Advanced Practice Nursing: Constraints to Role Fulfillment
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Citation

Abstract
This paper reports on a secondary analysis of data from an outcomes study of advanced practice nurse (APN) graduates from a university in the southwest United States. These authors describe the theme–constraints to role fulfillment—that emerged from data analysis. Interpretive phenomenology was the methodology used. All nursing masters graduates in practice for at least one year were invited to participate in the study either through a focus group or individual interview. Four themes related to constraints to role fulfillment for APNs were uncovered, including issues related to the practice setting, health care systems, legal systems, and environmental constraints. Implications for education, practice, and policy are discussed. Further research is indicated to explore the effect of various environments on APNs’ ability to provide access to health care for all people in this country. Outcomes studies of APN programs can reveal helpful insights for program evaluation and continued improvement of educational programs.

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INTRODUCTION
Constraints to APN practice, also referred to as barriers to practice, have been described in the literature for nearly as long as advance practice nursing roles have existed. In Stanley’s text (1), the author details two primary categories of barriers to practice: internal disputes related especially to the role of nurse practitioners (NPs) versus clinical nurse specialists (CNSs) and external obstacles that are primarily related to public policy. The importance in identifying these constraints is that educational programs can prepare graduates proactively for the realities of practice and enable graduates to practice to the full extent of their preparation.

This paper contains a report on a secondary analysis of data from an outcomes study of advanced practice nurse (APN) graduates from a university in the southwest United States. The authors refer to APNs as both NPs and CNSs; however, at points where differentiation is needed these roles are addressed as NP or CNS. The original study aimed to determine how graduates actualized our program terminal competencies in practice and examined APN role differentiation. The terminal competencies are based on domains of practice as established by the National Organization of Nurse Practitioner Faculties (2, 3), the National Association of Clinical Nurse Specialists (4), and American Academy of Colleges of Nursing (5). The theme, constraints to role fulfillment, emerged from our data analysis and is described in this paper.

LITERATURE REVIEW
Constraints to practice identified in the literature include conflict between nursing versus the medical role, public policy issues, and health care system concerns. Each of these constraints are discussed.

NURSING VERSUS MEDICAL ROLE
The tension between the nurse and physician role for the nurse practitioner is a constant source of concern. Bryant-Lukosius, DiCenso, Browne, and Pinelli (6) described important nursing values that must be maintained in the advanced practice role. These values include practice that is patient-centered, health-focused, and holistic. Jones (7) described the nursing role as a partnership between the patient and nurse in which the focus is to assist the patient “in living and coping with circumstances and environment in such a way that illnesses may be prevented or recovery may be facilitated” (p. 2). Miller, Snyder, and Lindeke (8) state that “few studies have examined the added ingredient NPs bring to the care setting: they are nurses and use this knowledge and experience in providing care” (p. 167). The authors proposed that a possible reason for positive
outcomes of NP practice related to patient satisfaction and teaching is the knowledge and expertise they bring from their nursing background.

In many managed care organizations, however, the medical model predominates leaving little time for the APN to provide the nursing aspects of care. Payment codes (CPT) used for billing are based on a medical model creating a disadvantage for non-physician providers (9). Furthermore, the APN is often put into a situation in which physician support or replacement is emphasized rather than the nurse role. The competing demands of medical functions become barriers to the APN carrying out advanced nurse roles such as research, education, or leadership (10).

PUBLIC POLICY ISSUES

Many constraints to APN practice fall under the rubric of public policy and have been most cumbersome to APN practice since the inception of the role. Over time and with APNs being active in the political realm and lobbying for their ability to practice in an expanded role, they have made great inroads to reduce or remove these constraints to practice. However, as the literature review and the results of this study reveal, constraints still exist that impair APN ability to provide needed health care.

Prescriptive privileges. In the United States, a considerable variance in state regulation of prescriptive privileges exists (9, 10). According to the 2007 Pearson Report (9), 39 states require physician involvement in NP prescriptive authority and 11 states and the District of Columbia allow for independent prescriptive authority. APNs lose autonomy where physician oversight is required for prescribing medications. In states in which physician oversight is not required, APN practice can be very independent.

Considerable difference exists among states regarding prescriptive privileges for CNSs and NPs. Many states allow CNS prescriptive authority for drugs specific to their clinical area of speciality (10). However, even in states that allow CNS prescriptive authority, some institutions still prohibit this (10). But, constraints to prescriptive authority are not always external to the APN. A recent study in Washington state examined the willingness of APNs to take on expanded prescriptive authority for controlled substances II-IV (13).

The investigators found reluctance on the part of some APNs to assume this level of responsibility for a variety of reasons. Thus even though legislation changes, practice behaviors of APNs do not necessarily follow suit.

Autonomy versus physician oversight. The requirement for physician oversight interferes with patient access to care, constraints independent practice, and creates economic barriers for APNs (13). Physician oversight is often masked by describing it as collaboration with a physician, but this practice is not true collaboration because it is one sided. The requirement for a physician collaborator for NP practice is gradually being removed. According to the 2007 Pearson Report (9), 12 states have no collaboration requirement, 4 states require physician involvement but no written documentation, and 24 states still require collaboration with written documentation.

Credentialing. The ability to be credentialed by health care organizations is vital to APN practice thus allowing them to be empaneled as providers and have their own slate of patients. This credentialing can be particularly difficult in managed care organizations (MCOs). Hansen-Turton, Ritter, Rothman, and Valdez (14) found that in states that required physician oversight of APNs only 17% of MCOs credentialed NPs as opposed to 78% of MCOs in states that do not require physician oversight.

Reimbursement. Medicare regulations related to APN reimbursement place a severe barrier to practice. The Balanced Budget Act of 1997 (BBA 1997) allows for direct reimbursement for both NPs and CNSs. Currently, the APN is only reimbursed at 85% of the amount allowed for MDs unless charged under the incident to category for higher reimbursement at 100%. Using the incident to practice according to Miller et al. (9) “costs taxpayers and also fails to recognize the true contributions” (p. 166) of the APN by concealing their provision of patient care within a physician-reimbursed charge. Another concern lies with the medical orientation of reimbursement codes. This practice does not provide a reimbursement mechanism for nursing care. The lack of coding for nursing care further tilts practice towards a medical model of care (9).

Certification. Requirements for certification for APN practice vary widely by state. The trend is to require a master's degree in nursing, certification from a nationally recognized certification body, and licensure at the state level as an advanced practice registered nurse (15, 16). This movement grew out of the BBA 1997 which among other actions allowed direct Medicare reimbursement of APNs (16). A considerable amount of discussion occurred to work out the details of the law thus delaying enactment until January 1, 2003.
HEALTH CARE SYSTEM

The movement towards health care provided by MCOs has had significant effect on APN practice. A qualitative study by Cohen, Mason, Arsenie, Sargese, and Needham (16) utilized focus groups of NPs working in the managed care environment. Barriers to practice that they identified included stalled or denied request for placement on provider panels and patient literature that describes providers only as physicians. “One of the most striking themes” they noted was “NP invisibility” (p. 57). Many private insurance companies follow this MCO model and also refuse to recognize or reimburse NPs as primary care providers (14).

BBA 1997 also places barriers on APN practice related to home health care. Current regulations prevent APNs from being able to write admission orders or sign a plan of care for patients requiring home health care. Only after the physician has written the admission orders and signed the plan of care can the APN provide the needed care (17).

METHODOLOGY AND STUDY DESIGN

Interpretive phenomenology was the methodology used in this study. This qualitative research methodology aims to uncover meaning in narrative-text analogues for analysis and interpretation. This methodology leads to increased understanding of phenomena.

RECRUITMENT AND SAMPLE

The study was approved by the institutional review board. All nursing master's graduates who had been in practice for at least one year were invited by letter to participate in the study. Informed consent and demographic data were obtained before the interview process began. Participants were interviewed either in a focus group or an individual interview depending whether they lived more locally or more distant from the university. Five focus groups (16 participants) and 14 individual interviews (mostly by conference call) were conducted. Of 40 eligible graduates, 30 participated (75% response rate), including 7 of 9 rural health specialists (RHS) (clinical specialist with a rural focus) and 23 of 31 family nurse practitioners (FNPs).

DATA COLLECTION

Focus groups or phone interviews lasted about 1 to 2 hours each. Interviews were comprised of semi-structured, open-ended questions based on the program terminal competencies. Interviews were audio taped and transcribed verbatim. Each transcript of the narrative-text analogue was reviewed for accuracy by one of the researchers.

ANALYSIS AND INTERPRETATION

Two researchers independently read the narrative-text analogues to uncover themes. Themes were then discussed between the researchers for consensual validation. Three strategies were used for analysis and interpretation, including thematic analysis and identification of exemplars and paradigm cases (18).

DEMOGRAPHICS OF SAMPLE

Of the 30 APNs who participated in this study, 4 (13%) were men and 26 (87%) were women. Their years in practice ranged from 1 to 4 with 13% in practice 4 years, 19% for 3 years, 39% for 2 years, and 29% for only one year. These APNs worked in various size communities: equal or greater than 100,000 population (13%), 50,000 to 99,999 (23%), 2500 to 49,999 (39%), less than 2500 (6%), and 19% worked on American Indian Reservations. Practice sites where they were employed varied widely including family practice (33%), Indian Health Service (IHS) facilities (13%), specialty sites (33%), acute care settings (13%), and education (7%). As our program is rural focused, a majority (64%) of these graduates practiced in communities with less than 50,000 population or on American Indian Reservations.

RESULTS AND DISCUSSION

In this secondary analysis, 4 themes were uncovered related to constraints to role fulfillment for the APN, including issues related to the practice setting, health care delivery systems, legal systems, and environmental constraints in the community, as illustrated in the Figure 1.

Role constraints may be specific to the APN role or they may be experienced by other health care providers as well.
The first 3 themes relate to constraints specific to APNs. While these 3 themes for role constraints are significant because they impact the ability for APNs to establish themselves as well accepted health care providers, the final theme, environmental constraints in the community, presents a barrier to carrying out the plan of care for patients and their families. In the remainder of this paper, these themes are discussed as they were described by study participants.

**PRACTICE SETTING ISSUES**

Four subthemes were uncovered related to practice setting: conflict between actual and desired role, nursing versus medical model, role recognition (or lack of), and quality management.

Conflict between actual and desired role. Conflict arose when APNs found that the practice setting did not allow them to practice in a holistic manner that was consistent with the nursing role. Teaching and counseling is an important part of the role of nurses and APNs, and can distinguish them from other health care providers. One FNP working in an Indian health clinic noted “It’s just an incredible opportunity for teaching,” but added that her ability to teach patients and their families was limited by the number of patients she saw, often as many as 30 a day. Another FNP noted “I tend to still want to do the teaching... but I could get people out of the ER faster if I didn’t...stop and teach.” She explained that her evaluations working in this ER were often critical of her when she spent too much time with patients because of her desire to use a holistic approach including appropriate teaching and counseling. She also lamented “I didn’t like that love ‘em and leave ‘em type of care. I was doing pap smears and I wasn't supposed to.” She recognized that in certain situations this may be the only opportunity for the patient to have access to health maintenance care so she risked criticism by her supervisor in order to provide that care to the patient.

Nursing versus medical model. APN graduates experienced a conflict between the nursing model versus medical model of practice. Increasingly, especially NPs, are being pressed into a medical model with less and less time to provide holistic care. Difficult choices sometimes have to be made between offering an added difference in the care provided or being physician extenders or substitutes. One FNP working in a school-based clinic struggled with this. She questioned whether she should “buy into a system that glorifies... a medical model?... I don't believe that... we should be a substitute for a doctor or an addition to his paycheck.” This FNP had studied healing touch as an alternative therapy and stated that “My goal is to integrate [that] into my practice... my vision... is to actually create a holistic nursing practice which is not medical and [not] even close to that...” Autonomy was a critical element of this FNP’s practice if she was going to be able to provide the spectrum of holistic nursing care to patients. Rather than being a physician substitute, she desired to offer patients an added difference in health care services.

Even the RHS working in the acute care setting in some ways must work under the medical model rather than focusing on the outcomes of nursing care. One RHS working in care coordination noted: “These teams have to be more physician driven... [we have to] look at things the physicians want to look at... instead of [clinical] pathways... more nursing outcomes.” She explained that this was where the income was for the hospital. There is a well-established system of nursing intervention (NIC) and outcome (NOC) criteria, but our current health care system does not acknowledge or incorporate their use. In time nursing, and specifically APNs as nurse leaders, must seize the gauntlet and take the leadership role so that delivery of nursing care is acknowledged and given its rightful credit.

Role recognition. Although nursing has made great strides in increasing public awareness of our various roles in health care delivery, more work needs to be done. One FNP graduate working in a nurse-managed primary care clinic noted that “A lot of people came sort of wondering what we were about... [they] would actually come to the office thinking we just gave shots.” Another FNP described lack of recognition by other health care professionals. She said “As much as I hate to admit it, people return calls to Dr. [X] faster than to [the NPs].”

Quality management. NPs in private practice were less likely to have in place a system for insuring continuous quality management (CQM); whereas they may have been very used to maintaining CQM procedures when working as nurses in acute care settings. One FNP observed that “In private practice... there was no QA (quality assurance) at all.” But the desire to institute a consistent QA system was expressed as a goal: “We're trying to set up something that's never been in place in the practice.” Another noted: “I've always felt a little uncomfortable that we don't have a [quality] structure in place because nursing is so into quality assurance.”

**HEALTH CARE DELIVERY SYSTEM**

Three subthemes were revealed related to health care...
delivery system constraints to role fulfillment, including time issues, reimbursement, and need to work the system.

Time issues. Heavy workloads for most FNPs created conflicts related to quantity versus quality of care delivered. In the narrative-text analogue, these researchers uncovered several ways that numbers of patients seen daily constrained advance practice roles, including reduced opportunities for collaboration with colleagues, reduced time for teaching and counseling patients and their families, and conflicts created between professional and personal life. One FNP noted that at the end of a long day she needed to be with her young family rather than participating in professional activities, like continuing education programs. An FNP working in a large health maintenance organization (HMO) explained:

In an ideal world we would have the family in and we'd have a nice medication list and the pill boxes would be set up and, you know, there'd be a safety survey at the home and all those things done, but nobody pays for that. So, you know, I have 15 minutes with somebody and that's the slot that my clinic's getting paid for and they have my salary to pay and lots of other bills to pay and we barely break even at the end of the year. So we have to look at all of that. I've got to see another patient in 15 minutes and I feel that it's pretty luxurious really that I have 15 minutes compared to some places.

This APN knows what her educational program has taught as the "ideal world", but she has been pressed into a time and money constraint in her clinic that prohibits her from practicing many nursing approaches to patient care. Thus for this APN the medical model becomes a more efficient approach when her time is limited with patients and their families. Another FNP echoes similar constraints:

We're a pretty busy practice and I typically see some 22 to 30 patients a day and (Int: WOW! Is that an 8-hour day). I start at 8 and I'll wrap up around 5:30. I typically take time off for lunch, then dictation, charting-wise, we dictate so that makes that go pretty quick.

By contrast one FNP who worked in an urgent care setting on an Indian reservation observed with some regret:

It was so hard of me to let go of some of my nursing roles so I would be, you know, taking care of the patient, giving them their treatments, cleaning up after them and I didn't have time to do all that, but I still could not let go of it. I mean seeing 75 patients a day?) I personally saws 75 patients a day in 14 hours.

This NP struggles with letting go of some of the nursing role in a very busy clinic setting.

Not all APNs feel that they have to sacrifice cherished nursing roles because of time constraints. One FNP working in a specialty practice explained:

I think in my role I'm very fortunate that the doctors will set enough time for new patients and established patient. I probably see no more than 15 to 18 patients per day. That gives me a lot of time for teaching. That is why they hired a nurse practitioner because of our teaching background. I spend 15 minutes with each patient going over their medications, their inhalers, their understanding of the disease process we're dealing with. I rarely spend any less than 10 minutes. Everybody gets taught, it's out of habit.

This FNP describes an ideal situation where true collaboration takes place in a practice. Each health care provider is recognized for their particular areas of strength and expertise and in this situation the FNP is able to sustain a practice enriched by a personal nursing background.

Reimbursement. Over the years reimbursement constraints to practice, especially for NPs have steadily been decreasing. However, these graduates indicated that there are still difficulties, some of which could be ameliorated by making systems more user-friendly. Related to obtaining Medicare universal personal identification numbers (UPIN), the time consuming nature of the application process was a concern. One FNP in a private practice explained that “I haven't gotten a number... If you don't have a dedicated support person, I cannot as a provider sit on the phone all day talking to Medicare.” Another replied, “I have one, but it took a lot of time.” The NP without a UPIN noted difficulties this could present: “So when my physician is out of town, I have to divert every Medicare patient to another provider. So that's hard on [patients].” With the institution of the National Plan and Provider Enumeration System in 2006 (19), the National Provider Identifier (NPI) will replace the UPIN. The difficulties that these APNs described to request UPINs may disappear. NPIs are obtained very efficiently through the internet with virtually no waiting period.

As independent providers some hurdles still exist related to obtaining insurance contracts. An NP in a nurse-managed practice explained:
The first thing we had to do was get on board with insurance companies. So we did that with a fairly good response till we ran up against Blue Cross. In this state Blue Cross has just flatly refused to allow NPs to enter into a contract as a primary care provider.

She also noted the difficulty with differential reimbursement by Medicare: “I did get my UPIN number as a Medicare provider... because of the reimbursement differences, usually I bring [MD husband] in on consult so that I can bill 100% [versus 85% if NP bills].”

Another lament of some of these APNs was lack of reimbursement for nursing activities. One RHS doing diabetes education explained the process that she had to resort to:

If you can't get through one door, you try to go in another one and then eventually you get to the grant foundation. You know it is a shame that people have to be seeking scholarships and what not for their diabetes education when it's such a proven fact [that DM education is essential for effective management].”

An FNP in independent practice noted that:

Most of what I do on a day-to-day basis would have nothing reimbursed for that visit... I'm actually starting to think do we just have to go outside the system... [to] bring nursing back home to itself? I believe this. It's back to our soul of what we are...

Working the system. Participants described various ways they “work the system” in order to give patients the necessary care. Communication skills were essential in managing and negotiating with managed care systems. One FNP shared: “Oh, I got to be a really good letter writer to convince the managed health care system that my patient...had needs and that they would pay for them.”

Another noted that sometimes she scheduled separate appointments to be able to bill for the needed care; for example, for patient teaching and counseling needs. An FNP working in primary care in a border community explained that learning the system was critical in rural communities:

Yes, it would be wonderful just to...hand off this problem and tell somebody could you please fix this?... Knowing myself how to work the system was such a valuable learning experience... now I know who to ring first... Yes, if we had a case manager in our clinic that would be the optimum, but is that going to happen in a rural practice?

This NP acknowledged that a case manager would be a huge asset to her practice but being in a rural practice acted as a barrier to adding another person to the clinic staff. In lieu of that possibility she learned how to advocate for herself and her patients and even to take on some of the roles of the case manager in order to “work the system”.

Obtaining needed medications for patients was another area where FNPs expressed role constraints in providing optimal care. One FNP explained:

I have done a lot of working with the drug companies. I have people who can't get a particular drug through their insurance company that they need. So I either have to go after the insurance company to approve the drug or sometimes I have gone to the drug manufacturers... to see if they have an indigent program. And that's very time consuming.

In this focus group, another NP responded:

It's the truth. The drug companies get to know...when they come in that they're just going to have to back that car up and unload those important things because we want full course samples for those people who don't have insurance.

Nurses are advocates for their patients and these APNs describe ways that they go to the mat to provide their patients with needed care and treatments. The Medicare Prescription laws may put added twists to these issues.

LEGAL ISSUES

Three subthemes emerged related to legal issues, including independent practice, hospital privileges, and certification.

Independent practice. APNs in independent practice help to provide needed access to care for all people, but they can experience various struggles in setting up and maintaining independent practices. One struggle relates to turf battles that can haunt APNs striking out on their own: “We've just gotten through another battle with the medical society. They are following the nation-wide AMA practice of trying to subvert our independent practice.” Insurance companies can pose another obstacle: “We are allowed to bill. The insurance law was changed in 1993 and any insurance company that practices in this state is forced to give credentialing privileges...” According to the 2006 Pearson report (33), NPs in many states have legal right to be included on provider panels as primary care providers and legislative language allows NP reimbursement by 3rd party payers and HMOs, but many states still do not have “any willing
provider” laws.

Hospital privileges. Since the study, many more APNs have been able to get hospital privileges, especially those working as acute care APNs. The NPs we interviewed were all in community-based practice. Whether they choose not to get hospital privileges or continue to fight to get hospital privileges, the long standing problem of the physician-nurse game, even for APNs, continues to be perpetuated. One FNP expressed that:

I had to call my collaborating physician because I don't have hospital privileges, but I say 'this patient needs to go to our in-patient site.’ He says ‘I'll take care of it right away.’ He doesn't even need to know what is going on.

Whereas this situation may also denote the trust and rapport developed between this NP and physician, it also holds reminders of the classic game. And other APNs continue to fight to obtain privileges: “We did not get hospital privileges, but again you are going around the battle ground... [trying to get privileges].”

Certification. Since this study, certification has become a non-issue for NPs with the new Medicare laws that require national certification in order to bill. For CNSs the issue is resolving. CNS programs need to be upgraded to include the required 500 clinical hours so that graduates are eligible to sit for the certification exam upon graduation from their programs.

ENVIRONMENTAL CONSTRAINTS IN THE COMMUNITY

This final theme of environmental constraints in the community presents a barrier to carrying out the plan of care for patients and their families. Although not exclusive to APNs, this barrier constitutes a significant constraint to role fulfillment and is also related to the fact that 64% of the participants in this study were practicing in rural and remote areas where these constraints impacted their practice. Four subthemes uncovered in the narrative-text include lack of food and pharmaceuticals, lack of long term care facilities, lack of transportation, and lack of phones.

Lack of food and pharmaceuticals. An area of frustration for the graduates practicing in rural or remote communities was the lack of services available for clients. Difficulties often occurred for the clients to carry out the desired plan of care because services normally found in urban areas were just not available in rural and remote areas. The health care provider often had to adapt the plan of care to meet the reality of the environmental situation. Many rural areas lack services such as large grocery stores or pharmacies. If there are no fresh vegetables in the local grocery store, patient have difficulties following dietary suggestions that include eating six servings of fruits and vegetables daily. A RHS graduate working as a public health nurse (PHN) at a very remote Indian health facility explains:

But I think they don't have access to a wonderful array of vegetables. They have a little bitty store there with maybe two kinds of vegetables and most of them wilted. So it's difficult to talk about salad bars and all this other stuff. So your teaching has to match what the people are doing.

This APN exemplifies how nursing practice must be adapted to what is available in a community which in turn will shape how she frames her teaching approach with patients and families.

If the ordered medication cannot be purchased locally and the client has no means of transportation, there would be no way to obtain the medication. The provider must take these environmental limitations into account when developing a plan of care. Often the provider had to adapt to the local conditions. One FNP graduate described this as: “We run like almost a little ER at our clinic because we’re it... So we kind of stretch the limits of our treatment there to give them what they need.” Another FNP in working on an Indian reservation explained:

We can do some labs down there, but you know...you sort of do initial work-ups and I've been sort of stuck. Now where do I go? I do have limited resources down there. I can do a pap smear, but don't have a microscope.

These NPs have learned to adapt their care based on the resources available to them. This fact can limit what they are able to do for a patient or put them in a situation where they must rely more heavily on their six senses and solid critical thinking skills versus a plethora of diagnostic tests.

Lack of long term care facilities. Another problem noted in rural communities is the lack of facilities that provide follow up care. If long term care is not provided in a community, it is difficult to find appropriate care for patients with chronic health problems. One FNP graduate working at an Indian health facility gave the example of a patient who required six weeks of intravenous antibiotic therapy:

...we do have a couple of people from [referral hospital] that have post surgical infections and they're supposed to get six
weeks of IV antibiotics and if they don't have running water at home, they can't really do it and we're a four bed short stay. So to have someone take up one bed when that only leaves 3 more, that's difficult...but we do have someone right now for six weeks and...we don't get reimbursed for that either. He's there, but the hospital can't charge for it, so he helps out with the other patients...you know, he's just making the best of it...

Because the patient did not have running water or electricity in his home, he was kept in a short term bed in the local health center thus tying up that bed for other patients. If there had been a long term care facility in the area that would have been a more cost effect option for this patient's treatment.

Lack of transportation. Another issue that created problems for the provider was finding transportation for clients either to the rural clinic or to the urban center when more advanced care was required. An RHS graduate working at a remote IHS as a public health nurse reflected about trying to get care for a paraplegic patient: “Rides are a terrible problem around here. It's just awful... so I brought [drove] him back to the clinic because he had a lot of congestion.” She further notes that having excellent health assessment skills and communication with the physicians at the IHS helps to bridge this problem when it is difficult to bring the patient into the clinic for evaluation.

Lack of phone service. The lack of phone service in rural Arizona creates many challenges. Large parts of the Indian reservation land cannot be serviced with either land line phones or cell phones. An FNP graduate working at a small, remote IHS clinic notes: “And we utilize a system of sending letters because most of our patients, I think 85% of our patients, 87% of our patients, don't have phones so we write letters.” Another FNP graduate working in a border community health facility tells a story about a patient that they were trying to send to a tertiary care center in an urban community: “So the next day I finally reached the woman who by the way has no phone, of course. You have to reach people through message phones... She calls back and tells me her story.” Lack of phones forces the APN to resort to more creative strategies to contact patients or these patients may be lost to follow-up. Without adequate means to contact patients once they have left the health facility, these APNs are constrained in their ability to follow through with a plan of care.

**IMPLICATIONS**

This research although consisting of a small sample from one university reveals several implications for education, practice and policy. In order to better prepare graduates for the realities of practice, these authors suggest several curricular components that need to be included in educational programs. First, students need to learn how to negotiate the terms of an APN position. In particular to fully utilize APN expertise, the APN needs to negotiate enough time with each patient to provide nursing as well as medical care. Importantly, the APN needs to negotiate a contract that allows for time, monetary compensation, and back-up coverage needed to attend continuing education programs. Second, students need to develop professional values and the related behaviors that will influence policies and reduce legal constraints to practice. One area that needs attention is development of reimbursement policies that support nursing outcomes as well as the current use of CPT codes. Another area is prescriptive authority that supports independent practice.

A third area of curricular content is the knowledge and skills to function effectively in health care systems. Learning how to become credentialed in an institution will facilitate autonomy once practicing as an APN. Learning to effect change and communication skills needed to advocate for patient care within and across health care systems will further enhance APN practice. Learning case management knowledge and skills in a curriculum will help prepare APNs for management and negotiation needed for effective patient care.

Finally, for programs that supply APNs to rural areas, the realities of rural practice need to be presented. Several ways these faculty members have introduced this to students are through a rural health course that not only includes rural theory and health policy, but also requires students to complete an assessment of a rural community. As well, students are placed in rural areas for completion of their specialty-specific clinical practicums.

**CONCLUSIONS**

As indicated by the Pearson Report (1) and The Nurse Practitioner legislative update (2), great strides have been made to overcome many constraints to APN practice. However, these researchers uncovered a number of constraints to APN role fulfillment in the study as revealed by FNP and RHS graduates of this master's program. The study involved graduates who practiced across five different
states with the majority in Arizona–a state that offers a great degree of independent and autonomous practice for FNPs while CNSs lag behind.

This graduate nursing program focuses on preparation of APNs to practice in rural and remote areas. Consequently, some of the constraints uncovered in the study relate more directly to rurality. These researchers suggest that other practice environments, such as under served urban areas, may also offer unique constraints to practice. Educating APN students to be armed with the knowledge and skills to overcome various constraints to their role fulfillment in the practice world is an important curricular consideration. Further research is indicated to explore the effect of various environments on APNs' ability to practice with enough independence and autonomy to provide access to health care for all people in this country. Outcomes studies of APN programs such as this research can reveal helpful insights for program evaluation and continued improvement of educational programs.

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