Rural Nurse Practitioner Workforce: Rural Registered Nurses as a Potential Untapped Resource

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Abstract

Purpose: The aim of this study was to examine rural nurse practitioner (NP) workforce issues and explore practicing rural registered nurses (RNs) as a potential untapped resource to address the rural primary care provider shortage.

Sample: A purposeful and snowball sample of rural RNs, rural nurse practitioners, critical access hospital (CAH) administrators, and rural community residents from diverse geographical areas of Idaho, a rural, Western state, was utilized as the source of data.

Methods: Twenty qualitative, semi-structured interviews were conducted, recorded, and transcribed verbatim. Transcript content was then analyzed for major thematic identification.

Findings: Four major themes were identified through the data analysis process. "Need exists", "Money matters", "Relationships", and "It's just you" were the four major themes illustrated throughout the interview transcripts.

Conclusions: Knowledge achieved from this study may be utilized to enhance supports and address barriers cited by rural RNs when considering pursuit of advanced degrees. Likewise, those factors identified by nurse practitioners as positive and challenging aspects of rural practice may

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inform recruitment efforts. The information gained may be utilized to increase the number of rural RNs who consider becoming nurse practitioners as well as the number of nurse practitioners who choose to practice, or continue to practice, in a rural setting and thus improve rural access to care.
Keywords: rural, rural nurse practitioner, workforce issues, rural nursing practice, primary care provider shortage, rural RNs

Rural Nurse Practitioner Workforce: Rural Registered Nurses as a Potential Untapped Resource

Rural access to health care services is a longstanding problem in the United States (U.S.). In 1908 President Theodore Roosevelt's Country Life Commission identified "health in the open country", where "physicians are farther apart and are called in later in case of sickness", as a concern (Bailey, 1909). Approximately two-thirds of the health professional shortage areas (HPSA) in the U.S. are comprised of rural communities (Waldrop & Gee, 2022).

The health status of rural populations is generally poorer than that of their urban counterparts (Rural Health Information Hub [RHIH], 2022a). Rural health disparities include higher rates of chronic disease and disability, higher uninsured rates, less frequent health-related behaviors, lower income and educational attainment, and higher all-cause mortality rates (RHIH, 2022a). Thus, it is reasonable to conclude that while rural communities have fewer health professionals, the need for health care professionals in those communities may also be greater.

Primary care providers are particularly scarce throughout the U.S., with the aging baby boomer generation and the Affordable Care Act (ACA) contributing to increasing demands for primary care, and fewer physicians opting for primary care practice (Buerhaus, 2018). Like many rural states, much of Idaho experiences challenges accessing primary care, with over 98% of Idaho designated as a primary care HPSA (Idaho Department of Health and Welfare, 2020). Nurse

practitioners (NPs) have been identified as a potential solution to the primary care provider shortage. NPs certified to provide primary care are more likely to practice in rural settings than are primary care physicians (Buerhaus, 2018). NPs in Idaho are authorized by the Nurse Practice Act to practice independently and could, therefore, serve to enhance access to primary care among Idaho's rural communities (American Association of Nurse Practitioners, 2022).

Historically, rural residents have had to relocate to urban centers to complete their education. Upon completion of their education, many have chosen not to return to their rural roots, contributing to the proverbial "brain drain" (Sowl et al., 2022). NP graduate programs are now available online. Therefore, rural registered nurses (RNs) are able to advance their education and become NPs without relocating (Luther & Zurik, 2020). The purpose of this paper is to present qualitative findings related to the challenges and rewards of rural practice and the factors that influence NPs' decisions to practice rurally. A further purpose is to highlight findings on the factors that impact rural RNs' decision to return to school to pursue a NP degree as well as general perceptions of NPs among rural community members and rural hospital administrators.

Literature Review

Rural Population Demographics

Approximately 14% of Americans reside in rural locations (U.S. Department of Agriculture [USDA], 2022b). Over the past three decades rural populations had been decreasing. However, that trend has recently shifted, with the pandemic contributing to an increase in rural populations for the first time since the mid-1990s (USDA, 2022b). Rural populations tend to be older, with those over 65 years of age making up over 18% of rural communities and less than14% of the population throughout the rest of the U.S. (American Hospital Association [AHA], 2019).

In addition, rural populations are less diverse, with over 81% of rural residents being Caucasian compared to just under 60% in urban areas (USDA, 2022b).

The poverty rate is higher among rural populations compared to their urban counterparts (Pew Research Center, 2018). Concentrated poverty, where at least one-fifth of the population lives in poverty, is much more common among rural counties than urban or suburban, with 31% of rural counties meeting that designation, compared to 19% of urban counties, and 15% of suburban counties (Pew Research Center, 2018**).** Average earnings per worker reflect this as well, with rural populations' average annual earnings lagging behind those of urban and suburban populations' (Pew Research Center, 2018**).** More rural residents, 34%, have a high school diploma or equivalent as their highest educational attainment, compared to 23% of urban residents. Furthermore, 25% of rural residents and 37% of urban residents have a bachelor's degree or higher (National Center for Education Statistics, 2023).

Rural Health Disparities

Some of the demographics outlined above contribute to existing rural health disparities. Lower socioeconomic status, older age, and less education are correlated with poorer overall health outcomes (Rural Health Information Hub [RHIH], 2022a). Healthy behaviors, such as exercising regularly, maintaining a normal weight, and getting adequate sleep are performed less commonly among rural populations (RHIH, 2022b). Rural residents also have higher rates of risky behaviors such as smoking or heavy drinking (RHIH, 2022b). Suicide rates are higher in rural communities when compared to urban settings (AHA, 2019).

More rural residents are uninsured than their urban counterparts. Those who are insured have the lowest rate of private insurance coverage and the highest rate of public insurance coverage

(RHIH, 2022a). Those who lack insurance are less likely to receive treatment for health conditions or preventive services (Kaiser Family Foundation, 2023).

Rural residents generally experience poorer overall health than their urban counterparts. Rural populations have higher rates of chronic health conditions, such as diabetes, hypertension, and heart disease (RHIH, 2022a). Given the aforementioned health inequities, it is not surprising that the overall mortality rate is 20% higher among rural populations than urban (Curtin & Spencer, 2021).

Rural Health Professional Shortage

Shortages of health professionals are most pronounced in rural areas. Approximately two-thirds of HPSA, as designated by the federal government, are in non-urban areas (AHA, 2019). The national average of primary care physicians per capita is 80 per 100,000 people, however, in rural areas the ratio is 68 per 100,000 people (AHA, 2019). NP availability is lower in rural settings as well, at 64.6 per 100,000, compared to urban settings where there are 69.5 per 100,000 people (RHIH, 2022b). NPs are more likely to practice in rural settings than physicians (Spetz et al., 2017).

Mental health professional shortages are significant across the U.S., but are more severe in rural settings. Over 60% of rural residents live in areas designated mental HPSA, and approximately 65% of rural counties do not have psychiatric services available (Morales et al., 2020). In Idaho, where 98.7% of the state is a designated primary care HPSA, 100% is designated a mental HPSA (Idaho Department of Health and Welfare, 2020.)

Higher Education Trends

In the 1990s, spurred in part by advancing technologies, higher education underwent a transition and began to offer more online distance learning options (Kobayashi, 2002). With brick

and mortar campuses halting live courses during the pandemic, the transformation to online distance learning in higher education was enhanced. Prior to the pandemic, approximately one-third of college courses were offered online. Although all pandemic-related restrictions have been lifted at campuses across the U.S., the number of courses offered online is now 50% above what it was pre-pandemic, with no indication of a looming reverse in the trend toward online learning (Marcus, 2022). Many NP graduate programs have followed the trend and are now available online (Luther & Zurik, 2020). Across America, approximately 83% of all households have broadband internet access, including approximately 85% of urban households and approximately 75% of rural households (Pollard & Martinez, 2021).

The Value of Nurse Practitioners to Fill the Gap

As the U.S. population ages and the demand for health care, particularly primary care services, grows, NPs have been identified as a possible solution. Expanded utilization of NPs is viewed as a potential method for providing universally accessible and cost-effective care to minimize disparities (Ortiz et al., 2018; Rosa et al., 2020). The gap in primary care services is most pronounced in rural areas and among vulnerable populations, where a higher percentage of NPs choose to practice compared to their physician counterparts (Harrison, 2023; Zhang et al., 2020).

The number of NPs has been increasing and is anticipated to continue to rise. The number of physicians choosing to practice in primary care is declining (Buerhaus, 2018). The number of NPs in the U.S. doubled from 2010 to 2017 (Timmons et al., 2021). The U.S. Health Resources and Services Administration (HRSA) projects that by 2030 the supply of NPs will increase by an additional 107% (HRSA, 2023).

Systematic review of the evidence examining the quality, safety, and effectiveness of care provided by NPs versus physicians reveals that NP care is equivalent or better than that provided

by physicians in 12 quality measures (Stanik-Hutt et al., 2013). Data demonstrates that the quality of primary care provided by NPs to Medicaid-enrolled patients is equivalent to that of physicians. Additionally, the cost differences, even specifically in states with pay parity between NPs and physicians, was found to be neutral or cost-saving (Harrison, 2023). Examination of patient outcomes and costs at the Veteran Administration (VA), the largest employer of NPs in the U.S., likewise reveals no significant difference between those treated by NPs versus physicians (Liu et al., 2020).

The current literature regarding rural population demographics, health professional shortages, and rural health statistics demonstrate that rural health care access is an ongoing concern. The evidence supports that NPs may contribute to addressing the challenges of rural health care access. Current trends in remote education indicate relocation may no longer be a barrier for rural residents wishing to pursue higher education. Hence, this study was conducted to explore additional insights into rural NP practice and factors that influence choosing a rural practice to illuminate potential solutions to the issue of rural health professional shortages.

Methods

Research Design and Approach

A qualitative study was undertaken to explore the challenges and rewards of rural NP practice, the factors that influence NPs' decisions to practice rurally, and the factors that impact rural RNs' decision to return to school to pursue a NP degree. Additional insights into rural NP practice and factors that influence choosing a rural practice setting may inform future approaches to addressing rural health care access and provider shortages. The aim of this qualitative research study was to explore challenges and rewards related to rural practice and the factors that influence NPs' decisions to practice rurally. It will also provide insight into factors that impact rural RNs'

decision to return to school to pursue a NP degree as well as general perceptions of NPs among rural community members and rural hospital administrators.

Setting

The setting for this study is the rural regions in the state of Idaho. This state meets the criterion of being a largely rural state, it is the 11th largest state geographically, with a population of 1,839,106 (U.S. Census Bureau, 2020). The vast majority of the state is comprised of counties with a population density below 10 per square mile (U.S. Census Bureau, 2020). The U.S. Department of Agriculture's definition of rural (nonmetro), which is "some combination of: 1.) open countryside, 2.) rural towns (places with fewer than 2,500 people), and 3.) urban areas with populations from 2,500 to 49,999 that are not part of a larger labor market areas (metropolitan areas)", was used to define rural for this study (USDA, 2022a).

Participants

The qualitative interview sample was comprised of 20 rural residents in Idaho. Inclusion criteria included falling into one of the five categories of prospective interviewees: rural NPs, rural NP students, rural RNs, rural critical access hospital (CAH) administrators, or rural community members. Exclusion criteria included not falling into one of those categories. Purposeful, snowball, and maximum variation sampling strategies were used. Purposeful sampling allows the researcher to choose participants that are informed about the topic under study (Creswell, 2007). Snowball sampling occurs when participants identify other potential participants who may be knowledgeable about the phenomenon of study (Creswell, 2007). Participants were asked to suggest other potential participants who had knowledge on the topic of rural nursing and rural NPs. Maximum variation sampling consists of the selection of participants likely to reflect different perspectives about the topic of interest (Creswell, 2007). This was achieved by recruiting five types

of participants: rural RNs, rural NPs, rural NP students, CAH administrators, and rural community members. In addition to seeking participants of different roles, diversity in participants' geographic location throughout the state of Idaho was also sought.

The study was approved by a university Institutional Review Board. This study was noninvasive, meaning no biologic data was collected. This study did not involve patients as participants, and presented no more than minimal risks to participants. As such, it was appropriate for expedited review.

Twenty interviewees participated in the study and represented varied geographic areas throughout Idaho: northern, southeast, central and southwest. Six of the participants were practicing rural NPs, three were rural NP students, three were practicing rural RNs, three were CAH administrators, and five were rural community members. Nineteen of the interviews were conducted in person and one was conducted via telephone. All participants received a token of appreciation in the form of a $20 Amazon gift card.

Data Collection

An interview guide was developed in collaboration with an expert in qualitative research (see Appendix A). This guide included semi-structured questions that were tailored to each category of potential interviewee. The semi-structured questions were aimed at collecting insights into the challenges and rewards of rural NP practice, the factors influencing NPs and NP students' decision to practice rurally or not, rural RNs' thoughts regarding returning to school to become NPs, the perspectives of CAH administrators and community members regarding rural NPs, and the potential for NPs to address some of the access challenges of rural health. Demographic questions were included at the end of each interview. The demographic data obtained was only

used to document respondent diversity in geographic location and category and not used as a source of data for thematic analysis.

Prospective participants were initially contacted via e-mail or telephone and provided a brief synopsis of the study's aim and inquired about their interest in participating. If they responded as initially interested, then they received an e-mail and an electronic copy of the consent form. If potential interviewees remained interested in participating, they were contacted to schedule a convenient interview time and location.

Because the study presented no more than minimal risk to participants, verbal consent was obtained from each interviewee. At the onset of each interview, the informed consent, which contains all required and appropriate elements of consent disclosure, was read verbatim. Any questions the interviewee had regarding the interview procedure or research study were addressed. The informed consent form stated that, by proceeding with the interview, the participants were indicating their consent to participate in the study, that participation was voluntary, and subjects were free to withdraw from the study or refuse to answer any questions without consequence at any time during the process.

Nineteen of the interviews were conducted in person and one was conducted via telephone. Both face-to-face and telephone interviews were electronically recorded and transcribed verbatim. Consent obtained from each participant prior to data collection included permission to electronically audio-record the interview.

Data Analysis

Qualitative data analysis occurred throughout the study as an iterative process. By initiating data analysis early in the research process, researchers can identify gaps and weaknesses in data, strategize on how to improve data collection, and enhance the quality of data (Basit, 2010**;**

Liamputtong, 2009). Qualitative interview transcripts were analyzed for major thematic identification, which focused on rural NP practice and the factors that influence a NP to practice rurally or a rural RN to pursue a NP degree, and general perspectives on rural NPs. The steps of thematic analysis included identifying the data content, reduction of redundancy, and grouping of the data into representative themes that describe the topic of interest (Aguinaldo, 2012).

Initially, the interview transcript was read in its entirety without any coding. Original coding occurred during the second reading of each data source, with consideration of who, what, where, why, and "so what" questions. While reading data the coder was cognizant of the need to shift focus between levels of data, from a detailed line or word to the overall transcript, or section of a transcript, and back again. Like data were grouped together in sub-categories and categories, and new groupings created for data that deviated from existing categories. Categories and sub-categories were recorded and examined for relationships and shared meanings among categories to identify general themes related to the topic of interest.

Data analysis was regularly discussed with an expert in qualitative research. Unmarked interview transcripts were reviewed by both researchers for confirmation of substantive statements, coding categorization and thematic identification. The researchers dialogued throughout the process with ongoing review and feedback regarding data analysis.

Findings

The interviews were analyzed, and findings were aggregated to examine the key purpose and research questions of the study. The findings demonstrated insightful perspectives on both the challenges and rewards of rural practice and decision trails NPs make in deciding to practice rurally. The interviews of the rural RNs also contributed meaning to their deliberations on whether to return to school to pursue a NP degree. Additionally, a general background of the perceptions

of NPs among rural community members and rural hospital administrators provided an updated context for the rural health system. The aggregation of findings resulted in four themes: 1) Need exists; 2) Money matters; 3) Relationships; and 4) It's just you. Each theme is detailed below, and exemplary quotes highlight the theme findings. Quotes were taken directly from the interviewees in response to the research questions and in their free-flowing comments.

Need Exists

Many NP participants included their perception of a need for additional rural health care providers when responding to the question about what made them want to become a rural NP. "I saw a need for providers" was a response provided by several interviewees. A rural NP participant indicated that "Hearing about people having to travel to get care or waiting to get in for care" contributed to her decision to practice in a rural location. A lack of available rural providers was also motivation for one NP student participant who stated, "We take in the whole county…we don't have providers here 24/7, providers have to drive here from different locations if there's an emergency. There's definitely a need here." Another rural NP interviewee indicated that she decided to become a rural NP when she saw "how nurse practitioners are a valuable, needed resource in the rural community." Other participants singled out perceived needs of specific rural populations. One interviewee indicated that she sought to become a rural NP, "To provide more access. I love the elderly and just don't think we have enough time for them. Our rural community has a lot of elderly residents." Another NP stated, "There's just so much poverty, and the needs exceeded the services, especially among children and the elderly" when explaining why she decided to be a rural NP. One participant indicated that she was pursuing her NP education with plans to practice in her rural community because "There are so many people waiting to be seen and they can't get in. The community will be so much healthier if they have a provider."

This theme was also highlighted by the consistently positive responses to whether there was a need for additional NPs. The positive responses were also provided in response to whether or not they thought rural community members desired additional NPs. Respondents provided their perspectives on what role NPs might play in addressing rural health care access challenges.

All NP participants responded, "Yes", when asked if they thought community members wanted more NPs. One opined that community members' desire for more NPs was fueled by a need, stating, "Yes, there are too many patients for far too few providers." Another similar response was, "Yes, we just don't have enough providers." Other participants identified access and choice of providers as existing needs, with one indicating, "Yes, they need female providers, better access, to be seen sooner." While another stated, "They need accessibility and choice."

CAH administrators and rural community members also included this theme of "need exists" when responding to questions about whether or not NPs could serve a role in addressing rural health care access challenges. One administrator indicated that a need for choices of providers could be addressed, stating, "Providing different options for primary care…one (clinic) is only males." One community member responded similarly, "I think they can fill that gap of not having a female…" while another stated, "More access."

Money Matters

The theme of "money matters" was prominent in NP participants' comments about the challenges of rural practice. Several participants identified a lack of understanding regarding the financial aspect of practice as a significant challenge, some opining that business courses need to be incorporated into NP programs' curricula. When describing the challenges, she initially faced as a rural NP one participant indicated, "I didn't understand the business structure. They never taught us how to bill correctly to generate enough income to cover overhead, etc. I got taken

advantage of, slave labor. The business aspect should be taught in NP programs." Another respondent shared, "It's important for people to know the realities of being a nurse practitioner and the difference, you're paid by the piece, not the hour, and if you don't understand the business end of things, you need to be valuable…or you won't make money or get retained…Having to see X number of patients is a huge paradigm shift…" Another NP agreed that financial knowledge was a need, "We have got to include business courses in our graduate nursing programs. Whether you're working for someone or running your own business, you need to know how to read profit and loss balance sheets. You need to be aware of the whole business part of it."

This theme of "money matters" was also illuminated by the fact that several respondents identified money as the most common barrier to getting a NP education. "Only financial" was the response from one RN when asked about barriers preventing her from becoming a NP. Another stated, "Financial, there would have to be loans, unfortunately." Likewise, when questioned about what support or resources they would need to become NPs, rural RNs frequently cited money. One simply stated, "Financial help".

The concept of "money matters" also appeared throughout miscellaneous comments made by interviewees. One participant seemed to suggest "money matters" for rural communities when choosing health care providers, noting, "You can have four nurse practitioners for the cost of two MDs, more providers for coverage and they can see more people." Another indicated, "Rural health care is not a money-making enterprise, rural Idaho's population is poorer and older." Another NP participant indicated that "money matters" when providing patients with treatment options, stating, "I referred a woman to a gynecologist and he gave her a prescription for $1,500, very out of touch. I asked a radiologist what a procedure cost and he had no idea. They don't get

that in medical school. In nursing school we're taught to consider their socioeconomic, everything."

Relationships

"Relationships" was identified as a theme from multiple perspectives. It arose as a positive aspect of rural NP practice and, conversely, as a challenge. The theme also appeared in responses to what community members desire from NPs. Additionally, "relationships", in the context of close family members, were cited as a support needed to successfully pursue a NP education. Despite the fact that there were no questions aimed specifically at the differences in the relationships physicians and NPs have with their patients, there were multiple comments made by participants in the course of the conversation that further illuminated this "relationships" theme.

When asked to describe their practice, rural NPs frequently cited the relationships they experience with their patients as a positive aspect. One participant reported, "The nurse practitioner-patient relationships, the sharing of information and the journey with them" was a positive aspect of her rural practice. Another noted enjoying "Getting to see patients again and again." One spoke in more general terms, noting the "Overall community feel and closeness."

Community member participants identified relationships as something they appreciate when receiving care from a NP, while NPs identified it as something patients desire. One community member stated, "You actually have a relationship, it's not so sterile or cold. I'm not there very often, but when I call, they know who I am." NPs indicated that relationships are something that patients are seeking from NPs. One rural NP stated, "I think our community members like the care that they receive from nurse practitioners, comprehensive, thoughtful, holistic care that takes into account their whole story." Another rural NP indicated, "People say: I go to a nurse practitioner, and they listen, they actually sit down and listen to what I have to say."

"Relationships" was a theme throughout multiple comments made by participants who spontaneously discussed NP care and how it differs from physician care. One rural NP reported, "Many community members prefer nurse practitioners and have switched over to me because we spend more time with them. I've had a lot of patients say: You're the first person who ever listened to me." Community members reported, "I've been very pleased with our nurse practitioners, they spend a little more time with you than MDs", and "The doctor in town is 50/50, love-hate, the nurse practitioners, everyone loves." One NP described her practice, "It's really about the why, getting that story and repeating that story to the patient so that you're understanding their story and looking at upstream reasons for the symptoms, learning their stress, nutrition, exercise and all the root cause things and that takes time. I'm here to help them help themselves." Another rural NP said, "In medicine there is no holistic model, as nurse practitioners we have a holistic model. Patients tell me I'm asking a lot more questions than anyone ever has and I tell them I'm not just taking care of your knee or cholesterol, you're a whole person and I'm taking care of all of you. They say, 'You're a good doctor' and I tell them, 'I'm not a doctor'." One rural NP shared her perspective, "A 15-minute appointment doesn't work for nurse practitioners because we're trained to interview our patients and get to know them and their stories. Their story is a huge part of the patient's diagnosis so with 15 minutes you can't begin to address the holistic perspective of your patient. Physician colleagues say that story is hearsay, they don't care, they don't have a lot of respect for the patient's story. For me, it's so important to spend time collecting their story…, but the system is not set up for that reimbursement-wise." A similar observation was shared by another rural NP who stated, "Some physicians just come in and zone in on one thing, write scripts, and walk out without education, explanation, or making sure it (the treatment plan) works for the patient."

Some respondents' comments that fell under the "relationships" theme also addressed relationships between NPs and physicians, and some indicated that those relationships were among the challenges faced by rural NPs. One rural NP explained, "Some MDs love nurse practitioners and some don't, certain ones are just sticklers and you feel like you're stepping on their toes." Another stated, "There's definitely some old-school attitude toward a nurse practitioner, a 'mid-level provider'; community members are very supportive, but some MDs are against us, some who are, luckily, retiring soon." A CAH administrator volunteered that, in his community, "Support from the traditional medical community is a challenge." A community member reported, "The ego between a nurse practitioner and MD can be the demise of effectiveness of a rural nurse practitioner. When you don't have a medical degree still garnering that respect can be hard." A CAH administrator observed, "In organizations that I've seen, the medical staff credentials side of it and the organization- they hold their own, they're gatekeepers for their peers and don't want nurse practitioners credentialed at that level." One rural NP discussed her hope for improved communications with physician-colleagues, stating, "Smaller communities like ours should have more events where all the providers come together…Nurse practitioners communicate with each other more readily than the MDs, but it would be good for all of us to come together more."

Other comments falling into the "relationships" theme category referred to a variety of relationships that exist among members of the rural health community. One rural NP spoke of the positive relationships between NPs and specialist physicians in her community, stating, "... Specialists in our area are wonderful to consult with, it's the GP doctors that seem to be the most threatened by us nurse practitioners." A rural NP student highlighted the close relationships that exist among the rural health care community, saying, "We rely a lot on community members, volunteer emergency medical services (EMS)." A rural NP made a similar comment, indicating

that while she was completing her advanced degree, “I had so many providers offer to precept me.” Family relationships were highlighted, too, as “Supportive family” was the common response among rural NPs and NP students when asked to identify what enabled them to pursue their advanced degree.

It's Just You

The theme, “it’s just you” was illuminated throughout interviews by participants as both a negative and a positive aspect. NPs cited the isolation of rural practice, with one stating, “Not a lot of support; you’re just out there and have to figure things out on your own.” Another simply reported, “It’s just you” when asked about the challenges of rural practice. Both NPs and NP students described the lack of support from employers while in school. One NP reported, “The CNO recognizes the need for nurse practitioners, but her responsibility is to get more LPNs and RNs for the hospital, so, no, not after getting your RN, there is no support there.” Another NP replied, “No. Come back and talk to us when you’re done.”

The “it’s just you” theme was presented in a positive light by some rural nurse practitioners. One cited “Autonomy” when asked why she decided to pursue her advanced degree. Another replied it was the desire “To have the autonomy to practice holistic care” that drove her to become a NP, while another noted it was “To make my own decisions.” One rural NP shared her vision for the future, “Starting my own practice so I have control over my own overhead and length of appointments because I don’t want to sacrifice the level of care I provide.” A NP student indicated, “You do it all and develop stronger relationships with your patients” as a positive aspect of rural practice.

Thematic analysis of the interview transcripts revealed four major themes, “need exists”, “money matters”, “relationships”, and “it’s just you”. These themes provide insights into the

experiences, both positive and negative, of rural NP practice, gaps in NP education, and supports and barriers that exist for rural RNs who are considering advancing their education and becoming rural NPs.

Discussion

Participants in this study cited a perceived need for additional providers in their rural community as a reason that they had, or planned to, pursue rural NP practice. Current literature supports that NPs are more likely to practice in rural settings than their physician counterparts (Buerhaus, 2018). NPs are responsible for two-thirds of the primary care provided in rural Idaho (The Idaho Nursing Workforce Center, 2020). Government programs incentivizing rural health professional practice and investments toward workforce training appear to be geared more toward physicians than NPs (Council on Graduate Medical Education, 2022). The loan repayment programs listed on the Idaho Department of Health & Welfare website include the State Loan Repayment Program (SLRP), that provides multi-discipline health professionals practicing rurally in qualifying facilities up to $25,000 per year for a two-year work obligation, and the Rural Physician Incentive Program, which provides up to $100,000 toward academic debt for physicians (Idaho Department of Health and Welfare, nd). Given that NPs are more apt to practice in underserved settings, including rural locations, government programs aimed at increasing the number of rural providers may find more success if their efforts were adjusted to target NP providers as widely as they do physicians.

Centers for Medicare & Medicaid Services (CMS) regulations for rural health clinics (RHCs) require that a NP, physician assistant, or certified nurse midwife be available to provide patient care at least 50% of the time (Centers for Medicare & Medicaid Services, 2021). Therefore, NPs are frequently employed by RHCs. Like all hospitals, CAHs regularly employ RNs to provide

bedside care. In attempt to fill provider vacancies, CAHs are beginning to employ NPs more (Butcher, 2017). However, provider and staff nurse hiring are typically done by different departments within a hospital. Interviewees indicated that CAH nurse administrators did not encourage or support RNs' pursuit of advanced degrees to become NPs, with some suggesting that maintaining bedside staff RNs was a greater priority. As the shift away from fee-for-service to value-based care continues, there is more of an emphasis on community-based and out-patient services as a means to improve population health outcomes (Centers for Medicare & Medicaid Services, 2020). Thus, a rural RN leaving her CAH staff nurse position to practice as a NP, either in a RHC or the CAH, should be viewed as a win for the community health care system as a whole. Unfortunately, rural RN vacancies are also difficult to fill (Sablick, 2022). Collaborations between universities, CAHs, and RHCs to develop, educate-in-place, and grow-your-own programs should be explored as a means of enhancing the supply of multidisciplinary health care professionals, including NPs and RNs.

In this study rural NP interviewees indicated that their education did not provide them with the financial knowledge necessary to successfully run their own practice or skillfully negotiate employment contracts. Likewise, past evidence supports these identified gaps in business knowledge and financial content in NP curricula (LaFevers et al., 2015). Incorporating health care financial content into NP curricula could serve to improve graduates' ability to successfully establish sustainable independent practices, negotiate employment agreements, and enhance their ability to positively impact employers' financial status.

Current literature demonstrates that rural NPs commonly experience feelings of isolation and anxiety. Such feelings are often related to the remoteness of their rural location where they frequently serve as the only health care provider in the community, managing both primary care

and emergency situations (Barnacle et al., 2021; Spetz et al., 2017). Rural NP participants in this study identified similar challenges due to seclusion and the added responsibility of being the sole provider.

Findings from this study also suggest that NPs would benefit from collaborative and mentorship relationships as they transition into rural practice. Existing literature demonstrates the benefits of work environments that facilitate professional collaboration to enhance job satisfaction and retention rates (Spetz et al., 2017). Previous evidence supports that relationships with specialists are particularly vital for rural clinicians while acknowledging that networking opportunities are often limited (Barnacle et al., 2021). Rural NP participants in this study indicated a desire for more networking opportunities.

There are programs and residencies aimed at encouraging rural NP practice and supporting the transition from education to practice (Barnacle et al., 2021; Gibson et al., 2021). Additional research should be undertaken to examine existing programs, determine their efficacy, compare outcomes, and establish best practice. Findings from such research could inform rural NP curricula, enhance creation of standardized transition to rural practice programs, and facilitate their wider application. Creative approaches to addressing feelings of isolation among rural NPs should also be explored as this study demonstrates it is an ongoing challenge.

Conclusion

The findings from this study supports that the health care professional shortage continues to be an issue across rural Idaho. Members of rural health care systems, from CAHs to RHCs, could work together and leverage their resources to address workforce issues, rather than competing with one another and duplicating efforts. A lack of employer support and inadequate financial assistance were identified as barriers to rural RNs advancing their education and

becoming NPs. If rural communities' health care systems worked as a whole, these barriers could more easily be addressed.

When recruiting NPs, rural communities or facilities may benefit from emphasizing the positive aspects of rural practice, autonomy and positive relationships with patients, as outlined in this study. Likewise, they may want to consider addressing those areas identified by participants as challenging aspects of rural NP practice, by including additional financial training or education in employment offers for NPs and facilitating closer connections among all health care professionals in the community. Universities need to enhance current NP programs to include business and health care finances in their curricula. Additionally, they should collaborate with rural health care facilities and communities to establish more robust transition to rural practice supports.

Rural RNs are an untapped resource when looking for potential rural health care providers. Application of the knowledge gleaned from this study could serve to bolster recruitment and retention of NPs in rural settings, facilitate more rural RNs pursuing advanced degrees and becoming NPs, and enrich current NP education, all of which could contribute to addressing the longstanding rural health care professional shortage.

Conflicts of Interest

The authors declare no conflicts of interest

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Appendix A

Interview Guide

Rural NPs/NP students

What made you want to be a rural NP?

What supports & challenges did you experiences as a NP student? As a new NP?

Did you receive any financial support for your NP education? If so, what and from whom?

Describe what you experienced when you first graduated as a new NP.

What resources enabled you to successfully become a rural NP? What were the challenges?

What challenges do you experience as a rural NP?

Do you think community members want more NPs?

What do you think community members want from NPs in the area?

How do you think more rural NPs would serve to improve access to health care in rural communities?

Rural RNs

What are your thoughts about becoming a NP? Have you considered it? Why or why not?

Do you think that there is a need for more rural NPs in general? In your community specifically?

What resources and supports would you need to return to school to become a rural NP?

How does your employer encourage RNs to further their education?

What barriers exist that keep you from becoming a rural NP?

What might be appealing about becoming a rural NP?

What aspects of rural NP practice might be unappealing?

CAH Administrators

What is your experience with NPs?

As an administrator, have you employed NPs? Does your current facility employ NPs? If so, in what capacity? In CAH, in out-patient clinic setting?

What health access challenges exist in your community?

What roles could NPs play in easing rural health care access challenges in your community?

What would you say to a RN who expressed an interest in becoming a NP?

Are there RNs practicing in your facility that you believe would make good NPs?

How do you encourage rural RNs in your facility to further their education?

Have you ever had one of your facility's RNs become a NP?

What challenges would arise if a RN in your facility wished to further his education and become a NP?

What resources or support would you offer to a RN employed by your facility that wished to become a NP?

How would a RN employee's return to school impact your ability to adequately staff your facility?

Who in your community may have insights into why RNs do or do not further their education to become rural NPs?

Community Members

What do you know about nurse practitioners?

What challenges have you experienced with accessing health care services while living in a rural community?

What challenges accessing health care services have others in your community experienced?

How do you think NPs might serve as a solution to rural health care access difficulties?

What are your thoughts on utilizing a nurse practitioner as your primary care provider? Do you think most community members would feel the same as you do about having a NP be their primary care provider?