

Retention of Physician Assistants in Rural Health Clinics

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ABSTRACT: *Context:* Improvement of rural health care access has been a guiding principle of federal and state policy regarding physician assistants (PAs). *Purpose:* To determine the factors that influence autonomous rural PAs (who work less than 8 hours per week with their supervising physician) to remain in remote locations. *Methods:* A qualitative exploratory study was undertaken in 8 rural Texas towns, including direct observation of clinics, semi-structured interviews with PAs, and focus groups with community residents. *Findings:* The major factors contributing to retention among autonomous rural PAs include: confidence in the ability to provide adequate health care, desire for small-town life, residing in the community, and being involved with the community. Both PAs and residents thought the level of their town's health care was moderately good but could be improved. The clinic allowed easy access for primary care and minor injuries. Town residents and PAs also expressed a desire for major improvements including a pharmacy, visiting specialists, and additional medical equipment. Not all residents sought medical care at the clinic, with some electing to travel to physicians in larger towns. *Conclusions:* Rural community residents have more confidence in and satisfaction with PAs who have remained in a clinic for several years. In order to increase retention rates, PAs committed to autonomous, rural primary care would benefit from additional training, particularly in emergency medicine, the benefits of community involvement, and adaptation to the local culture.

17% were in nonmetropolitan areas with 20,000 or fewer people.³

A number of studies validate that PAs and NPs play key roles in increasing access to primary care in rural areas.^{1,2,4-6} Rural PAs are more likely to practice primary care than urban-based PAs, and they do so at lower labor costs than physicians.^{7,8} Compared to their urban counterparts, rural PAs often put in longer hours, receive less compensation, and encounter reimbursement roadblocks.⁴ In nonurban communities, medical practices tend to have a disproportionately higher share of poor and elderly, a greater number of residents who lack any type of health insurance, and more people with substantial health problems of chronic illness and disability.^{6,9,10} PAs practicing in nonmetropolitan facilities provide a wide range of services for patients who range from newborns to the elderly and have a diversity of illnesses and emergencies.⁴

Research on PAs has been undertaken since the inception of the profession in 1965, but to date there has not been a study of autonomous PAs who work in rural clinics. Autonomous PAs are defined as isolated clinicians working no more than 8 hours per week with their supervising physician in the clinic. The purpose of this study was to investigate the factors that influence

Access to health care in rural areas in the United States depends on a sufficient supply and distribution of primary care doctors, physician assistants (PAs), nurse practitioners (NPs), and dentists, among others. Although physician supply and distribution have been a focus of concern, in the late 1980s attention shifted to PAs and NPs as alternatives.^{1,2} As of 2006, approximately one third of PAs practiced in communities with populations of 50,000 or fewer, and

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autonomous PA retention in rural health. The specific aims were to: (1) determine the social, environmental, and demographic factors that make a rural health practice satisfying for an autonomous PA; (2) determine the social, environmental, and demographic factors that influence a rural community's satisfaction with an autonomous PA providing the only available health care in the vicinity; and (3) gain a broader understanding of the relationship between a rural community and an autonomous PA. The goal was to better understand how this relationship could impact the retention of autonomous PAs who are isolated from others in the medical community.

Background and Significance. For PAs, improvement of rural health care access was one of the guiding principles for their development.¹¹ PAs work in rural areas proportionally more than physicians,^{6,9} yet knowledge of how to retain them in rural areas is limited. Hart and colleagues have identified PAs who have remained in rural practices over an extended period of years.⁴ It is this group of stable yet isolated practitioners that is of interest to this study.

In Texas, almost one quarter (23.4%) of PAs practice in rural communities of less than 20,000.³ Among the formidable issues facing Texas health care are the time and distance involved in traveling to medical treatment facilities. The rural population is widely dispersed, with 20% of the total state population living in nonurban areas spread across 82% of the state's land area.^{9,12,13} Out of 254 Texas counties, 126 are designated Health Professional Shortage Areas (HPSA) and 176 counties are Medically Underserved Areas (MUA)/Medically Underserved Population (MUP), and 26 counties are designated as "frontier."¹⁴⁻¹⁷

Texas PAs have continuous supervision by their supervising physician, but constant physical presence is not required. Therefore, it is possible to establish clinics that are staffed solely by PAs, although these clinics are limited to medically underserved areas. These clinics are typically satellite clinics of regional hospitals, but some are federally funded clinics. Supervising physicians are in constant contact with the PAs and must be on-site at least once every 10 business days and co-sign at least 10% of the charts. Texas PAs are permitted to sign prescription drug orders if delegated this task under standing orders, and authority includes Schedules III-V and non-controlled medications.

PA Job Satisfaction. Studies indicate that rural PAs have a higher level of professional satisfaction than do urban-based PAs.^{17,18,19} Several studies report that degree of practice autonomy is one of the strongest

indicators of PA job satisfaction in rural health care.^{18,20-22} Other factors include satisfaction with community,¹⁸ challenging work,²⁰ job security,²⁰ supervisor and colleague support,²² patient acceptance of PA and NP roles in providing health care,²¹ practice characteristics,^{22,23} demographics,^{22,23} and personal attributes.²⁴

Patient and Community Satisfaction. The patient's viewpoint is generally considered the most important element in the appraisal of PA acceptance in American society.⁹ Evidence from research in this area supports patient satisfaction with PAs.^{9,25-30} Yet, as noted by Baldwin et al, there is a slight difference between patient satisfaction and community acceptance: "Community acceptance implies not only satisfaction with the care received, but also a willingness to initially seek care from a PA or NP."³¹

Baldwin and colleagues measured community acceptance through a qualitative study design using focus groups. Rather than interview patients about their degree of satisfaction with the PA, the researchers met with members of the community where PAs practiced.³¹ This methodological approach reduced the bias or halo effect from patients who had recently consulted a PA for medical care. The Baldwin study reported that patient satisfaction improved with increased exposure to the PA's practice. A different prospective study on patient "willingness to be seen" identified some reluctance of patients to see residents, NPs, and PAs if they were unfamiliar with these providers.³²

Methods

The design of this project was primarily qualitative and exploratory. Quantitative, demographic data were collected to make comparisons among towns. The research team was composed of medical anthropologists and medical workforce analysts. Inclusion in the study was contingent on both the PA's and the community's willingness to participate, as well as the the following criteria: (1) the PA must be working autonomously in a rural health clinic with no more than 8 hours per week with the supervising physician; (2) PAs must be employed as the sole primary care practitioner in the community; (3) PAs must have worked in the community for more than 24 months prior to interview; (4) the town is smaller than 5,000 persons; and (5) town residents had no other primary health care options available within a 25-mile (40 km) radius.

To locate qualifying PAs/communities, we used snowball sampling through an extensive network of PA professional organizations, educational programs in

Texas, and rural-based PAs. Organizations included the Brazos Area Health Education Center, the Prairie Area Health Education Center, the South Central Area Health Education Center, the Tyler Association of PAs, the Central Texas PA Society, the Texas State Board of Medical Examiners, and the Texas State Board of Physician Assistant Examiners, as well as PA program faculty and rural-based PAs. All clinics in the study were in medically underserved areas.

In 2005, the research team traveled to 8 towns for 2-day encounters that included meeting with the PA, the town mayor or city manager, and a representative sample of town residents. All attempts were made to be visible in the town and to speak directly to anyone about the intent of the study. Research team members lodged in local hotels, ate at local restaurants, and engaged as many residents as possible in the investigative process. In addition to formal data collection, the research team also undertook casual conversations with passing residents about the town in terms of structure, history, the amenities of living in the area, and the quality of health care for the region. Signed permission was obtained from all informants for the interviews to be recorded, transcribed, and analyzed.

Data collection methods included direct observation, semi-structured interviews, and focus groups. The research team directly observed the workings of each medical clinic through the systematic recording of activities. This permitted the researchers to present a comprehensive view of the day-to-day operations of the clinic by combining his/her own perceptions with those reported by PAs and patients. The research team regulated inter-observer reliability through immediate discussion and corroboration of observations.

One researcher conducted a semi-structured interview with each PA (n = 8). The PAs interviewed were 6 males and 2 females (1 Asian, 1 African American, and 6 non-Hispanic whites). The average age of the PAs was 48 years old (see Table 1). An interview guide was prepared to ensure systematic and comprehensive data collection. The open-ended

questions encouraged the interviewees to express their own perceptions. The following information was obtained: education and career background; cultural background; reasons for practicing in rural health; issues of job satisfaction; issues of satisfaction with current living situation; community involvement; relationship with supervising physician; feelings of isolation; relationships with patients; and major issues facing rural PAs in Texas. Interviews were also conducted with town officials on issues of town health care satisfaction, the history of the clinic, and the future of the clinic.

Focus groups were held with 6-12 participants recruited from the local grocery store, post office, bank, and restaurants, as well as randomized phone calls. Each focus group (1 in each town) was queried about the level of health care available in their town and surrounding area, satisfaction with the available health care, willingness to seek care from the PA at the satellite clinic, how often they seek care at the clinic, and how often they seek care in a larger town.

Demographic Information. Characteristics of the towns were obtained through the US Census Bureau, and degree of rurality was identified by Rural-Urban Commuting Area (RUCA, Version 2.0) codes (see Table 2).³³ All towns were geographically isolated and considered rural, with RUCA codes of 5 to 10.6. The median age of town residents was 41.6 years, and on average 20.5% of all town residents were over 65 years old (Medicare age). Most towns received limited tax revenue, with ranching and farming as a primary industry. Most income came from the school, a small industry (such as a lumber company), and retirement and Social Security pensions.

Overall, the majority of patients who visited the PA-staffed clinics were predominately Medicaid or Medicare beneficiaries. The clinic administrative records demonstrated that all age groups came to the clinic for treatment, but the most frequent age group was the elderly, followed by children (under 18 years old). Patients were treated for common primary care conditions (such as respiratory symptoms, ear

Table 1. Characteristics of Physician Assistants in Autonomous Practice Rural Health Clinics

	Town A	Town B	Town C	Town D	Town E	Town F	Town G	Town H
Age of PA	63	45	50	31	37	51	54	52
Gender	Male	Male	Male	Female	Male	Male	Male	Female
Ethnicity	White	White	White	White	White	Asian	African American	White
Years at clinic	6	7	10	2	6	2	3	6.5
Federal RHC	No	No	No	No	No	No	Yes	No

Table 2. Characteristics of Rural Towns Served by Physician Assistants

	Town A	Town B	Town C	Town D	Town E	Town F	Town G	Town H
Population	637	2,235	241	2,589	844	2,424	800	740
RUCA code*	5	5	10.5	10.5	5	10	10.6	10
Distance from nearest town (miles)	30	25	60	32	25	30	80	25
Median age	40.4	39.3	46.1	37.8	38	38.7	43	42.7
Median household income	\$28,333	\$42,098	\$28,281	\$41,686	\$20,278	\$24,712	\$23,594	\$27,778

* Rural-Urban Commuting Area (RUCA, Version 2.0) codes. RUCA codes range from 1 to 10.6, with 1 being the most urban and 10.6 being the most rural. A RUCA code of 5 means that the census tract is strongly tied to a large town, with primary flow 30% or more to a large town. A RUCA code of 10 means that the town is considered an isolated small rural census tract, with less than 5% primary flow to a larger town. A RUCA code of 10.6 is slightly more rural than a code of 10.

infections, and stomach aches), minor trauma such as lacerations, and for the management of chronic conditions such as diabetes, high blood pressure, and arthritis.

Results

Retention. The most consistent and important factor influencing a PA to work autonomously in a rural clinic was confidence. All the PAs in the study discussed the need for confidence to practice medicine without the constant presence of a physician. Most identified significant intellectual isolation working in a rural clinic, and all 8 PAs discussed the absence of other colleagues as contributing to this isolation. When they experienced uncertainty about a patient’s condition, they communicated how they relied on their career experience for guidance. At the same time, they were not reluctant to call their supervising physician if needed. Most reported that they relied on their accumulated knowledge and skills as a basis for their confidence. One PA said, “I’m able to respond to emergency situations possibly better than other colleagues because of my background, and this thing is like an urgent care emergency room sometimes. I’m proud if I’m able to stabilize and do that kind of stuff.”

Another important factor influencing a PA to work in a rural satellite clinic was the desire for small-town life for his/her family. One PA stated: “I just want my kids to be in a small town. There are a lot of benefits. And I walk home for lunch every day which is nice. I don’t drive. I drive maybe a couple times a week.” Interestingly, the majority of PAs in this study (n = 7) did not grow up in small towns, but rather in medium to large towns or cities. These PAs voiced aversion to the fast-paced lifestyle of cities, which includes busy doctors’ offices. They identified the importance of knowing their patients on a personal level—both in the clinic setting and in the community. Most volunteered

the desire for a small-town life was valued by their spouse as well.

Flexibility and autonomy were attributes PAs identified as necessary for retention in a rural solo practice. This was defined as the freedom to be removed from constant supervision of a physician. Although each PA was responsible for keeping the clinic open during specific hours, they had more flexibility in their day-to-day schedule than cohorts working directly with physicians.

Living Arrangements and Community

Involvement. Six PAs lived in the community where they worked. While most were happy with their living arrangements, they also mentioned challenges. On one hand, the amenities of small-town life were endearing—the feeling of safety, the quiet, the sense of community. On the other hand, most felt they were always “on call” to residents even though it was not part of their contract. The 2 PAs who lived outside of the community they served identified some feelings of disconnect with the community. Since they both commuted 25 miles, these PAs tended to know their patients primarily in the clinic-setting context and did not always have the opportunity to see them in the community.

All of the PAs felt that community involvement was important for rapport and familiarity whether the people they interacted with utilized the clinic or not. One PA stated,

I think [community involvement] is very important and I’m trying to get more and more involved as time goes on. Like I say though, it’s kind of an interesting little place. You’ve got to kind of work your way in when you can. I’m still considered an outsider because the people have been here a long time. [I’m] finally breaking over that point I think. However, those who lived outside the community did not rank involvement in the community as

important or necessary as those who lived in the community.

Frustrations. The PAs also discussed job frustration, particularly relating to a lack of equipment. While the clinics met primary health care needs, patients often traveled to distant hospitals for X-rays and additional laboratory tests. This travel was difficult for most as they were poor, old, or infirm. Consistent with this lack of full-service medical care, PAs (as well as community members) discussed the absence of a pharmacy in town. In 1 town, the PA developed a system where he called the nearest pharmacy, and the pharmacy delivered medications to the clinic once a day.

Employment. Seven of the PAs were employees of a hospital more than 25 miles from the clinic. Universally the PAs felt disconnected with the administration of the hospital. Usually the supervising physician was contracted by the hospital and had his/her own private practice in a town 30-90 miles away. The PAs acknowledged that the hospitals maintained the clinics in rural areas for the greater good of health care in the region. Their frustration centered on lack of support or a *locum tenens* for release time, mediocre benefits, limited pay increases, and a lack of secondary support equipment. The eighth PA worked for a federally funded clinic.

Perceptions of Health Care. Both PAs and community residents thought the level of health care was moderately good but could be improved. Community residents recognized that other towns did not have clinics and were pleased to have a medical provider in town. They were comforted by the clinic presence in town and contended that the PA was better than having no local health care. Specifically, parents with young children stated that having a clinic in town contributed to their decision to remain in the town rather than moving to locations where more medical care was available. One resident stated:

“That was a consideration in moving back here . . . emergency services that are available . . . I’m not the healthiest person around and the fact that there’s a clinic here is fabulous. The EMS is fabulous. They saved my life so I tend to be quite, you know, fond of them.”

Townpeople recognized that the clinics did not have capabilities such as advanced laboratory testing and X-rays, and that health care was limited by the scope of a PA’s practice. They recognized that specialized doctors could not establish themselves

full-time in a small town but recommended that traveling specialists visit the town every few weeks. Additionally, residents saw the absence of a pharmacy as a major barrier to health care because most could not afford to drive to the nearest urban center, or they did not have transportation.

Interestingly, the PAs believed that the community residents were largely indifferent about there being a PA at the clinic instead of a doctor. They felt that patients did not distinguish between PAs and physicians for the practical purposes of getting treated at the clinic. However, many residents stated that they would rather have a doctor at the clinic.

Not all town residents used the clinic for primary health care, and the most common reason was already having a primary care doctor elsewhere. However, the PAs and townspeople collectively noted that the clinic drew people from the region beyond the town. Sometimes the clinic received patients from neighboring towns that did not have a practitioner, and sometimes they received patients from larger towns that had a doctor, which some PAs attributed to their having good reputations.

Attitudes Toward Physician Assistants. The highest satisfaction with a PA came from 3 towns that had retained the same PA for the longest time—between 6 and 10 years. The town that seemed the least satisfied with having a PA instead of a doctor was where the PA commuted and did not participate in local community events.

On a personal level, town residents expressed an overwhelmingly positive feeling about the PAs who worked in the clinics. Most thought the PAs were nice, helpful, and doing the best he/she could within the limits of the clinic and their abilities. While some said they would rather have a doctor at the clinic, they did not express this as dissatisfaction with the PAs themselves; rather, criticism was directed toward the availability of health care beyond the scope of a PA’s practice.

Patients of the PA. Patients reported several reasons why they sought health care locally. They went to the PA-staffed office for primary care and conditions considered “little things.” However, many also reported that the clinic was the first place they went for “minor emergencies” because it was convenient and the hospital was far away. Finally, several residents said the clinic was cheaper than going to a physician in another town.

Non-Patients. Three main reasons emerged why some town residents chose not to go to the PA. First, the PA was “not a doctor” and they did not have

confidence in the ability of a PA to handle their needs. Second, they already had a physician with whom they had a long-term relationship. Turnover remains high among practitioners in rural clinics and many residents preferred to stay with a doctor they had known for years. The third reason related to long-term, chronic, or severe medical conditions that required a specialist's care. Many elder town residents were in the care of specialists, often necessitating long travel time and expense.

Role of the PA in the Community. The majority of town residents desired the PA to be involved with the community because they felt participation builds trust and familiarity. They wanted to see the PA and the clinic staff sponsoring information fairs, going to the senior center for blood pressure screenings, assisting with immunizations, and being on-site during sporting events. They also wanted to see the PA involved in social and civic activities. A common comment was that PAs who are actively involved are committed to the town and its well-being.

Discussion

The goal of this study was to investigate factors that influence PA retention in rural health, specifically autonomous PAs working in medical clinics (autonomous PAs are defined as working no more than 8 hours per week with their supervising physician in the clinic). In doing so, we not only looked at factors that contribute to PA job satisfaction and patient satisfaction, but we also investigated the relationship between the PA and the entire community. Previous literature suggests that the leading factor in rural PA job satisfaction is practice autonomy. We controlled for autonomy in this project as this was a selection criterion. Knowing that all of the rural PAs in this study have a significant amount of autonomy in their practice, we investigated additional factors that contribute to job retention.

Confidence in oneself as a practitioner appears to be a major contributing factor to retention, and the single unanimous feature identified by autonomous rural PAs. All of the PAs in this study are comfortable working without direct physician supervision. Although autonomy was a criterion for inclusion in this study, autonomy does not assume confidence. The PAs in our study expressed trust in their scope of knowledge and abilities to provide adequate health care to the community. In addition to general care of the community, they are confident in their ability to stabilize patients for quick transport in cases of emergencies.

One observation is that rural PAs need to have a desire and commitment to maintain a satisfactory practice in small rural towns. All entered rural practice with the intent to stay in a rural practice. They were content, and those who lived and worked in the same town seemed more integrated with the community. Both PAs and town residents considered community involvement and participation to be important, but causality effects were not identified other than "community spirit." The 2 PAs who lived outside the town where they worked participated less in community activities than those living in town. PAs who resided in the same town as the clinic appeared committed to the well-being of the town—not only for its health care but also on a social and civic level. These same PAs seemed less likely to leave their job than PAs who lived and worked in different towns.

Both the PA and the community desired health care improvements including a pharmacy, visiting specialists, and additional medical equipment, such as an X-ray machine and basic laboratory testing. At the same time, both the PA and the community realized that these types of services were unlikely to exist in small, remote towns. The communities that have autonomous PAs are very small and do not have the volume of clientele needed to attract or justify the expenditure for such services and equipment. Various federal and state policies also prohibit prescribers to be dispensers of medication and to undertake laboratory procedures without lengthy education, certification, and meeting minimum standards of volume.

The 8 PAs in the study contended that town residents did not care that they were not medical doctors. They said patients know they are PAs, but did not distinguish between a PA and doctor when seeking treatment. Community residents, on the other hand, stated that they were aware that the practitioner was a PA and not a doctor. Some of town residents elected to travel to physicians in larger towns. Others went to the PA at the clinic because this was convenient and less expensive than a physician. While all community members were pleased to have some level of health care in the town, some were not satisfied that the practitioner was a PA.

Limitations. This was a qualitative and exploratory study and as such there were limitations. The main drawback was the limited amount of time spent in each town, usually 2 days, to interview PAs and town residents in order to understand the complexity of the local health care system. However, the attitudes and views were fairly uniform, which suggests additional interviews may not have netted more useful information.

An observation not probed was the use of electronic equipment as a means to deliver or enhance health care services. All PAs had an Internet-connected computer in their office and communicated with their employer, friends, peers, and other professionals. Some used it to obtain medical information or meet required medical education standards. The use of this technology was beyond the scope of the study.

Seven of the PAs were employed by a hospital system and staffed the clinic as salaried employees. While this was a source of some discontent, we did not explore this employer-employee relationship, nor did we look into why the PA's predecessor had departed.

Texas is a state with a high degree of rurality and was selected for various reasons. Our observations and conclusions are made cautiously since the findings in this state may not extend to other regions of the country.

Finally, this study was confined to PAs and did not include NPs and Certified Nurse Midwives (CNMs) who make up an important group of rural health providers in the United States. We selected PAs because of their dependent legal relationship and the negotiated autonomy they maintain with supervising doctors. Identified as a variable to control in this undertaking, the medical practice laws in Texas are explicit for PAs and less equivocal than those for nursing. Validating these observations on advance practice nurses in similar circumstances would be a useful undertaking.

Conclusions

Not only is there a national need to attract more PAs to remote areas of the country, there is also a need to discover ways to encourage those PAs to remain in their current positions. This preliminary qualitative study suggests that rural community residents have more confidence in and satisfaction with PAs who have remained in a clinic for several years. Their willingness to be seen by the local PA depends on their perceptions of him/her, and this perception will most likely improve the longer the PA remains at the clinic and gets to know the community. According to our study, the factors that contribute to autonomous rural PA retention are complex and depend upon the capacity to deal with medical uncertainty, lifestyle choices, and relationships with the local community.

Educators may benefit from these observations in selecting students for PA training and deployment for clinical experience in rural areas. First, although the PAs in our study knew they had the confidence to work solo, they also mentioned that it was more difficult in the beginning of their careers. PAs committed to rural primary care would benefit from additional training, particularly in emergency medicine. Second, our study

indicates that recruiting students from rural areas may not be the most effective strategy to increase retention rates among rural practitioners. Our results suggest that desire to live in a small rural town may be a stronger indicator of retention than growing up in a rural area. Furthermore, living in the community in which the clinic is located is an important factor in retention. Third, our study indicates that community involvement plays a strong role in rural PA retention. Living and participating in the community (not only professionally, but also socially) contributes to familiarity and trust among community residents. The residents get to know the PA and begin to build relationships outside the clinic. This, in turn, helps establish a steady patient population for the clinic. The PAs who are actively involved in the community feel less isolated and are more likely to remain in their current position. Rural PAs would benefit from training on the benefits of community involvement and adaptation to the local culture.

While we have identified some key elements in retaining PAs in rural settings, these elements need further exploring if the incentive to attract PAs to rural areas remains of interest to policy makers.

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