

Analysis of Current Post Graduate Nurse Practitioner Residency Programs

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Abstract

As Nurse Practitioners are gradually gaining full practice authority throughout the nation, the IOM (2010) Future of Nursing Report implored governing bodies to support the institution of post graduate Nurse Practitioner (NP) residency programs to ease the practice transition of new graduates. In an effort to fulfill the IOMs call for NP residency programs, the Health Resources and Services Administration (HRSA) has been actively providing grants to aide with their implementation. The National Nurse Practitioner Residency & Fellowship Training Consortium (NNPRFTC) and the American Nurses Credentialing Center (ANCC) are currently the leading NP residency accrediting organizations in the nation. However, these national accrediting agencies are currently not accredited themselves. Furthermore, while the IOM (2010) advised the institution of NP residency programs, there are currently no formal requirements for new graduate NPs to enroll in residency training. Moreover, there is no standardized curriculum in place for programs to emulate. Feedback that was elicited from the NP community, has revealed perceived areas of academic and clinical deficiencies that were not met during their graduate studies. When reflecting on the history of the nursing profession, there lacks the presence of one united voice as evidenced by incongruent entry into practice requirements. Identified disparities in curricula should be scrutinized to develop academic pillars that are fluid across all residency programs and are rooted in their identified specialty.

Analysis of Current Post Graduate Nurse Practitioner Residency Programs

As healthcare continues to revolutionize patient care delivery, the metamorphosis of the NP role has unabatingly risen to the challenge. The NP is equipped to diagnose and treat a myriad of health conditions which include, but are not limited to ordering and interpreting diagnostic testing, prescribing, and educating their patients across various health care settings using a holistic approach (AANP, n.d.). With the advent of the Affordable Care Act, the patient landscape has continued to evolve and grow in complexity. As many NPs are gaining full practice authority, the associated burden of this tremendous responsibility weighs heavily on the NP community. Recognizing this shift in practice authority, the IOM (2010) Future of Nursing Report implored governing bodies to support the institution of post graduate NP residency programs to ease the practice transition of new NPs. Since this groundbreaking report, NP residency programs have been steadily gaining attention throughout the nation. As their development continues to evolve, the need for standardization of curriculum remains a priority. While many NP residency programs align their program of study with lead nursing organizations and The Doctor of Nurse Practitioner (DNP)/The Masters of Science in Nursing (MSN) Essentials, there lacks uniformity and metrics to measure their effectiveness. While accrediting organizations serve to evaluate programmatic efficiency, further development is needed. In essence, new NPs must be furnished with the resources needed to serve the nation's underserved, rural and specialty care populations to the best of their ability.

Background & Significance

As the role of the NP continues to evolve, the complexity of the patient population for which they care for is undoubtedly following suit. This is especially relevant as it relates to NP's caring for rural, underserved and specialty care patient populations. The transition to practice can

be daunting for new graduate NPs entering into these unique patient care areas that require a unique skill set that may not have been appreciated during their graduate studies. The concept of NP residency programs has been steadily gaining momentum to account for this obligatory learning curve. As NPs continue to gain autonomy with many states furnishing NPs to exercise full practice authority, the utilization of NP residency programs is making its way to the foreground. In order to gain further perspective, it is critical to reflect on past successes to gain the needed momentum to move towards the future. The concept of nurse residency programs initially gained its footing to increase retention of new graduate Registered Nurses (RNs) with a documented 17.5% of nurses resigning in their first year. These RN residency programs are now being utilized by over 375 hospitals and healthcare institutions throughout the United States. Furthermore, RN residency programs demonstrate retention rates 10% above the national average as well as enhanced care delivery and overall staff development (AACN, 2018). It is postulated the NP residency programs will likely furnish similar results. While prospective employers continue to value providers with a rich clinical experience, the affiliation with a NP residency program only serves to increase one's marketability (Beauchesne, Hicks & Rico, 2018). Despite their gaining popularity, NP residency programs lack standardization with programs tailoring their own curriculum to emulate lead nursing organization standards. Ultimately, collaboration is needed at a local, state, and federal level to reach a common understanding of programmatic expectations. The attainment of a global understanding of the curricula of established NP residency programs will serve to provide the foundation on which to build a fluid educational experience for NP residency participants across the nation.

Patient Landscape. In order to gain an appreciation of the scope of the NP role, one must reflect on the rapidly evolving patient landscape. Since its inception and signing into law in

2010, the Affordable Care Act has transformed healthcare delivery. Its objective is to elevate the level of care by prioritizing quality with a focus on patient safety and cost effectiveness. This groundbreaking act is estimated to furnish over 32 million uninsured Americans (IOM, 2010). According to Flinter and Hart (2017), roughly 1,375 health care centers serve over 24.3 million underserved individuals which accounts for 1 out of every 13 people in the United States. They describe this populace as, "...disproportionately low income, members of racial and ethnic minority groups, publicly insured or underinsured and likely to be experiencing one or more chronic illnesses (p.97)." According to the IOM (2010) The Future of Nursing Report, the focus of graduate education should seek to foster a rich understanding of caring for those in underserved areas. In order to align with these goals, it is essential that new graduate NPs are equipped with the skills to meet the unique demands of this growing patient population. Additionally, NPs must encompass the skill set to manage patients at the specialty care level. Martsof, Nguyen, Freund, and Poghosyan (2017) identified that out of the 70 NP residency and fellowship programs across the US they examined, roughly 17 of these programs were rooted in specialty care areas such as cardiology and oncology. These niche patient care areas often require additional training to ensure mastery.

Provider Shortage. The projected rise of uninsured patients obtaining access to healthcare invokes a sense of urgency for providers to meet the flourishing patient demand. While the physician population has grown from 850,085 to 953,695 between 2010 to 2016, it is not increasing fast enough (Young et. al, 2016). Furthermore, the Association of American Medical Colleges (AAMC) (2018), estimates the total physician deficit will range somewhere between 42,600 and 121,300 by 2030. Of these, the primary care physician cohort will fall between 14,800 to 49,300 FTE physicians by 2030. This is gravely concerning as the population

is estimated to grow from 324 million to 359 million which is an overall increase of roughly 11%. Notably, the population comprising individuals age 65 and above will expand to 50% with the population of individuals 75 and above growing by 69% reflecting the largest growth segment. These projected numbers reflect a considerable increase in the health care needs of the nation's senior demographic. Furthermore, they highlight that if underserved populations have increased access and fewer barriers to care, these numbers have the potential to rise further. It is estimated that roughly 58 million Americans inhabit primary care Health Professional Shortage Areas (HPSAs). Within these designated locations, the distribution of primary care physicians in comparison to the community they serve does not meet federally defined standards (Paradise & Van Vleet, 2015). In stark contrast to their physician counterparts, there were roughly 229,000 Advanced Practice Registered Nurses (APRN) in 2016 which is predicted to climb to 449,000 by 2030 (AAMC, 2018). Flinter and Hart (2017) recount that in 2015 alone, 6,906 NPs collectively provided care for 27% of all patient visits in health centers. The projected surplus of NPs will undoubtedly serve to alleviate the crippling burden of the primary care physician shortage.

IOM 2010 Future of Nursing Report. Recognizing the distinctive challenges that this brings, the Affordable Care Act surmised that many health care professionals will require ongoing education. The IOM (2010) supports this sentiment conveying that health care providers will need ongoing education to quickly assimilate to their new roles as the setting and scope under which they practice continues to evolve. Furthermore, they support the initiation of residency programs with a special interest in providing funding to underserved and rural areas through HRSA. The report urges,

State boards of nursing, accrediting bodies, the federal government, and health care organizations [to] take [action] to support nurses' completion of a transition-to-practice

program (nurse residency) after they have completed a prelicensure of advanced practice degree program or when they are transitioning into new clinical practice areas (IOM, 2010 p.11).

In an effort to fulfill the IOM's call for NP residency programs, HRSA provides grants to aide with their implementation. Specifically, the Advanced Nursing Education Nurse Practitioner Residency (ANE-NPR) Program is offered to equip new primary care NPs to navigate caring for rural and underserved populations (HRSA, 2018). While they implore organizations offering residency programs to develop metrics to gauge their effectiveness, they do not speak to formulation of a standardized program model from which to emulate.

Comparison to other Disciplines. The growing demand for primary care providers coupled with NPs practicing independently will lend itself to a whole new era of primary care as the nation knows it. When drawing parallels to other disciplines at the doctoral level such as medicine, physical therapy, psychology and pharmacy, nursing remains the only cohort that does not enforce residency programs (Harper, McGuinness & Johnson, 2017). As reported by the American Association of Nurse Practitioners (2018), over 22 states allow full practice authority of NP's to prescribe and treat patients without the collaborative partnership of a physician. New Jersey remains a reduced practice state for NPs with physician collaboration mandated. While NPs are steadily gaining ground in their ability to practice to the full extent of their education, they are not being afforded the same residency education that their fellow providers are privy to. The American Association of Nurse Practitioners (AANP), Gerontological Advanced Practice Nurses Association (GAPNA), National Association of Pediatric Nurse Practitioners (NAPNAP), National Association of Nurse Practitioners in Women's Health (NPWH), and The National Organization of Nurse Practitioner Faculties (NONPF) (n.d), contend that new graduate

NPs do not require formal residency education. This determination was reached based on well documented superior patient outcomes and evidence-based research supporting the continued delivery of high-quality care provided by new graduate NPs. They argue that the term “residency” should be avoided and that “fellowship” should be used to impart that while residency is mandatory, fellowship programs are of a voluntary nature. However, they recognize the utility of residency programs for Community Health Centers and Veterans Administration health care systems. They acknowledged that the employment of fellowship programs may prove beneficial to manage the unique economic, societal and psychological co-morbidities these communities face. Over 11 states that have approved full practice authority for NPs, now require a transition phase prior to independent practice (Summers, 2016). Not surprisingly, as the landscape of care continues to change for the NP, more rigorous clinical requirements will be implemented.

Accrediting Organizations. While the IOM (2010) advised the institution of NP residency programs, there are currently no formal requirements for new NPs to enroll in residency training. The NNPRFTC and the ANCC are the leading NP residency accrediting organizations. The ANCC (n.d.) Practice Transition Accreditation Program (PTAP) for NP fellowship is currently implemented in 91 programs throughout the nation. Their focus is on several domains including: Program leadership, organizational enculturation, development and design, practice-based learning, nursing professional development, and quality outcomes. Attainment of accreditation serves to benchmark NP fellowship programs while receiving recognition for program outcomes. Nurse Practitioner Margaret Flinter led the charge, pioneering the first NP postgraduate residency program in 2007, at the Community Health Center, Inc. in Connecticut prior to release of the IOM Future of Nursing Report (Flinter & Hart, 2017). Flinter

now functions as the board chair for the NNPRFTC established in 2015. The cornerstone of their program centers around the following: clinical-based practice and patient care experiences, regularly scheduled didactic sessions, system-based learning and quality improvement, population-based health focus, and leadership and professional development (NNPRFTC, 2015). Geographically speaking, the vast majority of NP residency programs are localized in the Mid-North East, Great Lakes region and the entire West Coast but are steadily encroaching on middle America (NNPRFTC, 2018). The Association of Post Graduate APRN Programs (APGAP, n.d.) was founded in 2014 in response to the Future of Nursing IOM (2010) report. While they are not considered an accrediting organization, they support the accreditation process and act as a conduit to communicate the requisites of providers. Their mission is multifaceted with the goal to obtain standardization in programmatic development while striving for distinction as it relates to APRN post graduate education. Ultimately, they seek to promote the evolution of NP post graduate training and advocate for full practice authority.

Barriers to NP Residency Programs. Arguably, one of the most sizable barriers to NP residency programs is the inconsistent salary that is offered. Martsolf, Nguyen, Freund, and Poghosyan (2017) identified that the vast number of residency programs pay over \$60,000 with the highest reported residency salary quoted at over \$100,000. In particular, the VA Center of Excellence in Primary Care Education (CoEPCE) reports paying half the salary of a full time NP which is equivalent to their first-year physician residents. Of note, NP residents are provided with vacation and sick time as well as medical benefits (Harper, et al 2016). Acknowledging that NP residencies are not a requirement, but yet a valuable practice stepping stone, Harper et al. (2016) argues that resident salaries must be competitive to recruit reputable candidates in order to deliver quality care. Furthermore, it was appreciated that through investment of NP residency,

several graduates were recruited at the completion of the program. They found that this is ultimately a tremendous cost savings as they are, "...familiar with the system and patients, competent with the electronic health record, certified in telehealth, and know how to navigate complex patient care issues (p.428)." Ultimately, the familiarity with NPs who have completed the program ensures continuity of care while proving to be cost effective. Harper, McGuinness, and Johnson (2017) suggest that healthcare organizations invest by funding residency program participants and develop a formal contract of employment post program completion. This will ensure on return of investment with shorter orientation periods and an already established relationship with the organization and its operations.

Needs Assessment

While there remains much debate regarding the utility of NP residency programs, it is necessary to reach a consensus regarding programmatic structure. Reflecting back on the history of the NP profession, the first NP program was established in 1965 at the University of Colorado by pioneers Dr. Loretta Ford and Dr. Henry Silver. Their vision was to provide care to the underserved pediatric population via a collaborative nurse/physician partnership. Their efforts precipitated the establishment of the first national nurse practitioner organization allowing for collaboration on a national level. The National Association of Pediatric Nurse Practitioners (NAPNAP), sought to institute educational and practice standards to ensure the needs of the NP and the patient demographic for which they cared for were actualized (Duderstadt, Brady, & Jones, 2005). However, the nursing profession has remained inconsistent with its educational and entry into practice requirements. According to the American Association of Colleges of Nursing (AACN) (2017), there are currently three routes to practice as an RN which consists of a three-year diploma, a 3-year associate degree, and a four-year baccalaureate degree. The one

common denominator, is that all of the aforementioned degree paths require sitting for the National Council Licensure Examination-Registered Nurse (NCLEX-RN) examination. Furthermore, evidence has shown that Bachelor of Science in Nursing (BSN) prepared nurses demonstrate superior patient outcomes, decreased patient mortality, and the advanced skill set to formulate nursing diagnosis and interventions. These attributes, have served to prime nursing's future leaders while improving patient care delivery (AACN, 2017). Despite this, lack of uniformity resounds with educational requirements varying across the nation by state and institution alike. This inconsistency closely mimics that of NPs who can enter practice with either an MSN or DNP degree. According to NONPF (2018), the goal is to transition all entry level NPs to be doctorally prepared by the year 2025. This incongruity is also illustrated in NP practice authority privileges which vary across the nation. Furthermore, an important distinction to make is the nursing profession's lack of one united voice as compared to other disciplines. The nursing community has historically remained fragmented leading to incongruities and lack of an overall consensus. When drawing comparisons, the American Medical Association (AMA, n.d.) founded in 1847, serves as the sounding board for the medical community. Their mission statement exemplifies this by stating they are, "The voice of the American medical profession." The emulation of this sentiment translated within the NP community, would theoretically allow for a more streamlined throughput of curriculum and subsequent standardization.

When seeking the feedback of NPs currently practicing, their perceptions regarding their level of preparedness and openness to NP residency programs proves to be very insightful. In several surveys conducted to elicit such feedback, the vast majority conveyed their interest in attending a residency program if one had been accessible to them at time of graduation. Many expressed feelings of trepidation and insecurities regarding their readiness to practice. The lack

of a formal mentor during the first year of practice was also identified as a disparity amongst NP's entering into their new role (Hart, 2016; Mackay, Glynn, Mcvey, & Rissmiller, 2018). Perhaps this unequivocal shift within the nursing profession to practice at not only the highest degree possible, but with the highest available training led to the release of the IOM (2010) Future of Nursing Report. Their endorsement for post graduate training programs reflects the changing climate of patient care and the need for further education and mentoring.

When exploring the current state of NP post graduate training programs, several themes emerge. One commonality within the fabric of many programs, is their effort to align learning objectives as delineated by leading professional, education and practice nursing organizations and the DNP and MSN Essentials. While there are unifying similarities amongst programs, incongruity remains as it relates to curriculum development. The lack of standardization of NP residency programs may have a profound impact, especially as it relates to underserved, rural and specialty care areas who require providers to encompass a unique skill set. While NPs are recognized for the exemplary level of care that they provide, it is abundantly clear that they are not provided with the same level of practice preparedness as their doctoral prepared colleagues as evidenced by lack of formal post graduate residency programs. Yet as the role of the NP shifts from reduced practice authority to that of an autonomous provider, our ideals must change with it. As the population continues to grow and age, the supply of providers will be challenged to meet the growing demand. In addition to sheer volume, the acuity and chronicity of patient issues will continue to demand high quality care delivery despite lack of resources. Ultimately, this problem impacts the nation and across the healthcare spectrum. The pioneers of NP residency programs must come together to share successes, failures and areas for improvement in an effort to form a unified curriculum to ensure provider readiness with the patient at the helm.

Problem/Purpose Statement

There is a lack of consistency in post graduate NP residency programs due to absence of curriculum standardization across the nation.

Clinical Question

What are the commonalities and differences amongst current post graduate NP residency programs across that nation as it pertains to their designated structure and curriculum?

Aims & Objectives

Aim: To evaluate the curriculum of NP residency programs across the nation.

Programmatic structure will be examined as it pertains to core competencies in areas such as clinical, didactic and leadership elements. This project will reflect the need for standardization of curricula in an effort to improve NP transition to practice and health care delivery for patients in underserved, rural and specialty care areas.

Objectives:

1. To draw parallels and incongruities among NP residency program curricula.
2. To examine programmatic structure as it pertains to core competencies in areas such as clinical, didactic and leadership elements.
3. To assess incorporation of lead nursing organization programmatic learning objectives such as prescribed by the AACN DNP and/or MSN Essentials, and NONPF competency domains within the body of NP residency programs.

Review of Literature

A comprehensive literature review of articles published after 2015 was conducted by searching the following electronic databases: CINAHL, Google Scholar, MEDLINE and PubMed. Various combinations of the following terms were used: NP residency (3,464), NP

fellowship (22,767), NP post graduate training (12,963), and education. The search was narrowed down by utilizing filters and MESH terms to discern the most recent and relevant literature. Resources identified were reviewed for their cited references from which to draw further data inquiry. (See Appendix A). The Johns Hopkins Nursing Evidence-Based Appraisal Tool was used to assess the evidence level and quality of literature (Dang & Dearholt, 2018). While there appears to be unifying similarities amongst NP residency programs, there remains no clear curriculum from which to follow. Martsolf, Nguyen, Freund, and Poghosyan (2017) conducted a study exploring 70 NP residency and fellowship programs across the US to gain a better understanding of their attributes. Primary care residencies were the most prevalent at 38.2% (n=26). Seventeen of the programs were rooted in specialties, with the majority of them identifying as fellowships. Many of the programs were governed by hospitals and health systems (38.2%, n=26), as well as academic medical centers (20.6%, n=14). Of note, 26.5% (n=18) of residency programs were located in community health centers. It was distinguished that the initiation of NP residency and fellowship programs is likely a result of funding acquired through the Affordable Care Act to support community health centers and the patients they serve. They acknowledged that more research needs to be done to assess how these programs prepare new NPs to manage patients with a wide range of chronic illness in diversified patient care areas.

In order to gain perspective regarding NP residency programs' plan of study, it is essential to elicit the feedback of its participants. Brown, Poppe, Kaminetzky, Wipf and Woods (2015) highlight that a standardized program architecture is not currently in place for NP transition to practice programs. They conducted a survey at a regional residency forum in Seattle, WA with a total of 52 respondents. Participants deemed the following as non-negotiable elements of a robust transition to practice program: "(1) interprofessional training, (2) leadership/policy

component, (3) quality improvement and scholarship dimension, (4) diagnostic skill honing and special skill readiness (e.g. electrocardiogram readings), and (5) dedicated mentorship and role development (pg. 4).” Additionally, respondents voiced the need for engaged preceptors, proper funding, accreditation and need for aligning with a university to ensure program longevity and sustainability. To echo this sentiment, in addition to a formalized plan of study, it is essential to develop a common nomenclature of which to refer to these programs. Cappiello, Simmonds, and Bamrick (2018), propose using the umbrella term *postgraduate training programs* when referring to NP residency, fellowship and transition to practice programs to eliminate confusion.

While NP residencies are gaining ground, further inquiry is needed to gain an understanding of academic pillars that programs are founded on. Beauchesne, Hicks and Rico (2018) sought to delve into primary care NP residency programs to identify existing parallels and incongruities in their curriculums. Recognizing the limited data available exploring this phenomenon, data was merged to isolate the core curriculum that was reflective across all programs. They interviewed program directors who were members of the APGAP and the NNPRFTC. It was noted that no dedicated theoretical framework was utilized but many referenced the *Flinter Model* to assemble their program. They identified that curriculum learning objectives were aligned with the aforementioned nursing organizations and their prescribed educational goals. A total of 12 learning outcomes were isolated and found to be fluid between all 9 programs interviewed. A matrix was created highlighting these themes with its proposed utilization for future program development and uniformity. It was appreciated that various organizations tailor curricula to meet the needs of the providers and the populace they serve. The VA was recognized as being the most inventive with the development of a competency tool to provide a foundation for its curriculum and subsequent student appraisal. Deficiencies were

isolated as it relates to development of measurable standards to evaluate learner attainments.

Ultimately, it was hypothesized that a standardized, structured curriculum will highlight the need for post graduate residency programs while increasing funding and influencing policy change.

In order to ensure the success of any NP residency program, the formation of strong alliances must be cultivated. Harper et al. (2016) explored the utility of developing an academic partnership with the University of Alabama at Birmingham School of Nursing and the Birmingham Veterans Affairs Medical Center with a focus on a mental health NP residency. Their evaluation tool consists of nine competencies which include the following: interpersonal communication, collaboration and team work, screening and assessment, care planning and care coordination, intervention, cultural competence and adaptation, system-oriented practice, practice-based learning and quality improvement, informatics and professional development. Residents are also charged with development of a scholarly project rooted in veterans' health; many of which have gone onto publication. They believe the success of their program is rooted in a multidisciplinary team approach inclusive of academic and practice leaders and key stakeholders to ensure program viability. The NNPRFTC (2015) supports this position and encourages post-graduate training programs to collaborate with academic institutions to formulate a well-rounded curriculum, clinically engrained practice opportunities, as well as didactic exposure. It is theorized that this academic partnership will also lend itself to a fruitful source of prospective candidates to attend the residency program.

Harper et al. (2017) is in agreement with this sentiment, that academic partnerships make for a symbiotic relationship benefitting both the residency program as well as their academic affiliate. It was concluded that residencies collaborating with academic institutions will serve to establish exemplar curricula standardization and competencies rooted in evidence-based

practices. They postulate that NP residences collaborating with academic institutions will be posed to establish superior curricula standardization and competencies that are reflective of best evidence-based practices meeting accreditation standards. In order to actualize this, they contend that this change must occur within the nursing profession in order to elicit change at a policy level to allow for clarification and transparency across programs. Furthermore, they highlight the importance of establishing curricula around the DNP Essentials with an emphasis on Essential VIII. Essential VIII reflects the fluid role of the DNP and the expectation that they will embody exemplar clinical and leadership skills rooted in evidence-based practice across all specialty care areas (AACN, 2006). Ultimately, the attainment of clinical excellence founded in the NPs prospective area of specialization must become the standard. Harper et al. (2017) underscore the RAND survey and that over half of the 154 schools surveyed found there to be a deficit of clinical sites capable of fostering the desired level of clinical excellence to actualize the NP to their fullest potential. They conclude that metrics such as patient satisfaction, patient outcomes, ability to work in a multidisciplinary team and documented turnover should be used to measure NP competency upon residency completion.

In order to gain clarity and cohesiveness of NP residency programs, the integration of competency tools has shown to have lasting utility and reproducibility. Rugen, Dolansky, Dulay, King, and Harada (2018), appreciated that NP residency competency tools should be standardized in order to accurately benchmark programmatic outcomes. The need for a competency tool proved to be essential to programmatic success after the VA Office of Academic Affiliations (OAA) invested in the establishment of five VA Centers of Excellence in Primary Care Education (CoEPCE) NP residency programs. The goal was to standardize education across the spectrum for which they ultimately achieved. A wide range of specialty care rotations are

offered with a curriculum rooted in clinical, diagnostic and leadership skills. The tool was emulated to reflect the nine NONPF competency domains in addition to the eight AACN DNP essentials. Rating scales were employed to mirror entrustable professional activities (EPAs) models to gauge proficiency in skill sets. Furthermore, it utilizes qualitative feedback which thus far has been the primary means of programmatic evaluation across outside residency programs. Within the body of the tool, the following domains were created: Clinical, leadership, interprofessional team collaboration, patient centered care, shared decision making, sustained relationships, and performance improvement. Over the course of the 12-month program, it was shown that residents demonstrated improvement across all domains. Areas requiring further development were differential diagnostic skills as well as veteran specific health issues. These areas of deficiency are now being structured into their curriculum.

In addition to the VA CoEPCE NP Residency Program competency tool development, Rugen, Harada, Harrington, Dolansky, and Bowen (2018), examined the effectiveness of the program as perceived through the experiences of the NP residents themselves. Feedback was provided from 38 residents in the areas of perceived strengths, weakness and goals collected at months 1, 6 and 12 during the program. Themes developed highlighting the progression of clinical advancement beginning with perceived basic clinical skills at program onset to acquisition of complex skills and enhanced clinical reasoning needed to manage chronic diseases at programs end. Residents were most likely to identify clinical skills/competence as both an area of dominance as well as an area needed for further development. It was recognized that at this juncture, novice NPs are less likely to focus on their abilities in the domains of leadership and quality improvement until they are more established in their role. It was identified that this area needs to be further developed within the curriculum to emphasize not only clinical competency,

but also leadership and performance improvement acquisition across systems. This critical skill development will undoubtedly serve to groom the NP for a leadership role. Furthermore, residents expressed the need to improve in the domains of work-life balance and practice management skills including streamlined patient encounters and prompt documentation. The residents valued the acquisition of perceived proficiency in their role as well as their patients' and peers' perceived proficiency of them. This study serves to provide a more subjective view of the VA competency tool and captures programmatic success and areas for improvement.

Taylor, Broyhill, Burris, and Wilcox (2017) describe the experiences of Carolinas Health Care System (CHS) and their development of a robust 1- year fellowship program rooted in the need to improve recruitment, retainment, and productivity with quality care delivery as the cornerstone. It was established in 2013 and remains the largest postgraduate fellowship program recruiting 70 fellows annually over 20 specialty care tracks affiliated with the University of North Carolina at Charlotte. This partnership facilitated the development of a curriculum with a focus on practical didactics, case conferences, interprofessional education rotations, and simulation to support NP transition to practice. The program also encourages their critical care residents to take a 2-week course elective in an area they feel they need further exposure to or are of special interest to them. Furthermore, all fellows are required to participate in case study write-ups and conference presentations. They present two case study reports monthly, conducting a thorough chart review to ascertain the utilization of evidence-based guidelines that were used in the clinical decision-making process via a literature review. A quality improvement project is also required based on identified quality initiatives which are later formally presented at the Center for Advanced Practice Research and Innovation Showcase via oral and poster presentation. To foster leadership acumen, fellows are urged to participate in their professional

organizations and collaborate with leaders to acquire political advocacy skills. which is fluid across all practice areas. To incentivize retention, fellows received a sign-on bonus that was not afforded to non-fellowship hires.

While the need for NP residency programs has remained under scrutiny, the feedback from NPs in their first year of practice is telling. In an online study conducted by Hart (2016), a national survey was distributed to 51,000 members of Fitzgerald Health Education Associates. A total of 698 practicing NPs responded having graduated between 2006 and 2011. The survey sought to distinguish perceptions on clinical ability and subsequent transition into practice. This study was fueled by the lack of existing research, with Hart identifying only two published studies investigating practice preparedness. When asked, “Upon completion of your initial NP education program, how prepared were you to practice as an NP? 3.3% of the respondents described feeling “very well prepared,” 38.9% “generally well prepared.” 43.0% “somewhat prepared,” 11.1% “minimally prepared,” and 3.7% “very unprepared (pg. 547).” Specifically, the proficiency of interpreting diagnostic testing, billing and coding, management of chronic diseases as well as caring for highly complex patients was found to be most challenging to navigate for new graduate NPs. During the first year of practice, 47.7% perceived that they were practicing out of the confines of their competence level. A formal mentor was provided to 17% with 40.1% having an informal mentor and 24.3% reported having no mentor at all (pg. 547). When asked about willingness to participate in a post-graduate residency program, 58% were “extremely interested” with 32% being “somewhat interested (pg. 548).” Reflecting on this enlightening study, it is evident that the majority of NPs surveyed appreciated the utility in residency programs to ease transition into practice. The role transition from student to NP can be wrought with feelings of inadequacy, leaving the newly graduated NP contemplating their

readiness to practice. The concept of imposter phenomenon coined by psychologists Dr. Pauline Rose Clance and Dr. Suzanne Imes (1978) draws several parallels to the perceptions of new NPs and their capability to practice in their first year as an independent provider. They discovered that accomplished individuals, particularly women, feel as though their success is founded on luck and that they will ultimately be revealed to their colleagues as an imposter. This sentiment appears to be echoed by this NP cohort who expressed their trepidation upon entering their new role and their utility of residency programs to transition to practice. To measure perceived feelings of Imposter Phenomenon, Aubeeluck, Stacey, and Stupple (2016) conducted a pilot study of 27 graduate entry nursing students utilizing the Clance Imposter Phenomenon (CIPS) scale. Results concluded that 70% experienced feelings of impostorism. It was inferred that during any major role transition, feelings of inadequacy are likely to manifest until one is confident and familiar with their new role.

Mackay, Glynn, McVey, and Rissemiller (2018) conducted a survey seeking further insight into new NP's perceived knowledge deficits as well as to elicit their recommendations for future NP residency curriculum to overcome these deficiencies. A total of 159 NPs belonging to the Massachusetts Coalition of Nurse Practitioners (MCNP) were surveyed with a total of 89% expressing the perceived utility of residency programs with 80% expressing that they would have enrolled if one were available to them at time of graduation. 66% felt they had a knowledge gap and 60% a clinical skills gap. The following were identified as areas of deficiency upon transition to practice: "independent decision making, time management, complex care, prescribing, interdisciplinary communication, minor office procedures, and billing and billing/coding were identified." Respondents suggested the need for additional prescribing, billing and coding skills to be incorporated into residency program curriculum.

The association of prior RN experience has been postulated to affect new graduate NPs readiness to practice. In a study conducted by Barnes (2015), a convenience sample of 352 NPs was utilized at a national NP Conference. The objective was to ascertain the correlation between prior RN experience and its influence on role transition. Data collection was obtained using a 16-item, 5-point Likert Nurse Practitioner Role Transition Scale. Questions sought to explore variables such as perception of support, time management as well as patient and staff comprehension of their role. It was concluded that prior RN experience had an insignificant relationship ($r=-.08$, $P=.12$) to role adaptation. Furthermore, a formal orientation received by 33% of respondents was associated with enhanced role acclimation ($r=.29$, $P<.001$). When factoring in prior RN experience and perceived role transition, it was enlightening to learn that respondents did not feel their past experience provided leverage in their new role. Those afforded with the opportunity to have a formal orientation experienced enhanced acclimation to their new role. The utilization of residency programs will serve to pave the way allowing for the metamorphosis of the new NP from one of novice to a confident and capable clinician.

In an effort to gain perspective on the PCP shortage, Buron, Kippenbrock, and Odell (2013) conducted a survey of 479 APNS located in rural and underserved areas within the states of Arkansas, Louisiana, Mississippi, and Tennessee. Their goal was to gain insight into the characteristics of the NPs that serve these communities. They found a disproportionate number comprising 25% of the survey cohort practicing in HPSAs. Furthermore, when drawing parallels to their physician counterparts, they identify that \$160 million dollars of federal funds are allocated through Medicare for graduate medical education and diploma nursing programs. They propose that some of these funds should be funneled to aid graduate nursing education with a particular interest for those who practice in rural and underserved communities. They recognize

that these providers face a distinct set of patient care challenges requiring, "...a slightly different skill set, competencies, and sensitivity to practice; graduate schools need to focus a portion of their curricula on these rural-relevant competencies." They believe that if providers are equipped with specialized education to handle these challenges it will ultimately lead to improved patient morbidity and mortality.

The Community Health Center, Inc (CHCI) recognized as federally qualified health centers (FQHC) established a one-year- residency program for new nurse practitioners seeking to practice in primary care (Flinter, 2012). These sites serve to provide care to underserved communities with limited access to healthcare. They identified the need for residency programs to assist new providers in managing a vast spectrum of patient comorbidities ranging from behavioral health, substance abuse and discordant access to specialty care. Level of health literacy was also highlighted as a critical skill providers needed to ameliorate in order to effectively communicate with their patients. They identified that, "Key components of the NP residency program include precepted clinics, specialty rotations, independent clinics, and didactic sessions, supplemented by resident involvement in workgroups and data-driven quality initiatives of the organization" (Importance of the FQHC-based residency for new nurse practitioners, para. 4). NPs were provided with an orientation to their patient catchment area and local resources available to them. In order to gauge the program's effectiveness, NP participants were required to keep a journal of their experiences and perceived role transition. The feedback was resoundingly positive. A barrier identified was the lack of federal funding for NP residency programs. The CHCI continues to work towards changing legislation and policy to establish a tenable framework for NP residency programs (Flinter, 2012).

Flinter and Hart (2017) collected data capturing the first NP residency program participants' experience in the United States. A total of 24 NPs recorded their experiences in journals their first year of practice for a total of 1,200 entries. Utilizing nursing theorist Afaf Ibrahim Meleis, they sought to explore the evolution of the new NP -- from entry level confidence to one of mastery. Various themes emerged during their transition into practice with significant similarities noted across providers. The program's curriculum was founded on core components surrounding didactic, specialty care and clinical elements. Again, the need for competency assessment tools as created by the VA was highlighted. Additionally, the need to evaluate programmatic outcomes across centers to establish benchmarking was encouraged.

When examining the unique challenges of NP role development in specialty care areas, it requires thoughtful consideration and an appreciation of the many benefits residency education has to offer. Schofield and McComiskey (2015) describe the implementation of a 9-month critical care fellowship program with a focus on improvement of clinical and didactic skill acquisition. Curriculum was founded in both the Acute Care Nurse Practitioner (ACNP) and graduate medical education competencies. A focus on simulation-based learning, clinical rotations and the implementation of an evidenced-based project was employed. Prior to each rotation, a Likert scale rating was utilized, reflecting NP perceived competence. Procedural ability increased from a score of 0 (no experience) to 4 (fully competent). Additionally, overall self-rating increased from 2 (little experience) to 3 (competent). At program completion, fellows had also received credentialing for most procedures. Observational simulation ratings also increased from a mean score of 1 (1 critical action demonstrated) to a mean of 4 (all critical actions demonstrated). It was found that fellows demonstrated enhanced performance, confidence, knowledge, skills, and overall team cohesiveness allowing them to transition to a

more independent role. Perhaps most importantly, fellows demonstrated improved management of critically ill patients allowing them to gain confidence and deliver high quality care. They also highlight that over 40 NP graduates applied for the two available fellowship positions during their next request for applicants, further demonstrating the perceived need for post-graduate training.

In summary, while no formal curriculum has been established, pioneers in the establishment of post graduate NP residency programs have laid a solid foundation from which to build upon. The reported deficiencies as described from practicing NP's upon entry into practice proved to be very enlightening and instrumental in residency program development. Overall, a general consensus regarding the need for further skills as it relates to clinical, didactic, interpretation of diagnostic testing, leadership and billing and coding areas was conveyed. Utilizing educational pillars as prescribed by the DNP and/or MSN Essentials and NONPF core competencies serve to guide curriculum development for many established programs. Furthermore, the need for programmatic evaluation as exemplified by the VA is critical to ensure that quality remains a central focus.

Theoretical Model

In order to capture the numerous underpinnings that comprise NP residency programs, The American Association of Critical-Care Nurses (AACN) Synergy Model most aptly reflects this through the interplay of patient, nurse and health care system relationships. (See Appendix B). The model depiction reflects these three elements circling the core which is comprised of nurse competencies and patient characteristics. The fluid nature of this model is transferrable across numerous health care settings with its recognition of the importance of nurse competency driven care. It was created to move from a task-driven patient care model to one that delineated

the unique attributes that comprise both the patient and the provider and how this interplay translates systematically (Curley, 1998). Hardin & Kaplow (2005) presented the AACNs revised key nurse characteristics from the original model which were rooted in the following 8 elements: “Clinical judgement, advocacy, caring practices, collaboration, systems thinking, response to diversity, clinical inquiry, and facilitation of learning (pg.4).” Principal patient characteristics were described as the following: “Resiliency, vulnerability, stability, complexity, resource availability, participation in care, participation in decision making, and predictability (pg. 4).” Furthermore, the model discusses quality outcome measures to assess for congruency across all areas. This model exemplifies not only the nurse-patient dynamic, but the economic factors that are necessary to maintain sustainability. Ultimately, the model recognizes that when the aforementioned patient and provider components align, overall clinical outcomes are enhanced. It was appreciated that resources must be allocated accordingly to maintain clinical excellence and that in order to obtain funding, outcomes must exceed those of one’s predecessors. Furthermore, it is advised to formulate an outcome measurement plan across all synergy model levels (Curley, 1998).

When applying this model to NP residency programs, the cyclic nature of its elements allows for expansion and growth lending itself to continued evolution. When examining the complexity of specialty care as well as rural and underserved patient care areas, it was recognized that a perceived divide existed between the new graduate NP and the patients they served. Appreciating the unique needs of varying patient populations, it is essential to formulate a curriculum that is reflective of the patients they serve while meeting the needs of the providers who will be caring for them. Currently, while a clear need for NP residency education exists, there remains a gap in curriculum standardization where the systematic element of the model has

the potential to be actualized. While the synergy model offers both provider and patient characteristics from which to drive curriculum, this has the potential to be modified to reflect recommendations as provided through the DNP and /or MSN essentials, leading nursing organizations as well as accrediting agencies. In order to actualize the Synergy Model at a national level, information will be sought to identify commonalities and differences amongst current NP residency programs. This will allow for the formulation of overarching themes at the patient, provider, and systems level. This will serve as a catalyst to generate a consensus in the development of curriculum standardization. Perhaps this uniformity of program expectations will serve to gain footing to acquire NP residency program funding.

Methodology

Design of Project

This project employed a descriptive comparative design, utilizing a community assessment or windshield survey to analyze current NP residency programs through an internet-based search. This model served to extract similarities and differences between NP residency program curricula on a national level.

Setting

This project was conducted via a web-based search and sought to examine all active NP residency programs in existence across the nation that had online programmatic information available. Data retrieval was conducted within a 6-month timeframe after receiving approval from the Investigational Review Board (IRB) on June 20, 2019.

Study Population

The project included a convenience sample of all NP residency programs with an online presence within the United States. Inclusion criteria encompassed all programs that identified as

either being fellowship or residency based. Exclusion criteria consisted of programs that were not identified via a basic internet search. Websites that provided insufficient data regarding their curriculum were still included in the aggregate total. Sample size was based on the current number of active residency programs in existence with available online information during the length of the project.

Subject Recruitment

Subject recruitment was performed using an internet-based search. Additionally, the utilization of accrediting organizations such as NNPRFTC and the ANCC was employed to obtain a list of accredited residency programs within the United States.

Consent Procedure

Consent was not obtained as information was readily available to the general public via online program websites.

Risks/Harms/Ethics

There were no risks or harms associated with this project.

Subject Costs and Compensation

There was no cost to participate in this project. Subjects did not receive monetary compensation for their participation.

Study Interventions

This study entailed a thorough review of all active NP residency programs within the United States. The proposal for this project was submitted to the IRB for non-human subject review. After approval was received, the project implementation phase commenced. An online search utilizing accrediting organizations such as NNPRFTC and the ANCC was employed to obtain a list of accredited residency programs within the United States. However, programs who

have not yet obtained accreditation were also included in this project. In instances where website information is not clear, the Co-PI reached out directly via e-mail or phone to obtain further information not specified within the program website. During these encounters, the Co-PI identified themselves as a DNP student. Due to time constraints, a total of one attempt was made to retrieve information. The utilization of Microsoft Office and Microsoft Office Excel was adopted as a data management tool to collect information. Extrapolated data was examined to identify commonalities and differences amongst programs. An assessment was conducted to ascertain the need for standardized curricula. Findings were formally presented to Rutgers University School of Nursing via oral PowerPoint presentation on January 15, 2020.

Outcomes Measured

The outcomes measured reflect both commonalities and differences amongst NP residency programs. Information collected was initially recorded on the Microsoft Word data management tool and was later transferred to the Excel Spreadsheet data management tool. The data management tools served to collect the following information: Program name, website address and date accessed, year established, program type (residency/fellowship), accreditation status, specialty (e.g. primary, acute etc.), type of organization overseeing the program (e.g. hospital/health system, academic medical center, community health center, federally qualified health center), location (state/region, rural/underserved patient care area), program length (e.g. 6 months, 1 year), core curricular elements (e.g. didactic, leadership, quality improvement, rotations), guidelines, DNP and/or MSN Essentials, compensation and benefits (e.g. salary, vacation/sick time, medical/dental, sign on bonus, guarantee of employment at residency completion), requirements/eligibility/qualifications for enrollment (e.g. graduate MSN or DNP, NP license, AANP or ANCC certification, CPR), number of participants enrolled, and evaluation

methods (e.g. student and program outcomes). (See Appendix C). As the study evolved, the Co-PI elected to add certain measures that proved to be relevant to the project. As such, this required further additions/revisions to the Microsoft Word and Microsoft Office Excel data collection tools. This included tracking programs that had both NP and PA residents in their program as well as programs that disclosed a salary amount. During the gathering of information, it was necessary to go back to previously reviewed websites to ensure complete capture of information.

Project Timeline

The project commenced with a formal proposal presentation to the Co-PI's chair and team member on May 2, 2019. A submission to the IRB was made on June 10, 2019. Data retrieval was conducted from IRB approval on June 20, 2019 through December 2019. Data analysis was conducted from the time of IRB approval to December 2019. The findings were formally presented on January 15, 2020.

Resources Needed/Economic Considerations

There were no associated financial fees for this project. The use of a personal computer to access the internet for data collection was utilized.

Evaluation Plan

Data obtained during a thorough internet search was categorized and sorted by the Co-PI to identify similarities and differences amongst current NP residency programs. This information was then evaluated by the Co-PI and assigned team members to formulate conclusions regarding trends in curriculum and perceived needs for standardization.

Data Analysis Plan

Data collected was examined using a quantitative and qualitative data analysis through utilization of Microsoft Office Word and Microsoft Office Excel.

Data Maintenance & Security

All project data was stored on a personal password protected computer kept in the office of the Co-Principle Investigator's (PIs) home. This computer was only removed from the home to travel to Rutgers University School of Nursing located at 65 Bergen Street, Newark, NJ and kept with the Co-PI while on campus attending class. Project data was also kept on an encrypted flash drive that remained in the office of the Co-PI's private home. As all data collected was available for public consumption, all data obtained will remain in the Co-PI's possession for prospective publication using the aforementioned data security measures. Records will also be maintained by Rutgers University in the office of the project's designated chair Dr. Mary DiGiulio after graduation. An encrypted flash drive will be stored in a locked filing cabinet of her office.

Results

Requirements for NP Residency Enrollment

When examining general requirements and eligibility for enrollment, key elements were found to be universal across all programs. Firstly, applicants must prove that they are either a US citizen, naturalized US citizen or foreign national who has a visa permitting permanent residence. An unencumbered licensure as an RN within the state and/or eligibility to receive licensure within the state of application is required. In addition, either a masters or doctoral degree from an accredited NP graduate program in the desired field of study within the last 12-18 months was preferred. Some residencies extended this time frame to up to 24 months, but these programs were outliers. Applicants who had not yet graduated, but who had an anticipated graduation date prior to the start of the residency program were also considered. National board certification from The American Nurses Credentialing Center (ANCC) and/or The American

Association of Nurse Practitioners Certification Board (AANPCB) in the desired specialty was required. A well-rounded applicant, demonstrating past academic achievements and the desire to advance to a leadership role was a highly sought-after attribute. A minimum grade point average (GPA) between 3.0 and 3.5 was desired in many cases. Bilingual applicants were in high demand, with some programs citing this as a requisite for admission and/or the need to take an intensive Spanish course prior to the start of the program. A noteworthy distinction is Erie Family Health Centers Advancing Practice APRN Fellowship Program, who requested that applicants be amenable to traveling abroad for two weeks to learn medical Spanish. Conversely, many programs requested that applicants be fluent in written and spoken English. Additionally, the applicant must verify their eligibility for a drug enforcement administration provider (DEA) number and/or controlled substances license. The vast majority of programs required the completion of American Heart Association (AHA) certification in Basic Life Support (BLS), with specialty programs requiring courses like Advanced Cardiac Life support (ACLS), and Pediatric Advanced Life Support (PALS). Some acute care programs requested Advanced Trauma Life Support (ATLS) certification. In some instances, a copy of applicants NP malpractice insurance was also requested. Time frames were often provided to ensure that submission of required documents was obtained within six weeks to ninety days before the start of the program. Some programs preferred that applicants have between 2-3 years prior RN experience with some specialty programs preferring that this be within their specialty area such as acute care, cardiology, or a community health care setting. For instance, White River Junction VA Medical Center Primary Care NP Residency Program endorsed that preference would be given to applicants who were graduates of The University of Vermont and individuals who had participated in at least one VA clinical rotation. The vast majority of programs required that all

applicants be new graduates and have no prior experience working as an NP. In rare instances, some specialty programs such as Beth Israel Lahey Health Dermatology NP Fellowship program, required that applicants have several years of NP experience. Of note, many CHC's and FQHC's required that applicants sign a written commitment to practice as a provider in a FQHC or other safety net setting at end of their residency. Several other programs simply requested that residents verbalize their intentions in good faith to continue caring for this unique patient population. The aggregate majority of programs urged that all applicants remain within their field of study after the completion of the program with some requiring that applicants commit to 1-2 years of service following their residency. Priority for hiring was given to candidates who committed to a 12-month term of employment following the fellowship. The application process was comparable across programs with the following pre-requisites required: Curriculum vitae, background check, drug screen, physical exam, vaccinations, letters of reference, statement of personal interest/essay, official graduate program transcripts, and a formal interview process.

Compensation and Benefits Provided

The vast majority of programs offer an enticing onboarding package to attract incoming residents. Many offer a full-time salaried position, endorsing that rates may be subject to change identifying this is based on the annual allocation rate and the latest market analysis. Other standard offerings include: Full medical, dental, vision, benefits package for spouse/dependents, short- and long-term disability, paid time off, vacation and sick time, and a 403B retirement plan with/without discretionary employer match and contribution. Furthermore, loan deferment and/or loan repayment opportunities were provided. In some instances, residents are furnished with license and/or DEA reimbursement as well as medical malpractice insurance. While it is not

customary, a relocation allowance is provided for those who are moving from out of state. In particular, Sollus Northwest Family NP Residency Program provides five thousand dollars for such expenses. Customarily, attendance at conferences is strongly encouraged with funding and in some cases travel allowance provided. Furthermore, residents are provided with days off to complete mandatory continuing medical education (CME) requirements with the associated costs absorbed by the program. Additionally, complimentary journal subscriptions and book stipends are also afforded to many residents.

While some guarantee a full-time position at the completion of the program, many convey that while there is no assurance for employment, an opportunity may be available. Those who choose to remain within the organization after program completion, may receive a sign on bonus. Seattle Children's Hospital Advanced Practice Provider Fellowship, boasts that if a resident is chosen for a regular position upon completion of the fellowship, they will receive a \$15,000 sign on bonus. Many require that incoming residents commit to 1-2 years post residency employment. For those that leave the program, job placement services are available to assist with networking and swift attainment of employment. The Family Health Center of Worcester Family NP Residency, awards its residents with a clinical portfolio at the conclusion of the program to aide with job attainment. The aggregate majority of residency programs conveyed that faculty engage in frequent discussions with the resident to plan for future career aspirations. Letters of recommendation are also provided to residents to attest for their growth during the program. Overall, it is conveyed that participation in a residency program serves to make the new graduate NP more marketable which significantly improves overall career opportunities. Other unique benefits provided were as follows: Communication devices, medical apparel, free access to wellness programs/fitness centers, free parking/shuttle service, meal subsidy, and discounts on

local arts and cultural events. The Durham VA Health Care System Psychiatric Mental Health NP Residency offers a unique opportunity for residents to apply to the Duke School of Nursing's Doctorate of Nursing Practice program. If accepted, residents are able to take part in this program while concurrently participating in the residency. Moreover, some of the hours obtained in the post graduate residency program will be applied to the Duke DNP program hours.

Core Curricular Elements

Regardless of the field of study, certain core curricular elements were appreciated in most NP residency programs. This was inclusive of didactic, precepted continuity care clinics, mentored clinics, procedure clinics, specialty rotations, and leadership training and development. An orientation phase, described as a "boot camp" was implemented by several programs. This allowed for an introduction period to acclimate residents to standard operating procedures, programmatic expectations and competencies, core and specialty rotations as well as rigorous electronic medical record training. Furthermore, the development of a scholarly project often geared toward quality improvement and/or publication of a manuscript was also incorporated into the curriculum. The importance of cultivating a strong interprofessional collaboration was woven into the fabric of many programs. This was attained by conducting daily interdisciplinary rounds as well as arranging for guest speakers to present.

When examining didactic elements, many programs conducted formal learning sessions with on-site seminars and lectures or incorporated a more modern means of web-based learning. This was accomplished by conducting online learning modules or using platforms such as podcast reviews. The gathering and sharing of information remain integral to many programs who require residents to participate and/or present at seminars, journal clubs, case presentations, and grand rounds. Dissemination of information outside the confines of the program is achieved

with residents presenting at local or national conferences or via publication of a manuscript to a peer-reviewed journal. Some programs appeared to lack any leadership or QI opportunities for students within the body of their curriculum. Upon further inquiry, given the rigorous clinical requirements of these programs, it was indicated that there is limited time to allocate to such endeavors. However, it was conveyed that if residents choose to seek out these offerings, they can be made available to them.

Mentored clinics allows residents to see patients independently with the ability to consult the preceptor assigned to them. Many programs emphasize that this partnership is most often a 1:1 experience to allow residents to gain point of care consultation. Core rotations typically precede specialty clinics, allowing the resident to pick areas of particular interest to them that they may have encountered during their studies. This is also applicable to specialty clinic rotations. Furthermore, precepted continuity care clinics allow residents to develop their own panel of patients, once again under the advisement of an assigned preceptor. During this time, residents begin to build a robust referral network to align themselves for a smooth entry into practice at the completion of their residency. Residents are often required to maintain patient log sheets to itemize their patient encounters and overall productivity. In addition to rotations offered, high fidelity simulation training allows residents to work through case based and procedural scenarios to foster critical thinking and decision-making skills. In order to hone the resident's ability to critically evaluate and interpret testing such as ECG's and radiology reports, clinical skill courses are provided to develop these skills. From an operational standpoint, some programs expose residents to the management responsibilities of the NP in the office setting. Grooming of the resident to foster a professional development mentality by participating in

various Advanced Practice Provider (APP) Councils and committees within and outside the confines of the program is strongly encouraged.

Programs Rooted in Medical Model/Guidelines

A rather interesting discovery, was the large number of programs who integrated the Accreditation Council for Graduate Medical Education (ACGME) requirements into the foundation of their curriculum. These guidelines were developed with the intent to guide graduate medical education and to ensure the attainment of competency-based education milestones. Furthermore, it facilitates the evaluation of the resident and incorporates assessment tools to measure their progress. Ultimately, a feedback loop is created to ensure the accountability of both the resident and the faculty (ACGME, 2017). While utilization of these guidelines was appreciated across multiple residency programs, there did appear to be a strong link to more acute care and specialty programs. A list of programs that utilized the ACGME Milestones are as follows: Peak Vista Primary Care, CO, Emory Critical Care, GA, VA Maryland GI/Hepatology, MD, Memorial Sloan Kettering, NY, Sanford Health, ND, Greater San Antonio Emergency Physicians, TX, and UT Southwestern Acute/Emergency, TX.

In addition to the utilization of the ACGME Milestones for curriculum development and requirements, the GSEP Postgraduate Emergency Medicine Advanced Practice Provider Fellowship Program has also integrated the American Board of Emergency Medicine (ABEM) standards into the grading of their midterm and final oral boards. Notably, their utilization of these guidelines, was recognized by the American College of Emergency Physicians (ACEP) as the exemplary model in establishing emergency medicine training for APPs. The UT Southwestern Medical Center Advanced Practice Provider Fellowship Program, resembles this model, basing their clinical didactic curriculum on the ACGME requirements in Emergency

Medicine, as well as the ABEM 2011 Model of the Clinical Practice of Emergency Medicine. The Yale School of Medicine Emergency Medicine APP Residency Program also mirrors this structure and has based their clinical didactic curriculum on these guidelines. Sanford Health APP Primary Care Fellowship, ND has also expressed their intent for future plans to pursue accreditation of all residency and fellowship programs through the ACGME. This adoption of medical guidelines was seen in numerous other programs with some residency programs pulling from their own institution's internal medical residency competencies.

Programmatic Curriculum and Structure by Specialty

Primary Care/Rural/Underserved Curriculum. Programs that identified as a CHC's and/or FQHC's, were found to have many parallels in regards to programmatic structure and overall philosophy. In order to immerse the residents into the community they would be serving, it was customary to have the residents participate in a walking tour of the neighborhoods where their sites were located and to network with local community-based organizations. Additionally, it was also understood that residents would meet directly with the chief medical officer and community leaders to discuss the needs of the community and the health disparities most frequently encountered there. The overwhelming majority of programs defined these areas as, "high volume, high risk, high-burden areas." The participation in community events such as health fairs and free clinics were central to connecting with members of the community. North Mississippi Advanced Practice Clinician Fellowship Program trains NP fellows to function as lifestyle coaches within the community. Their efforts are focused on combatting chronic diseases such as type 2 diabetes and providing tobacco cessation classes through utilization of wellness clinics. Furthermore, a thorough introduction to the electronic health record was also emphasized to maximize efficiency and improve workflow.

When exploring curricular elements of these programs, the overall structure was remarkably similar and mirrored the curriculum set forth by the flagship Community Health Center NP Residency Program located in Connecticut. These rotations consisted of the following: Precepted continuity clinics, specialty rotations, mentored clinics, didactic education sessions, quality improvement/leadership training, and a community or quality improvement project. Common specialty rotations ranged from pain management, HIV care, infectious disease, and healthcare for migrant and seasonal farm worker populations. General and internal medicine rotations/ mentored specialty rotations consisted of the following: cardiology, endocrine, gastroenterology, nephrology, emergency medicine/urgent care, geriatrics, long term care, neurology, medication assisted treatment (MAT), ortho, hematology, oncology, dermatology, women's health, pediatrics, prenatal clinic, podiatry, pulmonary, geriatric, newborn, transgender health, addiction medicine, behavioral health/psychiatric, sports medicine, school-based health, wound care/rehab, and office procedure clinics. Procedure clinics included the following: Incision and drainage, skin biopsy, suturing, gynecologic procedures such as IUD placement and colposcopy, and orthopedic/therapeutic injections. Many FQHC's participated in a program called Project Echo which utilizes telemonitoring to providers at the point of care that work in underserved and rural patient care areas. A hub and spoke framework is utilized to connect providers with specialists via video conferences. This conduit of knowledge allows them to elicit their expertise on topics such as pain management strategies, opioid addiction, HIV/Infectious disease, Hepatitis C, buprenorphine management, mental illness, diabetes, and cancer (Robert Wood Johnson Foundation, n.d.).

Geographically speaking, the needs of the community varied significantly across the nation which required a unique programmatic approach to patient care. To illustrate this, the

Puentes Family NP Residency Program emphasizes their goal to adequately care for a growing Latino immigrant community while addressing health literacy barriers and population-specific healthcare needs. Another innovative program is the Shasta Community Health Center Primary Care Fellowship, which utilizes a Health Outreach for People Everywhere (HOPE) Van to bring medical care to the homeless community. Additionally, the Institute for Family Health NP Fellowship has its residents participate in Advocacy Day which is an annual event organized by Community Health Care Association of NY state (CHCANYS). This is an opportunity for residents to take an active role in advocating for the needs of FQHCs. Additionally, residents participate in a poster presentation at the Annual Institute Research Symposium and have the opportunity to collaborate on other research activities at the Institute. Residents across all programs are empowered to elicit change for underserved and rural communities via a myriad of ways. Residents are encouraged to attain membership on community health committees and task forces and to play a role in policy involvement and development.

While a great emphasis is placed on the patient experience, the need to ensure provider longevity and satisfaction remains a critical element in such complex patient care settings. It was identified that residents must be equipped to manage patients from a clinical standpoint while maintaining their own psychological health in the process. The Sea Mar Community Health Centers' Family Nurse Practitioner Residency was one of the only programs that discussed the importance of resiliency skill acquisition of their residents in managing the challenges they will face in the FQHC setting in order to ensure professional longevity. They recognized that the preservation of the residents emotional and psychological well-being through utilization of coping strategies was essential in reducing "compassion fatigue and provider burnout." This

philosophy aligns with the goal of provider retention and overall job satisfaction which remains elusive in more rigorous clinical settings.

Critical Care/Surgical/Trauma Residency. Critical care programs emphasize immersing residents in hospital rounds and working alongside medical residents, fellows and attending physicians in addition to a robust APP team to foster a multi-disciplinary partnership. Rochester Regional Health Fellowship Program practices this learning model and aligns APP residents with their critical care MD fellowship program. Residents are often expected to work several days per week including days/evenings/nights/weekends/holidays and overnight call. In addition to the core curricular elements previously described, residents participate in morbidity and mortality review and are often times assigned to present a case they've encountered during their clinical experiences. During their residency, they engage in proctored invasive procedures and adopt a competency-based hands on learning approach. The acumen of procedural skills is vast and is inclusive of the following: lumbar puncture, intubation, moderate sedation, insertion of chest tubes, central and arterial lines etc. The University of Colorado Division of Hospital Medicine's Advanced Practice Fellowship, has created three phases within their fellowship to allow for a gradual progression. It begins with a *junior fellowship* and bootcamp orientation to acclimate residents to the program and inpatient service. This is then followed by an *intermediate fellowship* to enhance clinical skills and acclimate to rotational electives. Lastly, is the *senior fellowship* which immerses the fellow in a "real world" experience working on a hospitalist team. For those enrolled in a surgical program, residents are engaged in all phases of surgical care and management and assist in the OR. Surgery residents have exposure to rotations in acute care surgery, shock/trauma surgery, cardiothoracic surgery, surgical oncology, vascular, transplant, and plastic surgery. A comprehensive list of clinical rotations assigned to acute

residency programs is as follows: Anesthesiology, Surgical/Medical/Neuro ICU, CCU, Cardiology, Infectious Disease, nephrology, OR, oral surgery, radiology, and pulmonary. Ultimately, the residents clinical experience, closely mimics that of their physician colleagues as they complete their fellowship training, making them thoroughly equipped to practice to the fullest extent of their license.

Emergency. There were several residency programs throughout the nation that were based in emergency medicine. Like their critical care counterparts, the NP residency program very closely emulates the physician residency program. Residents often work in tandem with attending physicians, advanced practitioners and medical residents. Standard procedures performed included: lumbar puncture, ABG sampling, bedside ultrasound, advanced cardiac life support procedures, wound and burn care, etc. Residents are responsible to maintain both procedure and patient logs. Clinical rotations included but were not limited to the following:

Adult/gerontology/pediatric emergency medicine rotations, anesthesia, addiction medicine, critical and intensive care, obstetrics, cardiology, dermatology, emergency medical services (EMS), ear/nose/throat (ENT), general surgery, intensive care, internal medicine, neurology, ophthalmology, orthopedics, radiology, stroke, trauma, tele-health, and ultrasound. At the conclusion of the program, residents may sit for The American Academy of Emergency Nurse Practitioners (AAENP) Certification Exam and/or The National Emergency Nurse Practitioner Certification examination.

Other Specialty Programs. For those residents seeking to gain further specialty training in the desired field of their choice, there is a multitude of programs available. Cardiology based programs vary from both inpatient and outpatient experiences and expose residents to a wide clinical spectrum of patient management. Programs boast a clinically immersed experience

supplemented by didactic education. Residents develop skills in interpretation of EKGs, echocardiograms, stress tests, and chest x-rays. Simulated learning is an invaluable tool to mimic various clinical scenarios in addition to hands on labs. Once again, team rounds are incorporated into the programmatic structure to ensure adequate interdisciplinary team communication. Programs such as Piedmont and Rochester, afford the resident a range of opportunities to function in both an inpatient and outpatient setting where they rotate through a critical care environment and various subspecialties such as advanced heart failure management, electrophysiology, as well as general and interventional cardiology. Residents participate in the management of patients that have undergone procedures such as coronary artery bypass, Left Ventricular Assist Device (LVAD), and Extracorporeal Membrane Oxygenation (ECMO). Additionally, they are assigned with pacemaker/defibrillator device interrogation, and ordering of appropriate diagnostic testing and subsequent interpretation. Residents are also tasked with the management of patients with advanced heart failure, angina, MI and arrhythmias, and pre/post op management after their patients undergo cardiac procedures.

Collectively, five NP Neurology residency programs were identified throughout the nation. The Duke Department of Neurology Advanced Practice Provider Program, has its residents participate in the same core lectures as their neurology physician residents. Rotations include but are not limited to: General neurology, neurocritical care, consultative neuro, headaches, epilepsy, neurological testing (EEG, sleep studies), electromyography, inpatient stroke, epilepsy, multiple sclerosis, memory disorders, movement disorders, nerve conduction studies, neurosurgery, spine surgery, neuroradiology, endovascular neurosurgery. Didactics consist of neuro grand rounds, journal club, neuroscience lecture series, and case conferences.

There were numerous Oncology based residency programs offered throughout the nation. Rotations provided include the following: Critical care, ED, oncology pathology, oncology pharmacy, palliative care, physical therapy, radiation oncology, and surgical oncology. Didactic offerings were as follows: Prevention and early detection, active treatment, survivorship and/or end of life care, as well as tumor board meetings. The Advanced Practice Provider Oncology Residency in WA incorporates the successful completion of the American Society of Clinical Oncology (ASCO) online advanced practitioner training programs into its programmatic requirements. Comparatively speaking, the University of Miami NP Oncology Fellowship Program requires its residents to complete the Advanced Oncology Certified NP Certification exam.

Palliative care residences provide a more holistic focus on the management of patients and their families across the inpatient, outpatient and home settings. The Harvard Center for Palliative Care NP Fellowship follows a, “Communication Curriculum” design which they describe as a cognitive approach to communication that is cultivated through demonstrations and role play. Additionally, fellowship retreats are offered to places like the museum of fine arts for observation and reflection skills. Residents also participate in a teaching lollapalooza. They note that their fellowship was constructed to complement the Standards for Clinical Practicum in Palliative Nursing for Practicing Professional Nurses and the Hospice and Palliative Nursing Scope and Standards of Practice. Memorial Sloan Kettering Hospice and Palliative Care Fellowship, utilizes a program called ComSkil that provides video resources and actors working through various clinical scenarios to develop resident communication skills. Upon completion, residents are eligible to sit for The Hospice and Palliative Care Credentialing Center (HPCC)

Advanced Certification in Hospice and Palliative Nursing Exam as well as the Advanced Certified Hospice and Palliative Nurse (ACHPN) Certification Exam.

A myriad of other programs offers unique opportunities for its future residents.

Dermatology residency programs allow residents to acquire diagnostic and surgical skills necessary through proctored training sessions. Various rotations provide exposure to cosmetic procedures, cryotherapy, phototherapy, wound care, shave and punch biopsies, excisions, steroid injections, and intralesional steroid injections. Residents may sit for the Dermatology Certified NP Exam which is also used as a programmatic evaluation tool. Alternatively, The University of Virginia Urology NP Fellowship program appears to be the only NP urology fellowship program in the nation. Residents are responsible for managing patients in the preoperative, perioperative and postoperative phases of care. Additionally, they are trained to perform endoscopic procedures of the upper and lower urinary tract in addition to office-based procedures including urodynamic testing. Currently, Johns Hopkins and The Swedish Medical Center appear to be the only two gastroenterology fellowship programs in the nation. Johns Hopkins notes that their NP residency program is aligned with the divisions of GI and hepatology MD fellowship program and that their training experiences are very similar to one another. Rotations take place in both the inpatient and outpatient settings with the cornerstone of the program focused on gastroenterology. Residents are also exposed to endoscopy procedures, hepatology/liver transplantation, bariatric and colorectal surgery, and oncology. The UC Davis Advanced Practice Fellowship Program, was the only Radiology program identified. They describe a comprehensive clinical experience with rotations in interventional radiology and procedural training in parenthesis, lumbar puncture, and line placement. Furthermore, residents are equipped to manage patients undergoing image guided procedures. There were numerous adult and youth mental

health residences in existence. The Nationwide Children's Child and Adolescent Psychiatric NP Fellowship, provided rotations in early childhood mental health, mood/anxiety program, autism spectrum, and telepsychiatry. Programs rooted in adult mental health offered rotations in various settings including inpatient, outpatient, short term crisis stabilization. Other rotations provided in mental health settings included but are not limited to: Eating disorders, palliative care, woman's health, and trauma clinic.

VA Programmatic Curriculum

Nationwide, the VA is comprised of numerous residency programs that are recognized as Centers of Excellence in Primary Care Education (CoEPCE) that receive funding through the OAA. Given the unique veteran population that residents will be caring for, the emphasis on a collaborative framework across all disciplines is cultivated. The VA Maryland Health Care System Primary Care NP Residency Program highlights their use of Interprofessional Education Sessions (IPE) in order to adequately meet the unique needs of the Veteran population in which they care for. They surmise that, "Monthly IPE training will allow the NP resident to develop an understanding of the roles and responsibilities of other members of the health care team, establish and build rapport, develop communication skills and build strategies to manage conflict." When compartmentalizing programmatic structure, VA programs identify that their programs are comprised of 80% clinical, and 20% didactic. The San Francisco VA Health System NP Primary Care Residency program highlights their use of a patient-centered medical home model referred to as a Patient-Aligned Care Team (PACT). This team is made up of several disciplines inclusive of a resident physician, RN, case manager, clergy, dietician, behavioral health specialist etc. In order to cultivate a leadership role, it is required that residents

complete clinical teaching assignments, co-precept with clinical faculty, and immerse themselves in a mentoring role on a performance improvement project with the support of faculty.

The VA offers a robust subset of care for the veteran population and the myriad of health conditions they live with. A strong psychiatric and mental health focus is central to the VA and those they care for. Mental health clinical rotations typically include: Inpatient/outpatient psych, intensive case management, addiction psychiatry, psych emergency, neuro and geropsychiatry, and family/couples counseling. It is conveyed that every attempt is made to arrange for clinical rotations that are of special interest to the resident in order to provide for the most fruitful clinical experience. A rather unique residency program was developed by the Greater Los Angeles VA Medical Center with an NP Residency in Primary Care for Homeless Veterans. The program provides rotations in street medicine as well as professional competencies in homeless care and mental health. Furthermore, residents work to foster Center of Excellence Interprofessional Academic Homeless Patient Aligned Care Team (COE IA HPACT) through means of teaching peers and junior team members. Another notable offering is the San Francisco VA Health Care System Post-Graduate Psychiatric Mental Health NP Residency Program which incorporates tele-mental health training into its curriculum to bridge any foreseeable gaps in patient care. In addition to the common core curricular elements previously identified, the VA Salt Lake City Health Care System Psychiatric-Mental Health NP Residency Program, boasts a unique array of didactic seminars as well as human patient simulated learning experiences. Topics are inclusive of substance abuse disorders, post-traumatic stress disorder (PTSD) and suicide prevention. Residents are also exposed to management of the lesbian, gay, bisexual, transgender, and queer (LGBTQ) veteran's population and their related health care needs.

Furthermore, the experiences of racism encountered in the military and the associated impact on mental health is explored.

The VA Maryland Health Care System Geriatric Primary Care NP Residency Program, exposes residents to high-volume/high-burden/high risk situations encountered within the veteran population. Their curriculum was developed based on the CCNE & NNPRFTC accreditation standards and have expressed that they are currently examining the ACGME and their associated milestones. The White River Junction VA Medical Center Primary Care NP Residency Program observes interprofessional “clinician-leader-improver” model which entails three main focus points including: clinical practice, quality improvement science, and leadership. A notable finding was made within the Washington DC VA Medical Center Adult Gerontology NP (AGNP) Residency program regarding dissemination of the resident’s final project. They endorse that upon completion of their project, residents then present their findings to VA leadership and the OAA. Ultimately, this allows for sustainability of the resident’s work through direct communication with VA leaders.

Evaluation Methods

Evaluation methods varied significantly across programs, with no formal assessment in place. The VA proved to be the exception, after implementing a standardized evaluation process across all their residency programs. Many programs describe their evaluation process as utilizing “qualitative and quantitative” measures but fail to elaborate further on what specific metrics are used. The evaluation process was often rooted in the programs core competencies and associated goals and objectives which were either developed internally or through utilization of accrediting organizations such as the AANC, NNPRFTC, and the Commission on Collegiate Nursing Education’s (CCNE) Standards for Accreditation. Those who received accreditation, conveyed

that they utilized accrediting guidelines to assess residency competencies. Evaluations ranged from formal to very informal consisting of “check ins” with residents in real time. Generally speaking, evaluations were performed by preceptors on a quarterly basis and coincided with changes in clinical rotations. Each rotation had a prescribed set of goals and objectives for which the evaluation was based on. Residents often were tasked with completing pre- and post-residency self-evaluations.

Academic and clinical competencies were evaluated in a variety of ways. The utilization of written exams was predominantly used at the beginning and end of each clinical rotation and following assigned simulations. Residents were also required to maintain a procedure log book to ensure adequate exposure and mastery of skills. CHAS Health NP Residency Program attests that weekly chart reviews as well as shadowing of office visits is used towards the resident’s evaluation. Another distinctive feature of their program is the feedback they illicit from patients after their office visit. Many programs had residents take a certification exam at the completion of the residency program which was also used to evaluate academic achievement and to gauge mastery of course curriculum. The SUNY Upstate Medical University Emergency NP Fellowship evaluated their residents utilizing an evaluation tool that is based off of the AAENP scope and standards of practice. This is performed every four months with a formal meeting with the resident at which time feedback is elicited and advice is solicited to ensure the success of the resident. Each residency has subscribed milestones that align with each rotation which are evaluated utilizing subscribed aims and objectives.

The subjective feedback from both residents and preceptors was found to be essential in both the academic development of the resident and in fostering the programs overall success and longevity. Often times, several team members including leadership were involved in this process

to allow for transparency and constructive feedback. The objectives of this evaluation process are multifactorial with the resident conducting a self-evaluation of their perceived progress as well as an evaluation of faculty members and their clinical rotation experiences. Additionally, faculty provides an evaluation of the resident and their progression throughout all stages of the program. Finally, the program itself is evaluated in its entirety at its conclusion. It was recognized that Rochester Regional Health APP Fellowship Programs utilizes MedHub, a web-based residency management system to conduct their evaluations after each rotation. Similarly, Aria Community Health Center NP Residency Program employs an online program called myevaluations.com to assess all major programmatic elements including competency self-assessments based on the NNPPRFTC accreditation standards. Other programs elected to use platforms such as survey monkey to collect this data.

Presumably, this information was confidential in nature to allow for constructive feedback without fear of retribution. The frequency of evaluations varied greatly but the vast majority of programs conducted pre-self-evaluations at the program's initiation, 3, 6, and 9 months and upon program completion with an exit evaluation/interview. However, feedback was elicited as frequently as weekly, bi-weekly and monthly in order to ensure that preceptor and resident feedback was dissected in real time to make necessary improvements. Conversely, some programs only elicited feedback of their perceived experiences with the program and its faculty every 6 months to one year, leaving little room for improvement in real time. In some cases, residents were asked to document their residency experience through reflective journal entries. Ultimately, a formal meeting with the resident allowed for an opportunity to review evaluations, clinical progress and elicit constructive feedback all while developing a strategic plan to ensure that their goals were reached.

The VA Residency Evaluation

As previously discussed in the review of literature, the VA utilizes the NP Resident Competency Assessment tool evaluation designated by the OAA. This is completed by residents, preceptors, program directors and other designated faculty to allow for a comprehensive evaluation across disciplines. This tool ensures a thorough evaluation of all program facets while measuring the resident's achievements in reaching key programmatic milestones. These evaluations are conducted at 1 month, 6 month and 12-month intervals. A rating scale is utilized from 1 (critical deficiencies) to 6 (competent). Evaluations are also conducted following each clinical rotation and didactic session. In addition to the OAA NP residency competency tool, the University of Alabama at Birmingham VANAP (Child/Adol) PMHNP Residency has modified the evaluation tool from the UAB school of Nursing to measure educational competencies. This demonstrates the versatility of the tool to incorporate site specific milestones that are relevant to the resident's experience and the setting in which they are working.

Accreditation Attainment

When exploring the accreditation status of residency programs, several conclusions were reached surrounding this achievement. The VA was unanimous in their decision to not actively seek accreditation of their NP residency programs. The rationale behind this decision was that until a national post graduate NP residency accrediting body also undergoes the accreditation process, there will be no forward movement to obtain this distinction. However, once this is actualized, the VA has expressed they will actively seek accreditation of their programs and have fervently been preparing for this process. It was also conveyed in responses received, that the OAA had not yet determined an accrediting body that their funded residency sites should apply to. The Boise VA Medical Center Primary Care NP Residency Program was the only VA

program to receive accreditation through the NNPRFTC. Additionally, many programs expressed the inability to apply for accreditation as their program was still in its infancy and had not yet graduated their first class of NP residents. It was also discovered that some programs who were comprised of both NPs and PAs had received accreditation for one cohort but not the other. Many were accredited for PAs but not for NPs.

Quantitative Data Analysis

When analyzing programmatic elements, several themes emerged highlighting the similarities and incongruities across programs. When examining the utilization of the term residency vs. fellowship, a large divide amongst programs was noted. Sometimes this was seen within one institution, with two programs interchangeably using the term residency to describe one program and fellowship to describe another. Out of 173 programs, a total of 74 (43%) of programs identified themselves as a residency, with the remaining 77 (45%) identifying as a fellowship. Of note, for those programs who lacked online information or who were newly established, there were no means to ascertain what they identified as, which made up 19 (11%) of programs. Of note, all VA programs defined their program as a residency. One outlier was the Duke University School of Nursing/Durham VA Health Care System, which strictly identified themselves as a post-graduate training program. There was a total of 24 VA residency programs, which comprised 14% of the aggregate total. It was noted that VA programs often aligned themselves in an academic practice partnership by collaborating with local universities. When evaluating organizations affiliated with the residency program, it was not uncommon to observe that many worked in unison with other institutions. The breakdown of organizations overseeing residency programs is as follows: Academic Medical Centers-51 (29%), Hospital/Health System-45 (26%), FQHC-28 (16%), VA-24 (14%), CHC-14 (8%), and Other 11 (6%). By and large,

Academic Medical Centers and Hospital/Health Systems operated within silos of their own institution. This was also noted amongst FQHC and CHC's, although some were affiliated with Universities. As many new programs had recently received grants, it was unclear if they would be partnering with any outside institutions. For example, some programs that were based within universities did not disclose if there was an affiliating organization due to lack of website information. A wide array of specialty offerings was appreciated with the majority of them rooted in primary care. Offerings were as follows: Primary Care 72, Critical Care/Surgical 24, Psych/Mental Health 21, Emergency 18, Cardiology/CTS/Cardiac Imaging 7, Dermatology 3, Hematology/Oncology 10, Gastroenterology/ Hepatology/Colorectal Surgery 5, Neuro/Neuro surgery 6, Orthopedics 4, Palliative Care/Hospice 4, Surgical 5, Urgent Care 3, Urology 3, Solid Organ Transplant 1, Radiology 1, Genetics 1, Neonatology 1. There was a total of 22 programs that did not identify their specialty.

Geographically speaking, the majority of programs were located in the Northeast at 51 (29%) followed by the Southeast-38 (22%), Midwest-34 (20%), West-33 (19%), Southwest-16 (9%), and Pacific Region-1 (0.5%). The state's housing the most residency programs were New York with 16 (9%), California with 15 (8.6%), and Washington with 13 (7%) respectively. The vast majority of programs were over the duration of 12 months comprising 76% of programs. The length of remaining programs was as follows: 3 months-0.5%, 6 months-2.9%, 9 months-2%, 13 months- 2%, 18 months-5%, 24 months-1% with the length unknown for 10% of programs. Of note, The University of New Mexico Surgical/Critical Care Advanced Practice Provider Fellowship, provided a range of 12-18 months. The fellowship length varied at the discretion of the team, taking into account the participants prior experience and perceived need for a longer clinical duration. The number of participants enrolled ranged anywhere from 1-10

per residency year. A total of 84 programs provided the exact number of residents enrolled per class. The majority of programs enrolled two residents per class. The totals are as follows in ranking order: 34 programs enrolled 2 residents (40%), 16 programs enrolled 3 residents (19%), 16 programs enrolled 4 residents (19%), 5 programs enrolled 1 resident (6%), 5 programs enrolled 10 residents (6%), 4 programs enrolled 5 residents (5%), 2 programs enrolled 6 residents (2%), 1 program enrolled 7 residents (1%), and 1 program enrolled 8 residents (1%). Of note, for those programs who projected an increase in their residents for this calendar year, this was reflected in the total. An estimated 27% of programs were based in rural and underserved patient care areas with the majority of these programs identifying as a FQHC. While more programs may represent this cohort, it was not identified on their website. Another important distinction to make is that a total of 36 programs had received HRSA grants in 2019, which comprised 21% of programs. While some of the programs that received funding were previously in existence, many were awarded these funds to start up a new program. As more programs are anticipated to be awarded funding in the future, NP residency development will continue to proliferate at a rapid pace. The addition of another indicator examining the makeup of program participants and if the program was exclusively for NPs or if it was a mixed cohort of both NPs and PAs was incorporated into this study. The majority of programs were comprised of NPs alone at 59%, with a mixed cohort appreciated in 29% of programs with 11% of programs not specifying. Of note, programs that consisted of PAs alone were not included in this project. Several programs such as Memorial Sloan Kettering reported having a “twin fellowship” comprised of both MDs and NPs training alongside one another.

Program accreditation was disparate, with the majority of programs lacking this distinction. In regards to the VA, the rationale for lack of accreditation was that there was no

nationally recognized accrediting agency. It was universally expressed, that once one is established, the VA will seek accreditation. Many programs did not yet have accreditation but were in the process of obtaining this distinction. This was especially true for programs that were in their infancy and had not yet graduated their first class of residents. Out of all programs surveyed, 21 (12%) identified that they had received accreditation. Of those that were accredited, 10 were through the ANC and 11 were through the NNPRFTC. One program reported being accredited through the Higher Learning Commission. The remaining programs expressed that they were either currently in the process of working towards accreditation, had not received accreditation and/or were not seeking accreditation. In addition, the remainder of programs, either lacked this information on their website, or failed to respond to further inquiries. Collectively, this accounted for 152 programs for a total of 87%. While many programs did not openly disclose the salary afforded to its residents, there appears to be quite a disparity amongst programs. There was a divide amongst programs and their willingness to divulge salary on their programmatic websites. Based on publicly available information, salary ranged from \$45,000 - \$83,000 a year with the highest reported salary at \$90,000 for an 18-month program.

Limitations

Many websites did not include all the indicators that were being evaluated in this project. Additionally, the lack of response from programs further impacted data retrieval and subsequent analysis. Due to time constraints, the Co-PI was only able to solicit one data request via e-mail and was not able to follow up with those programs who failed to respond. Many newly awarded HRSA recipients had not yet created websites and so it was unclear if they referred to their program as a residency or fellowship in addition to its associated specialty and whether or not they accepted NPs and/or PAs. In this case, publicly available supplemental websites or articles

were utilized to gather additional data if no formal website was in existence. While it was planned to track the underpinnings of programmatic curriculum based on guidelines etc., it became clear that this was a subjective response and varied depending on the recipient of the e-mail and their understanding. This information was also not readily available on many programmatic websites. As a result, this indicator was removed from the data retrieval process. Many programs offered several residency tracks and so this was collectively counted as one program to account for a more accurate number of existing residency programs. The exception to this was the VA, in which each residency program was counted individually. Furthermore, for programs that offered a range of accepted residents, the largest cohort was representative of the collective whole in estimating # of participants enrolled. If only one of the tracks responded/offered information within one institution, that was representative of the collective whole. Furthermore, online based residency programs were not included in this study.

Discussion

Economic/Cost Benefits of Project

In order for residency programs to actualize their fullest potential both academically and financially, a cohesive framework must be implemented to streamline programmatic structure. When postulating the economic benefits of this project, a standardized curriculum is just one facet of a well-composed residency program. As conveyed by Taylor, Broyhill, Burris, and Wilcox (2017), the impact of residency programs has the potential to make significant fiscal gains. They surmised that through utilization of fellowship programs, a tremendous cost savings was appreciated. This was achieved through revenue obtained from services rendered by fellows. Also contributing to cost savings, was the acquisition of fellows after program completion, resulting in decreased recruitment costs and turnover rate. Furthermore, they

recognized that this continuity of care ultimately serves to enhance both patient and provider satisfaction, enhanced patient safety, and decreased readmissions. These metrics are assessed on a regular basis to strive for clinical excellence and financial return of investment. The investment in a standardized curriculum has far reaching effects impacting not only provider satisfaction and competency, but ultimately patient satisfaction and elevated delivery of care.

Impact on Healthcare Quality and Safety

As identified in the literature review, a feeling of impostor phenomenon has been recognized amongst NPs transitioning into practice. Self-reported feelings of inadequacy and perceived lack of preparedness can impact morale, job satisfaction, and ultimately patient care. While lead nursing organizations identify that NPs have exemplar patient outcomes upon transition into practice, a stark contrast was reported from the providers themselves. Feedback that was elicited from the NP community has revealed perceived areas of academic and clinical deficiencies that were not met during their graduate studies with the majority of providers expressing their interest in residency programs if it had been afforded to them. Common themes emerged with respondents expressing a need for further education as it relates to clinical, diagnostic, procedural, quality improvement, and leadership skills. As NPs continue to gain full practice authority, and the patient landscape continues to grow and evolve, the NP must continue to re-invent themselves in order to meet growing expectations. Ultimately, many NP residents are absorbed by their program into its affiliated institution which allows for continuity of care. While residency programs remain in their infancy, it is essential to formalize their curriculum. NPs entering into underserved, rural and specialty care areas will require a unique skill set in order to efficiently and safely manage their patients.

Policy Implications

In accordance with DNP Essential V, it is imperative that the NP adopts a leadership role in order to effectively advocate and implement best practices at an institutional, local, state, regional, and national level (AACN, 2006). Due to the time constraints of this study, formal policy change was not feasible during the proposed timeline of this project. However, implications for future policy change remain a driving force behind this project's design. Awareness within the nursing profession through dissemination of this project will serve to generate further discussion about the current and future state of residency programs and the need for standardization of curriculum. Identified disparities in curricula should be scrutinized to develop academic pillars that are fluid across all residency programs and are rooted in their identified specialty. It will also provide an opportunity to draw parallels in programmatic successes and validate the incorporation of identified areas of perceived deficiency of residents. Partnering with academic institutions has proven beneficial for some of the most notable residency programs and would prove invaluable in curriculum development. With a total of 36 NP residency programs across 24 states receiving HRSA grants in June 2019, it is essential that standardization of curricula is attained to support and guide these up and coming programs. Ultimately, it is critical to communicate and form a partnership with policy makers in order to elicit change at the academic and patient care level.

Plans for Sustainability and Translation/ Plans for Future Scholarship

The sustainability of this project can be attained within Rutgers University and on a national level. Remaining student faculty will have the opportunity to expand upon this project's findings. Additionally, the collaboration with accrediting agencies and policy makers will ensure

that appropriate stakeholders are invested in the project's continuation. This will allow for change to occur on a global scale and potentially transform policy.

Plans for Dissemination and Professional Reporting

The results of this project was initially disseminated to the Rutgers School of Nursing via formal DNP project presentation given to faculty and peers. Submission of an abstract will be considered to the following nursing journals: Journal of the American Association of Nurse Practitioners, The Journal for Nurse Practitioners, and the Journal of Doctoral Nursing Practice. Additionally, consideration for submission of an abstract to leading DNP organizations for dissemination at both local and national nursing conferences will be explored.

Conclusion

The development of NP residency programs marks an exciting time for not only the NP community, but the nation as a whole. However, with the swift establishment of these programs, there is a glaring lack of standardization and uniformity in their design. In particular, there lacks one common nomenclature as to how to refer to these programs with the term residency and fellowship used interchangeably. Furthermore, while accrediting organizations are in place, they themselves lack accreditation. As a result, many programs are electing not to undergo this distinction. It is imperative that the nursing community collaborate to reach a consensus while residency programs remain in their infancy. It is irrefutable that NP post graduate residency programs have a valuable role in allowing for a considerably smoother transition into practice. The blended residency experience with NPs working alongside medical residents, only reaffirms the utility of post-graduate training. From a financial perspective, NPs are more clinically and procedurally competent and have often developed a strong referral base which benefit the institution overall. Furthermore, NP residents are often retained at the completion of the

residency which is ultimately a sound investment in the long run. As NPs continue to gain full practice authority throughout the nation, it is fundamental to refocus educational and patient expectations to align with the challenging yet compelling patient landscape.

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Appendix A

Analysis of Current Post Graduate Nurse Practitioner Residency Programs

Clinical Question: What are the commonalities and differences amongst current post graduate NP residency programs across that nation as it pertains to their designated structure and curriculum?

Article #	Author & Date	Evidence Type	Sample, Sample Size, Setting	Study Findings	Limitations	Evidence Level & Quality
1	Beauchesne, M., Hicks, K. E., & Rico, J. (2018)	(Descriptive quality improvement project) Non-Experimental /Qualitative	Sample/Sample Size: Semi structured interviews of nine primary care postgraduate training program directors. This cohort reflected 36% of the established 25 post graduate primary care programs.	Commonalities of postgraduate training programs (PTP) was explored. Twelve core competencies were identified across all programs reflecting either QSEN or NONPF recommendations. Competencies included the following: 1. Autonomy, confidence 2. Leadership 3. Interprofessional collaboration 4. Practice knowledge 5. Chronic disease management and prevention 6. Patient-centered care 7. Professionalism 8. Cultural and community awareness 9. Resiliency, stress management 10. Learning and improvement 11. Quality improvement 12. Clinical skills/procedures	Small sample size. Restricted availability of various sites program curriculum due to limited time and resources of the lead investigator and eligible participants. One of the nine sites was unable to disclose curriculum.	Level III; Quality B

				<p>They proposed the potential utilization of their matrix in creating a tool to guide future PTP curriculum.</p> <p>Minimal data was available regarding program evaluative measures or indicators to gauge learner performance. Evaluation was based on reflective journaling and preceptor assessment alone.</p>		
2	Brown, Poppe, Kaminetzky, Wipf, & Woods (2015)	Written questionnaire and focus group discussions Non-Experimental/Qualitative	Sample/Sample Size: 52 NPs/nursing stakeholders Setting: NP Residency forum in Seattle Washington	<p>A review of the literature revealed that no formal framework for NP residency programs is currently instituted. Lack of unanimity regarding programmatic design. Written questionnaires and focus group discussions were generated to elicit feedback. Survey respondents agreed upon incorporating the following into residency programs:</p> <p>“interprofessional training, leadership/policy component, quality improvement and scholarship dimension, diagnostic skill honing and special skill readiness (eg electrocardiogram readings), and dedicated mentorship and role development.”</p>	Small convenience sample was used. Participants consisted of mostly western demographic and may not have been representative of national views.	Level III; Quality B

3	Flinter, M. (2012)	Cross-case synthesis analyzing residents and preceptors' experiences via journals Non-Experimental/Qualitative	Sample/Sample Size: Four NP Residents and their preceptors Setting: [REDACTED] a Federally Qualified Health Center (FQHC) located in Connecticut	CHCI a FQHC developed the first post-graduate family NP residency program in the US in 2007. It was identified that new NP's required additional training to manage patients in underserved areas who often have multiple co-morbidities and limited access to care. The program included the following components: "precepted clinics, specialty rotations, independent clinics, and didactic sessions." All residents were oriented to the patient catchment area in which they serve as well as available resources. A cross-case synthesis was conducted analyzing residents as well as their preceptors' experiences at scheduled intervals via journals. It was found that residents adapted well with a total of 16 completing the program since its inception. The IOM landmark report used the CHCI model to model future program development.	Small sample size. Single center experience.	Level III; Quality C
4	Flinter, M., & Hart, A.M. (2017)	Reflective Journaling Non-Experimental/Qualitative	Sample/Sample Size: Reflective journals of 24 Residents Setting: Journals	Qualitative data obtained from 24 residents reflective journaling regarding their experiences using Krippendorffs' content analysis model for evaluation. Program is rooted in curriculum based on core components including didactic,	Residents informed that their entries would be reviewed by CHCI leadership which was postulated to potentially have influenced their	Level III; Quality B

			obtained from the [REDACTED] a Federally Qualified Health Center (FQHC) located in Connecticut	specialty care and clinical elements. Several themes emerged across participants which were likened to Meleisis transition theory. The need for competency assessment tools as created by the VA was highlighted. Additionally, the need to evaluate programmatic outcomes across centers to establish benchmarking was encouraged.	responses. One author was a leader and personally provided feedback to some participants as they were going through the program.	
5	Harper, D. C., McGuinness, T. M., & Johnson, J. (2017)	Literature Review of NP residencies	N/A	<p>The objective was to evaluate current NP residencies and their curricula that reflects the DNP Essentials with a specific focus on Essential VIII and to reflect on future policy changes for residency programs.</p> <p>It was concluded that residencies collaborating with academic institutions will serve to establish exemplar curricula standardization and competencies rooted in evidence-based practices. They question how programs will be evaluated on a national level in order to reach a consensus of programmatic standards.</p>	Literature review not inclusive of all NP residency programs.	Level V; Quality B
6	IOM (2010) The future of nursing: Leading	Consensus/ Position Statement	N/A	Recommended the implementation of post graduate transition-to-practice programs. Regulatory bodies, nursing organizations and	Report reflects opinion of the committee and its authors and may not	Level IV; Quality A

	change, advancing health	(Landmark Report)		health care organizations were implored to support development of these programs. Advised the implementation of metrics to assess program efficacy as evidenced by competencies and observed retention rates to ultimately improve patient care delivery and outcomes.	encompass the views of organizations and/or committees participating in its conception.	
7	Martsolf, G. R., Nguyen, P., Freund, D., & Poghosyan, L. (2017)	Online search of NP post graduate training programs in the US.	N/A	Examined 68 NP residency and fellowship programs in the US looking at various elements such as program focus, length, and salary. Focus of programs: primary care (38.2%), emergency/trauma medicine (13.2%), acute care (11.8%), psychiatry (7.4%), and palliative care (5.9%). Seventeen specialty programs were identified with a focus in areas such as cardiology, oncology and others. Programs were managed by hospitals and health systems (38.2%), academic medical centers (20.6%), and CHC (26.5%). Length of most programs was 12 months.	Information obtained was drawn from publicly accessible program descriptions which at time provided minimal programmatic information. A more critical review is needed to identify future NP post graduate training programs and their role.	Level V; Quality B
8	NNPRFTC (2015)	Clinical Practice Guidelines and Consensus (Post	N/A	The NNPRFTC functions as an accrediting organization for post graduate NP training programs to develop educational standards and training model to guide curriculum and programmatic structure. In	Reflects the opinion of one accrediting organization	Level IV; Quality B

		graduate NP Training Program Accreditation Standards)		order to receive accreditation, the following 5 elements must be part of the post-graduate training curriculum: Clinical-based practice and patient care experience, regularly scheduled didactic sessions, system-based learning and quality improvement, population-based health focus and leadership and professional development. Evaluation consists of NP self-assessment, fulfillment of core competencies and preceptor assessment. An overall programmatic evaluation is also completed.		
9	Mackay, Glynn, Mcvey, & Rissmiller, (2018)	Survey Non-Experimental /Qualitative	Sample/Sample Size: 159 NP members of the MCNP	Survey conducted revealed that 86% saw utility of NP residency programs with 80% expressing they would have attended a program if it had been available to them. 66% felt they had a knowledge gap and 60% a clinical skills gap. The following were identified as areas of deficiency upon transition to practice: “independent decision making, time management, complex care, prescribing, interdisciplinary communication, minor office procedures, and billing and billing/coding were identified.” Respondents suggested the need	One NP organization was surveyed. Survey tool created by authors of study and will need further content validity and reliability evaluation.	Level III; Quality B

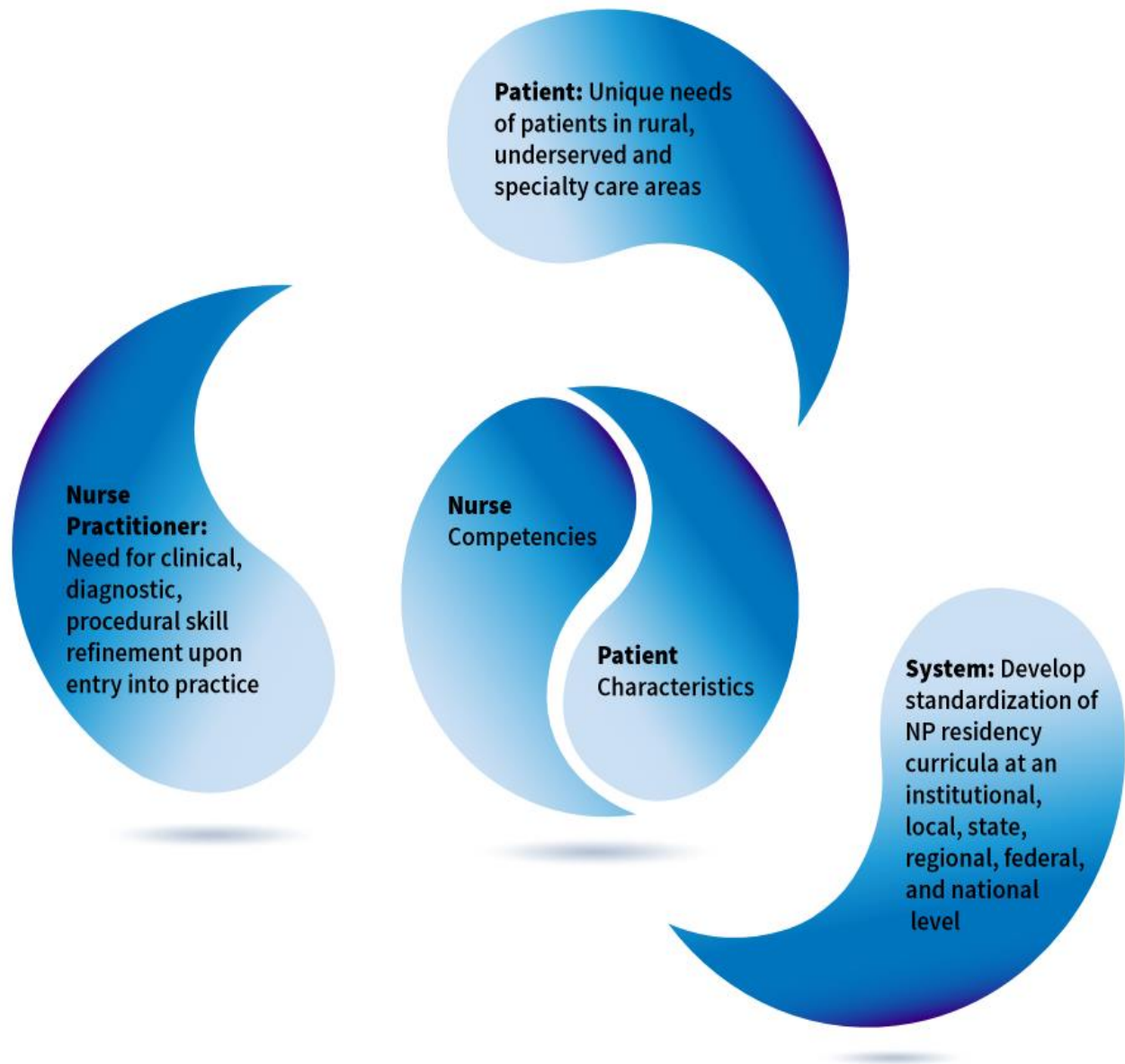
				for additional prescribing, billing and coding skills to be incorporated into residency program curriculum.		
10	Rugen, Dolansky, Dulay, King, & Harada, (2018)	Non-Experimental /Qualitative	<p>Sample/Sample Size: A total of 38 VA residents and their assigned mentors were evaluated.</p> <p>Setting: 5 VA CoEPCE NP residency sites were examined.</p>	<p>Implementation of an NP residency competency tool to ensure standardization across all 5 VA CoEPCE residency sites. This was the first tool of its kind developed to evaluate post-graduate NP competencies. Competencies were rooted in AACN, NONPF, DNP essentials, National Committee for Quality Assurance, Interprofessional Education Collaborative Expert Panel, Accreditation Council for Graduate Medical Education. The seven competency domains within the tool were: Clinical, leadership, interprofessional team collaboration, patient-centered care, shared decision-making, sustained relationships, and performance improvement. in order to facilitate transition to practice.</p> <p>An EPA rating model was used to evaluate NP clinical competencies. Qualitative data was also obtained from residents regarding their</p>	Further research needed to examine competency tool reliability and validity. Additional development of tool remains ongoing.	Level II; Quality A

				<p>progress. Data was collected from residents and mentors at 1 month, 6 months and at 12 months upon completion of the program.</p> <p>NP residents showed advancement in all domains ($P<.0001$). NP self-evaluations mirrored that of their mentors demonstrating consistency. Several themes emerged for programmatic improvement including refinement of differential diagnosis development and management of veteran specific health problems such as post traumatic stress disorder.</p>		
11	Rugen, Harada, Harrington, Dolansky, & Bowen (2018)	Non-Experimental /Qualitative. Assessment of residents experiences using open ended questions	<p>Sample/Same Size: A total of 38 VA residents</p> <p>Setting: 5 VA CoEPCE NP residency programs</p>	<p>Resident self-assessments were completed at 1, 6, and 12 months during their residency program. Clinical competency ratings significantly improved with independent management of common primary care conditions demonstrated at 12 months. Valued improvement of self-confidence and perceived competence. As a result of responses, the following additions were made to the curriculum: Time management, organization and work life balance.</p>	Data was self-reported and not anonymous. A short answer format was used limiting responses.	Level III; Quality B

12	Schofield & McComiskey (2015)	Non-Experimental /Qualitative. Assessment of critical care fellows experiences using Likert Scale ratings of skills pre and post training	Sample/Same Size: 6 NP Fellows Setting: Tertiary Medical Center	A 9-month critical care fellowship with a focus on improvement of clinical and didactic skill acquisition. Curriculum was founded in both the Acute Care Nurse Practitioner (ACNP) and graduate medical education competencies It was found that fellows demonstrated enhanced performance, confidence, knowledge, skills, and overall team cohesiveness allowing them to transition to a more independent role. Fellows demonstrated improved management of critically ill patients. Prior to each rotation, a likert scale rating was collected reflecting NP perceived competence. Procedural ability increased from a score of 0 (no experience) to 4 (fully competent). Overall rating increased from 2 (little experience) to 3 (competent). Credentialing was obtained for most procedures at program end. Observational simulation ratings increased from a mean score of 1 (1 critical action demonstrated) to a mean of 4 (all critical actions demonstrated).	Small sample size. (2 of the 6 enrolled did not complete the program)	Level III; Quality C
13	Taylor, A., D., Broyhill, S., B., Burris, M.,	Non-Experimental /Qualitative.	Sample/Sample Size: 158 fellows (Nurse	Carolinas Health Care System (CHS) 1- year fellowship program One of the largest postgraduate	Does not examine NPs exclusively but a	Level III; Quality B

	A., & Wilcox, A., Mary. (2017).	Journals & self - evaluations	<p>Practitioners, Physician Assistants, Certified Registered Nurse Anesthetists, Certified Nurse Midwives, and Clinical Nurse Specialists).</p> <p>Setting:</p> <p>██████████</p> <p>██████████</p> <p>██████████</p> <p>██████████</p> <p>██████████</p> <p>██████████</p> <p>██████████</p>	<p>fellowship programs recruiting 70 fellows annually over 20 specialty care tracks affiliated with the University of North Carolina-Charlotte. Curriculum focused on practical didactics, case conferences, simulation and interprofessional education rotations. All fellows are required to participate in case study write-ups and conference presentations. They present two case study reports monthly. A quality improvement project is also required which is formally presented at the Center for Advanced Practice research and innovation showcase via oral and poster presentation. To foster leadership skills, fellows are urged to participate in their professional organizations and collaborate with leaders to acquire political advocacy skills. 80% of residents remain within the health care system upon graduation. The following improvements were seen: 27% increase in general clinical knowledge, 80% increase in radiologic skills, and 43% increase in readiness to function as leader in code.</p>	combination of disciplines	
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Appendix B



Adapted from Curley, M.A.Q. (1998). The synergy model. Retrieved from: Patient-nurse synergy: Optimizing patients' outcomes. *American journal of critical care*, 7 (1), 64-72.

Appendix C

Title: Analysis of Current Post Graduate Nurse Practitioner Residency Programs
Co-PI: Christine Stiansen

Analysis of Current Post Graduate Nurse Practitioner Residency Programs:**Data Management Tool**

Program Name: _____

Website Address: _____ Dates Accessed: _____

Direct communication with residency program via email/phone: ☐ Yes ☐ No Dates: _____

Year Established: _____ Number of participants enrolled: _____

Location: State: _____ Region: _____ ☐ Rural/Underserved patient care area

Program Length ☐ 6 months ☐ 1 year ☐ Other: _____

Program type ☐ Residency ☐ Fellowship ☐ Other: _____

Accreditation status: ☐ Yes (Agency Name: _____) ☐ No

Specialty: ☐ Primary ☐ Acute Other: _____

Type of organization overseeing the program: |

☐ Hospital/health system

☐ Academic medical center

☐ Community health center

☐ Federally qualified health center

☐ Other: _____

Breakdown of Programmatic Elements	
Requirements/eligibility/qualifications for enrollment (e.g. Graduate MSN or DNP, NP license, AANP or ANCC certification, CPR)	
Compensation and benefits (e.g. salary, vacation/sick time, medical/dental benefits, sign on bonus, guarantee of employment at residency completion)	
Core curricular elements (e.g. didactic, leadership, quality improvement, rotations)	
Guidelines/DNP/MSN Essentials	
Evaluation methods (e.g. student and program outcomes).	
Other	

Christine Stiansen NP Residency Program Data Collection Tool-Version 1 - Excel

Christine Stiansen

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	A	B	C	D	E	F	G	H	I	J	
1	Residency Program Name	Year Est.	# Patiripants Enrolled	Location (State/Region)	Program Length	Program Type	Accreditation Status/Agency	Speciality	Affiliating Organization	Overseeing Progra	Requirements/eligibility/qualifications for enrollment
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Christine Stiansen NP Residency Program Data Collection Tool-Version 1 - Excel

Christine Stiansen

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	K	L	M	N	O	P	Q	R	S	T	U
1	Vacation/Sick Time	Medical/Dental	Salary/Sign on bonus	Guarantee of employment	Core curricular elements	Guidelines/DNP/MSN Essentials	Evaluation methods	Website Address	Dates Accessed	Direct Communication	Other
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Appendix D

**Appendix 12: DNP Project Proposal Evaluation Form****Proposal Approval Form**

All DNP Projects require formal presentation to the DNP Team. After the presentation, the DNP Team will complete this form. A copy of the form must be uploaded into the electronic drop box located in **DNP Project Checklist [learning management systems (LMS)]**. Students and DNP Team Members should also keep a copy for their records. **Level 3 or higher is required on all components.**

Full Title of DNP Project Analysis of Current Post Graduate Nurse Practitioner Residency Programs

Name of Team Members

Student(s) Christine Stiansen RN, BSN

DNP Chair Mary DiGiulio, DNP, APN, FAANP

DNP Team Member Jeffrey Kwong, DNP, MPH, ANP-BC, FAANP

DNP Team Member _____

DNP Team Member _____

Date of Presentation 5/2/19

Component	1 Very Poorly	2 Poorly	3 Good	4 Very Good	5 Excellent	Comments
Cover Page, Table of Contents, Abstract (< 250 words), and general formatting meet APA requirements and RUSN instructions	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	
Introduction: Basic overview of project and describes the contribution it will make to change practice and impact outcomes .	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	

Component	1 Very Poorly	2 Poorly	3 Good	4 Very Good	5 Excellent	Comments
Background & Significance: The problem or gap is clearly identified. Description of the problem/gap includes, the population affected, what is currently happening, why the audience should care, what we currently know, and what we need to find out is articulated. The significance is explained in detail to include the impact/status of the problem/gap on population, cost, policy, education, healthcare systems, and beyond.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	
Needs Assessment: The need, feasibility, and resources available are discussed. Congruence of the project to the organization's mission is evident. The student describes logically the contextual/organizational environment. Discusses previous attempts or possible solutions to the problem based on evidence and experience. Was a specific process used? Ex: SWOT, Community Assessment, etc. Describe:	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	
Problem/Purpose Statement: Problem/Purpose is clearly stated and summarized. Scope of project is realistic and appropriate to DNP Scholarship.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	
Clinical Question: The student frames an answerable clinical question related to the problem/practice gap.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	
Aims & Objectives: All aims are supported by objectives that are specific, measurable, achievable, realistic, and time-bound.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	

Component	1 Very Poorly	2 Poorly	3 Good	4 Very Good	5 Excellent	Comments
Review of Literature: Directly relates to answering the posed Clinical Question. Databases used, key terms, and search strategy are described. Evidence is appraised and synthesized into an Evidence Table using the instructions by Dearholt & Dang (2012). The student articulates a written summary of the findings and does not simply regurgitate information.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	
Theory/Framework: The theory/framework for the project is described and applicable to operationalizing the project. A concept map is presented.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	
Methodology: The overall design of the project correlates to the Aims & Objectives. The student clearly communicates the: Setting, Study Population, and Recruitment Strategy. The consent Procedure, Risk/Harms to Participants, and Cost/Compensation for Participants. The study intervention(s) is/are described in detail. Progress Indicators/Outcomes to be measured are relevant to the project. Tools/Instruments are appropriate. A project timeline and budget/resource list is presented.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	
Evaluation Plan: An evaluation plan for the DNP Project Process is included. Evaluation measures, tools, instruments, and measures match the Aims/Objectives and Project Type.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	
IRB: All Rutgers IRB requirements are meet.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	

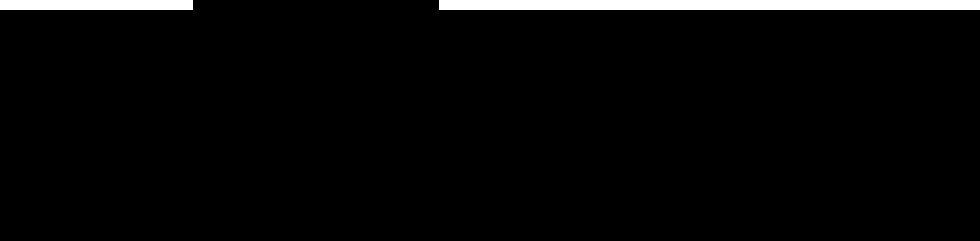
The project is suitable for IRB submission. All organizational IRB requirements are met.						
Letter of Cooperation is included.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Not applicable
Formal Presentation of DNP Project: Presentation is presented on Rutgers-School templated slides and includes all relevant aspects of the project. The student's appearance and presentation skills meet doctoral expectations.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	
Turn-It-In Originality Report is included.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	9%

Comments _____

Describe Corrective Actions if Revisions Required _____
(Use additional paper if necessary)

Select the Outcome of the presentation:

☒ Approved as presented ☐ Approved with minor revisions ☐ Reject proposal



Date 5/2/19

UPLOAD signed form into the *DNP Project Checklist (LMS)*.