A Standardized Transition To Practice Program For Novice Advanced Practice Registered Nurse(s) In A Federally Qualified Health Center Setting

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A STANDARDIZED TRANSITION TO PRACTICE PROGRAM FOR NOVICE ADVANCED PRACTICE REGISTERED NURSE(S) IN A FEDERALLY QUALIFIED HEALTH CENTER SETTING

Submitted to the Faculty
Yale University School of Nursing

In Partial Fulfillment
of the Requirements for the Degree
Doctor of Nursing Practice

Taína R. Lopez-Cartagena

May 23, 2022
This DNP Project is accepted in partial fulfillment of the requirements for the degree Doctor of Nursing Practice.

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Date:
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Signed:

May 23, 2022
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Abstract

Novice Advanced Practice Registered Nurses in Federally Qualified Health Centers are expected to assimilate to the autonomous clinician role rapidly and meet the threshold of clinical expertise required for their new role. Mentorship is widely demonstrated in the literature as an important resource during onboarding and transition. Mentorship and social support facilitate appropriate novice Advanced Practice Registered Nurse role transition and attainment. This project employs a literature review, surveys and interviews of Advanced Practice Registered Nurses and the implementation of a transition-to-practice program in a federally qualified health center. Results of this project indicate that a structured transition-to-practice program can potentially bridge the gap between academic training and clinical practice. Further large-scale application and assessment of the model is warranted.
**Table of Contents**

Chapter 1: Introduction ........................................................................................................1

Chapter 2: Review of the Literature .....................................................................................8

Chapter 3: Methods .............................................................................................................24

Chapter 4: Results .............................................................................................................41

Chapter 5: Discussion and Conclusion .............................................................................45

References .........................................................................................................................54

Appendix A: Prisma Diagram .............................................................................................68

Appendix B: Project Models .............................................................................................69

Table 1: Program Surveys .................................................................................................71

Table 2: Program Schedule ...............................................................................................75

Table 3: Expert Panel Validation Questionnaire Results ....................................................76

Table 4: Competency Rubric Results ................................................................................79

Figure 1: APRN Preparedness Survey Grouped Results ....................................................83

Figure 2: Needs Assessment Survey & Self Perception Themes ........................................84

Figure 3: Post Survey .........................................................................................................86

Figure 4: Interview Themes ...............................................................................................88
Chapter 1

Introduction

The urgency for a fundamental transformation in nursing practice is the guiding principle behind the Institute of Medicine’s 2010 report “The Future of Nursing: Leading Change, Advancing Health” (Institute of Medicine [IOM], 2010). Drivers of this report include systematically creating opportunities for nursing to contribute and build improved healthcare systems to meet the demand for safe, high quality, patient-centered, accessible, and affordable care (IOM, 2010). The report highlighted the need to remodel the nursing profession in three crucial areas: practice, education, and leadership (IOM, 2010). As part of this, they recommended implementing post-graduate transition-to-practice programs (TPPs), to “achieve higher levels of education and training through an improved education system that promotes seamless academic progression” (IOM, 2010 p. 4). IOM committee members recommend further defining program models; setting criterion, analyzing funding and business case models, and devising a structure to track and evaluate the quality, effectiveness, and significance of TPPs (IOM 2010).

Presently, the National Academy of Medicine (NAM) formerly known as IOM released a 2020 report, “The Future of Nursing: Charting a Path to Achieve Health Equity. Report highlights are strengthening nursing education by way of nursing mentorship, fostering nurses as leaders and advocates, preparing nurses to respond to disasters, and supporting the well-being of nurses (National Association of Medicine [NAM], 2021).

There is no standardized onboarding or TPP programs post-graduation. Our physician colleagues are required to complete a 3–4-year residency in internal medicine; Advanced Practice Registered Nurse (APRN) graduates can practice immediately in primary care with no widely implemented transitional training. Novice APRNs may opt for additional post-graduate APRN
training through a residency or fellowship program. These TPPs aim to bridge the gap between education and professional practice, further cultivating the transition from novice to competent clinician (Hockenberry et al., 1995; Flinter, 2012; Hicks et al., 2018; Martsolf et al., 2017; Robeano et al., 2019). While APRN clinical education ensures entry-level aptitude, and studies conclude APRNs provide equivalent care to physicians in primary care (Decapua, 2019), it should not be assumed that all educational institutions and healthcare sites have the capacity to offer well-organized onboarding and transitional clinical training.

Literature emphasizes the importance of transition and concludes the lack of effective resources to transition from the classroom to the field can have a profound negative impact on the novice APRNs and potentially catalyze a negative cascade effect. (Twine, 2018, National Council of State Boards of Nursing [NCSBN], 2020). It can lead to increased provider burnout that in turn results in suboptimal patient care, greater probability of errors, and promotes high turnover rates that consequently decrease access to care (IOM, 1999; Anderson, et al., 2012; Hoff et al., 2017; D’afflitti, et al., 2018; Duckett, & Moran, 2019; Hall, Johnson, Watt, Tsipa, & O’Connor, 2016).

A 2011 survey indicated that annual turnover rates for APRNs is approximately 12%, doubling that of physicians (Anderson, 2012). Messina’s 2016 abstract on the impact of job satisfaction and turnover of APRNs noted a 12.6% turnover rate. In 2020 the Registered Nurse (RN) turnover was noted as 18.7%, a 2.8% increase from the year prior (Plescia, 2021). Duckett & Moran, (2019) noted a higher incidence of medical errors occurring during times of staff transition. Hall et al. (2016) systemic review indicated poor healthcare staff wellbeing and burnout are associated with poor patient safety. This inconsistency in quality of care can potentially be traced back to how well equipped the novice APRN is for practice.
In addition to clinical training, other important facets of clinician roles should be addressed during onboarding. In present times clinicians play a vital role in promoting cultural competency and health emergency preparedness and response especially with the COVID-19 pandemic. NAMs 2020 report emphasizes advancing health equity and preparing nurses to respond to disasters (NAM, 2021). Matteliano & Street, (2012) note APRN contributions in the delivery of culturally competent health care to diverse and underserved patient populations in urban primary care practice. As per the study, APRNs established culturally sensitive partnerships with patients, encouraged self-advocacy, addressed contextual considerations, and adjusted practices to meet the patient needs (Matteliano & Street, 2012). As per WHO (2015), it is advised that long-term substantial investments be made to reinforce health systems so they can deliver safe, effective, and quality health services before, during and after epidemics. In doing so, the health system has the leverage to strengthen itself through collaborative mechanisms in order to mitigate the negative impact of a health care crisis (e.g., pandemic epidemics) (WHO, 2018).

The goal of this DNP project was to create and implement a sustainable, culturally competent, evidence-based, mentored, onboarding program for novice APRNs in a Federally Qualified Health Center (FQHC) urban health center. Furthermore, it incorporated tactical onboarding initiatives for emergency preparedness related to healthcare emergencies, specifically epidemic/pandemic scenarios. This DNP project informed broader efforts as it may be scaled up and modified in future applications.

**Problem Statement**

Undoubtedly, there is a demand to fully utilize APRNs in FQHCs because of the medical need and cost effectiveness, yet there are only approximately 70+ TPPs (AACN, 2020; Hicks et al., 2018). While national projections report that an additional 1.13 million nurses will be needed
by 2022 (ANA, 2020), a growing body of work highlights the adversity that novice APRNs face during role transition. Specifically, the self-perception that they are not well prepared for their demanding APRN role results in high turnover (Hart et al., 2016; Hicks et al., 2019; Jones et al., 2015; Norwick 2016; Robeano et al., 2019; Twine, 2018). This is significant in that replacing an APRN has an estimated cost of $103,000-$320,000, up to two times the annual salary of an APRN (Barret, 2019). Consequently, high APRN turnover rates come at considerable costs to agencies and pose a threat to patient care access.

APRN’s can benefit from proven tools and resources during onboarding to assist them with their role transition and mitigate the gaps in patient care and turnover potential. The importance and need for mentorship as one such tool and resource during onboarding and transition is widely demonstrated (Flinter, 2011; Gerhart, 2012; Norwick 2016; Robeano et al., 2019; Twine, 2018), but not routinely employed. Existing knowledge indicates that novice clinicians who receive inappropriate transitional training often avoid primary care or prematurely leave it. (Faraz, 2016). This is alarming, in that, according to the Academy of American Medical Colleges (AAMC, 2020) by 2030, there is an expected primary care physician shortage between 42,600 and 121,300 physicians and approximately 89% of all APRNs are prepared in primary care (AANP, 2020), are more likely to practice in urban settings, and more likely to provide care to vulnerable uninsured/underinsured populations (Kaiser, 2015).

In like manner, public health emergencies appear to have a greater impact on medically vulnerable populations and rural and remote regions (HRSA, 2018). As abovementioned, APRNs often provide care in these types of healthcare settings. A pandemic can pose a substantial threat to healthcare systems especially if that system is ill-equipped due to the lack of preparation. The most recent COVID-19 pandemic illustrated that operational, workforce and patient care were
greatly affected by the public health emergency. As such, health systems must institute appropriate measures on all fronts to mitigate future gaps.

The COVID-19 pandemic exposed a vital service disruption and APRNs were expected to be equipped to determine and provide appropriate guidance and resources with no formal training. Ideally APRNs should be leaders who possess appropriate emergency risk communication skills, the ability to evaluate and adjust the delivery of healthcare services, and possess, infection prevention and control knowledge. Therefore, tools and resources should be in place for the APRN, to avoid heightened levels of stress and burnout during a healthcare crisis and potentially decrease turnover potential (U.S. Department of Veteran Affairs, 2020).

If during novice APRN onboarding a health system faces an unforeseen health crisis, this can further affect role transition. With the additional burden of a universal health care emergency essential workers face heightened levels of adversity including morale, trauma, mental/physical exhaustion, and further burnout (Jain, 2020, Pearce, 2020). Additional stressors include clinicians facing resource restrictions (e.g., personal protective equipment [PPE]), unforeseen patient care emergencies and ultimately caring for the influx of patients who have encountered interrupted care of chronic conditions. This extends to addressing new and additional mental health issues. Given these specific stressors, appropriate emergency preparedness training and resources should be incorporated during onboarding. The goal of this DNP project was to create and implement a sustainable, culturally competent, evidence-based, mentored, onboarding program for novice APRNs in an FQHC urban health center. Furthermore, it incorporated tactical onboarding initiatives for emergency preparedness related to healthcare emergencies, specifically epidemic/pandemics scenarios.
Significance

Recruiting and onboarding workers, especially APRNs, physician assistant/associates and physicians may cost organizations 100% of the yearly pay for that clinician (Cascio, 2006). The Society for Human Resource Management (SHRM) estimated costs for APRN replacement can range between 50%-60% of an employee’s salary with overall costs surpassing that percentage three-fold (SHRM, 2020). Consequently, healthcare facilities can lose $5.2 million to $8.1 million annually from nursing turnover (University of New Mexico, 2016).

Through the Affordable Care Act (ACA), previously uninsured Americans have obtained health insurance, thereby dramatically increasing the volume of patients needing care (Flinter, 2011; Hart et al., 2016; Hicks et al., 2017; Norwick, 2016); thus, the healthcare workforce must be redesigned in order to care for the surge of newly insured patients. With the shortage of physician primary care providers, APRNs compensate by filling this widening labor gap to provide patients with high quality health care (Norwick, 2016). A robust body of literature implies that the APRN profession is an integral part of the current health system. Nationally, there are 3.8 million nurses, representing the largest portion of the healthcare workforce (IOM, 2010; AACN, 2020). Furthermore, there are more than 290,000 APRNs licensed in the U.S. (AACN 2020) at present. Moreover, 88% of the APRN population are prepared in primary care with approximately 70% actively practicing APRNs providing primary care (AANP, 2020).

Notably, FQHCs have increased the use of APRNs to reduce barriers in access to primary care (Xue, et al., 2018). Though the implementation of the ACA has increased access and reduced barriers to care, especially for vulnerable low-income populations (Kominski, Nonzee & Sorensen, 2017), providers are now treating an increasing number of patients with complex health needs. The ACA and Health Resources and Services Administration (HRSA) recognize this and have
invested over 65 million dollars to expand the role of APRNs in providing effective primary care by supporting the training of 900+ APRN’s (Vleet & Paradise, 2015). Currently the National Association of Community Health Centers (NACHC) strategic innovation entails recruitment and retention by way of enhancing staff training and development. The Robert Wood Foundation Campaign for Action supports transforming nursing education. Additionally, Bill S.962 reauthorized the FY2024 the Community Health Center Fund, which provides enhanced funding for community health centers and the National Health Service Corps.

Novice APRNs are expected to work autonomously, providing complex healthcare management. APRNs must be properly equipped to this responsibility. The creation of a standardized onboarding for novice APRNs can potentially improve confidence, proficiency and retention in complex health systems serving vulnerable populations.
Chapter 2

Review of the Literature

The literature review focused on the characteristics of transition-to-practice support programs, including residencies, fellowships, and onboarding experiences for novice APRNs, and the impact of these programs on APRN perceived preparedness, job satisfaction, retention, and patient outcomes. This review integrates these factors as they relate to onboarding in times of crisis such as the COVID-19 pandemic. Furthermore, this review focused on studies that have considered bridging the APRN transitional gap through formal mentorship initiatives. Of these initiatives, educational strategies, curricula, cultural competency, and tactical onboarding during a pandemic/epidemic were also examined.

Search Strategy

A search was performed using the following databases: EBSCO, CINAHL, PubMed, Cochrane Library, ProQuest, and Scopus. The following keywords/major subject heading terms were used: Advanced Practice Registered Nurse, Nurse Practitioner, APRN/NP residency, APRN/NP onboarding, APRN/NP fellowships, APRN/NP mentorship, APRN/NP perceived readiness, culturally competent APRN/NP onboarding, APRN/NP onboarding during pandemic and/or epidemic, APRN/NP simulation learning and APRN/NP transition to practice programs. Inclusion criteria were (1) English language studies conducted in the United States, (2) those that published between 1900 to 2021, (3) with Registered Nurses (RN) and Advanced Practice Registered Nurse/Nurse Practitioners. Studies of RNs were included to inform the topic of novice nurse onboarding and nurse onboarding during pandemic. Articles without a link to transition-to-practice were excluded. An initial search yielded 277 articles, of which 253 articles were excluded. The remaining 24 articles consisted of scholarly articles which included systematic reviews,
qualitative studies, longitudinal studies, integrative literature reviews, descriptive studies, content analysis and quality improvement projects. Of the 24 scholarly articles, 17 considered transition-to-practice support experience inclusive of programs, outcomes of these programs, curricula used, and analysis of nurse practitioner graduates. Two included high-fidelity simulation. Three focused on APRN postgraduate curriculums. Additionally, nine included APRN mentorship, and three included APRN onboarding, which is the integration of new employees into a new work environment and/or a new role (Barrett & Wright, 2019). Of the 24 articles used in this review none identified culturally competent APRN onboarding. There was limited data on onboarding of RN or APRN during epidemic and pandemic. See PRISMA diagram (Appendix A)

Literature Findings

Models of Transition-to-Practice

APRN TPPs can be categorized as residencies, fellowships, or mentored onboarding. APRN primary care residencies are generally one year long and include precepted and independent patient care sessions, didactics, and participation in specialty and procedural clinics. One such example is the Community Health Center, Inc. (CHCI), a large FQHC in Connecticut, and a pioneer of the APRN residency movement. This FQHC has been committed to training its APRN residents in the high-performance model of care since 2007. Per Flinter & Bamrick (2017), elements of this model include complex care management, ongoing training to address new and emerging high complexity challenges, and the art and science of performance and quality improvement, among others. CHCI is striving to create a replicable and sustainable residency model through its nationwide educational platform (e.g., the Weitzman Institute) and its clinical workforce development initiatives (Flinter & Bamrick, 2017; Flinter, 2011).
Fellowships generally focus on a specialty, such as emergency medicine or palliative care. While there are over 70+ such residencies and fellowships, they lack standardization in terms of organization, management, and structure (Martsolf et al., 2017). Furthermore, one must apply for these positions, and placement is not guaranteed. By 2025 it is anticipated there will be 244,000+ APRN’s nationwide (AANP, 2014). Hence, the current number of TPPs will not be able to accommodate the growing number of novice APRNs.

Another promising transition option is a mentored onboarding. This process involves integrating a novice APRN into the clinical workforce with access to a mentor. The mentor has a wealth of professional experience that the mentee can access in times of need (Gerhart, 2012). This dynamic can be reviewed as a mentor/mentee relationship. However, many healthcare organizations, specifically FQHCs who cater to a population at greater risk, generally have limited resources and do not implement mentored onboarding initiatives.

**Impact of Role Transition and Appropriateness of Support/Mentorship During Transition**

Transition is a life course commonality which includes moments of self-renewal and psychological growth (Bahouth et al., 2013). The transition from student to independent clinician is challenging (Flinter, 2011; Gerhart, 2012; Faraz, 2016; Hart et al., 2016, Hicks, 2019; Jackson, 2020; Park et al., 2022). Under the best of circumstances, the novice must learn to navigate appropriately through their role transition (Twine, 2017). Initially, there may be a sense of role ambiguity, as suggested by Faraz (2016). However, the novice APRNs experience is twofold, as role transition often parallels with clinical situational transition (Bahouth et al., 2013). The initial years of the novice APRNs career can affect their professional identity, sway self-confidence, hinder development in the new role, and/or influence the decision of whether to remain employed (Twine, 2017). Hicks et al. (2019) additionally noted that inappropriate transitioning can result in
novice clinicians avoiding or prematurely leaving primary care, thereby increasing turnover. Twines’ study indicates that designing pedagogy for innovative learning environments catered specifically to the novice APRN can support critical thinking, synthesis of information and facilitate healthy role transition.

A central and recurrent theme during role transition in the literature is that novice APRNs perceive themselves as initially not well prepared for the APRN role post-graduation (Hart et al., 2016; Hicks et al., 2019; Jones et al., 2015; Norwick 2016; Robeano et al., 2019; Twine, 2018; Speight et al., 2019). Hart & Bowen (2016) performed an APRN preparedness survey which found that APRNs are interested in receiving assistance through mentoring or residencies as a result of their feelings. Specifically, Hart et al. (2016) found that 53% of APRNs felt minimally to somewhat prepared post APRN education. Furthermore, 47% felt they practiced outside of their competence level during the first year as a clinician. Of note, the perceived preparedness of APRNs has not changed since the seminal study by Brower (1988) “Missing links in NP education.” Additionally, one study specified that APRNs did not feel prepared for the initial role (Jones et al., 2015), while other articles neither differentiated nor specified on initial role or concurrent APRNs roles.

However, exposure to mentorship appears to remedy this, it improves role transition and is crucial for the novice APRN. One way clinical self-confidence and competency is developed is when mentors and other significant role models, such as expert APRNs provide mentorship (Gerhart, 2012). In order for APRNs to transition successfully, formalized mentorship for the novice APRN seems essential (Flinter, 2011; Gerhart, 2012; Norwick 2016; Robeano et al., 2019; Twine, 2018; Hicks, 2019; 2019; Jackson, 2020 Park et al., 2022). Robeano et al. (2019) notes how mentorship, both formal and informal, efficaciously aids in RN to APRN role transition.
Likewise, (Gerhart, 2012; Jackson, 2020; Park et al., 2022) literature indicates novice APRN’s value mentorship. Mentorship was essential for self-affirmed confidence in clinical knowledge and competency development. Though there is empirical evidence on the significance of mentorship, more research is needed on the structure and content of successful mentoring and mentorship programs (Gerhart, 2012; Faraz, 2016; Jackson, 2020).

**Nursing Graduate Education**

In 2008 the development of the new national standards through the APRN consensus model focused on the uniformity in the regulation of APRN roles, licensure, accreditation, certification, and education. Problematic for the APRN profession, not all states have adopted the model which has not only compromised APRN educational consistency, but mobility and patients access to care. To date APRN clinical requirements may vary. At minimum students must complete 500 supervised direct patient care clinical hours. The hours are distributed to support competency development (Bray & Olson, 2009). Additionally, simulation is recommended to augment the clinical learning experiences. However, there is not a regulatory task force in place for APRN programs to vet preceptors and ensure appropriate clinical sites and validity and efficacy of clinical experiences. Though APRN programs are accredited, Bray & Olson (2009) notes there are discrepancies in family APRN program makeup and clinical expectations (e.g., programs lack validation in evidence-based research). This can result in self-perceived unpreparedness post-graduation amongst novice APRNs.

**Increasing Health Complexity**

Complex patient health and management needs are an ongoing argument for the implementation of TPPs for both RNs and APRNs (Anderson et al., 2012; Flinter, 2011; Hart et al., 2016; Hicks et al., 2018; Jones et al., 2015; Martsolf et al., 2017). For example, Hicks et al.
(2018) notes that escalating primary care challenges for APRNs include complex patient health needs. Likewise, the literature (IOM, 2010; Flinter, 2011; Martsolf et al., 2017 & Moran et al., 2017), confirms the increasing number of complex patients with access to healthcare. A central finding from Jones et al. (2015) was that novice APRNs unanimously expressed that they felt inadequately prepared for the complexity of the comorbidities experienced by the geriatric population.

**Pandemic and Tactical Onboarding Initiatives**

Though there is a paucity of literature on this topic, there are noteworthy findings. The literature appears to delineate the impact of the pandemic on nursing education, onboarding, and transition-to-practice (Crismon et al., 2021; Smith et al., 2021). For example, structural changes as they relate to clinical education. A disruption in educational partnerships amongst higher education institutions and health systems was a catalyst for the deficiency of clinical sites and preceptors during the pandemic resulting in virtual and simulation education. This modified the classroom educational experience and was viewed as a barrier and perpetuated the perceived skills gap for students transitioning into the profession (Crismon et al., 2021).

Post-graduation system-related stressors (e.g., licensing delays and early-stage disordered onboarding) were added stressors and impacted nursing transition (Crismon et al., 2021). In some instances, onboarding and transitional challenges intensified once hired new graduates had to assimilate to the profession with evolving health system policies and procedures, increased workloads, less on-the-job training, and increased risk for COVID-19 exposure (Crismon et al., 2021). It is unsure if those mentioned above will have long-term effects on the nursing workforce, though nursing resiliency has been noted and further studies are warranted (Crismon et al., 2021).
The themes noted with Smith and colleagues (2021) results involved nurses feeling overwhelmed and worried they would practice in an unsafe manner. Additionally, the fear of taking on the professional role autonomously post modified curriculum. The literature appears to be congruent to the non-pandemic APRN workforce with the need for a supportive learning environment during role transition to increase nurse confidence in fulfilling their clinician role. Undoubtedly further research is recommended on the impact of COVID-19 on novice nurses in their clinical experiences, competency, and confidence (Smith et al., 2021).

**Barriers to Implementation**

Several barriers to TPP implementation exist, despite the fact that NAM, HRSA, and the principles of the ACA encourage nursing, federal, and accrediting organizations to standardize such programs (IOM, 2010; Cosme, 2015; Hicks et al., 2019). Barriers include the lack of approval and consensus among professional and credentialing entities & stakeholders (e.g., American Association of Nurse Practitioners (AANP), boards of directors, executive leadership teams, clinical leadership, and key operational departments), and clinical and budgetary resource limitations (Gerhart, 2012; Flinter & Bamrick, 2017; AANP, 2019). The AANP opposes mandated residency and fellowships as a condition of licensure and notes concern about these initiatives delaying patient access to care (AANP, 2019). Conversely and despite the opposition, the American Nurses Credentialing Center (ANCC) has accredited both RN and APRN TPPs, thereby solidifying their stance and justifying the need (Cosme, 2015). Moreover, the National Nurse Practitioner Residency & Fellowship Consortium offers program accreditation for post graduate APRN training programs and has received federal recognition as an accrediting agency by the United States Department of Education (NNPRFTC, 2021).
Budgetary barriers are also noted in the literature; Norwick (2016) concluded fiscal/monetary resources have been one of the biggest challenges with the implementation of an APRN residency. As such, the article notes that productivity of the APRN residents scantily counterbalances the cost of the nonproductive preceptor (Norwick, 2016), putting forth that there exists a cost to dedicated preceptors-lost revenue. Conversely, should an organization oppose a TPP because of financial implications, it might be noted that APRN turnover costs can exceed that of implementation costs. Essentially, if this turnover is theoretically related to the lack of transitional support. Anderson (2012) indicated the benefit associated with the elimination of costs related to nurse turnover rates, RN replacement, and recruitment. Van Camp and colleagues (2017) also recognized the high costs associated with new graduate nurse turnover as a catalyst for the implementation of nurse residency programs nationwide. Articles discussing the specific cost/benefits analysis for APRNs were not found in the literature.

To offset the costs there are now grant funding opportunities in place to support transitional programs. In 2019, HRSA rolled out a transition-to-practice application grant. The initiative entitled, “Advanced Nursing Education-Nurse Practitioner Residency Program” (ANE-NPR) focuses on novice APRNs and Nurse Midwives preparation in primary care practice. Residencies are completed in community-based settings through clinical and academic focused initiatives for a 12-month duration. HRSA awarded 36 grants to healthcare facilities in 24 states in June 2019 (HRSA, 2019). The goal was to increase primary care providers in community-based settings (HRSA, 2019). Furthermore, there was a preference for projects that benefit rural or underserved populations (HRSA, 2019). Between 2019 and 2020, HRSA funded a total of 25 ANE-NPR grants valued at over 25 million dollars. Though this is an excellent first step, more financing is required
to accommodate the growing APRN profession. Moreover, additional grant funding is not guaranteed. To ensure the demand can be met additional grant funding will need to be allocated.

**Lack of Consistency in TPP Structure and Evaluation**

The currently available 70+ TPPs lack consistency and standardization in organizational management, structure, and evaluation. There is variation in the naming (e.g., residency vs fellowship) of primary care residencies and curriculum content (e.g., learning outcomes, competencies, didactics, and length of the programs) (Anderson et al., 2012; Hicks, 2018). All include a formalized mentorship, yet there is no standardized implementation of this role. Inconsistencies in the above-mentioned facets of TPPs can compromise validity and rigor of such programs. Lack of standardization may be detrimental to a profession that has historically received considerable criticism from other professions in the medical community. As per Hain & Fleck (2014) “some physician professional organizations believe APRNs are incapable of providing quality, safe care at the same level as physicians” (Hain et al., 2014, p. 24). The continued questioning of APRN legitimacy by non-supportive colleagues is damaging to the novice APRN psyche and implicates the need for standardized TPPs (Brown & Olshansky, 1997).

**Goals & Positive Outcomes**

According to Flinter and colleague (2017), the APRN residency was created for the evolving APRN workforce as a quality improvement initiative, with the goal to create an individualized and highly structured, ‘ramp up’ for APRNs (Flinter et al., 2017; Flinter, 2011). The initiation of these programs was a response to the apparent need for postgraduate training and improved access to care for patients. Though transition support was a high priority in the literature, other organizational goals in creating transition-to-practice programs focused on recruitment and
retention opportunities (Norwick, 2016). HRSA’s goal is to increase APRN primary care providers in community-based settings (HRSA, 2019).

Positive outcomes of TPP’s implementation include the likelihood of long-term retention of high performing providers, provider diversity, and increased patient access which results in program attractiveness to medical and operational leadership (Robeano et al., 2019) - outcomes that align with the NAMS 2020 report. Furthermore, job satisfaction is associated with APRN transition program completion, an especially positive outcome (Bush & Lowery, 2016; Barrett & Wright, 2019; Robeano et al., 2019; Park et al., 2021). Both Barrett & Wright (2019) and Robeano (2019) found that APRNs perception of being supported better prepared APRNs, and consequently increased their confidence post onboarding. Moreover, providers felt fulfilled, which in turn improved job satisfaction. Robeano (2019), further notes that successful onboarding was measured by being able to retain high performing providers long-term, which improved patient access to care. A 2016 study yielded APRN postgraduate education had a statistically significant positive impact on job satisfaction (Bush & Lowery, 2016). Likewise, a 2021 qualitative study noted primary care APRNs who partook in a TPP had increased odds of being satisfied with their primary care position than those not having completed one (Park et al., 2021). No negative impacts or consequences of program participation were identified.

**Strengths & Limitations of Literature**

Noteworthy strengths in the literature cited here include clear identification of the aims in the abstract/introduction, and a logical congruence between the stated problems and methods used in each article. In the studies, data was appropriately managed and analyzed to ensure that the findings were credible; indeed, they appeared to be.
Despite these strengths, there exists glaring gaps and limitations in the literature. Only three articles on formalized onboarding and no literature on formalized onboarding versus residency or culturally competent APRN onboarding. Only two articles exist on nurse onboarding during pandemic. This is likely controversial given the profound effect this currently has on the healthcare infrastructure. Furthermore, there was no literature specifically on novice APRN onboarding with the inclusion of emergency preparedness tactics or organizational onboarding literature during epidemic/pandemic.

The lack of culturally integrating competence into onboarding programs for APRNs is noteworthy. Research indicates patients may feel increased comfort in healthcare settings where providers share and/or understand their cultural characteristics (Terlizzi, Connor, Zelaya, Ji, & Bakos, 2019). Moreover, there is a correlation with racial and ethnic disparities resulting in poorer health and higher mortality rates among minority groups (Terlizzi, et al., 2019). It should be noted that one factor that may contribute to disparities is the lack of diversity in the healthcare workforce (Terlizzi, et al., 2019).

A trend in the studies was the use of surveys for evaluation purposes; though important, this usage of self-report measures may be viewed as a weakness because surveys are prone to researcher error, recall bias, and socially desirable responding. Moreover, several studies focused on the survey assertions instead of information derived from empirical evidence. Furthermore, the studies’ small samples may have limited generalizability and validity of the findings, and the data does not appear to have been saturated in the qualitative studies. Lastly, there was no empirical data on transition-to-practice program impact on patients. See evidence matrix (Appendix B)
Summary of the Literature

It appears that researchers are starting to pay increasing attention to, and provide support for, TPPs, their curriculums, and their overall impact. There is an established need for best practices and guidelines in bridging the transition gap for novice APRNs, which appears crucial to the future and direction of postgraduate APRN preparation. Appropriate transition-to-practice support can have a deep-rooted impact on novice APRNs; however, subsequent studies are needed specifically on the impact of onboarding mentorship, standardization of transition-to-practice programs, patient outcomes and costs and benefits analysis of APRNs, tactical onboarding during pandemic, and APRN specific organizational readiness plans to name a few. Furthermore, literature on the effects of culturally competent onboarding would be of great value.

The literature reflects that the mentored APRN experience can increase novice APRNs’ perceived preparedness, perceived competency, retention, decrease turnover, and provide safe and effective quality care. Moreover, healthcare systems would benefit greatly by implementing these initiatives with respect to provider shortages and decreased patient care access. However, subsequent resources/studies are necessary.
Project Model

The Plan Do Study Act (PDSA) model was foundational to this project (Coury, et al. 2017). This four-step management method is a standard quality-improvement (QI) process (Coury, et al. 2017). This process guides the onboarding project development, implementation, and evaluation into the complex environment of an FQHC urban healthcare system (Coury, et al. 2017). The PDSA cycle in this research setting provides structure for the core onboarding team and focuses on continuous improvement initiatives throughout the life of the program with recommendations for the future. Ideally, its metrics promote the personal and professional development of the novice APRN to competent, resulting in positive outcomes. The application of the model is outlined below. (See Appendix C)

**PDSA model as it relates to this DNP Project**

**Plan**
- Problem/change identification
- Goal and aims development
- Engagement
  - Who: Recruit stakeholders (e.g., novice APRNs, mentors [expert APRNs], FQHC leadership [BOD])
  - What: Adapted curriculum to current orientation and modified as needed (HR orientation, Mentorship [mentor/mentee outline webinars], developed onboarding checklist, mentorship tool kit, surveys, identified roles/responsibilities, created a timeline (e.g., via gantt chart), incorporated pandemic and cultural competence content
  - Where: An urban FQHC health center in the Bronx
  - When: Launch date October 14th, 2021
- Examined FQHC onboarding (e.g., SWOT analysis)
- Developed survey with predictions based on objectives and problem statement

**Do**
- Completed onboarding initiative
  - Commence HR orientation, implemented curriculum and mentorship program
- Collected data
  - Occurrences of mentor/novice clinicians surveys
  - Reviewed initiatives (pro’s & con’s; which need refinement to reach the intended outcomes).
Study
- Data collection and analysis of surveys and initiatives (pre/post)

Act
- Strategic planning for further improvement
- Shared findings internally with the goal to present externally at similar organizations
- Revised/modified curriculum/plan based on project findings and to scale
- Submitted report findings to leadership and made recommendations for scaling and sustainability
Supporting Theoretical Frameworks

Two supporting theoretical frameworks supported the onboarding curriculum. The Limbo to Legitimacy framework focused on the novice’s evolving personal development during transition throughout the first year following graduation (Brown & Olshansky, 1997). This process was divided into four categories termed laying the foundation, launching, meeting the challenge, and broadening the perspective, and includes additional subcategories (Brown & Olshansky, 1997).

A second developmental model for the primary care clinician termed From Novice to Expert focused on professional development in the workplace, and included fundamentals of reflective practice, leadership, continuous learning and depicted the stages of clinical competence (e.g., novice, advanced beginner, competent, proficient, expert) (Benner, 1986). In this context the theories were contingent upon one another. Novice APRNs experience personal role transition that often parallels with clinical situational transition (Bahouth et al., 2013). (See Appendix C)

Project Goal and Aims

The goal of this DNP project was to create and implement a sustainable, culturally competent, evidence-based onboarding program for novice APRNs in a FQHC urban health center. Furthermore, it incorporated tactical onboarding initiatives for emergency preparedness related to healthcare emergencies, specifically epidemic/pandemic scenarios.

The project aims were:

1. To develop an onboarding process for novice APRNs who are entering their initial APRN role at a FQHC urban health center in the Bronx, NY using a formal mentorship experience with an expert clinician.
2. To implement and evaluate the onboarding process.
3. To make recommendations for scaling sustainability of the protocol throughout the organization and similar FQHC organizations.
Chapter 3

Methods

This quality improvement, early phase program development project developed and implemented a replicable and sustainable, evidence based, TPP for novice APRNs in an urban, FQHC. The iterative nature of this project included a mentored, structured pathway for a duration of three months. This pathway filled a gap in the need for a structured transition during APRN onboarding.

Project Goal and Aims

The goal of this DNP project was to create and implement a sustainable, culturally competent, evidence-based, mentored, onboarding program for novice APRNs in an FQHC urban health center. Furthermore, it incorporated tactical onboarding initiatives specific to the epidemic/pandemic for health care emergency preparedness. The intent was to adapt the curriculum to respond to the contemporary workplace. This DNP project will inform broader efforts as it will be scaled up and modified in future applications.

The project aims were:

1. To develop an onboarding process for novice APRNs who are entering their initial APRN role at a FQHC urban health center in the Bronx, NY using a formal mentorship experience with an expert clinician.

2. To implement and evaluate the onboarding process.

3. To make recommendations for scaling and sustainability of the protocol throughout the organization and similar FQHC organizations.
Aim 1

To develop an onboarding process for novice APRNs who are entering their initial APRN role at a FQHC urban health center in the Bronx, NY using a formal mentorship experience with an expert clinician.

- A search was conducted with consultation from a Yale librarian. The electronic search strategy was performed in January 2019 and repeated in 2021 and used multiple databases including EBSCO, CINAHL, PubMed, Cochrane Library, ProQuest, and Scopus. Specific keywords and major subject heading terms (MeSH) included Advanced Practice Registered Nurse, Nurse Practitioner, APRN/NP residency, APRN/NP onboarding, APRN/NP fellowships, APRN/NP mentorship, APRN/NP perceived readiness, culturally competent Nurse Practitioner onboarding, APRN simulation learning and APRN transition-to-practice programs. Articles that did not include a link to TPP were excluded. A flowchart and synthesis of all evidence was compiled. (See Appendix B) A literature grouping matrix was created to extract and summarize common themes. Once elements were identified, they were placed into the following categories: impact of role transition and appropriateness of support/mentoring during transition. Review of the current APRN models to transition processes examined goal and objectives as well as structure and curriculum content.

- Targeted Meetings with Stakeholders- Information was also gathered from Human Resources (HR) who provided the FQHC’s current APRN onboarding protocols. The Chief Medical Officer (CMO) provided feedback on the current onboarding process, the clinical content, and her perceptions of APRN work performance post
onboarding, specifically that of novice APRNs as reported to her by the Medical Directors.

- Next, a team was developed with FQHC executive members’ support. A transition-to-practice taskforce was formed. The executive stakeholders included the CMO and Family Medicine Director. The roles and responsibilities of the task force were delineated and included a Team Leader/Project Manager (DNP student), Senior Agency Collaborator (CMO), Sponsor (Family Medicine Director), and two APRN mentors. Additional mentors were to be identified as the project progressed.

- Clinicians were recruited as mentors and presenters for didactic modules. They were informed of the DNP project in person or via telephone conversations. Clinicians were informed that mentors must have expert clinician status (e.g., an APRN with five or more years of clinical experience). Indeed, expert mentors are vital and central to the effectiveness of the revised APRN TPP. The DNP student specified that the ideal mentor is one whose peers and supervisors viewed as possessing comprehensive clinical knowledge and who conducted themselves with professionalism and possessed nursing leadership skill sets. Mentors’ most recent supervisorial reviews must have yielded favorable remarks by the Medical Director—namely, meeting, or above expectations. Additionally, Benner’s Model (From Novice to Expert) was employed to assess and stage prospective mentors’ clinical competence (Benner, 1984). This model focuses on professional development in the workplace and depicts the stages of clinical competence (e.g., novice, advanced beginner, competent, proficient, expert) (Benner, 1986). To identify appropriate candidates, the CMO and Medical Directors were asked to
recommend APRNs who they perceived as experts and champion mentors. Five possible mentors were then contacted via email and asked if they would be interested in the role. Two mentors agreed.

- Curriculum development began with baseline data assessing current APRN workforce experiences. Interviews and Qualtrics surveys were completed and distributed to the current APRN workforce within the FQHC clinic. These included: (1) needs assessment survey, (2) onboarding survey, and (3) satisfaction survey. The surveys were online-accessible via Qualtrics (2020) software. A secure link to the online survey was included in the recruitment email. Content analysis was employed via a descriptive qualitative approach.

- The length of employment, age, ethnicity, and gender varied amongst the surveyors. The goal was to construct a plan to address the gaps in the APRN onboarding process by gathering baseline data on those who completed the previous protocol. A total of thirteen APRNs completed the surveys. Simple content analysis was employed to extract data from questionnaire surveys and interviews. Questions were both open and closed ended.

- All participants (N=13) noted that their current job was their first one post-graduation, therefore remembering their novice experiences. Post onboarding 76% of respondents felt somewhat prepared and 100% felt it was imperative to have access to a mentor. Additionally, 53% of the respondents had a partly positive onboarding experience, and 30% of respondents had a negative onboarding experience. (See Figure 3) The APRN satisfaction survey revealed that 62% were slightly satisfied with their role as an APRN with their current employer. Moreover,
54% felt slightly satisfied with their career progress, and 54% were dissatisfied (slightly, moderately, or extremely) with their current workload. Another survey noted that a majority of respondents regularly consulted with a more experienced clinician. (See Figure 2) Qualitative methodology extracted data using telephonic and in person one-to-one conversations about the APRNs onboarding experiences. The self-perception themes included: (See Figure 2)

1. Perception of role ambiguity.
2. Feeling ill-equipped or unprepared during medically complex patient encounters.
3. Lacking autonomy in a complex clinical setting.
4. Lacking various site-specific learning needs that were not addressed during onboarding. (complex medical care, clinic systems, procedures, etc.)

Overarching themes included the importance of mentorship and the need for continuous educational materials. All participants noted that they would have been interested in completing a postgraduate transition-to-practice program at the FQHC clinic. Many participants reported that they might have felt more confident and more autonomous as clinicians during their transitional period if they had received additional structured on-the-job training or education. Additionally, respondents noted a variety of emotions about the onboarding process including feeling overwhelmed, dissatisfied and having experienced resentment. Of the seven questions in the needs assessment, one included “What were your past needs as a new APRN hire and current needs? Please elaborate.” This revealed the FQHC did
not have a standardized onboarding approach. After a two day all staff HR orientation, additional onboarding varied by designated site and supervisor. Furthermore, APRNs expressed that electronic medical record (EMR) training did not address their perceived charting and billing needs. Likewise, APRNs reported lacking access to a mentor and noted they would have preferred to have had a proficient/expert clinician available for regular consultation. The data was analyzed, and conclusions were drawn to determine the strengths and weaknesses of the existing APRN onboarding, and the additional unmet needs as viewed by the APRN workforce. The survey results allowed the DNP student to refine and develop an enhanced onboarding protocol draft.

- The curriculum was drafted iteratively, by using this information in addition to the Azara Data Reporting and Visualization System (DRVS) dashboard as employed at the urban healthcare center. The Director of Performance Improvement and Quality assurance at the Bronx urban health center was contacted via email and asked to assist with data retrieval using the Azara DRVS, a centralized data reporting and analytics solution for community health centers. The dashboard is intended to improve the quality and efficiency of health care delivery through actionable data. It is presently used at more than 380 health centers in 31 states (Azara, 2020), and it pulls data from: (1) the eClinicalWorks (ECW) electronic health record (EHR), (2) a claims database with submissions for billing to the managed care organization, and (3) a health information exchange via Bronx Regional Health Information Organization (RHIO). Additionally, the dashboard tracks specific populations of patients based on type of chronic disease, age/gender,
and/or advanced filter preferences such as payer, co-morbidities, or health disparities. Azara is also used to track and follow-up with patients after they are admitted or discharged from acute care facilities. For the current project, it was used to extrapolate data on the most prevalent diagnosis in order to develop curriculum content. Thereafter, the DNP student developed and adapted an APRN onboarding checklist, mentorship tool kit, and onboarding process timeline.

- Supplemental data and exemplars were adapted. One being the CHCI residency model which includes continuous training with access to continuity planned care, team-based care, prevention-focused care, and use of data & technology. The DNP student also completed the 2018-2019 CHCI and Weitzman Institute's National Training and Technical Assistance Partnership (NTTAP) on Clinical Workforce Development, a six-month participatory experience focusing on postgraduate APRN residencies and is designed to provide knowledge, tools and coaching support to help health centers implement residency programs. It included:

1. Video conference learning sessions and coaching sessions with primary care teams from across the country.
2. Quality improvement training.
3. Ongoing mentoring from coaches in the organization.
4. Technical assistance.
5. Access to web-based tools.

The DNP student also utilized CHCI's "Training the Next Generation: Residency and Fellowship Program for Nurse Practitioners." This book included
implementation strategies, a 12-month curriculum sample, and content mapping resources.

- Eight expert/advisory panelists were recruited, and five completed the validation tool. The other three never responded. These individuals were accomplished clinicians and educators in their respective professions. Of the five, two were Physicians (one in internal medicine and one in family medicine), two were adult/geriatric APRNs (one with an Advanced Holistic Nursing Specialty and the other with a Doctor of Nursing Practice degree), and the final expert was a Registered Nurse with a Doctor of Philosophy and Associate Vice President for Academic Affairs at a State University. Content validation was completed by said expert panel using a content validation questionnaire (Lazenby, Dixon, Coviello and McCorkle, 2014). Instructions with a complete program summary and the questionnaires were emailed to the five experts. Each expert was sent two questionnaires pertaining to the (1) design and (2) curriculum. They were asked to rate the (1) APRN resource manuals, (2) clinical education handouts, (3) competency rubrics, and (4) APRN preparedness survey of the program. Following each rating was a comments section for the reviewers to annotate additional feedback. Content validation was completed by using a content validation questionnaire. All categories scored above .78 for relevance and above .90 for importance. No second round of review was necessary. For this project, relevance standards were determined by Polit, and colleagues’ recommendations and scores were computed by averaging results across items (Polit, Beck and Owen, 2007). The level of agreement was greater than chance (Lazenby et al., 2014). (See Table
3) One expert recommended reformatting and rephrasing some sections of the document. Otherwise, design and content were agreed upon unanimously. Although the experts' assessments were utilized to determine the validity of each design component, the annotated feedback was valuable and was incorporated into the curriculum. Overall, the experts agreed that all aspects of the curriculum should be kept, and the curriculum design content reflects their position.

- Finally, the processes and curriculum were modified to reflect and adapt to current clinical and novice clinician needs and include didactics on contemporary issues. These included topics on cultural competency, social determinants of health, and emergency preparedness. The didactics were scheduled once a week in addition to specialty rotations (e.g., podiatry, optometry, HIV etc.) and procedure clinics. Educational delivery methods were finalized and included hybrid delivery of both remote and in person. It was planned that the APRN would undergo competency-based training, with the goal that she would demonstrate acquisition of the identified essential knowledge, skills, and outlooks expected of her at the FQHC. The TPP included self-assessments of the APRN, mentor assessments of the APRN and didactic presenter assessments at regular intervals. The draft curriculum was reviewed by the CMO, Family Medicine Director and both agreed on the relevance of didactic topics, journal articles, procedure clinics and processes.

- The 13-week onboarding content and processes were divided per week with specified direct and indirect clinical education. The TPP was also based on the resources and needs of the organization and included novice clinician autonomous clinical care by way of a ramp up schedule with unlimited access to the expert
mentor. The ramp up schedule was planned with a gradual increase in scheduled patients and expected APRN performance. The novice clinician would not inherit a large patient panel on day one. As stated above, weekly didactics were supplemented with mentorship and specialty rotations, procedure clinic, self-paced modules, readings, professional development opportunities, interprofessional collaboration with colleagues, access to digital reference tools and monthly chart reviews.

**Aim 2: To implement and evaluate the onboarding process**

- A survey was developed for new hires at the urban health center during the months of July and August 2021 to determine who was interested in participating. Inclusion criteria included American Nurses Credentialing Center (ANCC) or American Association of Nurse Practitioners (AANP) board certification and having been hired less than 6 months post-graduation. The DNP student specifically aimed to recruit 3-7 APRNs who graduated in May 2021 and who had been recently hired. One APRN fit inclusion criteria and provided informed consent and was scheduled to start the mentored onboarding pending CMO approval.

- The novice clinician was assigned to a practice site and a mentor. Post HR orientation and in preparation for it, the novice clinician received a mentorship handout in a welcome packet. The handout provided an overview of the mentored onboarding.

- Following the two-day HR orientation, the novice clinician started a portion of the onboarding by way of instruction in the use of an electronic medical record (EMR) orientation catered to providers, shadowing and patient panel ramp up. The 13-
week transition-to-practice hybrid curriculum and mentorship program did not go live until October 14, 2021, three months after the APRN already started. This was when the initial TPP introductory meeting led by the DNP student in which the mentored onboarding experience and expectations were discussed. For this DNP project, mentorship was defined as a relationship in which a more experienced or more knowledgeable and expert clinician (mentor) provides guidance (via in person and virtual correspondence) to a less experienced APRN (novice clinician) for a duration of three months. The partnership focused on the learning and development of the novice APRN. This mentored onboarding process was not intended to reeducate the novice APRN on content that was learned during her graduate education. Post graduate APRNs are prepared for entry-level practice, as well as licensure and certification. Rather, it was intended to empower her to apply the subject matter she learned and build on her clinical skills.

- The schedule and content for the curriculum is provided in Tables 2 and 3.

**Evaluation:**

The evaluation of the mentorship program included the use of pre and post program surveys as well as a clinical competency evaluation via domain rubric clinical metrics. Both the mentor and APRN completed all competency evaluations. The surveys included questions on APRN knowledge, skills development, perceived competence, autonomy readiness, and nursing leadership. Furthermore, qualitative questions on program feasibility, success and challenges were included in the post program interview. Due to a small sample size, analysis included descriptive statistics with the examination of pre-post trends as well as content analysis.
Aim 3. To make recommendations for scaling and sustainability of the protocol throughout the organization, similar FQHC organizations and to disseminate.

- For scalability, the DNP student aims to present the project findings to NACHC with recommendations for further modification and adoption of the program at other community health centers.
- The sustainability plan included the submission of report findings post-implementation to the CMO and Family Medicine Director. The DNP student made recommendations for sustainability throughout the organization. Moreover, plans for strategic planning meetings, with stakeholder involvement, for further improvement initiatives and modifications of the current program within the organization are pending.

Dissemination:

The DNP student will also submit a revised project paper as per journal standards to the Journal of Nursing Education, and apply to present at the NACHC Community Health Institute Annual Conference.
The Business Case

The business case for this project was supported via an evaluation of the return on investment (ROI). The DNP project recommends a mentored onboarding experience for all novice APRNs entering the FQHC workforce. An expert mentor provides direct clinical guidance through the life of the onboarding process. The novice APRN will also complete an onboarding curriculum. Implementation of the program included hybrid training at no cost. The DNP scholar leveraged internal and external clinicians. The specialty preceptors were recruited similarly and are employed by the FQHC. The mentored onboarding was implemented during work hours and initially assumed costs related to decreased novice APRN productivity. However, the project sponsor (Family Medical Director) was placed in the clinic to absorb the novice APRNs patients. As such, there was no loss of revenue due to lost productivity.

This DNP project serves as a novel TPP with the intent to retain novice APRNs in medically complex FQHCs. The literature notes there is a high cost to provider burnout. Poor transition can result in heightened stress levels and increased potential for burnout. Consequently, high APRN turnover rates come at considerable cost to agencies and threaten patient care access. A total direct turnover cost for a single APRN is approximately $114,919 (Sullivan, 2020). However, indirect costs include loss of productivity, vacancy length, provider overtime pay, etc. As such, replacing an APRN has an estimated overall cost of $103,000 - $320,000 (Barret, 2019). Health systems that implement appropriate TPPs engage and retain APRNs. These programs mitigate the negative impact of turnover, including turnover costs, recruitment/training costs, a decrease in access to care, and an increased workload for the clinical team members due to vacancy (Barret, 2019). Implementing a TPP in an FQHC and retaining the APRN can result in a total direct benefit of $915,656 in year one, followed by $1,220,518 in year two, inclusive of productivity,
appropriate EMR billing, and expedited note lock times. Indirect benefits include provider satisfaction and retention intention.

Implications

Noteworthy findings of the literature include role ambiguity and APRN perceived lack of preparedness for autonomous practice (Gerhardt, 2012; Faraz, 2016; Jackson, 2020; Hart et al., 2016; Hicks et al., 2019; Jones et al., 2015; Norwick, 2016; Robeano et al., 2019; Twine, 2018; Speight et al., 2019, Flinter, 2011). Furthermore, multiple articles (Brower, 1988; Hart et al., 2016; Jones et al., 2015) make note of the preference of post graduate APRNs to participate in residencies/fellowships. Moreover, varying structures and inconsistencies of APRN formal education exist. This is also true with residency/fellowship programs. Literature suggests several areas where APRNs educational programs need to be strengthened. Another noteworthy finding was the arbitrary data on APRN vetting for institutional clinical preceptorship during formal training.

Though the AANP opposes mandated residency and fellowships, as a condition of licensure for APRNs, there is no opposition to a structured TPP such as the one proposed. Indeed, the DNP project presented an innovative solution to several of the perceived problems. Furthermore, there is a supposed need for structure during the role transition as there are gaps within formal training and onboarding of APRNs. These gaps must be addressed by way of a structured pathway that is viable, replicable, and sustainable. This project has the potential to address the needs of novice APRNs as well as the needs of organizational entities for a proficient APRN workforce, APRN recruitment, attrition, and retention in a medically complex health system.
Statement Related to Human Subjects

The Yale University IRB guidelines deemed this project as Quality Improvement. There was minimal to no risk to participant.
Leadership Immersion

This DNP project related to leadership immersion by improving APRN onboarding quality in the community clinic sector. Implementation and dissemination of this project addressed significant APRN educational and clinical practice concerns as well as organizational concerns related to recruitment, retention, attrition, and employee satisfaction and engagement. The DNP project is also related to leadership immersion as nursing is a constantly changing and dynamic field within the community health system and will need to adapt to the current environment of racial injustice awareness and needs for, at a minimum, of basic cultural/structural competence, social determinants of health competence and increased awareness of global health concerns that are expressed through pandemics. Moreover, this project translated evidence-based research into the design and evaluation of a novel TPP.

- As part of the required leadership immersion experience associated with this DNP project, collaboration among the DNP student, advisors and various organizational leadership occurred and was significant because it can enrich the nursing profession and can be a the catalyst for the implementation of improved health systems. Several meetings were pre-arranged with advisors, organizational leaders, current APRN workforce and new hired APRNs to discuss APRN formal education, postgraduate education, gaps in education, and APRN perceived needs.

- As part of implementing this project, the leadership immersion included meetings with clinical experts on design, content, and curriculum. The use of an expert panel was based on faculty recommendations. Meetings with stakeholders (CMO & medical directors) prior to going live and once implemented to ensure engagement, and monthly emails regarding current onboarding status were submitted to the
CMO and Family Medicine Director. These emails contained onboarding milestones and progress. In addition, monthly face-to-face meetings with the CMO were scheduled to elicit real-time feedback during the transition. These meetings provided an update on the program, allowed for a review of new policies or procedures, and provided a forum for engagement in dialogue on challenges and successes.
Chapter 4

Results

This DNP project featured the development of a transition-to-practice program (TPP) inclusive of an expert validated and evidence-based curriculum for novice APRN(s) in an FQHC setting. This chapter reviews the results of the project.

Implementation

All the FQHC APRN new hires were surveyed about their interest in partaking in the onboarding at the urban health center. One candidate fit all inclusion criteria: American Nurses Credentialing Center (ANCC) or American Association of Nurse Practitioners (AANP) board certification, and employment as an APRN for less than six months post-graduation. The candidate was approved by the CMO. On October 14, 2021, the TPP onboarding went live. The onboarding consisted of three months. Each week the novice clinician had four mentored full (8 hours) autonomous clinical days. One half-day (4 hours) of a specialty rotation and one-half day (4 hours) of didactics.

The DNP student, with in-depth experience of structured TPPs at FQHC sites, previously having been a Nurse Practitioner Resident during a 12-month residency, led the project. The DNP student’s role included the creation, adaption, and coordination of all aspects of the TPP program, including leading all project initiatives. This included a literature review, curriculum development, PowerPoint presentations, clinician pre/post surveys, designing case studies, grading rubrics, provided resource handouts, and development of content modules. Additional responsibilities included the procurement and meeting with presenters, expert clinicians, preceptors for specialty rotations, stakeholders, external experts, and booking conference rooms & equipment. The DNP student facilitated outreach and communication among internal and external networks.
continuously. The DNP student was employed at the urban healthcare facility as a Family Nurse Practitioner during the project. The duration of project development began September 1, 2020, through January 14, 2022.

**Evaluation**

The initial transition to practice task force consisted of a Team Leader/Project Manager (DNP student), Senior Agency Collaborator (CMO), Sponsor (Family Medicine Director), and two APRN mentors. Due to the FQHC operational demands, two APRN mentors could not commit to the project. As a result, the Family Medical Director assumed the role of the mentor. Though the novice clinician was not on the team, she could network with a variety of primary care and specialty clinicians within the network. Moreover, she had direct access to all presenters and preceptors, including the CMO. This access was intended to promote a sense of belonging and convey the team’s investment in her. No additional mentors were identified as the project progressed. Though the intent was to have the roles and responsibilities divided among the task force members, the DNP student assumed the majority of the project responsibilities.

Program goals and objectives were met. Data noted improved APRN perceived competency and confidence. During the onboarding, the initiatives were produced with appropriate use of resources and novice APRN and DNP student staff time. The value and benefit of the onboarding exceeded the cost of the production of the onboarding-no financial implications. While there was an initial presumed decrease in productivity for the novice clinician, there will be a return on investment to retain the novice clinician due to appropriate role attainment. The progress of set goals and objectives was shown to be related to the program instead of any other educational initiatives that the novice clinician partook in throughout the onboarding.
Pre-Post Onboarding Survey

Design: The pre-post onboarding survey questions evaluated the instructional intervention's impact. The intent was to capture the APRNs perceptions of knowledge acquisition, impact on future clinical decision making, retention intention, and satisfaction.

Summary of Responses:

Overall, the self-assessment APRN preparedness survey and competency rubric yielded promising results with a median one-point increase on specific competencies. (See Figure 1 and Table 4) Furthermore, the mentor's competency scores improved throughout the three months. (See Table 4)

Of note, discrepancies existed between the novice clinician’s perceived competency and the mentors. For example, during the first month in the TPP competency rubric the novice clinician rated herself as a 4 (able to perform without supervision) in care for acute illnesses, chronic disease and health maintenance needs using evidence-based guidelines. The mentor scored her as a 3 (needs supervision periodically). These ratings provided opportunities for open dialogue amongst the two clinicians and had the potential to improve overall outcomes. Additionally, on the APRN TPP evaluation tool the mentor described the APRNs level of performance as competent in all the following domains:

1. Management of patient health/illness status
2. Nurse Practitioner/patient relationship
3. Teaching-coaching functions
4. Professional role
5. Managing and negotiating health care delivery systems
6. Monitoring and ensuring the quality of healthcare practice
7. Culturally sensitive care

Elements drawn from the APRN debriefing interview included: (See Figure 3)

1. Greater feelings of safety in providing patient care.

2. Increased confidence.

3. Feeling invested in by the FQHC and being a part of a community.

4. Retention intention.

Dissemination

Findings of the DNP project were presented to leadership post completion including reports to the CMO and Family Medicine Director. Recommendations for sustainability throughout the organization were made. Strategic planning meetings are on hold due to organizational priorities. Scaling of the DNP project is underway. The DNP student completed outreach to NACHC, requesting a project presentation at the annual conference with further modification and adoption recommendations at other community health centers. A revised project paper is being submitted to the Journal of Nursing Education.
Chapter 5

Discussion

The aims of this quality improvement project were achieved. This project developed a successful and replicable structured onboarding for novice clinician(s) in an FQHC setting based on literature review, interviews/surveys of the current APRN workforce, and validation of contents by a panel of experts. The literature review identified many barriers novice APRNs experience during role transition and potential solutions. The results of the project surveys also paralleled the results of seminal surveys in the literature as they pertain to APRNs role transition and TPPs.

Strengths

This project utilized a literature review, interviews, and surveys of the current APRN workforce and an expert panel to validate the evidence for inclusion of information in this curriculum. Furthermore, the data were systematically analyzed to extract the most relevant and meaningful elements in the curriculum. All surveys provided an opportunity for the participants to add additional comments to clarify and extract further data. This was supplemented with personal interviews. The interviews were designed to elicit detailed information about the onboarding processes and curriculum initiatives; they were not response limited and provided further elaboration about their perspectives. At no cost, the DNP student leveraged partnerships with out-of-network organizations to provide didactic learning modules and shadowing clinical experiences.

An additional strength is the multifactorial transitions throughout the life of the program. The novice APRN was able to transition into her role as an autonomous clinician. Additionally, the onboarding consisted of a transitional period for the patient panel ramp-up. The novice clinician was not expected to practice to standard (care for three-four patients per hour). Instead,
the novice clinician was ramped up each month. At the start of the ramp-up, the novice clinician was expected to see one patient during an hour block, but by the completion of the onboarding, the expectation was three patients per hour block. This helped limit the cost to the institution while the novice gained real world experience and confidence. Additionally, the novice clinician was paid the market rate APRN salary. Her salary was not adjusted as is the salary of APRNs who complete residencies and fellowships. This surely is a strength and something that would improve future recruitment outcomes while meeting the financial needs of the APRN. Lastly, the curriculum is adaptable and replicable.

Another strength was that the APRN was Latina and bilingual in English and Spanish. She is equipped with cultural insight when delivering culturally competent care and communicating with the Latino population, which is more than half of the FQHCs patient population. It is assumed the APRNs lived experience of understanding the customs and preferences of Latinos facilitated the tailoring of health education to improve their health outcomes.

**Limitations**

In evaluating the project, several areas for improvement were noted. The novice clinician had already been practicing when she was approved to partake in the program. She had previously undergone the standard orientation, mentor shadowing and ramp up. After having practiced autonomously for three months she started the didactic/specialty sessions. This is a limitation because she did not complete the program as it had been intended.

The small sample size lessens conclusive results. Furthermore, the characteristics of the sample may not generalize to other samples. The use of convenience sampling was used for the surveys. Though the data collection can be facilitated in a short duration of time and was cost-effective to implement, it is less than optimal. An alternative is purposive sampling. This technique
could have been employed to allow the DNP student to make generalizations from the sample that was being studied. Furthermore, self-report measures may be a weakness because surveys are prone to recall bias and socially desirable responding. Additionally, it significantly lowers the validity of the study.

Another limitation was the duration of the program and time for recruitment. More novice participants with small group learning would encourage skill and knowledge development with informal peer support. While three months is appropriate for standard onboarding, 6-12 months would be more desirable for this program structure. Most residential programs are 1-2 years. The program could also be expanded to include other specialties often seen in FQHCs, such as psychiatric/mental health or women’s health.

Another limitation was the inability to schedule all specialty didactics as planned. Although several specialty clinicians agreed to participate, several key in-network clinicians opted out of participating (e.g., cardiologist, neurologist & gastroenterologist). This limited the novice clinician's exposure and potential learning related to those specialties. In order to mitigate future occurrences, the organization's culture should be a multi-professional team teaching health facility. The expectation can be set during the hiring process or during the annual evaluation and contractual renewal processes.

Incentives for mentors and preceptors are another strategy. APRNs, physician assistants/associates, physicians, specialty clinicians, and administrative support are facilitators to successful program implementation. Notwithstanding these limitations, this study remains valuable. Undoubtedly, more extensive confirmatory studies are needed.
**Policy Implications**

Although mounting evidence suggests the APRN role transition presents a myriad of challenges, APRN TPPs are not standardized or mandatory. The NACHCs view and support of training is noted but specifically for APRN TPPs is unclear. The inclusion of section 5316 in HR 3590 (the Patient Protection and Affordable Care Act of 2010) authorized HRSA to create a three year demonstration project funding training programs for Family Nurse Practitioners in FQHCs. In June 2019, HRSA awarded 36 grants to entities in 24 states to increase primary care providers in community-based settings. The grant funding initiative focused on the Advanced Nursing Education Nurse Practitioner Residency (ANE-NPR) Program. Moreover, the Committee on the Robert Wood Johnson Foundation Initiative on the Future of Nursing and NAM are proponents for residency training programs for novice APRNs.

**Clinical Practice**

There is an evident demand and clinical necessity to prepare novice APRNs to care for the clinically complex, multi-problem, and often undifferentiated patients challenged by social determinates of health. This DNP Project was a three month full-time paid position. The novice APRN was assigned a dedicated expert mentor and was educated about continuity of care and practice management in the FQHC urban healthcare setting. Autonomous clinic patient panel ramp up provided the novice APRN with additional time to access patients, research, and formulate appropriate clinical plans. The expert mentor was readily available to field questions from the APRN about medically complex cases.

During the three month TPP, the novice APRNs primary care assignment was integrated with weekly didactics and participation in various specialty rotations such as optometry, HIV care and podiatry. The immersive curriculum included online advanced learning modules, procedural
training, and educational assignments. Post onboarding survey/interview findings suggest the onboarding curriculum enhanced clinical competency. Moreover, the training impacted clinical practice in many ways. The novice APRN reported improved note lock times (e.g., same day vs. 2-3 days), lessened encounter times (e.g., 10-15 minutes versus 20+), increased productivity (e.g., 15-18 patients vs. 10 patients), and intention to remain at the FQHC for a longer duration as previously perceived. Overall, the additional clinical training provided an opportunity for skill acquisition and helped prepare the novice APRN to better manage a patient population with complex health issues.

This DNP project offers a viable option to implement structured onboarding within each FQHC health system. FQHCs and look-a-likes can ally to create internal or federal funding to operationalize the APRN TPPs and attain optimal program standardization. Creating a standardized framework of a phased transition into the FQHC will facilitate the career change process. FQHCs can implement standardized onboarding curricula through a highly structured evidence-based transition experience anchored on the APRN role requirements. They can offer mentorship and support for novice APRNs achievement of competence, confidence, and mastery in all domains of primary care, and propel and cultivate the APRN’s leadership role in the FQHC.

**Further Work**

The literature note’s role ambiguity and novice APRN perceived lack of preparedness and perceived skills gap problems for autonomous practice. Furthermore, it confirms APRNs interest in participating in TPPs, if offered the opportunity to do so. Presently, most employers cannot offer on-the-job training due to fiscal, time, and resource constraints. The assumption is most novice APRNs entering the FQHC workforce are unable to receive structured mentorship and support unless they apply and are accepted into a residency/fellowship.
Further work on, and implementation of structured TPP onboarding has the potential to remedy this issue. FQHCs can complete preliminary research and start incorporating this project's method of structured onboarding. Steady integration of these TPPs in FQHCs can prepare APRNs in complex healthcare management, especially with vulnerable populations. This will leverage APRN academic excellence initiatives to improve long-term FQHC patient access and outcomes.

Supplementary action can be undertaken and should include strategies to limit time and resource constraints. Long-term retention outcomes as they pertain to a structured mentored onboarding pathway versus traditional APRN FQHC onboarding are important areas of interest. Lastly, assessment of the optimal length of onboarding program time is warranted.

**Recommendations**

Recommendations within the DNP student’s FQHC health system are to continue to strategize to improve current curricula, start onboarding post two-day HR orientation and lengthen the duration of the onboarding. Curricula revisions should be considered each year to remain relevant and responsive to the current state of health care. Suggested topics after the implementation of this project include telehealth and nursing self-care. Telehealth has been shown to increase access to care for many and has remained a viable option in care delivery. Preventing burnout and increasing nurse resiliency is a national issue reflective of our current practice climate and relates directly to the concern for retaining the needed workforce.

As per interview findings, a 6–12-month onboarding would be of value. Another recommendation is to create a dedicated onboarding team to sustain the program. A qualified interdisciplinary team that shares the unique onboarding vision. For a program of this magnitude to be sustainable, the implementation of a team with dedicated roles is warranted. A full-time practicing clinician cannot take on the full responsibility of this onboarding initiative.
Furthermore, buy-in from organizational departments is needed and important to bolster the program, and grant funding would be ideal to effectively allocate the needed staff and resources.

Future novice APRN hires should sign contractually binding agreements to remain working at the organization post onboarding for a designated period of time. This strategy improves retention and helps limit costs to the institution while providing the organization a good return on investment over time. A fiscal strategy to defray some cost of decreased productivity can be the decrease in salary during the duration of the onboarding.

On a broader scale, the initial recommendation is to build and seek NACHCs support to replicate and disseminate the onboarding model. FQHC organizations can optimize their recruitment and retention strategies by adopting a structured onboarding process for novice APRNs. A highly structured evidence-based curriculum with a transition experience inclusive of mentorship and support for the novice APRNs achievement of competence, confidence, and mastery in all domains of primary care is optimal and makes good business and healthcare sense.

This TPP model focused on core distinctive clinical specialization and restructured the transition from novice to advanced beginner/competent clinician in an FQHC. It allows the APRN to meet the challenge by increasing competence and gaining confidence. This model will result in expanding quality primary care for underserved and special populations and contributes to primary care clinical workforce development in FQHCs.

**Conclusion**

Drivers of NAM’s 2010 and 2020 report “The Future of Nursing: Leading Change, Advancing Health & Charting a Path to Achieve Health Equity” and a greater focus on health system reform, focusing on primary, preventative, and value-based care, has catapulted growing appreciation of the role of APRNs and the need to leverage their skills. It is essential to boost
APRN confidence during role attainment, lessen their susceptibility to negative role transition, both catalysts in providing safe, evidence-based, high-quality care. Implementation of the TPP onboarding program included structures and processes of evidence-based nursing strategies for effective integration of knowledge, skill development, and retention.

Furthermore, due to the pandemic, regulatory and policy changes have advanced and expanded the APRN scope of practice. This upskilling and expansion require appropriate APRN role attainment. Moreover, the pandemic exposed several underlying issues about health disparities among marginalized populations and the well-being of the nursing workforce. It highlighted social determinants of health and health disparities due to the poor outcomes. Likewise, the pandemic crisis heightened nursing attrition, burnout, and moral injury due to the lack of organizational emergency preparation. Clinicians are increasingly important in developing cultural competency and health emergency preparedness and response, particularly in light of the COVID-19 pandemic.

The current state of the health system cannot afford to lose an already compromised APRN workforce, especially in FQHCs that cater to this patient population with social determinants of health. The stressors related to inadequate role attainment can have lasting implications. Those stressors coupled with pandemic stressors can lead to burnout and moral injury resulting in APRNs opting to distance themselves from the FQHC primary care setting.

This DNP project can be one of the many post-pandemic strategies implemented to improve APRN retention in FQHC settings. Being adequately assimilated to the APRN workforce as an autonomous clinician through structured onboarding is an FQHC recruitment and retention tool. Now more than ever, appropriate APRN role transition attainment is crucial. FQHCs should
impose structured onboarding measures for novice APRNs to increase APRN competency, APRN satisfaction, improved patient outcomes, and APRN retainment.

This onboarding model promises to educate novice APRNs entering the FQHC workforce to a primary care model consistent with the patient centered medical home and in alignment with FQHC models. It promises to be a solution to appropriate APRN role attainment and can be applied to all settings across the primary care sector, with some individualization based on organizational needs. This program is a fraction of the duration of a standard APRN postgraduate residency; it is cost-effective and has the potential for increased APRN satisfaction, perceived competency/confidence, and return on investment. APRN leaders, innovators, and visionaries can advocate for a formal transition program in their organizations. This will recruit APRN candidates, improve primary care retention at an FQHC, and ensure optimal patient care outcomes.
References


Fillable Plan Do Study Act (PDSA) Tool for Health Care Quality Improvement (QI).

Flinter, M., (2011) "From New Nurse Practitioner to Primary Care Provider: Bridging the Transition through FQHC-Based Residency Training" OJIN: The Online Journal of Issues in Nursing Vol. 17 No. 1.


and Transition into Practice. The Journal for Nurse Practitioners, 12 (8), 545-551. doi: https://doi.org/10.1016/j.nurpra.2016.04.018.


Jackson, D., Bradbury-Jones, C., Baptiste, D., Gelling, L., Morin, K., Nebville, S., & Smith, G.D.


Messina, B. A. M., PhD, Rn, & Anp. (-1, November 30). Impact of job satisfaction and turnover


*OCEBM Table of Evidence Working Group=Jeremy Howick, Iain Chalmers (James Lind Library), Paul Glasziou, Trish Greenhalgh, Carl Heneghan, Alessandro Liberati, Ivan Moschetti, Bob Phillips, Hazel Thorton, Olive Goddard and Mary Hodgkinson


Peniston, K. K., Swett, L., & McKoy, A. (2019). Four key concepts of transition to practice for


Van Camp, J. & Chappy, S. (2017). The Effectiveness of Nurse Residency Programs on


Appendix A

Records identified through EBSCO database searching (n = 277)

Additional records identified through other sources (n = 7)

Records after duplicates removed (n = 173)

Records screened (n = 100)

Records excluded (n = 47)

Full-text articles assessed for relevance (n = 53)

Studies included in ROL (n = 24)

Studies included in matrix (n = 24)

Appendix B

Project Models


Theoretical Model

### Table 1

Workforce Program Surveys

**APRN Needs Survey**

<table>
<thead>
<tr>
<th>Please take a moment to answer the survey questions. The survey is anonymous.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Is this your first NP position post-graduation?</td>
</tr>
<tr>
<td>Yes ☐</td>
</tr>
<tr>
<td>In your opinion how prepared were you to start working as an autonomous clinician post MHHC onboarding?</td>
</tr>
<tr>
<td>Prepared ☐</td>
</tr>
<tr>
<td>In your opinion, how important is it for a new NP hire at MHHC to have access to a mentor?</td>
</tr>
<tr>
<td>Extremely Important ☐</td>
</tr>
<tr>
<td>Slightly Important ☐</td>
</tr>
<tr>
<td>Do you currently have a mentor for clinical consults?</td>
</tr>
<tr>
<td>Yes ☐</td>
</tr>
<tr>
<td>How often do you consult with a more experienced clinician?</td>
</tr>
<tr>
<td>Always ☐</td>
</tr>
<tr>
<td>Sometimes ☐</td>
</tr>
<tr>
<td>Can you suggest any additional education that would have been beneficial during your onboarding?</td>
</tr>
<tr>
<td>Please Annotate ☐</td>
</tr>
<tr>
<td>What are your past needs as a new NP hire and current needs? Please elaborate.</td>
</tr>
<tr>
<td>Please annotate ☐</td>
</tr>
</tbody>
</table>

We thank you for your time spent taking this survey.
Onboarding Survey

Please take a moment to answer the survey questions. The survey is anonymous.

<table>
<thead>
<tr>
<th>Question</th>
<th>Yes</th>
<th>Partly</th>
<th>No</th>
</tr>
</thead>
<tbody>
<tr>
<td>Did you have a positive experience during your NP onboarding?</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Did you feel welcomed during your NP onboarding process?</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Did you feel deeply invested in as a new hire during your NP onboarding?</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Did you have the tools and resources needed to complete your job during your NP onboarding?</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>During your NP onboarding, were you integrated and taught about MHHC’s processes, policies, and structure?</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>What critical gaps exist within the MHHC onboarding process?</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>How can MHHC improve the onboarding process?</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Additional Feedback (Optional)</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

We thank you for your time spent taking this survey.
Satisfaction survey

Please complete the anonymous survey.

The purpose of this survey is to collect feedback on your satisfaction as a NP at MHHC.

It will take only 3 to 4 minutes. Your feedback will be used to help us improve employee experiences.

<table>
<thead>
<tr>
<th>How satisfied or dissatisfied are you with your ability to do interesting work in your NP role?</th>
</tr>
</thead>
<tbody>
<tr>
<td>Extremely Satisfied</td>
</tr>
<tr>
<td>Neither Satisfied or Dissatisfied</td>
</tr>
<tr>
<td>Moderately Dissatisfied</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>How satisfied or dissatisfied are you with your ability to learn new skills and apply them in this role?</th>
</tr>
</thead>
<tbody>
<tr>
<td>Extremely Satisfied</td>
</tr>
<tr>
<td>Neither Satisfied or Dissatisfied</td>
</tr>
<tr>
<td>Moderately Dissatisfied</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>How satisfied or dissatisfied are you with your current workload?</th>
</tr>
</thead>
<tbody>
<tr>
<td>Extremely Satisfied</td>
</tr>
<tr>
<td>Neither Satisfied or Dissatisfied</td>
</tr>
<tr>
<td>Moderately Dissatisfied</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>How satisfied or dissatisfied are you with your opportunities for career progression?</th>
</tr>
</thead>
<tbody>
<tr>
<td>Extremely Satisfied</td>
</tr>
<tr>
<td>Neither Satisfied or Dissatisfied</td>
</tr>
<tr>
<td>Moderately Dissatisfied</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>How satisfied or dissatisfied are you with the physical environment at your workplace?</th>
</tr>
</thead>
<tbody>
<tr>
<td>Extremely Satisfied</td>
</tr>
<tr>
<td>Neither Satisfied or Dissatisfied</td>
</tr>
<tr>
<td>Moderately Dissatisfied</td>
</tr>
<tr>
<td>How satisfied or dissatisfied are you with your relationship with your supervisor?</td>
</tr>
<tr>
<td>----------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>Extremely Satisfied ○          Moderately Satisfied ○          Slightly Satisfied ○</td>
</tr>
<tr>
<td>Neither Satisfied or Dissatisfied ○          Slightly Dissatisfied ○</td>
</tr>
<tr>
<td>Moderately Dissatisfied ○          Extremely Dissatisfied ○</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Overall, how satisfied, or dissatisfied are you as a NP at MHHC?</th>
</tr>
</thead>
<tbody>
<tr>
<td>Extremely Satisfied ○          Moderately Satisfied ○          Slightly Satisfied ○</td>
</tr>
<tr>
<td>Neither Satisfied or Dissatisfied ○          Slightly Dissatisfied ○</td>
</tr>
<tr>
<td>Moderately Dissatisfied ○          Extremely Dissatisfied ○</td>
</tr>
</tbody>
</table>

We thank you for your time spent taking this survey.
Table 2

Program Schedule

<table>
<thead>
<tr>
<th>Monday</th>
<th>Tuesday</th>
<th>Wednesday</th>
<th>Thursday</th>
<th>Friday</th>
</tr>
</thead>
<tbody>
<tr>
<td>8:30am-12:00pm Specialty Rotation</td>
<td>9:00am-5:00pm Autonomous Clinic</td>
<td>9:00am-5:00pm Autonomous Clinic</td>
<td>8:00am-12:00pm Didactics 1:00pm-5:00pm Autonomous Clinic</td>
<td>9:00am-5:00pm Autonomous Clinic</td>
</tr>
</tbody>
</table>
### Table 3

Expert Panel Validation Questionnaire Results

#### Design of Onboarding

<table>
<thead>
<tr>
<th>Inclusion of category into program</th>
<th>Percentage (1=100% respondents agreed important element to include, 0.67=67% of respondents agreed important to include)</th>
<th>Percentage (1=100% respondents agreed important element to include, 0.67=67% of respondents agreed important to include)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mentored Clinic</td>
<td>1</td>
<td>100%</td>
</tr>
<tr>
<td>Autonomous Clinic</td>
<td>1</td>
<td>100%</td>
</tr>
<tr>
<td>Specialty Rotations</td>
<td>1</td>
<td>100%</td>
</tr>
<tr>
<td>Indirect Clinical Activities</td>
<td>1</td>
<td>100%</td>
</tr>
<tr>
<td>Remote Modules with Q&amp;A</td>
<td>1</td>
<td>100%</td>
</tr>
<tr>
<td>Clinical Education Handouts</td>
<td>1</td>
<td>100%</td>
</tr>
<tr>
<td>APRN Transition to Practice Program Evaluation Tools</td>
<td>1</td>
<td>100%</td>
</tr>
</tbody>
</table>

#### Didactics of Onboarding

<table>
<thead>
<tr>
<th>Inclusion of category into program</th>
<th>Percentage (1=100% respondents agreed important element to include, 0.67=67% of respondents agreed important to include)</th>
<th>Percentage (1=100% respondents agreed important element to include, 0.67=67% of respondents agreed important to include)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Didactic Topics</td>
<td></td>
<td></td>
</tr>
<tr>
<td>History of the Community Health Center and Nurse Practitioner Movement</td>
<td>1</td>
<td>100%</td>
</tr>
<tr>
<td>Focused History, Interviewing, and Documenting</td>
<td>1</td>
<td>100%</td>
</tr>
<tr>
<td>Presenting a Case to Your Preceptor—Best Practices</td>
<td>1</td>
<td>100%</td>
</tr>
<tr>
<td>Laboratory Tests: Selecting, ordering, and interpreting</td>
<td>1</td>
<td>100%</td>
</tr>
<tr>
<td>Diagnostic Imaging</td>
<td>1</td>
<td>100%</td>
</tr>
<tr>
<td>Performing Annual &amp; Pre-Op Physicals</td>
<td>1</td>
<td>100%</td>
</tr>
<tr>
<td>Immunizations of Children and Adults: Typical and Atypical</td>
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<td>100%</td>
</tr>
<tr>
<td>Topic</td>
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<td>100%</td>
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<tr>
<td>----------------------------------------------------------------------</td>
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</tr>
<tr>
<td>Anemia</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>EKG Interpretation</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Diabetes Type II: Screening, Assessment, Diagnosis, Management, and Patient Education</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Initiating Medication &amp; Insulin in the Diabetic Patient</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Pain Management: Pharmacologic and Non-pharmacologic Approaches</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Prescribing Opioids for Complex Patients in Community Health and Primary Care</td>
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</tr>
<tr>
<td>Pediatric &amp; Adult Asthma: Assessment, Diagnosis, Management and Patient/Family Education</td>
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<td></td>
</tr>
<tr>
<td>Contraception: Contraceptive Methods and Options</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Sexually Transmitted Disease: Screening, Assessment, Diagnosis, Management, and Patient Education</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Pediatric Growth and Development: Screening, Assessment, Identification, and Referral &amp; Obesity/Hyperlipidemia</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Anxiety and Depression: Screening, Assessment, Diagnosis, Management, and Patient Education</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Interpreting Pap Smears and Managing Abnormal Results</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>HIV/AIDS: Overview, Prevention, Screening, Testing</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>HIV/AIDS: Pharmacologic Management in Primary Care</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Hepatitis C: Screening, Assessment, Management, Patient Education</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Hypothyroidism</td>
<td>1</td>
<td></td>
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<tr>
<td>COPD</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Hypertension</td>
<td>1</td>
<td></td>
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<tr>
<td>Hyperlipidemia</td>
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<td></td>
</tr>
<tr>
<td>Geriatric Care</td>
<td>1</td>
<td>100%</td>
</tr>
<tr>
<td>--------------------------------------------------------------------------------</td>
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</tr>
<tr>
<td><strong>Procedure Clinic</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Nexplanon training</td>
<td>1</td>
<td>100%</td>
</tr>
<tr>
<td>Long-Acting Reversible Contraception</td>
<td>1</td>
<td>100%</td>
</tr>
<tr>
<td>Suturing: Simple closure</td>
<td>1</td>
<td>100%</td>
</tr>
<tr>
<td>Punch biopsy</td>
<td>1</td>
<td>100%</td>
</tr>
<tr>
<td>Incision &amp; Drainage</td>
<td>1</td>
<td>100%</td>
</tr>
<tr>
<td>Endometrial Biopsy and Endocervical Curettage</td>
<td>1</td>
<td>100%</td>
</tr>
<tr>
<td><strong>Case Presentations</strong></td>
<td>1</td>
<td>100%</td>
</tr>
<tr>
<td><strong>Remote Modules with Q &amp; A</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Interprofessional Care and Collaborative Practice</td>
<td>1</td>
<td>100%</td>
</tr>
<tr>
<td>Nursing Leadership</td>
<td>1</td>
<td>100%</td>
</tr>
<tr>
<td>Professional Development and Leadership/Policy Training</td>
<td>1</td>
<td>100%</td>
</tr>
<tr>
<td>Culturally Competent Healthcare</td>
<td>1</td>
<td>100%</td>
</tr>
<tr>
<td>Managing Difficult Patient Encounters/Resources</td>
<td>1</td>
<td>100%</td>
</tr>
<tr>
<td><strong>Clinical Education Handouts:</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Chronic Heart Failure Assessment, Diagnosis, Management, and Patient Education</td>
<td>1</td>
<td>100%</td>
</tr>
<tr>
<td>Chronic Kidney Disease: Assessment, Diagnosis, Management, and Patient Education</td>
<td>1</td>
<td>100%</td>
</tr>
<tr>
<td>Fatty Liver Disease: Assessment, Diagnosis, Management, and Patient Education</td>
<td>1</td>
<td>100%</td>
</tr>
<tr>
<td>Osteoporosis &amp; Arthritis</td>
<td>1</td>
<td>100%</td>
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**Comments:**
As per expert recommendations additional educational efforts that pertain to role attainment. Inclusive of EMR documentation, appropriate use of clinical resources for evidence-based practice and clinical decision-making. 

**Content validity index (CVI)**
Table 4
Competency Rubric Results

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works effectively with the healthcare team, other healthcare providers and acts in a consultative role when needed

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Figure 1

APRN Preparedness Survey Grouped Results

APRN Preparedness Survey \( N=1 \)

- COVID Clinical Management
- Emergency Preparedness in a Clinical Setting
- Cultural Competency
- Clinical Competency
- Procedures

Pre-Curriculum vs. Post-Curriculum
Figure 2

APRN Workforce Needs Assessment Survey & Self Perception Themes

Education that would be beneficial during onboarding?
- Provider Specific EMR Training
- Complex Chronic Care Management
- Organizational Policies & Processes
- Procedures

What were your needs as a novice APRN?
- Mentorship
- Didactics
- Continuous Educational Resources
- Additional Structured on the Job Training
Workforce Self-Perception Themes as a Novice APRN

- Perception of Role Ambiguity
- Feeling Ill Equipped
- Lacking Autonomy in Complex Clinical Settings
- Site Specific Learning Not Addressed
Figure 3

Post Survey

APRN Onboarding Survey
Current APRN Workforce N=13

- Positive onboarding experience
- Felt welcomed during onboarding
- Felt deeply invested in during onboarding
- Had tools and resources needed to complete the job during onboarding
- Integrated and taught about the urban health centers processes, policies and structure

APRN Onboarding Survey
Novice Clinician N=1

- Positive onboarding experience
- Felt welcomed during onboarding
- Felt deeply invested in during onboarding
- Had tools and resources needed to complete the job during onboarding
- Integrated and taught about the urban health centers processes, policies and structure
Satisfaction Survey
Current APRN Workforce N=13

1. How satisfied or dissatisfied are you with your ability to do interesting work in your NP role?
2. How satisfied or dissatisfied are you with your ability to learn new skills and apply them in this role?
3. How satisfied or dissatisfied are you with your current workload?
4. How satisfied or dissatisfied are you with your opportunities for career progression?
5. How satisfied or dissatisfied are you with the physical environment at your workplace?
6. How satisfied or dissatisfied are you with your relationship with your supervisor?
7. Overall, how satisfied or dissatisfied are you as an APRN at MHHC?

Satisfaction Survey
Novice Clinician N=1

1. How satisfied or dissatisfied are you with your ability to do interesting work in your NP role?
2. How satisfied or dissatisfied are you with your ability to learn new skills and apply them in this role?
3. How satisfied or dissatisfied are you with your current workload?
4. How satisfied or dissatisfied are you with your opportunities for career progression?
5. How satisfied or dissatisfied are you with the physical environment at your workplace?
6. How satisfied or dissatisfied are you with your relationship with your supervisor?
7. Overall, how satisfied or dissatisfied are you as a APRN at MHHC?
Figure 4

Interview Themes

Post-Onboarding Interview Elements

- Decreased Patient Encounter Times
- Improved Note Lock Times
- Improved Perceived Competency
- Improved Confidence
- Providing Safe Clinical Care
- Retention Intention