

ANew Project to Develop and Support Rural Primary Practice

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Abstract

South Dakota is one of the nation's most rural and frontier states and has the highest proportion of rural dwellers in the Midwest. Many of the state's counties suffer from provider shortages, with nurse practitioners increasingly being called upon to fill the role of the primary care provider in clinics and critical access hospitals. However, family nurse practitioner (FNP) education programs are not required to provide the training and skills necessary to meet the unique challenges of rural practice.

An Upper Midwest land grant university prepares both masters and doctoral FNP students to fill primary care provider needs in South Dakota and the surrounding region. The purpose and scope of this two-year Advanced Nursing Education Workforce (ANew) project was to enhance an existing academic/practice partnership to prepare primary care advanced practice registered nursing (APRN) students for practice in rural and/or underserved settings in the state and region.

The ANEW project provided FNP students with a longitudinal primary care clinical traineeship experience in rural clinical settings.

Trainees benefited from traineeship funds, learning advanced procedures and skill concepts through attendance at a series of educational workshops, and job placement efforts post graduation.

The ANEW project also provided for a comprehensive preceptor development collaborative designed to enhance competence and confidence for independent rural practice and facilitate job placement in rural communities after graduation.

This project strengthened the quality of FNP education through an academic/practice partnership which resulted in a symbiotic, synergistic relationship to address rural work force supply and the identification of the knowledge and skills needed for current and future rural healthcare providers.

Keywords: family nurse practitioner, education, preceptor, academic, practice partnership, rural primary healthcare, healthcare provider shortage

ANEW Project to Develop and Support Rural Primary Practice

Preparing primary healthcare providers for rural practice continues to be difficult with approximately one in five people, or 19% of the US population, residing in rural settings (United States Census Bureau, 2017). South Dakota (SD) has a significant rural population. South Dakotans living in rural areas account for over 51% of the state's population (United States Department of Agriculture Economic Research Service, n.d.). Rural residents face healthcare barriers in terms of limited access to care as well higher rates of advanced age and chronic disease, and decreased income compared to their urban counter parts (Holland et al., 2019).

Current family nurse practitioner (FNP) education programs are not required to encompass the knowledge and skills needed by nurse practitioners (NPs) in rural settings. Rural patient care

requires healthcare providers who possess the knowledge and skills of primary care and who can step in as needed and serve as an emergency medicine provider. To bridge this gap, providing comprehensive education for future rural primary healthcare providers is vital.

Literature Review

Nurse practitioner education is guided by the National Organization of Nurse Practitioner Faculties (NONPF) Core Competencies and applies to all NP programs regardless of population focus (NONPF, 2017). These NONPF Core Competencies are a set of essential standards for all NPs preparing for entry into practice (NONPF, 2017). Nurse practitioner population-focused curriculum is further guided by NONPF Population-Focused Nurse Practitioner Competencies for family/across the lifespan, neonatal, acute care pediatric, primary care pediatric, adult-gerontology acute care and primary care, psychiatric mental health, and women's health/gender related population specialties (NONPF, 2013; NONPF, 2016). However, NP educational competencies specific to rural practice as a specialty are not available.

Rural regions often do not have the capacity to support sufficient healthcare services. According to the National Rural Health Association (2012) and the American Hospital Association (2019), healthcare facilities in rural areas have difficulty recruiting and retaining primary care providers. This deficit has been attributed, in part, to higher death rates in nonmetropolitan areas compared to those in urban areas (Garcia et al., 2017; Moy et al., 2017). A shortage of providers has the potential to negatively impact rural patients' access to healthcare services, including primary care. For example, rural residents were more likely to report less access to care as well as lower quality of care than those residents living in metropolitan areas (Agency for Healthcare Research and Quality, 2017).

Physician shortages in rural regions have been well documented in the literature; however, nurse practitioners have increasingly been called upon to fill these rural healthcare gaps with 87 percent of the 270,000 NPs in the country now trained in primary care (American Association of Nurse Practitioners, n.d.). Despite the NP role emerging to meet the needs of rural populations, little information is available about the challenges NPs face when beginning practice in a rural healthcare facility. In most of these areas, NPs typically practice in primary care clinics and have expanded their role to include acute care settings such as the emergency department, inpatient hospital care, long-term care, telehealth, and off-hours on-call schedules. These additional practice settings exceed most standard NP educational program requirements and present a gap in education-to-rural practice transitions.

Economics, education, rural practice characteristics, rural demographics, and health status are often cited as reasons for healthcare provider shortages in rural regions. In addition, training in an urban setting does not necessarily prepare one for practice in rural settings, making transitions from urban to rural settings difficult for providers. Residing in a rural area may impact a provider's desire to return to rural practice after graduation (Goodfellow et al., 2016). Further, associations between having an interest in underserved populations and working in rural areas are supported within the literature (Goodfellow et al., 2016; Rabinowitz et al., 2000). Despite practitioners with rural backgrounds as well as practitioners with an interest in rural areas returning to those types of areas to practice, rural areas remain medically underserved.

Methods

The College of Nursing (CON) at an Upper Midwest land grant University prepares masters (MS) and doctoral (DNP) FNPs to fill primary care needs in SD and the surrounding region. The purpose of a two-year Advanced Nursing Education Workforce (ANEW) project was to enhance an existing academic/practice partnership to prepare primary care FNP students for practice in rural and/or underserved settings.

The program partnered with an integrated health system to provide primary care clinical training experience emphasizing rural and/or underserved populations, traineeships, and a comprehensive preceptor program. Four objectives addressed the need for developing enhanced rural FNP education with existing clinical partners and expanded academic-practice partnership and increasing partnerships within rural primary care community-based settings throughout the state and region. The ANEW project was reviewed by the University Institutional Review Board, who determined the project was not Human Subjects Research and was exempt from full review.

Objective 1: In collaboration with the practice partner, provide an innovative approach to longitudinal, immersive clinical training experiences that includes advanced procedures and skill concepts, with an emphasis on rural and/or underserved populations for graduate nursing students who are specializing as primary care family nurse practitioners.

An academic practice partnership created intentional space for dialogue and innovative action leveraging the strengths of academia and practice aimed at building the competence and confidence of the FNP leading to increased work force capacity. The practice partner is headquartered in SD and is the largest not-for-profit healthcare system in the nation, with locations in 126 communities in nine states. Practice partner contributions included identification of clinical sites with established clinical intensity for immersive clinical experience, collaboration on preceptor development, trainee workshops, and rural job fairs.

Three workshops, “Introduction to the Rural Clinical Community Culture”, “Advanced Procedures in the Rural Community”, and “Advanced Skill Concepts in the Rural Community”, were developed and conducted during three FNP practicum courses. These workshops were designed to introduce rural culture, build skill intensity and complexity, and close knowledge and skill gaps by the end of each practicum course. The pedagogical approach incorporated experiential learning with a teaching-learning framework of simulated scenarios and structured debriefing. The workshops included content expert lectures, educational stations, and simulation scenarios. The workshops enhanced the rural experience for the trainees by reinforcing specific skills required of rural FNPs. Other University CON graduate students, community stakeholders, practice partners, and preceptors were invited to attend each workshop and received Continuing Education Units (CEUs) or Continuing Medical Education (CME) credits.

The “Introduction to the Rural Clinical Community Culture” workshop was conducted, recorded, and professionally edited using videoconferencing, allowing content experts and trainees to remotely attend the workshop at their convenience. The “Advanced Procedures in the Rural Community” workshop topics included: wound management with a focus on laceration closure, digital blocks, 12 Lead ECG interpretation, STEMI protocols, nail removal, and ear, nose, and throat emergencies. Participants were provided opportunities for hands-on experience with splinting and casting. The final “Advanced Skill Concepts in the Rural Community” workshop expanded on topics introduced in the previous workshop, particularly in terms of skill intensity and complexity. Examples of topics were slit lamp/Woods lamp skill station, de-escalation techniques and personal safety, child abuse recognition and forensics exam, difficult conversation simulation scenarios, sepsis simulation scenario, Stop the Bleed®, basic x-ray interpretation, and an unfolding simulation scenario.

In addition, an immersion experience occurred in rural and/or underserved clinical sites in the surrounding region to provide trainees with appropriate learning experiences. Trainees completed 180-240 practicum hours in their assigned rural and/or underserved clinical setting over a period of three to four months. A two-week intensive experience established foundational knowledge in rural and/or underserved settings. Trainees completed a community assessment and developed a specific intervention to address gaps in services or resources.

Objective 2: Provide traineeship funds to enrolled graduate nursing students specializing as family nurse practitioners, who are placed in primary care sites with a focus on rural and/or populations for longitudinal, immersive, clinical training.

The objective focused on the creation of a funded traineeship for FNP students dedicated to serve rural and/or underserved populations. Trainee applicants were required to commit to exploring an intent to practice primary care for rural and/or underserved populations; complete an immersive clinical experience and a 2-week intensive experience in a rural setting; attend all workshops; conduct a community assessment with a specific intervention; and agree to provide professional activity data following graduation.

The selected ANEW trainees included 34 females and 9 males who ranged in age from 25 to 50 with an average age of 30.07 years. Thirty of the trainees were enrolled in the MS program and 13 in the DNP program. The area where a trainee grew up was rural for 25 trainees, urban for 6, suburban for 11 trainees, and 1 unreported. Seven of the 43 trainees were from an economically or environmentally disadvantaged background, and all trainees entered the ANEW traineeship with plans to practice in a rural or underserved area after graduation. Traineeship funds were disbursed at the beginning of each academic semester and assisted trainees in paying for tuition, books, and provided a living stipend.

Objective 3: Recruit, train, develop, and support preceptors, and evaluate preceptor outcomes in rural and/or underserved settings.

A key component of the ANEW project was to focus on the essential functions of the clinical preceptor. The academic/practice partnership engaged in intentional preceptor development strategies to meet the innovative approach to rural FNP education. The CON clinical coordinators contacted experienced primary care provider preceptors in rural and/or underserved settings in four Midwest states and matched each trainee with a qualified preceptor.

To provide access to educational and informational support, a preceptor-specific webpage was developed and shared with all preceptors. The webpage allowed preceptors to easily access the preceptor handbook, links to free CEU/CME opportunities, and links to preceptor vignettes (NONPF, n.d.) to aid in preceptor/trainee development. ANEW program faculty also created a continuing education session specific for preceptors titled “Leading into the Future: Preceptor Development” which was presented at an annual state nurse practitioner association conference. Rural health preceptors were provided the opportunity to attend the conference tuition-free, utilizing funds from the ANEW program. Additional support was provided during a one-day preceptor development workshop created in partnership with the University’s practice partner.

During the two-week intensive experience, trainees worked full-time alongside their preceptors (including on-call shifts to cover emergency rooms and caring for the emergent needs of long-term care residents). While most trainees were placed in rural towns, several were placed within the Indian Health Service system on rural Native American reservations. Working in these settings allowed trainees to completely immerse themselves in the process of addressing factors that impact health disparities common in this population (Indian Health Services, 2019).

Objective 4: Develop and implement strategies to connect ANEW program graduates with employment opportunities in rural and/or underserved settings.

ANEW trainees' enhanced experiences prepared them for rural employment and increased their employment desirability to rural employers. To facilitate trainees' employment opportunities in rural areas, a University sponsored job fair was held each year. Rural employers were invited to showcase their communities, while connecting trainees with employment opportunities. In preparation for the job fair, trainees developed a portfolio illustrating their enhanced rural and/or underserved experiences that qualified them for available positions. In addition to the job fair, CON faculty and the academic/practice partners, including the clinical practice preceptors, facilitated employment opportunity searches, applications, and interviews during the rural immersion and intensive experiences to further connect trainees with employment opportunities. Ultimately, the overarching goal of the ANEW project was to increase the number of primary care providers available in these areas and to more fully equip those FNPs to respond to the unique challenges that working in the rural and/or underserved communities experience. Between Fall 2017 and Summer 2019, 56% of ANEW trainees who completed preceptorships accepted employment in a rural and/or underserved setting.

Evaluation

Evaluation efforts were grounded in process and outcome evaluation, with a focus on tracking activities contributing to the intended short-term outcomes, providing ongoing feedback with the practice partner, and identifying best practices for disseminating and application in other settings. The evaluation plan utilized Rapid Cycle Quality Improvement (RCQI) and Plan-Do-Study-Act to assess and monitor program objectives, make necessary adjustments, and achieve performance improvement (Center for Health Workforce Studies, 2016). Quantitative and

qualitative data points were identified for each project objective. To further enhance evaluation efforts and direct the project, an Advisory Board composed of academic/practice partners and rural and/or underserved community stakeholders was established. The Advisory Board met each semester to provide feedback and discuss project progress.

Formative and process evaluations were conducted following each workshop. All participants rated the “Introduction to the Rural Clinical Community Culture” workshop as “Excellent” or “Good” overall and agreed the information was applicable to their practice. “Advanced Procedures in the Rural Community workshop” evaluations provided qualitative feedback such as the opportunities for kinesthetic learning and the high-quality speakers were much appreciated. One hundred percent of participants rated the workshop overall as “Excellent” (78.57%) or “Good” (21.43%). The evaluations for “Advanced Skill Concepts in the Rural Community workshop” rated all topics >4.2/5 except the sepsis scenario. Suggested revisions were to pre-assign roles and increase pre-briefing. Trainees identified areas for future workshops such as foreign body removal, wound care, sexually transmitted infection treatment, medical coding, and incision and drainage of abscess.

Trainees evaluated their clinical immersion experience with a quantitative and qualitative measurement Likert scale tool (1-5) developed by the project team. One participant identified the strengths of the experience as “the experience is priceless. You get to see first-hand a whole other side of the potential factors that may impact rural care and practice”. Another noted,

Throughout my experience, I was constantly reminded of the importance of establishing rapport and respect within the community. My preceptor was called last minute to come visit a patient in the nearby community nursing home during a shift. She adapted her schedule to

see the hospice patient in the nursing home and navigate conflicting healthcare decisions with the family.

All participants expressed positive feedback.

Trainees reported the clinical immersion experience positively affected (scale 4 out of 5) their knowledge of the challenges of rural living and medical practice in the areas of underinsurance/lack of insurance; delays in seeking care; lack of anonymity, and distance to care. Trainees' knowledge was “greatly impacted” (4) or “extremely impacted” (5) related to the rural and/or underserved culture characteristics of strong work ethic, determination, frugality, self-reliance, and strong social support networks. One trainee commented,

During my experience at the clinic, the school bus dropped off a child who was having difficulty breathing. Due to his condition, he was taken via ambulance to the local hospital. The FNP rode in the ambulance as the volunteer emergency medical technicians did not feel comfortable with the child and some of the equipment in the ambulance was not working. It was great to see how resourceful and committed the FNP was in this difficult situation.

Other trainees commented on how astonished they were to witness first-hand the provider shortages and how those shortages affected residents' access to care. Overall, trainee feedback captured the pressing challenges that most rural communities experience in terms of their members' access to medical care.

ANew trainees completed a community assessment and developed community-specific interventions. Examples of the interventions created by the trainees included community advanced care planning education, BiPAP simulation, and provision of free parks and recreation prescriptions. These ideas were shared with community members and peer trainees as a voice-over multi-media presentation accessible on the University course management software.

Conclusion

The NP role is emerging to meet the needs of rural populations, however, there is limited information about the challenges NPs face when beginning practice in a rural healthcare facility. The ANEW project strengthened the quality of FNP education through an academic/practice partnership which resulted in a symbiotic, synergistic relationship to address work force supply and the identification of the knowledge and skills needed for rural healthcare practice. The ANEW traineeship increased participants' cultural engagement and fostered a desire to launch a career in a rural and/or underserved environment. Utilization of workshops to increase the knowledge and skills needed by rural providers was positively evaluated and supports the need to develop rural practice competencies for NP education.

Primary healthcare provider shortages have impacted rural patients' access to healthcare services. With the literature focusing primarily on physician shortages in rural areas, more knowledge is needed regarding the recruitment and retention of the NPs called upon to fill this nationwide primary care gap. The ANEW project contributed to this knowledge gap and demonstrated the potential for increasing providers as 56% of trainees accepted employment in a rural and/or underserved setting. Therefore, implementation of rural preceptorships, such as the ANEW project, could ultimately decrease the critical shortage of providers in rural and/or underserved settings.

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