon in clinical NPs (Moran et al., 2017).

Cost containment measures were considered. Members of the project team will be voluntarily assisted with the production and/or implementation of the project. Participants were also participating on a voluntary basis and were given reassurance of confidentiality that answers/results were not identifiable to anyone besides the project leader; the overall results were to be shared with the participating organization's ACO committee members without disclosure of participants' identifying factors. Questionnaires were delivered and gathered by the project leader. The mode for healthcare financial literacy education was through a publicly accessible online source, and the post-education questionnaire was delivered via contact with the project leader.

This project plan coincides with recommendations by Harris et al. (2016), who recommend the three-step plan aimed toward patient safety and quality improvement.

Recognizing the opportunity for improvement is the first step followed by determining pertinent measures. The third step involves measuring and re-measuring to determine outcomes from the improvement efforts.

Continued utilization of the ACO committee throughout the project duration was essential to the sustainability of healthcare financial literacy in NPs within their organization. The sustainability of a quality improvement design is highly dependent on organizational culture and change leadership (Harris et al., 2016). Culture and change leadership in the NP community may be challenging based on the historic barriers for NPs to attain healthcare financial literacy, such as lack of motivation and lack of nursing's ownership of financial performance (Bai et al., 2017; Douglas, 2010). This challenge should be met with an applicable sustainability plan. The post-education questionnaire was designed to encourage feedback and improvement alterations for the education intervention to support sustainability efforts.

Data Analysis

Quantitative data was obtained on a 7-point Likert-type scale depicting participants' pre- and post-education intervention knowledge of healthcare financial literacy within their shared organization. This scale was utilized in order to enable participants to express perceptions of their healthcare financial attitude, ability, and behavior quantitatively on a rating scale. The ANOVA two factor without replication was used for statistical analysis in order to compare the pre-intervention scores to the post-intervention scores.

Qualitative data from the pre- and post-education intervention questionnaires were obtained from each participant as a means to identify patterns and explore further understanding of the financial literacy phenomenon in clinical NPs. Qualitative data can also be utilized for potential further improvement measures. Drawing inferences from the quantitative data was

difficult due to limitations. Inferences were drawn from the qualitative component of data collection based on identified trends amongst NPs and/or within the organization.

Institutional Review Board and Ethical Issues

The need for Institutional Review Board (IRB) approval was determined by the Committee on the Use of Human Subjects in Research (CUHSR) at Bradley University. The application was completed and submitted to the CUHSR upon receiving approval to proceed from the project proposal defense committee. The proposed study (CUHSR 16-18) was found to be exempt by Category 2 and notification was sent to the project team on May 24, 2018. This research study, Improving healthcare financial literacy in nurse practitioners with concise, applicable healthcare-focused financial education, likely received exemption by Category 2 based on strict confidentiality during project implementation with no personal identifiers linked to subjects in results (DHHS, 2009). Confidentiality was considered high priority throughout the project implementation process. The Vice President of Quality and Community Services was initially sent an email with a direct link to the project leader to every NP employed by the participating organization. The link simply provided a route for participants to voluntarily reach out to the project leader volunteering participation in the project. The pre- and post-education intervention questionnaire components were implemented via personal contact. Numerical coding was given to questionnaires in place of identifiable data and were utilized solely by the project leader to compare pre- and -post-intervention results. All identifiable information was kept on a password-protected computer within the project leader's home and will remain in this location for five years then will be destroyed. Participants' responses were combined to depict comprehensive results and were summarized in a report to further ensure confidentiality.

Within the participating organization, the need for IRB approval was handled by the organization's Vice President of Quality and Community Services. A minimal risk of project participation included concern for job security based on questionnaire responses; however, confidentiality was reassured as a high priority in order to eliminate this risk. Participants were obtained based on a voluntary basis. Each participant was reassured that refusal to participate or withdrawal from the project at any time would not result in any negative consequences. Those who completed the 3-step project process personally received the study outcome results as well as a $10 Starbucks gift card in appreciation for their participation. Numeric assignment was given to each questionnaire, and names were purposefully omitted to protect participants' identity. The project leader was the sole person to have access to the identification key connecting an individual's identity with their number; the key was necessary to link pre- and post-education intervention questionnaire results to determine improvement outcomes. The identification key is secured within the project leader's home and is intended to be retained for five years then destroyed. Questionnaires were delivered and gathered by the project leader to avoid any organizational influence on potentially sensitive questions. Written informed consent, along with an information and instruction form, were provided to each participant (see Appendix C). Written informed consent was obtained from each participant either prior to or during distribution of the pre-intervention questionnaires. Consent forms will also be kept on a password-protected computer within the project leader's home for five years then destroyed. After dissemination of the healthcare financial literacy education intervention, the post-education questionnaires were delivered and gathered by the project leader.

Chapter III

Organizational Assessment

The participating organization has been in an Accountable Care Organization (ACO) since 2016, and ACOs advocate for providers that work collaboratively to provide high quality, cost-effective, and financially accountable care for the population they serve (Schur & Sutton, 2017). Non-clinical organizational leaders, including the Vice President of Quality and Community Services, Vice President of Clinical Operations, Vice President of Finance, and the CEO, have expressed the importance of improving financial literacy, particularly in clinical staff members, as a means to adhere to the pay-for-performance initiatives to improve quality care and contain costs. The medical director has also been a pertinent change facilitator in encouraging staff to understand and comply with pay-for-performance initiatives. Functional and practice changes within the organization that initiated annual wellness visits and chronic care coordination present organizational readiness to change in the dynamic healthcare system. Nurse practitioners' health care decisions can directly influence patient quality outcomes and associated costs; therefore increasing financial literacy could positively influence these decisions. The agency's strategic plan, mission, and values to holistically care for individuals and the community, establish the quality of professionalism and excellence, and maximize reimbursement efforts can be directly correlated to NPs and their role in the organization. The scholarly project to improve healthcare financial literacy in nurse practitioners with concise, applicable healthcare-focused financial education correlates with the organization's change initiatives thus far and aims to improve financial knowledge, attitude, ability, and behavior that can be directly associated to clinical NP's practice within the organization.

The aforementioned leaders within the organization all appear to be facilitators of change. Interprofessional collaboration with these leaders continued throughout the project implementation process in order to ensure organizational application. Interprofessional collaboration occurred amongst the project team, as the gap between nursing and finance may inevitably begin to close and future implications for financial literacy in NPs is established.

Potential barriers to project implementation may arise from NPs within the organization. These potential barriers will presumably evolve from the historical gap between nursing and finance. Barriers may include a lack of nursing's ownership of financial performance, nurses' conflicted feelings between role of caregiver and business and money analysis, and lack of understanding toward finance language and tools (Douglas, 2010). Despite this historic gap between nursing and finance, the project will aim to instill ownership of financial literacy because evidence has shown a progressing correlation between financial literacy and direct care providers' performance abilities. The organization is interconnected when approached with system change (Sherman et al., 2007). Providers' willingness to be involved and engaged in the change process is a key element to successful ACO care transformation for patients, and direct care providers who improve their competency and familiarity with finance are better able to affect future healthcare delivery decisions (Muller, 2013; Schur & Sutton, 2017).

Cost Factors

Considerable budgetary needs did not apply to this project. As previously mentioned, cost containment measures were taken to decrease and nearly eliminate expenses. Project members and participants took part in the project based on a voluntary basis. No additional information technology or databases were needed for statistical analysis. The education intervention was created on a publicly accessible online source, which avoided costs for both the

project leader and the participants. Participants that completed the 3-step project process were given a $10 Starbucks gift card in appreciation for their participation. Other cost factors were limited to paper supplies, ink, and gas expenditures.

Chapter IV

Outcomes

Analysis of Implementation Process

Once notification was received from CUHSR that project was reviewed and found to be exempt from full review under category two, the first step involved reaching out to the Vice President of Quality and Community Services at the participating organization in order to network with all practicing NPs employed by the organization to solicit volunteer participants. On May 30, 2018, an email was sent by the Vice President of Quality and Community Services to a total of ten NPs; the email included my direct email link and requested volunteer participation for a Doctor of Nursing Practice project. A response for voluntary participation was requested by June 11, 2018. Six participants volunteered to take part in the DNP project, and each participant was sent a document of informed consent to be completed prior to participation. As soon as each participant emailed their willingness to volunteer and completed the informed consent, the pre-questionnaires were delivered via each individual's preferred method of delivery. Each participant was provided a participation number. All of the participation numbers consisted of six digits and were exactly the same with the exception of one digit; this one differing digit is how each individual was identified by the project leader while keeping the numbers seemingly obscure to anyone that may see the questionnaires en route. Each participant's requested method of questionnaire delivery was accommodated in an attempt to ease the participation process. Some individuals requested the forms be faxed and others

requested email delivery of the forms; one participant requested to mail the project leader completed forms, while another requested hand-delivery and pick-up. Regardless of the method of delivery, participants were strictly advised to place only their participation number on the top of the questionnaires; identifying data were strictly advised to be omitted. If faxing was the preferred delivery method, completed forms were faxed to the project leader on a home fax.

During the aforementioned process, the education intervention was built. The final intervention video was 22 minutes in length and can be viewed via QuickTime video at https://www.youtube.com/watch?v=Uzo1qoiUEQ0&feature=youtu.be. The material presented per slide is located in Appendix D. Building the education intervention was a time-consuming activity that involved determination of inclusive information in order to create a video that was concise yet applicable and specific to NPs, creation of an outline that depicted where the information was gathered, creation of a powerpoint, construction of a typed narrative, and recording the final voiceover. Starting June 11, 2018, each participant that completed the pre-education intervention questionnaires were emailed the intervention link and sent the post-education intervention questionnaires via their preferred method of delivery. The deadline for completion of the entire 3-step process was set for June 25, 2018, in order to allow adequate time for data analysis and project completion.

A participation key was created and secured on the project leader's password-protected computer. The key includes each participant's name and coinciding participation number as well as lists to keep track of which participants were sent the questionnaires, what method was personally requested, which participants returned questionnaires, and what method they utilized. The key was a simple yet highly useful tool. On June 20, 2018, the key was referenced to

determine which participants had not yet completed the full 3-step process; these participants were sent a reminder email of the completion deadline of June 25, 2018.

Analysis of Project Outcome Data

Quantitative data from the pre- and post-education intervention questionnaires were analyzed in order to identify differences in the participants' self-perceived healthcare-specific financial attitude, ability and behavior prior to viewing the education intervention compared to after viewing the education intervention. Participants were asked the exact same 10 questions on the pre-intervention questionnaires and again on the post-intervention questionnaires (see Appendices A & B); each question involved a 7-point Likert-type scale of self-perception of each of the three aforementioned financial literacy concepts. The ANOVA two factor without replication was the tool used for statistical analysis. The ANOVA two factor was determined to be the best statistical tool to analyze the same thing twice; in other words, the ANOVA two factor without replication was the best tool to compare the participants' pre-intervention scores to the scores after the intervention. The comprehensive results of the total 10-question scores show an F statistic greater than the F critical, indicating significance (Table 1). In addition, the resulting P-value was less than the set alpha level of 0.05. This combination of the F statistic and P-value provided evidence that the average post-intervention quantitative scores were statistically significantly higher than the pre-intervention quantitative scores. This complete statistical analysis via the ANOVA two factor without replication for the total results is depicted in Appendix E.

Table 1

TOTAL (All Categories)				
Participant	Pre Avg	Post Avg	% Change	F = 11.6
1	6.20	7.00	12.9%	F crit = 6.6
2	6.10	6.60	8.2%	F > F crit?
3	3.10	4.40	41.9%	TRUE
4	3.90	5.90	51.3%	
5	4.50	6.20	37.8%	0.01917
6	5.70	5.70	0.0%	P < 0.05
	4.92	**5.97**	**21.4%**	TRUE

The data were further broken down based on the financial literacy concepts of attitude, ability, and behavior. Questions 1-4 were built to identify the participants' perceptions on attitude; questions 5-7 to identify ability, and questions 8-10 to identify behavior. When scores were isolated, both attitude (Table 2) and ability (Table 3) resulted in average post-intervention quantitative scores that were statistically significantly higher than pre-intervention quantitative scores based on the F statistic and P-value. Alternatively, when the behavior data (Table 4) was isolated, significant improvement was not found. Again, the complete statistical analysis via the ANOVA two factor without replication for the isolated results is depicted in Appendix E.

Table 2

Attitude				
Participant	Pre Avg	Post Avg	% Change	F = 28.4
1	6.00	7.00	16.7%	F crit = 6.6
2	6.25	7.00	12.0%	F > F crit?
3	2.00	3.75	87.5%	TRUE
4	3.25	5.75	76.9%	
5	4.25	6.25	47.1%	0.00311
6	5.00	6.00	20.0%	P < 0.05
	4.46	**5.96**	**33.6%**	TRUE

Table 3

Ability				
Participant	Pre Avg	Post Avg	% Change	F = 11.4
1	6.00	7.00	16.7%	F crit = 6.6
2	6.33	7.00	10.5%	F > F crit?
3	3.00	4.67	55.6%	TRUE
4	4.33	6.33	46.2%	
5	3.67	6.33	72.7%	0.01966
6	6.00	6.00	0.0%	P < 0.05
	4.89	**6.22**	**27.3%**	TRUE

Table 4

Behavior					
Participant	Pre Avg	Post Avg	% Change		F = 0.2
1	6.67	7.00	5.0%		F crit = 6.6
2	5.67	5.67	0.0%		F > F crit?
3	4.67	5.00	7.1%		FALSE
4	4.33	5.67	30.8%		
5	5.67	6.00	5.9%		0.65603
6	6.33	5.00	-21.1%		P < 0.05
	5.56	**5.72**	**3.0%**		FALSE

Qualitative data from the pre- and post-education intervention questionnaires were analyzed to identify trends, patterns, and themes throughout the short answers in order to better understand the knowledge concept within the financial literacy phenomenon in clinical NPs. Qualitative questionnaires were also analyzed to detect differences in knowledge and perceptions amongst the six participants' subjective viewpoints related to healthcare-specific financial literacy. The pre-education intervention questionnaire contained seven questions (see Appendix A); these questions are summarized below.

Question 1: What do you wish you had known about finance before starting as an NP?

Of the six volunteer participants, two participants (33%) directly stated the need to better understand billing. Other responses included the desire to understand how everyday decisions impact their organization's financial condition and how to help the organization meet the bottom line. One participant wished she had known that healthcare was a "big business," and another participant stated, "I never really felt that finances would affect my role."

Question 2: Is healthcare finance stressed in your work environment?

Four of the six participants (67%) felt that the finance component of healthcare was not stressed in their work environment either continuously or at all. One participant responded that the finance component was stressed but additional education and reminders would be beneficial. The remaining participant simply stated, "Yes," the finance component of healthcare was stressed in the work environment.

Question 3: Name at least one relevant healthcare financial term or concept.

Answers varied greatly amongst the six participants when they were asked to list at least one relevant financial term or concept. No trends or themes were identified. The various answers included prior authorization, quality measures, CPT coding, revenue, and ACO reimbursement. One participant was unable to list at least one term or concept.

Question 4: What would you like to better understand about healthcare finance?

Two trends were noted when NPs were asked what they would like to better understand about healthcare finance. Four participants (67%) would like to better understand concepts related to insurance coverage. These answers included a better understanding of prior authorizations, payment modifiers, and, more broadly, "I would like to be able to understand and know more about insurance coverage". The remaining two participants (33%) would like more information on their specific practice performance and impact in order to understand their ability to generate income and make improvements as necessary.

Question 5: What is your biggest barrier(s) to enhancing healthcare financial literacy?

This question identified a trend amongst participants. Three of the six participants (50%) referenced lack of graduate-level education and/or training on healthcare-specific financial education as their biggest barrier. Barriers also included lack of time and not being provided all

of the necessary information. The remaining participant referenced lack of motivation, stating, "…I don't want to have to care. I went to school to treat people, not bill and document for charges."

Question 6: Is healthcare financial information shared with you?

When asked if healthcare financial information is shared, answers were equally divided amongst the six participants. Two participants answered yes and two participants answered no. The remaining two participants answers involved, "Yes and no," and "To an extent".

Question 6 Sub-question: What information is shared?

A theme was found in the participants' answers, as three of the six participants (50%) referenced the organization's ACO meetings as their source of financial information. Answers referencing the ACO included ways to reduce costs, "…Meeting once or twice a year to discuss goals and how we're meeting them," and "…[being] lectured on how to bring money in but nothing more." Two participants (33%) did not respond to this question. The remaining participant stated, "Meeting goals, helping patients, and reimbursement" is information that is shared.

Question 6 Sub-question: Which information/concepts/terms do you want to learn more about?

No trends or themes were found amongst the participants' answers to this question, as answers were highly disparate. Two participants (33%) did not respond to this question. Other participants listed the following; the bottom line, modifiers, NP compensation, and prior authorizations.

Question 6 Sub-question: Which healthcare financial information/terms/concepts are applicable in your work environment?

Two participants (33%) again referenced the organization's ACO committee as their source of applicable information; answers included quality measures and being up to date on these measures. Other responses involved the bottom line and levels of care coding. One participant stated "Probably all of them" when asked about which information, terms, and concepts are applicable in their particular work environment as an NP. The remaining participant did not answer this question.

Question 7: Name and describe one quality improvement measure tied to Medicare that providers can influence and how you influence this measure.

Five out of six participants (83%) adequately listed at least one quality improvement measure tied to Medicare and how they, as direct patient care providers, influenced this measure(s). Two participants (33%) listed encouraging and/or ensuring immunizations are up-to-date as a quality improvement measure. Other answers included discussing the importance a healthcare power of attorney during goals of care discussions, meaningful use of the electronic medical record system, transitional care management and obtaining results from screening measures, and smoking cessation. The sixth participant was, "Not sure" of a quality measure tied to Medicare that direct patient care providers influenced.

After completing the pre-education intervention questionnaires, participants were directed to the second step, which involved the education intervention. The education intervention (Appendix D) provided information to improve financial literacy in the voluntary participants. Once the education intervention was viewed, participants were directed to complete the post-education intervention questionnaires, which was final step of the process. The post-

education intervention qualitative questionnaire contained eight questions (see Appendix B); these questions are summarized below.

Question 1: What was the single key message from the education intervention?

A theme was identified, as four of the six participants (67%) listed understanding or being aware of the importance and/or impact of financial literacy concepts as the key message from the education intervention. One participant stated being responsible for costs of testing, reducing costs, and improving outcomes. The remaining participant acutely stated, "…NPs can make a direct difference in controlling the cost of healthcare while improving the quality of the healthcare."

Question 2: Any information in the education intervention you found remarkable? What?

Two participants (33%) did not find any of the information in the education intervention remarkable. Three participants (50%) indicated that the specific financial amounts discussed within the education intervention were remarkable information; these answers included "That there is $200 billion wasted every year on unneeded tests and treatments," "One dollar gained = 8-10% operating earnings; every day decisions impact economics," and "That so much of Medicare money goes towards patient with >5 chronic conditions-that's a lot!" The remaining participant stated, "Good patient care can reduce costs" as remarkable information in the education intervention.

Question 3: Name at least one additional relevant healthcare financial term or concept.

Six of the six participants (100%) were able to list at least one relevant healthcare financial term or concept. All of the terms or concepts listed by participants were discussed in the education intervention; thus, all of the listed terms or concepts were specific to the participating organization. Two participants (33%) answered "pay for performance" as a

relevant term or concept. Other answers included the ACO, chronic care coordination, risk adjustment factor, and hierarchical condition categories.

Question 4: What is the biggest barrier(s) to enhancing financial literacy in NPs?

When the question of the biggest barrier(s) was presented again, four of the six participants retained their answers from the pre-intervention questionnaire; these answers included time, lack of education or training, and lack of motivation. Two participants altered their answers on the post-intervention questionnaire. One participant changed her biggest barrier from "not being given enough information" on the pre-questionnaire to "Insufficient reference tools" on the post-questionnaire. The remaining participant initially stated, "Training" as the biggest barrier, but post-intervention stated, "Honestly I don't feel we can relate to it. Our quality measures are not even considered separate entities from the physician. All the work we do directly effects patients but reflects on the collaborating physician."

Question 5: What information from the education intervention did you find useful/applicable?

Two participants (33%) listed chronic care coordination as useful and/or applicable information presented in the education intervention. Another participant answered the inclusion of official fall risk assessments. One participant stated, "All of it" was found to be useful and/or applicable, and one participant did not answer the question. The remaining participant stated, "As NPs become independent, it will be vital to have financial literacy in order to shape the future of healthcare".

Question 5 Sub-question: What information did you find unnecessary or inapplicable?

Three participants (50%) answered "none" of the information was found to be unnecessary or inapplicable. Another participant stated, "I believe the whole presentation was

pertinent to my role as an NP". One participant listed risk adjustment factors as unnecessary or inapplicable stating a lack of understanding how "this effects me". The remaining participant did not answer the question.

Question 6: Name and describe at least one quality improvement measure tied to Medicare that the providers influence and how you influence the measure.

All six participants adequately listed pertinent quality improvement measures that were presented in the education intervention. Nonetheless, answers varied widely among participants. One participant listed diabetes control, which is influenced by checking the result and teaching how the patient can implement lifestyle changes. Another answer involved avoiding the term "history of" when charting and being as specific and detailed as possible with coding. Becoming more aware of quality measures and taking the time to follow through in order to improve quality measures was listed as a way to improve the measures tied to Medicare. Chronic care coordination was listed as a quality improvement measure, and the participant described influencing this measure by performing a physical exam and being more decisive on the ability to manage the patient in the outpatient setting. One participant listed prevention, safety, communication, and risk populations all as quality improvement measures that are influenced by being more cognizant and understanding the quality measure domains. Smoking cessation through consistent inquiry followed by documentation was another answer.

Question 7: What recommendations do you have to improve the questionnaires?

Four participants (67%) did not recommend any changes or improvements to the questionnaires. One participant did not answer the question. The remaining participant recommended that the pre-intervention questionnaire more clearly stated that participants were not expected to know all of the answers on the pre-questionnaire.

Question 8: What recommendations do you have to improve the education intervention?

Two participants (33%) simply had no recommendations to improve the education intervention. One participant recommended discussing the importance of palliative medicine within the reimbursement models. Another participant recommended further addressing the barrier of lack of education and stated, "…Would be helpful to have meetings or learning workshops". The remaining two participants recommended more education and/or more frequent education; one participant stated, "It is easy to remember immediately after a training but at times it's forgotten with all the other responsibilities".

Chapter V

Discussion

Findings

The comprehensive 10-question quantitative data that assessed financial attitude, ability, and behavior, showed statistically significant improvement on the post-intervention questionnaires compared to the questionnaires that were completed prior to viewing the educational intervention video. When data were isolated, the financial literacy concepts of attitude and ability depicted this statistical significance. In contrast, behavior scores declined from pre-intervention data to post-intervention data. A potential explanation for the decline in behavior scores is that participants may have initially felt that their financial behavior was adequate; yet, after viewing the education intervention, participants acknowledged their lack of financial behavior in the clinical setting. Further assessment of the quantitative data would be necessary to better understand the decline in perceived financial behavior on the post-intervention questionnaires.

Coinciding with the findings by Douglas (2010), one participant discussed the conflicted feelings between the role of caregiver and business and money analysis; this participant stated, "…I don't want to have to care. I went to school to treat people, not bill and document for charges." This finding was not unexpected from the NP community, and I suspect that similar answers would have been noted if a larger participant population would have been examined. Nonetheless, NPs as direct care providers significantly influence the organization's financial sustainability; thus, willingness of NPs to care about and involve themselves in the healthcare pay-for-performance initiatives effects the organization, personnel, and resources for patients and the community (Muller, 2013; Schur & Sutton, 2017; Stanowski et al., 2015)

When the six participants were asked if healthcare-specific information was shared with them, the answers were divided into thirds; two participants answered yes, two answered no, and the remaining answers involved, "Yes and no," and "To an extent". This range in the participants' answers warrants further investigation by the organization in order to determine a more apparent and/or interactive manner to share healthcare-specific financial information with NPs. Three participants (50%) indicated that the healthcare-specific financials depicted in the education intervention were remarkable information; perhaps sharing more specific organizational financial information can increase motivation and increase the ability of NPs to relate to the organization's financial terms and concepts.

Project Aims

Four of the five project aims involved improving healthcare financial knowledge, which was measured by comparing the participants' pre- and post-education qualitative questionnaires. The first aim requested participants name and define one additional healthcare financial term that is considered relevant to the organization. This aim was satisfactorily met; five of the six

participants (83%) were able to list at least one healthcare financial term prior to viewing the education intervention, while all six (100%) were able to list at least one healthcare financial term after viewing the intervention. In addition, 100% of the participants listed a different financial term on their post-intervention questionnaire when compared to their pre-intervention questionnaire; these results could also indicate an improvement in financial literacy.

The second and fourth aims were inadvertently measured together. The assessment question detected the ability of participants to identify and describe one additional quality improvement measure that has direct influence on performance-based payment systems. Consequently, the question also measured the ability to list an additional measure used to improve population health that can reduce overall healthcare costs because quality measures are designed to improve population health and are associated with health system cost ("Demystifying HCC Coding," 2018; Seow & Sibley, 2014). Thus, project aims two and four will subsequently be discussed together. Similar to the first aim, 83% of participants were able to list one quality improvement measure prior to the intervention. However, all six participants (100%) were able to list at least one quality improvement measure after the intervention. Again, all six participants listed a different quality improvement measure on the post-intervention questionnaire when compared the their pre-intervention questionnaire potentially signifying improvement in the participants' financial literacy.

The third project aim called for participants to relate the quality measure listed to satisfy the second/fourth aim to their clinical practice by asking participants how they influence the quality measure. The findings of this aim are directly correlated to aim two/four. All of the participants that adequately listed a quality improvement measure on both the pre- and post-intervention questionnaires were able to describe how they influence the measure in their clinical

practice. Since all six participants listed a different measure on the post-intervention questionnaire compared to their pre-intervention questionnaires in the second/fourth aim, all six participants also listed new ways in which they influence the quality measure.

The fifth and final aim sought to find improvement in participants' scores between the pre- and post-intervention quantitative questionnaires on self-perceived ability, attitude, and behavior, which was measured on a 7-point Likert-type scale. The comprehensive quantitative data met this project aim; the participants' total quantitative data showed statistically significant improvement from the pre-intervention questionnaires to the post-intervention questionnaires. When data was isolated, the financial concepts of both attitude and ability individually met this project aim by depicting statistically significant improvement. When the financial concept of behavior was isolated, improvement in the total participants' scores were not noted, thus, this individual concept does not meet the project aim.

Limitations

The small sample size of only six participants is a substantial limitation in this study. Initiating the study as a quality improvement project in a single rural critical-access hospital subsequently limited the project to only ten potential NP participants. Nonetheless, six NPs (60%) volunteered participation, which the project team considered a reasonable population sample in the participating organization. Purposeful sampling was also a limitation to the project design. Yet, the implementation of a quality improvement project involves a targeted sample population within the organization based on the necessary alignment with the organization's underlying systematic approach (Harris et al., 2016).

Deviations from Project Plan

In the original project plan, the pre- and post-intervention questionnaires were to be delivered and gathered to each NP via hand-delivery by the project leader. However, the six participating NPs worked in various clinic locations with diverse clinical hours. Thus, I accommodated each participant's personal request on the method of questionnaire delivery and submission. These methods included hand-delivery, email, fax, and mail. Regardless of the requested method, all participants were instructed to write only their participation number on the questionnaires and omit names and/or other readily identifiable information.

The ANOVA two factor statistic was ultimately chosen for the quantitative data analysis because it was determined to be the most applicable statistical tool to analyze the same thing twice. Therefore, the project team determined that analysis of the participants' scores before the intervention and again after the intervention were better depicted via the ANOVA two factor without replication.

Implications

While the disassociation of nursing and finance may be apparent in a clinical setting, literature referencing healthcare-specific financial literacy in NPs was challenging to locate in order to build a literature review. With the changing healthcare system from fee-for-service to pay-for-performance, decisions are increasingly based on cost value analysis of quality care (McClenathan & Rickert, 2013). Thus, more research is necessary to determine the value of financial literacy in NPs as well as in all nurse leaders and/or aspiring leaders in healthcare.

When asked about the biggest barrier to enhance healthcare-specific financial literacy in NPs on the post-education intervention questionnaire, one participant candidly stated, "Honestly I don't feel we can relate to it. Our quality measures are not even considered separate entities

from the physician. All the work we do directly effects patients but reflects on the collaborating physician." I believe this statement may present an essential perception in the NP community, which seems highly applicable to the future of nurse leaders. The inability to relate to financial literacy secondary to being incapable of separated the NP's work from the work of the collaborating physician appears to be a concept that warrants further investigation. Future studies could determine the difference in NPs' motivation level to attain financial literacy in contrasting working environments; the first environment in which the NP is required to work under a collaborating physician versus the second environment in which a collaborating physician is not required.

In the post-intervention questionnaire, three participants (50%) recommended continued and/or additional education on the financial literacy concepts. LaFevers et al. (2015) previously noted that scant data and limited research exist on how or where NPs should acquire financial literacy. Thus, these project results present an indication for future education interventions. Based on the project participants' feedback, financial literacy education may provide the basis for the development of a continuing education course as well as implementation or revision of current formal financial education classes or training courses. Providers proficient and familiar with finance are more capable of influencing the future healthcare delivery decisions as well as advocate for patients and the overall nursing profession (Muller, 2013). Therefore, I believe that the key to improving financial literacy in NPs is to make the financial content applicable and concise in order to promote participant understanding of their direct involvement and influence of the financial literacy concepts.

Chapter VI

Conclusion

Value of Project

Improving financial literacy in NPs with concise, applicable healthcare-focused education appears to be a unique, innovative quality improvement project. The historic disassociation between nursing and finance may continue to present resistance to initiating continued and/or additional financial literacy education. Nonetheless, quality care indicators are connected to cost, and NPs have a significant impact on the success and sustainability of healthcare reform efforts that influence the organization's financial indicators (Harris et al., 2016; Muller, 2013; Schur & Sutton, 2017)

The 3-step implementation process involving pre- and post-education intervention questionnaires was designed to determine whether an education intervention focusing on healthcare-specific financial literacy could improve NP's healthcare-specific financial knowledge, ability, attitude, and behavior. Based on the results from the quantitative and qualitative questionnaires, improvement in financial literacy appears to have been accomplished in the participation sample. While specific concepts of knowledge, ability, attitude, and behavior may require additional and/or consistent improvement methods, awareness and willingness of the need to eliminate the disassociation of nursing and finance seems to have been understood throughout the implementation of this project. Nurse practitioners, as direct care providers, should regularly be informed of organizational finances that directly impact them as well as the finances that they directly influence.

DNP Essentials

Various DNP essentials were consistently met by developing, implementing, and completing this project, including essentials II, III, VI, and VIII. Essential II was met by leading a quality improvement project that employed principles of leadership and finance during the development and implementation phases. Developing and designing a quality improvement project in order to promote safe, timely, effective, equitable, and patient-centered care led to meeting DNP essential III. Utilization of research methods to collect appropriate and accurate information also resulted in satisfying essential III. Essential VI has been met consistently during the project design and implementation process through collaboration with my project team as well as the various members of the accountable care organization committee, and the volunteer participants. Continual inter-professional communication and collaboration was an essential element in improving personal financial literacy competency in the project leader; this personal competency was necessary to achieve prior to building the financial literacy education intervention. Essential VIII involves sustaining therapeutic relationships and partnerships with other professionals in order to facilitate optimal care and patient outcomes. Building such relationships have been discussed throughout various steps of the project process and should be considered a vital factor in the current healthcare system in order to persistently employ principles of finance and leadership.

Plan for Dissemination

The plan for initial project dissemination involves submitting the finalized DNP project paper to the Doctors of Nursing Practice Doctoral Project Repository. A presentation of a written executive summary will also be submitted to the participating organization's administrative staff. The executive summary will be presented to the Vice President of Quality

and Community Services at the participating organization, who will be requested to share the presentation with other members of the ACO committee. The volunteer participants will also receive a copy of the written executive summary along with their thank you cards in appreciation of their participation. An oral presentation at Bradley University will also be held to present the project findings.

Attainment of Personal and Professional Goals

This project was conceptualized based on the project leader's lack of healthcare-specific financial literacy. The evolution from fee-for-service to pay-for-performance is increasingly evident, and this personal lack of financial literacy seemed humbling yet unnecessary. Thus, a goal of this study was to improve personal healthcare-specific financial literacy in order to improve the financial literacy in clinical NPs. Collaborating with various inter-professionals was a critical element in attaining this personal goal. An invitation was extended by the ACO community at the participating organization, and the project leader attended multiple meetings in an attempt to better understand healthcare-specific terms, concepts, as well as the organization's internal processes to improve the quality measures that influence reimbursement. The ACO committee included the ACO Champion and Vice President of Quality and Community Services, the NP provider and Chronic Care Coordinator, the Vice President of Clinic Operations, the Medical Director, the Director of Quality, the Information Services Specialist, the Director of Information Services, the Vice President of Finance, and the President and Chief Executive Officer. Consistent inter-professional collaboration with the project chair (BS, MS, PhD) and the project mentor (CPA, MBA) further enhanced personal growth and let to attaining financial literacy terms and concepts, statistical understanding, and understanding of various research processes. Improving personal financial literacy also led to professional development because

the financial terms and concepts that were personally gained also directly relate to the healthcare system. As the project leader that spearheaded the project idea, the project tools, the education intervention, and other diverse project facets, I intend to sustain inter-professional relationships that were built during the project and plan to continue to enhance personal healthcare-specific financial literacy terms and concepts as a clinical NP. I believe that healthcare-specific financial literacy is a critical competency in nurse leaders.

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Appendix A

Pre-Intervention Quantitative Questionnaire

Please circle one number.
1 = Strongly Disagree; 2 = Disagree; 3 =Disagree Somewhat; 4 = Neutral;
5 = Agree Somewhat; 6 = Agree; 7 = Strongly Agree

2. I feel comfortable collaborating with multidisciplinary staff regarding quality improvement and cost containment measures.
   1 2 3 4 5 6 7

3. I feel confident with basic healthcare-specific financial terms and concepts.
   1 2 3 4 5 6 7

4. I feel self-assured when contributing to conversations referencing organizational reimbursement.
   1 2 3 4 5 6 7

5. I believe that improving healthcare financial literacy can improve patient outcomes.
   1 2 3 4 5 6 7

6. I am able to recognize cost-containment opportunities in my clinical environment.
   1 2 3 4 5 6 7

7. I am able to find the association between basic healthcare financial terms and my clinical practice.
   1 2 3 4 5 6 7

8. I am able to understand my necessary connection to the reimbursement information presented in my organization's Accountable Care Organization (ACO) meetings.
   1 2 3 4 5 6 7

9. I purposefully attempt to adhere to quality improvement measures.
   1 2 3 4 5 6 7

10. I encourage my staff to identify patients that would benefit from chronic care management services.
    1 2 3 4 5 6 7

11. I discuss longterm cost-containment measures with staff and patients.
    1 2 3 4 5 6 7

Pre-Intervention Qualitative Questionnaire

12. What do you wish you had known about finance before beginning your role as an NP?

_____

_____

13. Is the finance component of healthcare stressed in your work environment as an NP?

_____

14. Name at least one relevant healthcare financial term or concept.

_____

_____

15. What about healthcare finance would you like to better understand?

_____

_____

16. What do you feel is the biggest barrier(s) to enhancing healthcare-specific financial literacy in NPs _____

_____

17. Is healthcare-specific financial information shared with you? _____

    1. If yes, what type of information (your contribution to meeting goals, reimbursement changes, bottom lines, etc.)? _____

_____

    2. Which healthcare financial information, concepts, or terms would you like to learn more about? _____

_____

3. Which healthcare financial information, concepts, or terms are applicable in your particular work environment as an NP? _____

18. Name and briefly describe at least one quality improvement measure tied to Medicare reimbursement that direct patient care providers can influence _____

_____

_____

1. How do you influence this quality improvement measure? _____

_____

_____

Appendix B

Post-Intervention Quantitative Questionnaire

Please circle one number.
1 = Strongly Disagree; 2 = Disagree; 3 =Disagree Somewhat; 4 = Neutral;
5 = Agree Somewhat; 6 = Agree; 7 = Strongly Agree

19. I feel comfortable collaborating with multidisciplinary staff regarding quality improvement and cost containment measures.
    1 2 3 4 5 6 7

20. I feel confident with basic healthcare-specific financial terms and concepts.
    1 2 3 4 5 6 7

21. I feel self-assured when contributing to conversations referencing organizational reimbursement.
    1 2 3 4 5 6 7

22. I believe that improving healthcare financial literacy can improve patient outcomes.
    1 2 3 4 5 6 7

23. I am able to recognize cost-containment opportunities in my clinical environment.
    1 2 3 4 5 6 7

24. I am able to find the association between basic healthcare financial terms and my clinical practice.
    1 2 3 4 5 6 7

25. I am able to understand my necessary connection to the reimbursement information presented in my organization's Accountable Care Organization (ACO) meetings.
    1 2 3 4 5 6 7

26. I purposefully attempt to adhere to quality improvement measures.
    1 2 3 4 5 6 7

27. I encourage my staff to identify patients that would benefit from chronic care management services.
    1 2 3 4 5 6 7

28. I discuss longterm cost-containment measures with staff and patients.
    1 2 3 4 5 6 7

Post-Intervention Qualitative Questionnaire

29. What would you consider to be the single key message from the education intervention?

_____

_____

30. Was there any information in the education intervention that you found remarkable?_____

    1. If so, what information? _____

_____

31. Name at least one additional relevant healthcare financial term or concept.

_____

_____

32. What do you feel is the biggest barrier(s) to enhancing healthcare-specific financial literacy in NPs?

_____

_____

33. What information from the education intervention did you find useful and/or applicable to your practice as an NP?

_____

_____

    1. What information did you find unnecessary or inapplicable to your practice as an NP?

_____

_____

34. Name and briefly describe at least one quality improvement measure tied to Medicare reimbursement that direct patient care providers can influence.

_____

_____

1. How do you influence this quality improvement measure?

_____

_____

35. What recommendations do you have to improve the questionnaires?

_____

_____

36. What recommendations do you have to improve the education intervention on healthcare financial literacy?

_____

_____

Appendix C

Questionnaire Information and Instructions

Thank You and Project Topic

Thank you for volunteering to take part in this Doctor of Nursing Practice Scholarly Project. This project aims to explore healthcare-specific financial topics that clinical nurse practitioners (NPs) consider valuable. Healthcare financial topics will be examined before and after a healthcare-focused online financial education intervention.

Stages, Instructions, and Expected Timeframe

This project involves a 3-step process including a 30-minute, online education program with short questionnaires before and after the educational program. We will be gathering thoughts and perspectives in narrative form as well as asking participants to numerically rate self-perceived ability, knowledge, attitude, and behavior on a 10-point scale before and after the education intervention. Each questionnaire is expected to take about 10 minutes to complete. Please be truthful and do not leave any section blank. It is permissible to answer, "I don't know," "Not sure," and "None".

Confidentiality

The project leader and Bradley University consider the confidentiality of your data highest priority. Be assured that all identifiers will be kept strictly confidential by the project leader. Any and all identifying information will be destroyed when appropriate. All personal information provided by participants will remain confidential. Responses will be combined with other participants and will be summarized in a report to further ensure confidentiality.

Agreement to Participate

Participating in this project is completely voluntary, and you can withdraw at any time. Choosing not to participate or withdrawing participation at any point in the process is completely admissible and will have not result in any consequences to you or the organization. Those who complete the 3-step project process will personally receive the study outcome results as well as a $10 Starbucks gift card in appreciation for their participation. Any questions or concerns can be directed to the project leader at tjvipond@mchsi.com.

Information and Consent Form

Study Title: Improving Healthcare Financial Literacy in Nurse Practitioners (NPs) with Concise, Applicable Healthcare-Focused Financial Education

Introduction: You are being asked to participate in a scholarly project research study through Bradley University. Your participation is voluntary. Your decision to participate or not to participate will have no effect on your job status. Please ask questions if there is anything you do not understand. The purpose of this study is to explore healthcare-specific financial topics that clinical nurse practitioners (NPs) consider valuable. Healthcare financial topics will be examined before and after a healthcare-focused online financial education intervention.

What is involved in the study?

e. A 3-step process including a 30-minute online education program with short questionnaires before and after the educational program.
f. All participants will be given the same questionnaires and will view the same education program.

How many people will take part in the study?

- It is anticipated that 10 nurse practitioners will participate in this research.

How long will I be in the study?

g. The study duration will be dependent on completing the 3-step process and is estimated to be completed within one month.
h. Your expected time commitment is estimated to total one hour.

What are the risks of participating in the study?

i. A potential risk includes concern for job security based on participation status and questionnaire responses. Confidentiality of responses will be considered high priority in order to eliminate this risk.

What are the benefits of participating in the study?

j. You will not benefit from being in this research study.
k. We hope to gather information that may help future research, education, and practice.

What about Confidentiality?

l. Confidentiality will be top priority, and all reasonable efforts will be made to keep your personal information confidential. We cannot guarantee absolute confidentiality. All questionnaire documents will be numerically coded to purposefully omit identifiable data from completed questionnaires. The key linking numeric coding to your identity will be stored in a password-protected computer and will only be accessible by the project leader. The key will be destroyed when appropriate.
m. Organizations or individuals that may inspect and/or copy numerically coded documents for quality assurance and data analysis include:

a. Bradley University faculty advisor
b. Bradley University Committee on the Use of Human Subjects in Research (CUHSR)
c. Project primary mentor

What are the costs?

n. There are no costs for participation in this study.
- Those who complete the 3-step project process will personally receive the study outcome results as well as a $10 Starbucks gift card in appreciation for participation.

What are my rights?

o. Taking part in this study is voluntary. You may choose not to take part or may leave the study at any time.

Who should I call with questions or problems during the study?

p. Questions about this study may be directed to the researcher or the research advisor in charge of this study: Dr. Steinwedel at (309) 677-2575 during normal business hours.
q. If you have general questions about being a research participant, you may contact the CUHSR office at (309) 677-3877 during normal business hours. The Chairperson of this committee will discuss the matter with you.

Documentation of informed consent

You are voluntarily making a decision to participate in this study. Your signature means that you have read and understood the information presented and have decided to participate. Your signature also means that the information on this consent form has been fully explained to you and all your questions have been answered to your satisfaction. If you think of any additional questions during the study, you should contact the researcher.

I agree to participate in your study Date

_____ _____

Signature of Participant

_____

Printed Name

Appendix D

Slide 1: Healthcare Financial Literacy For Nurse Practitioners

By: Taylor A. Vipond, RN, BSN

DNP Scholarly Project Education Intervention Bradley University

Slide 2: Introduction

Most significant pay-for-performance initiative in history

High quality, cost-effective, financially accountable care Interconnected system

Financials are the core & indicate sustainability

Slide 3: What is Financial Literacy?

Knowledge, Attitude, Ability, Behavior

Slide 4: Significance for NPs

Direct care providers = direct effect on success

Financial discussions/decisions

Decisions influence patient quality outcomes & costs Financial competencies for outstanding leadership Inadequate literacy = financial uncertainty

Slide 5: Significance for NPs (Cont.) Decision making impacts economics

One dollar gained = 8-10% operating earnings Nurse leaders -> Take responsibility

Identify lacking healthcare financial literacy qualities

Slide 6: Why is Healthcare Financial Literacy Important Now?

Initiatives demand changes in how care is delivered

Analyzed for economic impact

Decisions no longer solely on volume of services

Cost value analysis

Slide 7: Why is Healthcare Financial Literacy Important Now?

Strive to improve Financial Literacy because:

Strive to improve Financial Literacy because:
Estimated $200 billion predicted waste
Did fee for service lead to health being managed separately? Waste & partitioned financing in the U.S.

Slide 8: Terms/Concepts

What do they mean to me?

Pay-for Performance

paying for quality services rather than volume

performance scores assigned to criteria/used for financial rewards/penalties

Accountable Care Organization (ACO)

Vehicle to shift from volume to value

Providers accountable for quality & reimbursement

Slide 9: Terms/Concepts (Cont.)

Chronic Care Coordination

Close gaps in care & transitions to keep healthy & reduce costs

Assist navigation of complex healthcare system; end-of-life planning 79% of Medicare costs = patients with 5+ more chronic conditions

Slide 10: Terms/Concepts (Cont.)

Risk Adjustment Factor (RAF)

Identifies degree of illness that drives reimbursement Ensures resources to care for high-risk patients Numerical value to identify health status

Hierarchical Condition Categories (HCC)

The risk adjustment methodology

More accurate portrayal of patient's condition & anticipated costs

Slide 11: Quality Performance & Indicators Quality performance

Essential for reimbursement & population health Quality indicators (measures)

increasingly connected to health system cost

Slide 12: Quality Measures Aims:

Prevent, care coordination, HCCs, safety, caregiver engagement, cost containment CMS rewards/penalizes organizations for health outcomes

4 Domains of ACO Quality Measures

31 Quality Measures in 2018

Exclusions (Imaging for back pain)

Slide 13: 2018 ACO Quality Measures by Domain At Risk Population

DM composite

DM HbA1c control DM eye exam

HTN control

ASA for IVD Depression remission

Slide 14: 2018 ACO Quality Measures by Domain Preventive Health

Breast cancer screen

Colon cancer screen

Flu vaccine

Pneumonia vaccine

BMI & Follow up

Tobacco use & follow up Depression screen & follow up Statin therapy for CVD

Slide 15: 2018 ACO Quality Measure by Domain

Care Coordination & Patient Safety

Fall Risk

Med. Rec. Post-Discharge

Use of imaging of low back pain Unplanned admissions

Readmissions

Admissions: prevention quality EHR technology

Slide **16: 2018 ACO Quality Measures by Domain**

Patient/Caregiver Experience (CAHPS Survey)

Timely care

Doctor communication

Patient's rating

Access to specialists

Health promotion & education Shared decision making Health/Functional status Stewardship of patient resources

Slide 17: Quality Work Achieved, Now Get the Reimbursement

Fee for service vs Pay for Performance

Bill condition yearly

Increase accuracy of RAF score & avoid missing potential earnings

Document all conditions addressed in visit

Diagnosis codes at highest specificity level

Slide 18: Get the Reimbursement (Cont.)

Hierarchical Condition Categories (HCC)

Slate wiped clean every year = ensures chronic conditions managed yearly

Stable condition = make it clear rather than omitting from documentation

Slide 19: Barriers

Why the gap between Nursing & Finance?

Lack of motivation Evolution of healthcare Insufficient training Insufficient reference tools

Slide 20: Barriers (Cont.)

Nursing education & orientation

Lack of ownership of financial performance

Conflicted feelings as caregiver/money analysis

Slide 21: Financial Literacy Accountability

Willingness = Key to quality care & cost containment

ACOs rely on providers

Improve care coordination, contain costs PCPs have significant impact

Outstanding leadership must include financial competencies

Slide 22: Accountability (Cont.) Take responsibility

Interconnected system Continue direct efforts:

Screenings, smoking cessation, medication reconciliation, advance care plans/surrogate decision maker, coding at high specificity

Realize benefits & impacts

Slide 23: Future Considerations for Nurse Practitioners Direct managers of patient care

As NPs become independent across the U.S., will insurance companies adjust reimbursement to 100%? Use leadership positions to influence decisions & be engaged in reform efforts

Finance is the next concept to conquer

Shape dynamics of the future of healthcare

Slide 24: Take Home Message

Eliminate disassociation between Nursing & Finance

Providers proficient & familiar with finance can more competently: Influence future healthcare delivery decisions

Advocate for patients & nursing profession

Slide 25: Take Home Message

HCC codes impact condition, reimbursement, & patient-centered care

Utilize care coordination to increase care quality & decrease costs

Quality care + sensible expenditures = healthier populations & organizational viability

Slide 26: Thank you for your participation!

Slide 27-33: References

Appendix E

Total

Anova: Two-Factor Without Replication

SUMMARY	*Count*	*Sum*	*Average*	*Variance*
1	2	13.2	6.6	0.32
2	2	12.7	6.35	0.125
3	2	7.5	3.75	0.845
4	2	9.8	4.9	2
5	2	10.7	5.35	1.445
6	2	11.4	5.7	0
Pre Avg	6	29.5	4.91666667	1.63366667
Post Avg	6	35.8	5.96666667	0.81066667

ANOVA

Source of Variation	*SS*	*df*	*MS*	*F*	*P-value*	*F crit*
Rows	10.7941667	5	2.15883333	7.56158786	0.02223216	5.050329
Columns	3.3075	1	3.3075	11.5849387	0.01917462	6.607891
Error	1.4275	5	0.2855			
Total	15.5291667	11				

Attitude

Anova: Two-Factor Without Replication

SUMMARY	*Count*	*Sum*	*Average*	*Variance*
1	2	13	6.5	0.5
2	2	13.25	6.625	0.28125
3	2	5.75	2.875	1.53125
4	2	9	4.5	3.125
5	2	10.5	5.25	2
6	2	11	5.5	0.5
Pre Avg	6	26.75	4.45833333	2.68541667
Post Avg	6	35.75	5.95833333	1.43541667

ANOVA

Source of Variation	*SS*	*df*	*MS*	*F*	*P-value*	*F crit*
Rows	19.4166667	5	3.88333333	16.3508772	0.00406758	5.050329
Columns	6.75	1	6.75	28.4210526	0.0031117	6.607891
Error	1.1875	5	0.2375			
Total	27.3541667	11				

Ability

Anova: Two-Factor Without Replication

SUMMARY	*Count*	*Sum*	*Average*	*Variance*
1	2	13	6.5	0.5
2	2	13.3333333	6.66666667	0.22222222
3	2	7.66666667	3.83333333	1.38888889
4	2	10.6666667	5.33333333	2
5	2	10	5	3.55555556
6	2	12	6	0
Pre Avg	6	29.3333333	4.88888889	1.98518519
Post Avg	6	37.3333333	6.22222222	0.74074074

ANOVA

Source of Variation	*SS*	*df*	*MS*	*F*	*P-value*	*F crit*
Rows	11.2962963	5	2.25925926	4.84126984	0.05420536	5.050329
Columns	5.33333333	1	5.33333333	11.4285714	0.01966098	6.607891
Error	2.33333333	5	0.46666667			
Total	18.962963	11				

Behavior

Anova: Two-Factor Without Replication

SUMMARY	*Count*	*Sum*	*Average*	*Variance*
1	2	13.6666667	6.83333333	0.05555556
2	2	11.3333333	5.66666667	0
3	2	9.66666667	4.83333333	0.05555556
4	2	10	5	0.88888889
5	2	11.6666667	5.83333333	0.05555556
6	2	11.3333333	5.66666667	0.88888889
Pre Avg	6	33.3333333	5.55555556	0.82962963
Post Avg	6	34.3333333	5.72222222	0.55185185

ANOVA

Source of Variation	*SS*	*df*	*MS*	*F*	*P-value*	*F crit*
Rows	5.0462963	5	1.00925926	2.71144279	0.14883567	5.050329
Columns	0.08333333	1	0.08333333	0.2238806	0.65603485	6.607891
Error	1.86111111	5	0.37222222			
Total	6.99074074	11				