Community Education of the Nurse Practitioner Role in Healthcare

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Purpose: The purpose of this project was to develop and evaluate an educational program on the role of nurse practitioners in primary healthcare in a rural community setting.

Design: Descriptive pre-presentation and post-presentation surveys were offered to 81 participants from a convenience sample of adults attending Office of the Aging events in Wyoming County, New York. The pre-presentation survey measured participants’ experience and attitudes towards a nurse practitioner in primary care. After completing the pre-presentation survey, participants received instruction on the educational requirements, the scope of practice, and benefits of a nurse practitioner in primary care. A post-presentation survey was administered to measure changes in attitudes and knowledge following the educational intervention.

Results: A comparison of pre-presentation and post-presentation survey responses showed an increase of 1% of study participants willing to receive primary healthcare services provided by a nurse practitioner. Of the 6% of study participants declining nurse practitioner-delivered care on the post-presentation survey, 92% were female while 8% were male; 73% of the declining participant subgroup possessed less than or equal to a high school diploma; compared to only 57% of the participant subgroup that was accepting of nurse practitioner care with similar education limits.

Conclusion: The 1% increase of study participants willing to receive primary healthcare services provided by a nurse practitioner indicates that patient education on nurse practitioner roles within the healthcare system may be an effective way to increase awareness of and openness to the nurse practitioner role in primary care in a rural community.

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By

Lisa M. Kemp, RN, BSN

Submitted in partial fulfillment of the requirements for the degree

Master’s in Advanced Practice Nursing

Supervised by

Tara L. Sacco MS, RN, CCRN-K, AGCNS-AC, ACCNS-AG

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Second reader Signature: 
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Community Education of the Nurse Practitioner Role in Healthcare

The United States healthcare system is experiencing a deficit of primary care providers creating a challenging obstacle for many Americans to access primary care services (Bodenheimer & Pham, 2010). Hansen-Turton, Ware, Doria, Bond, and Cunningham (2013) found additional physician shortage concerns and identified contributors to the shortage: the passage of the Patient Protection and Affordable Care Act of 2010 (ACA), the expected growth of the elderly population, and physician specialization. The ACA is a federal statute passed by Congress that went into effect on March 23, 2010 with several key goals, including the expansion of health insurance coverage to decrease the number of uninsured, which resulted in an additional overload to the healthcare system (Van Vleet & Paradise, 2015).

Hansen-Turton et al. (2013) found evidence supporting the projected rise in patients seeking primary healthcare services under the ACA, reporting that approximately 16 million insured patients would be absorbed into the healthcare system. This figure is overwhelming, given that researchers also concluded a potential deficit of approximately 60,000 primary care providers in the United States due to the ACA induced patient influx. Similarly, the American Academy of Medical Colleges released a physician workforce projection report asserting that due to the increasing demand for healthcare providers, the projected physician deficit would be up to 90,000 by 2025, with primary care physicians encompassing up to 34% of the overall physician deficit (Wergin, 2015). The imbalance of supply and demand of primary care providers is further complicated by the declining medical student interest in primary care.

Nurse practitioners (NP) working in the primary care workforce are helping to fill the gap caused by the primary care provider shortage (Poghosyan, Boyd, & Knutson, 2014). Primary
care is the foundation of healthcare; it is the point of which all other healthcare services stem from, the maintenance of chronic conditions, and the prevention of disease. The acceptance of the NP role within the primary care setting is essential to the care and promotion of healthy behaviors for patient populations served (Poghosyan et al., 2014). Due to the influx of people seeking healthcare with the physician deficit, healthcare must make adjustments to previously acknowledged team makeup. Medical personnel will not only need to adjust to these changes, but also help the community adapt and accept the changes (Poghosyan, Lucero, Rauch, & Boyd, 2012).

The United States Census Bureau reported that by 2050, the American aging population, those 65 years old and over, will nearly double with the majority consisting of baby boomers (Ortman, Velkoff, & Hogan, 2014). According to Stults et al. (2016), the baby boomer population will become eligible for “Medicare at a rate of 10,000 per day through 2029” (p. 11) accumulating to nearly 80 million, further straining the limited amount of primary care providers. Petterson et al. (2012) projected an increase in total primary care physician office visits from 462 million in 2008 to 565 million in 2025 necessitating an additional need of 52,000 primary care providers.

The American Academy of Family Physicians estimated that the primary care provider shortage would reach a 40,000 family physician deficit by 2020 (Guzik, Menzel, McNulty, & Fitzpatrick, 2009). Fewer medical students choose to focus on primary care, instead opting to pursue specialized areas of medicine, and the interest in primary care is expected to worsen over time. Many factors have been linked to the decline in interest in the field of primary care. Low prestige, high workload, and declining reimbursement rates are of the most cited reasons for lack of interest. The focus on the decreasing supply of primary care physicians is essential to
healthcare reform due to the devastating effects the shortage has on the health of a community (Lakhan & Laird, 2009).

The primary care provider plays an important role in healthcare reform that restructures medical care to focus on preventative medicine. Primary care providers are the foundation of essential healthcare and support the implementation of changes to identified behavioral risks that influence patient health outcomes. One of the Healthy People 2020 objectives is to improve patient access to comprehensive, timely, and quality healthcare services through vital regular contact with primary care providers. The ability to have quality health services accessible to the expected flood of patients is part of this goal (U.S. Department of Health & Human Services, 2017). A lack of primary care providers negatively affects patient health outcomes and potentially causes an increase to the nation’s overall healthcare costs.

The primary care physician shortage is based upon the traditional healthcare delivery model. Due to the lack of available primary care physicians, America is reshaping the nation’s healthcare workforce to utilize NPs to fill the gap. An increasing number of graduating NPs are being integrated into the healthcare system to alleviate the challenges of the primary care physician shortage, resulting in a restructuring of the healthcare workforce (Poghosyan et al., 2012). In 2012, 120,000 NPs, nearly half of the NP workforce providing patient care in the United States, were in the primary care setting, managing up to 90% of the medical needs of their patient population (Van Vleet & Paradise, 2015). As NPs take a more critical role in providing health services to the majority of the patient caseload, it is important to consider the safety, effectiveness, and satisfaction of NP driven patient management as compared to physicians. The determination of similar outcomes such as safety, effectiveness, and satisfaction with NP delivered care is essential to increasing the number of NPs providing primary care to
meet the need of the rising population. Researchers have identified contributing factors that influence patient satisfaction with NP-delivered primary care.

**Review of the Literature**

Nurse practitioners in the primary care setting have demonstrated similar patient health outcomes as their physician counterparts (Poghosyan et al., 2012). Horrocks, Anderson, and Salisbury (2002) set out to determine whether NPs in the primary care setting were able to provide patient care equivalent to their physician counterparts through a systematic review of randomized controlled trials and observational studies. An evaluation of the included studies found no differences in patient health status, health outcomes, prescriptions, consultations, or referrals. Moreover, the role of a NP as the first point of contact care showed greater patient benefits as compared to physicians. Nurse practitioners spent more consultation time with patients and conducted more health investigations, resulting in higher patient satisfaction levels than physicians (Horrocks et al., 2002).

According to Poghosyan et al. (2012), NPs have a unique skill set that is extracted from physical, biological, and social sciences that enable a focus on the delivery of health care services and patient interactions that leads to higher patient satisfaction as well as high quality care. As NPs become more involved in the primary care setting, they have a responsibility for targeting disease prevention and health promotion in an effort to reduce the nation’s overall healthcare cost. Although the trend of the increasing NP-driven care in the primary care setting has been effective in health promotion and enhancing access to essential care, the question that remains is whether patients accept and are satisfied with this role.
Patient satisfaction has been defined as the patient's judgment on the quality of service, degree of expectations perceived as fulfilled, and outcomes of the services provided (Thrasher & Purc-Stephenson, 2008). Berkowitz (2016) found that patient satisfaction has a correlation between direct and indirect encounters with their healthcare provider. Patient satisfaction has a significant impact on the quality of care experienced by patients, families, and their community. Gagan and Maybee (2011) set out to determine satisfaction and acceptance of NP-delivered primary care. To determine the level of satisfaction and acceptance of the NP role in the primary care setting, they collected 193 surveys from participants. Questions on patient satisfaction and acceptance were the primary focus of the survey while two additional questions on role clarity were added as a secondary interest. Participants reported a high satisfaction and acceptance of the NP-delivered care. Unexpectedly, a positive correlation on role clarity and patient satisfaction was discovered, indicating that a clear understanding of the NP role within the healthcare team directly improved patient satisfaction. These results bring the issue of knowledge on healthcare provider roles and its impact on satisfaction to the forefront.

Agosta (2009) found similar results in a study examining patient satisfaction with the delivery of healthcare services by NPs as well as identifying possible patient demographics with a significant impact on results. The majority of the sample (n=300), obtained from an on-site occupational healthcare clinic, indicated higher satisfaction levels with NP-delivered healthcare services than those provided by physicians. Patient demographics, including race, age, gender, education, and income, were found to not be correlated with satisfaction. However, a closer examination of the study's location may offer some insight into factors that influence satisfaction rates. The population in which participants were selected, employees of a medical facility and
their families, likely maintained a higher basic knowledge of the NP role within the healthcare system.

Thrasher and Pure-Stephenson (2008) also studied patient satisfaction with NP-delivered healthcare to determine the influence of specific components of satisfaction in developing a valid and reliable measure of satisfaction. Components included attentiveness, defined as the personal attention received; comprehensive care, describing the treatments received; and role clarity, identified as the understanding of the NP role. Unsurprisingly, participants reported high levels of satisfaction on attentiveness and comprehensive care. However, the results further indicated that a knowledge deficit related to the NP role in the healthcare system affected satisfaction levels. It is the importance of patient knowledge on the clarity of the NP role that drove the herein project.

**Purpose**

The purpose of this project was used to develop and evaluate an educational program on the role of nurse practitioners in primary healthcare in a rural community setting. The introduction of this role in the rural setting is a change for many community members. Change is always difficult, but necessary to the improvement of any system. Healthcare appears to be in a constant state of transition signifying the importance of implementing a change theory to promote smooth, permanent transformations. With the introduction of NP-delivered primary care, Lewin's Change Theory is applicable as it is a model of change within human systems. This model involves present learning to be discounted and replaced. Lewin's theory holds that behavior is a balance of forces, driving which pushes toward change, and restraining which pushes away from change. There are three well-defined stages to Lewin's change theory:
unfreezing, transition, and refreezing. Unfreezing is the stage in which there is an understanding that change is necessary and initiating an environment in which change is sought. Transition is the actual implementation of the change. Refreezing is the integration of the change into the routine. Once the first two stages have completed, the third, refreezing, begins. It is essential that refreezing occurs to prevent backward movement or reverting to old behavior (Connelly, 2017). Examining community members' knowledge of NP-delivered primary care is necessary to both the unfreezing and transitions phase so that refreezing can occur.

**Method**

The educational project was presented in the form of a public presentation (see Appendix A for the presentation outline). This project was granted ethical approval from the St. John Fisher College Institutional Review Board. A letter of introduction was sent to the Office of the Aging program director describing the proposed educational presentation. The Office of the Aging is widespread throughout the county with the provision of weekly meetings in numerous townships. Meetings provide participants with a free meal while including an activity; many of which are educational. Information on the herein study was provided to attendees and voluntary consent for participation obtained. The consent was attached to the pre-presentation survey for participants to review as the presenter verbally read the information to the participants. Verbal confirmation of participant understanding was verified.

Willing participants were provided with an educational presentation, focusing on the nurse practitioner role and required education, during the program's weekly meetings. Closed-ended and open-ended questions along with a 5-point Likert scale were utilized on a pre-presentation survey and post-presentation survey. The surveys were administered to participants with the intent to gather data on the effects of the presentation in changing willingness to accept
the NP role within the primary care health system. Surveys were completed on a voluntary basis, each taking approximately five minutes to complete. No identifying information was collected or used in the dissemination.

Sample

The sample was a convenience sample from a rural community and included adults whom had engaged the services of an office of the aging in a rural county in New York State. All were 18 years of age or older. A final sample size of 81 participants was obtained.

Data analysis

In the pre-presentation survey there were three questions related to demographics of the participants. The first gathered data on participant age. Of the participants 80% (65) were 60 or older, 15% (12) were between the ages of 46-60 and 5% (4) between the ages of 31-45. There were no participants less than the age of 31 (See Figure 1 in Appendix B). Information gathered on participant gender revealed 80% (65) were female, 19% (15) male, and one chose not to answer (See Figure 2 in Appendix C). Participants education levels included; 15% (12) did not complete high school, 46% (37) had completed high school, 23% (19) had two to four years of college, and 16% (13) had greater than four years of college education (See Figure 3 in Appendix D).

The pre-presentation survey included a question of prior experience with NP-delivered care in the primary care setting; 81% (65) of study participants answered they did have experience with a NP. Next, participants rated their experience with the NP on a 5-point Likert scale. Of the participants (n=65) that had experience with NP care, 48% (31) indicated that they were highly satisfied, 38% (25) were satisfied, 9% (6) neutral, and 5% (3) were dissatisfied.
None of the participants indicated they were highly dissatisfied. There were 10 participants with no experience with a NP and six chose not to answer the question (see Figure 4 in Appendix E).

Included on the pre-presentation survey was a question evaluating participant knowledge on required education for NPs. This question was left open without options for participants to choose from which led to varying degrees of answers, from two years to ten years. The most frequently written numbers were three to four, by 13 participants.

The last question on the pre-presentation survey gathered information on participant willingness to have a NP as their primary care provider 68% (55) of participants were willing, 15% (12) declined NP-delivered care, 11% (9) were unsure, and 6% (5) chose not to answer (see Figure 5 in Appendix F). Of those participants not willing, 73% of them had less than or equal to a high school diploma and 57% of those that were willing had similar education limits.

Participants that indicated an acceptance of NP-delivered primary care shared comments narrating the reasons for their willingness that included: “personalized care”, “spend more time with you”, “I think they know more about how a person feels and answers all my questions in words I can understand”, “easy to talk things over and follow through and NP’s look at the whole person rather than just the malady”, and “more personal interaction with people, increased communication by NP and more time and balanced approach and to build a relationship for better health”. Seven of the participants who declined NP-delivered primary care shared the following comments: “my insurance is expensive and I am supposed to have the real doctor”, “if paying premium, prefer a doctor”, “to[o] many issues”, “because I’m paying for a doctor”, and “I have a [workman’s] comp case so I have to have physician”.

Following the educational intervention, participants assessed whether or not they felt that the presentation was understandable on a 5-point Likert scale. Out of the 81 participants, 91%
(74) rated the presentation as easily understandable. An additional yes or no question was used to assess if the speaker answered participants’ questions, 74% (60) responded yes, none of the participants responded no, and 23% (19) chose not to answer. Only two of the participants responded they did not have any questions.

On the post-presentation survey, participant willingness to have a NP as a primary care provider was re-evaluated, 69% (56) responded they would be willing, which was an increase of 1% post-presentation. The post-presentation surveys revealed a 4% decrease in participants that were not willing to accept a NP as a primary care provider with 15% (12) on the pre-presentation survey and 11% (9) on the post-presentation. Further comparison of the surveys demonstrated a reduction in participants that were unsure if they would be willing to have a NP as their primary care provider (9 participants pre-presentation versus 7 post-presentation). In addition, 11% (9) chose not to answer on the post-presentation surveys, an increase from the 6% (5) that did not answer on the pre-presentation surveys (See Figure 6 in Appendix F).

The final question on the post-presentation survey gathered information used to evaluate the influence of the educational presentation on participant confidence in the NP role as a primary care provider. Over half of the participants (66%) either agreed or strongly agreed with this item while 9% responded as neutral, one participant strongly disagreed, and seven participants did not respond.

Discussion

Thrasher and Puc-Stephenson (2008) identified education of the community as an essential component to assist the transition of NPs within the healthcare field. A comparison of the pre-presentation and post-presentation survey responses show an increase of 1% of the
participants indicating they were more willing to have a NP as their primary care provider. Although the increase is small, it suggests that educating the community is important and can potentially lead to enhanced acceptance of NP-driven primary care.

A more in-depth review of the data reveals possible patient demographics that may influence acceptance of the NP role. Of the 6% (12) that were unwilling to have a NP as a primary care provider, 92% (11) were females and 8% (1) were male. This suggests that women in this sample are more reluctant to receive care from a NP than men. Additionally, 84% of those that indicated they were not willing to have an NP provide healthcare services possessed less than four years of post-high school education, indicating education may also have an effect on acceptance levels. Further research is needed to determine the true effect of gender and age on patient acceptance of the NP role in primary care.

A comparison of pre-presentation and post-presentation surveys indicate the impact this educational session had on participant’s satisfaction and confidence in NP-delivered primary care. Pre-presentation 81% reported having experience with NP-delivered care; nearly half were highly satisfied (48%). Post-presentation, 66% of all participants either agreed or strongly agreed that they had confidence in a NP’s ability to provide high quality care. This indicates that this educational intervention was successful in instilling confidence regarding the NP role for participants. The increase in participant confidence strengthens the hypothesis that educational information can influence acceptant of NP-driven primary care in a rural setting.

There were limitations to this research project. The convenience sample was small with the sampling frame being limited to only those who participated in weekly meetings offered through the office of the aging in a rural county in New York State. Furthermore, a larger
number of participants in this study were over the age of 60; perceptions of the NP role in other age groups may be different. Although the pre- and post-presentation surveys were printed and read aloud to participants, the effects of comprehension difficulties with questions are unknown; considerations regarding literacy level are needed for future investigations. The generalizability of these findings is limited. Further studies should be undertaken with a larger sample size, reaching a more diverse population, with the use of inferential analyses to draw more definitive conclusions regarding the influence of patient education on acceptance of the NP role in primary care.

Conclusion

The medical field is always evolving to adapt to available technology and overcome challenges presented. The healthcare system must overcome the current and predicted future physician shortage to continue to provide quality care in the United States. The evolution of the healthcare delivery system based on the safety and effectiveness of alternate workforce teams would begin to transform current care delivery models. Although there is not a single solution to this multifaceted problem, the integration of NPs in primary care could potentially relieve much of the overwhelmed healthcare system. Communities must evaluate their own unique needs in initiating an educational program addressing the acceptance of NPs in their community healthcare systems. This effort will aid in encouraging the utilization of NPs to their fullest potential. With patient satisfaction rates that are higher than physicians and similar patient outcomes, NPs can be a valuable asset to existing healthcare teams and the communities they serve.
References


Appendix A

Presentation outline

The Nurse Practitioner role in primary care

Objectives
- Learn the educational requirements of the Nurse Practitioner
- What are the benefits of Nurse Practitioners in primary health care
- Learn the scope of practice of the Nurse Practitioner

What are the educational requirements for Nurse Practitioners?
- Must be a licensed Registered Nurse
- Must have a Bachelor’s degree in Nursing
- Complete a Master’s degree program in Advanced Practice Nursing
- Pass a National certification exam
- Maintain continuing education yearly

Master’s Program
- Instruction on research interpretation
- Healthcare economics
- Advanced pharmacology
- Advanced pathophysiology
- Diagnostic reasoning
- 600 hours of clinical experience with a practicing Nurse Practitioner
  
  Adult, pediatric, gerontology and women’s health
Why are Nurse Practitioners needed in health care, specifically primary care?

Shortage of Primary care providers

- American Academy of Family Physicians estimate a deficit of 40,000 family physicians by 2020
- Affordable Care Act has allowed for an increase in people having insurance and seeking Primary care providers
- Primary care is the building block for health education

Scope of Practice

- Assess patients
- Order and interpret diagnostic tests
- Make diagnosis
- Initiate and manage a treatment plan
- Prescribe medications
- Education of disease prevention and healthy lifestyle
- Counseling
- Practice in primary, acute and specialty healthcare
- Collaboration with a practicing physician

Written practice agreement
Written protocols
Collaborating physician to review patient records every 3 months

Some differences in Nurse Practitioners & Physicians

Nurse Practitioners

- Masters or Doctorate degree in Advanced Practice Nursing
• Follow nursing model of healthcare focusing on treatment of patients response to disease and emphasis on prevention, have a more holistic approach to patient care
  
  • Mean wage in NYS from the US Bureau of Statistics May 2013 $95,000.00

Physicians

• Doctorate degree in Medicine

• Follow medical model focus on diagnosis & treatment of diseases

  • Mean wage in NYS from the US Bureau of Statistics May 2013 $187,200.00
Appendix B

Figure 1 Participants' age
Appendix C

*Figure 2 Participants' gender*
Appendix D

Figure 3 Participants' Education Level
Appendix E

Figure 4 Satisfaction with Nurse Practitioner-driven Care
Appendix F

Figure 6 Willingness for Nurse Practitioner as Primary Care Provider

![Bar chart showing willingness for nurse practitioner as primary care provider before and after presentation.](chart.png)