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12-9-2018

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### Recommended Citation

Neubrandner, Judy; Franzen, Susan; and Mathis, Rebecca, "INPUT: An academic–practice partnership to an underserved rural community" (2018). *Faculty and Staff Publications – Milner Library*. 99.

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# INPUT: An academic–practice partnership to an underserved rural community

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## Abstract

The INPUT project is a model partnership that changed the way health care was offered to the underserved in rural Western North Carolina. Grant funding provided a full-time Family Nurse Practitioner (FNP) to a free clinic and created clinical placements for FNP students. Students had opportunities to learn about unique aspects of care for vulnerable, underserved populations to encourage them to consider working in rural communities. The clinic saw an increase in patient visits and offered more continuity in follow-up care. This academic–practice partnership represents a successful example of how working together can benefit the collaborators and community.

## KEYWORDS

access to health care, advanced practice nursing, graduate nursing education, health disparities, rural health

## 1 | INTRODUCTION

The Increasing Nurse Practitioner in Underserved Territories (INPUT) project, funded by the Golden Leaf Foundation, sought to enhance the health care workforce through an increase in family nurse practitioner (FNP) clinical sites in Western North Carolina. The project was a partnership between a regional comprehensive university in the Eastern United States, hereafter referred to as “the University” and a regional, rural-free clinic, hereafter referred to as “the clinic.” Grant funding provided a full-time FNP to practice in the clinic and to serve as a preceptor for 18 FNP students over a 2-year period in a rural, underserved clinical setting.

Beyond educating FNP students, another goal of the project was to improve the health and health care of the region by adding an FNP to increase access to primary care for the underserved populations in rural Western North Carolina and give those patients a primary care medical home. This highly successful project resulted in a consistent clinical site for FNP students and a reliable medical home for underserved patients in rural Western North Carolina. Ultimately, INPUT resulted in the clinic being absorbed into a federally qualified health clinic in Western North Carolina, providing financial and personnel stability.

## 2 | LITERATURE REVIEW

Schools of nursing often struggle to find adequate clinical sites for their student nurses, especially nurse practitioners (NP). According to *Recruiting and Maintaining U.S. Clinical Training Sites: Joint Report of the 2013 Multi-Discipline Clerkship/Clinical Training Site Survey* (2014), the American Association of Colleges of Nursing (AACN), American Association of Colleges of Osteopathic Medicine (AACOM), Physician Assistant Education Program (PAEA), and Association of American Medical Colleges (AAMC) surveyed 580 schools; 80% of the respondents reported increasing difficulty in finding appropriate clinical placement sites for their students. Specifically, 95% of the 295 nurse practitioner programs surveyed expressed concern regarding the lack of clinical placement sites. This survey focused on clinical site placements in general, but even fewer placements are available for rural primary care, which is just one disadvantage rural communities face.

Rural communities face more disadvantages in comparison to their urban counterparts. Rural Healthy People 2020, a study conducted by Bolin et al. (2015), indicates social and environmental challenges facing rural residents have not changed over the last decade. Residents of rural America are often plagued by poverty, lack of transportation,

poorer health, lower employment rates, and hospital closings (Anderson, Saman, Lipsky, & Lutfiyya, 2015; Bolin et al., 2015; Douthit, Kiv, Dwolatzky, & Biswas, 2015). In addition, rural stakeholders cite the lack of trained practitioners as a major concern in their communities.

The United States Department of Health and Human Services, Health Resources and Services Administration, National Center for Health Workforce Analysis (2013) projects an increase in demand for primary care physicians, primarily due to an aging population, especially in rural areas. The need for practitioners in primary care offers career possibilities for NPs if they are afforded opportunities to learn in rural settings. Clinical site experiences may lead to a desire to practice in rural communities

Often rural areas struggle with fewer health care providers, which increases wait time and adds additional barriers to access for individuals who face challenges with health insurance, transportation, or affordable medication. Nurse practitioners can serve a vital role in rural health when given the opportunity to practice. Evidence shows that NPs working in rural settings have positive outcomes, including reduced wait times, high patient satisfaction, and cost-effectiveness (Bauer, 2010; Poghosyan, Lucero, Rauch, & Berkowitz, 2012; Ryan & Rahman, 2012). The first step toward getting more NPs in rural communities is to increase the number of clinical placements in these areas.

Partnerships between academia and practice sites can increase clinical placements. Nursing schools are partnering with rural hospitals, health clinics, and community health services to provide much needed clinical placements (Cheshire, Montgomery, & Johnson, 2017; McDaniel & Strauss, 2006; Richards, O'Neil, Jones, Davis, & Krebs, 2011) for students at all levels. However, rural clinical placements for NPs are not as prevalent because of the difficulty in finding preceptors (Drayton-Brooks, Gray, Turner, & Newland, 2017). The combination of lack of clinical placement sites for NPs, demand for primary providers, difficulty finding preceptors, and unique characteristics that impact rural health care necessitate innovative and original solutions to increase clinical sites, especially in rural areas.

Drayton-Brooks et al. (2017) encourage nurse educators to expand their thinking to new models for NP clinical experiences, including 24-hr coverage, observation unit opportunities, advanced convenience care, correctional institutions, and school-based primary care. One model, academic-practice partnerships, is essential for increasing rural sites and requires careful nurturing. To be effective, these collaborations require strong commitment over time as well as essential components of effective communication, conviction, and ability (Mayer, Braband, & Killen, 2017; Plowfield, Wheeler, & Raymond, 2005). These proactive, collaborative alliances can lead to positive, powerful outcomes for all involved, including students, faculty, primary care practitioners, patients, and the community.

### 3 | THE RURAL COMMUNITY AND INPUT PROJECT PARTNERS

In Western North Carolina, like many rural settings, the resources and availability of health care are scarce, especially for those without

insurance. The INPUT project served six rural counties in Western North Carolina: Cherokee, Clay, Graham, Jackson, Macon, and Swain. According to the North Carolina Department of Commerce (2016), all six are considered Tier 1 counties in terms of being economically distressed. In addition, the United States Department of Health and Human Services, Health Resources and Services Administration (2018, as of June 25, 2018, designate all six as Health Provider Shortage Areas (HPSA). According to the Appalachian Regional Commission (2016), all these counties are considered either transitional, at-risk, or distressed. When 100 North Carolina counties were ranked by the University of Wisconsin Population Health Institute and Robert Wood Johnson Foundation (2018) for overall health based on mortality, morbidity, health behaviors, and social economic factors, Cherokee, Graham, and Swain had some of the worst rankings in the state (University of Wisconsin Population Health Institute and Robert Wood Johnson Foundation, 2018).

Western North Carolina is not a highly diverse region when looking only at the category of underrepresented ethnic minorities. However, the area has a unique culture and has experienced education and health care disadvantages in the past that have left it near the bottom in comparison to other parts of North Carolina. Cherokee, Clay, Graham, Jackson, Macon, and Swain all have medically indigent populations. For example, according to the U.S. Census Bureau (2010), Swain, has a low-income population group and serves the Native American tribal population with an Indian Health Service facility located on the Qualla Boundary of the Eastern Band of Cherokee Indians. 27% of the population was Native American, according to the U.S. Census Bureau (2010). An important resource for all members of the community is the University.

According to the University web page, it is a regional comprehensive university located in Cullowhee, North Carolina, and founded in 1889 to bring higher education and career opportunities to the disadvantaged Western region of North Carolina. The Family Nurse Practitioner (FNP) program admits an average of 24 students annually. The FNP program prepares nurses in an advanced practice role with competencies in family health promotion and clinical management of common conditions across the life span. The typical program is 3 years part-time and requires 49–53 semester hours of graduate coursework, including 720 clinical hours. Although most clinical sites took place in suburban/urban areas, this school of nursing also wanted to provide clinical placements in rural communities.

The clinic was a volunteer-based free clinic that served adults (18–65) with limited income (below 175% of the federal poverty level) who were ineligible for Medicaid and had no health insurance. The need for a free clinic in the community was evidenced by more than the 400 residents of Jackson, Swain, Macon, Graham, Clay, and Cherokee counties who used the clinic annually for primary care and medication assistance. Despite changes in health care, the clinic enrolled those who did not qualify for Medicaid or the new tax subsidies through the Affordable Care Act, providing vital care and access to treatment that enabled the people of rural Western North Carolina to live healthier lives. The clinic was a nonprofit organization, funded solely by grants and private donations.

The greatest limitation of this clinic was the patients' access to providers. The clinic staff included volunteer-only physicians, physician assistants, nurse practitioners, and RNs. The provider clinic operated 1 day a week by appointment every Tuesday afternoon and evening from 3:00 p.m.–9:00 p.m. A drop-in clinic operated Monday through Thursday during regular business hours where nurse case managers coordinated care by answering follow-up questions, providing referrals, refilling prescriptions, educating patients, and administering patient applications. The clinic also provided a Medication Assistance Program (MAP), which provided free prescription medications to eligible patients of the clinic and/or other community patients.

The clinic had a waiting list of almost 400 patients who waited 4–6 months for an initial visit with a provider. Patients rarely saw the same provider twice, another challenge of volunteer-only providers. Scheduling follow-up visits was also difficult because of volunteer-only schedules. These factors led to a lack of continuity, consistency, rapport, and trust, which were barriers for this vulnerable population of underserved individuals.

In order to help mitigate the challenges faced by the clinic, the Golden Leaf Foundation provided the funding for the INPUT project. According to the Golden Leaf Foundation's web site, the Foundation was created as a result of the historic 1999 Master Settlement Agreement that included 46 states and provided 50% of the annual payments made by cigarette manufacturers to North Carolina. An endowment was established to use these funds to create meaningful economic transformations across the state. The mission of the Foundation is to increase economic opportunities in North Carolina through leadership in grant-making, collaboration, innovation, and stewardship. Golden Leaf's grant-making focuses on the following priorities: economic development, agriculture, workforce preparedness, health care, education, and community vitality. The INPUT project met four of six of these goals—health care needs, workforce preparedness, education, and community vitality. The Golden Leaf funding made a significant difference in rural Western North Carolina.

## 4 | PROJECT OVERVIEW

The University's school of nursing had an unmet need for FNP clinical site placement. The FNP program required students to find their own clinical placements. Like many schools across the country, clinical sites were limited and difficult to arrange (Erikson et al., 2014). In addition, clinical site placements were sought by not only local schools of nursing but also online FNP programs and other health care disciplines, including medical and physician assistants. Students struggled to find clinical sites in primary care settings, and those offices were often overwhelmed with clinical site requests.

The INPUT project allowed the school of nursing to place three FNP students in the clinic each semester. Students participated in educational seminars that taught them about social determinants of health, cultural diversity, and special needs of rural patients. As part

of the project, FNP students at the clinic were required to keep a journal of their experiences and to reflect on working in a rural location with underserved populations.

Along with providing a quality FNP clinical site, one of the goals of this project was to increase the students' knowledge and understanding of patient care in rural and underserved populations. Historically, most of the primary care clinical sites were in urban or suburban settings and the clients in those settings had payer sources, such as private insurance or Medicare. FNP students in these settings learned the fundamentals of primary care but did not see the unique needs of patients from diverse backgrounds who were underinsured or underserved. Without the experience and exposure, students were less likely to choose to work in rural settings.

## 5 | PROJECT OUTCOMES

With a full-time FNP, the clinic eliminated its waitlist and served as a consistent medical home for its patients. The number of patient visits and the number of patients served by the clinic increased significantly. With the addition of a full-time FNP, the clinic's ability to serve patients grew exponentially. The number of patients served increased 40% and the number of patient visits grew by 124%. At the initiation of the project in 2014, the clinic was averaging 877 patient visits. By the end of the project, the number of patient visits increased to 1966 (Table 1).

Through consistent communication and education, patients began to learn that the clinic was their medical home, and they could utilize clinic services instead of emergency room services for primary care needs. The clinic enhanced its strong relationship with the local hospital by providing the emergency room staff with discharge planning instructions for patients who identified themselves as clinic clients. The clinic staff was able to provide patient follow-up within 72 hr of an emergency room visit.

The INPUT project not only provided quality care for clinic patients but was also a valuable learning experience for 18 FNP students who participated in an onsite clinical rotation. The Executive Director of the clinic met one-on-one with each student at the beginning of his or her rotation, explaining the context of the clinic as a safety-net provider, discussing the challenges of providing primary care in a rural setting to vulnerable populations, and teaching the students about the Federal Poverty Level Guidelines. Students completed a Cultural Competency Self-Assessment tool to reflect on their awareness or lack of awareness about social determinants of health and barriers to care that often accompany medically underserved communities. In addition to direct patient care, students shadowed

**TABLE 1** Patients served and patient visits

	2014	2015	2016	% Increase from 2014 to 2016
Patients served	427	524	596	40%
Patient visits	877	1,625	1,966	124%

clinic staff, attended community health meetings with clinic leadership, and wrote reflective journal entries about their experiences.

FNP student participants kept a journal of their experiences as part of the grant and gave permission to have excerpts of their entries published. Many students noted that working in a not-for-profit that provided care for the underserved and underinsured opened their eyes to a new world of health care and a new way of managing patients.

One student commented in her journal that being exposed to the clinic setting made her more aware of patients who were underserved with unique needs and challenges.

I was surprised to learn that most of the patients were regular people that [sic] simply could not afford healthcare. Many of the patients were in dyer [sic] need of care for chronic health problems that had been untreated for a number of years due to their inability to obtain healthcare.

Student comments often focused on the lack of resources patients had to purchase prescriptions or to follow up with further treatment:

I had the opportunity to not only care for people that [sic] had fallen through the healthcare cracks, but to also learn from some of the most compassionate and dedicated staff I have ever met ... Patients were not able to afford the recommended medications or even health maintenance surveillance such as mammograms and PAP smears. The staff at the clinic taught me how to think outside of the box with regards to obtaining these much-needed resources. The clinic had a medication assistance program (MAP) that could provide some medications at no charge. They also partnered with a local pharmacy to obtain medications for acute illnesses or those not covered in the MAP program.

Other students expressed gratefulness for the learning experience and said the experience changed their attitudes toward free clinics, the plight of the underserved, and their thoughts about working as providers with this population:

My first week of clinical left me with feelings of shock, happiness, and gratitude. Shock at how many people in our country fall through the cracks of our system, happiness that a clinic such as Good Samaritan is in existence to help these individuals, and gratitude for the life that I have been given, as well as for the experience to work in this environment.

Another FNP student who participated in the INPUT program chose to seek employment in a free clinic setting postgraduation. In her journal, she commented: "I learned so much about caring for

this at-risk population and hope to be able to work in a similar environment after I graduate." Without this clinical experience, this student may never have realized the reward of working in a rural community.

In their journal entries, the students reflected that they valued their experiences in this unique clinical environment. They were exposed to underserved populations, which increased their awareness, and hopefully desire, to work in health care organizations that provide services to low-income, underinsured communities. Journal entries show the students' heightened awareness of vulnerable population challenges.

## 6 | FUTURE IMPLICATIONS

This project demonstrated the value and importance of schools of nursing partnering with clinics that serve the underserved. The opportunity for students to learn in this environment provided both an education in primary care and a secondary education in the unique needs and challenges of those from disadvantaged backgrounds where many social determinants affect health. FNP faculty should consider didactic content within the FNP curriculum on unique health concerns faced by rural communities. Regardless of their clinical experience, students exposed to this rural-focused content will have an increased understanding of the rural population's needs. This type of project can also serve as a recruitment tool for future providers by allowing students to experience the satisfaction of caring for the most needy and vulnerable in society. The FNP preceptor saw more patients while teaching students, which increased the overall capacity of the clinic. The INPUT project also served as a catalyst for developing new partnerships that eventually led to the clinic expanding into a full service Federally Qualified Health Clinic (FQHC) satellite.

## 7 | CONCLUSION

The INPUT project successfully met the needs of all community partners. By providing clinical placements to FNP students and creating an FNP position, the clinic was able to meet the needs of more patients. The success of the project allowed for the continued existence of the clinic as part of Blue Ridge Health as well as meeting the goals of the Golden Leaf Foundation in utilizing funds to improve educational, health care, and workforce opportunities in Western North Carolina.

This collaboration showed the positive influence academic-practice partnerships can have as models for improving patient health while providing necessary clinical placements for NPs, as recommended by Drayton-Brooks et al. (2017). These types of unique projects are necessary to meet the pressing need for clinical placements for NPs and other health professionals (*Recruiting and Maintaining*, 2014).

Additionally, FNP students gained valuable experience caring for patients in a rural, free clinic, making them more aware of the unique issues faced by vulnerable individuals without access to traditional health care or insurance. As the literature states, projects like INPUT

can increase the workforce in rural areas where it is needed the most (Barnason & Morris, 2011; Kelly, Garvey, Biro, & Lee, 2017) while providing students with valuable practice experience (Cheshire et al., 2017; McDaniel & Strauss, 2006; Richards et al., 2011).

The INPUT project is a powerful example of the positive outcomes possible with community partnerships. More patients received point-of-need care while the school of nursing gave student nurses valuable learning experiences and resulted in a much needed increase in providers in the community. Foundational funding was used in the way it was intended to make a lasting impact on a rural area of the state in need of economic and health care stability. Overall, this model is a powerful example of what can be accomplished when academic-practice partners in the community work together.

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**How to cite this article:** Neubrandner J, Franzen SR, Mathis R. INPUT: An academic-practice partnership to an underserved rural community. *Public Health Nurs*. 2019;36:233–237. <https://doi.org/10.1111/phn.12566>