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Recruitment and Retention of Physician Assistants in Rural Medicine: A Novel Approach

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Recruitment and Retention of Physician Assistants in Rural Medicine: A Novel Approach

Abstract
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Improving the health of patients requires having access to well trained medical providers. This is one of the main goals of the physician assistant profession. For many, years research has documented how to recruit and retain physician assistants in the rural areas of the United States. Although created to fill the gaps in primary care medicine physician assistants have moved as all of medicine has into specialization. This gap in primary care has not closed and is most significant in rural areas. This paper reviews the plethora of research and elaborates on the known and best methods for recruitment and retention. Building on this research, the paper elucidates a different approach to solve the challenges of retention and recruitment of physician assistants to the rural United States.

Background: The original concept for the practice of medicine by physician assistants (PA'S) was to provide relief to physicians and to take medicine to the underserved areas of the country, both rural and urban. Utilizing the skills of former medical corpsman and the fast-track template of physician training utilized during World War 2, physician assistants were created. This concept of PA's has been so successful, that the original intent has been blurred as physician assistants have crossed over into the vast majority of medical specialties. This movement outside of primary care could possibly be reducing the number of PA's available to practice in rural underserved areas of the country as these areas do not have the vast array of specialties available for the PA to work.

Purpose: The challenges of providing medical care to rural populations are broad and will be discussed in the paper. PA's have proven that they provide comparable care as physicians, but the problem remains that the rural areas of the country are still underserved. Even with sign-on bonuses, relocation packages, NHSC loan repayments/scholarships and other recruitment efforts retaining PA's remains a challenge. With many of the top barriers to recruitment and retention of PA's are discussed in the literature, this paper reviews those and seeks to answer how these barriers can be overcome with innovative solutions.

Methods: A comprehensive literature review was conducted using ResearchGate, Health Source: Nursing/Academic Edition, JSTOR and PubMed using the search terms PA retention, Rural PA, Health Professional Shortage Areas, Indian Health Service PA retention. Inclusion criteria were studies that researched the challenges of both recruitment and retention of medical providers, primarily PA's but also nurse practitioners and physicians in rural and frontier regions of the United States. Exclusion criteria were studies that were single region and/or single facility studies, due to individual studies or locations could have unique circumstances that might not translate as well for larger regions.

Conclusion: The majority of research into the problem of retention of PA's in rural areas points to recruiting students from rural areas as the way to improve retention. The background of the student coming from a rural area is the largest positive predictor of a PA remaining in a rural area. With this acknowledged, all efforts should be focused on recruiting from rural communities to improve the retention of PA's, thereby improving the access to medical care for those living in these areas.

Key Words: Rural Physician Assistant, Rural PA Retention, Rural PA Recruitment

Retention of Physician Assistants in Rural Medicine: A Novel Approach

Introduction.

For the past thirty years there have been talks, discussions and research on the retention of physician assistants in the rural health care setting. Study after study will list the top five issues facing physician assistants in rural medicine but few of these ideas have been put into practice to see if they work to correct the rural recruitment and retention challenge. The challenges noted include providing for the professional development of the PA, pay disparities between rural and urban practice, as well as primary care vs specialty care PA's. Other areas noted include amenities such as recreational activities, quality schools and the availability of work for a partner of the PA. These topics are very important to the retention of PA's in rural practice. The goal of this paper is to identify and review several of these researched topics and propose an integrated approach, to solving the recruitment and retention issues of rural medicine.

As this topic has been studied and published many times it is noted that many of these solutions have been attempted with limited success. Federal and State dollars providing facilities, scholarships or loan forgiveness to providers who will work in rural areas only goes so far in the long-term retention. One area that is least attempted is the mentoring and support of people from those communities to become physician assistants and return to the community. Mentoring by nature does not adapt well to large macro ideas, instead it is a solution on a micro scale. A unique approach would be to utilize a proven method from the United States military. Army special forces members are detailed throughout the world to provide training and assistance in many areas¹. Although military training is the standard, many times they build housing, drill water wells, help with veterinary care, and provide medical care. The goal of their medical care approach is not just to provide treatment but also assist, train, and mentor local medical

providers. They work with the local populations to identify the difficulties and challenges. The locations they work in are rural, underserved and have logistical challenges that are nearly identical to rural areas and populations in the United States.

Methods.

A comprehensive literature review was conducted using ResearchGate, Health Source: Nursing/Academic Edition, Google Scholar, JSTOR, and PubMed. Search terms utilized include PA retention, Rural PA., and PA Rural Retention, Health Professional Shortage Areas, Medically underserved areas and Indian Health Service PA retention. Inclusion criteria were studies that described primarily PA retention in medicine but also secondarily nurse practitioner and physician retention in rural medicine where broad topics about rural medical provider retention. Exclusion criteria were studies that were not directly inclusive of physician assistants except for research data that was generalized in the retention of rural healthcare providers and not specifically physicians or nurses.

Background/Literature Review.

The physician assistant profession was created to fill a need for the lack of primary care physicians /in the rural and urban underserved areas of the United States. In the early 1960's the American Medical Association approached the nurse educators and national leaders about creating a mid-level provider, but they were turned down. With that the creation of physician assistants began. The first several classes of PA students were primarily military corpsman and medics with vast amounts of experience and a willingness to utilize these skills with their new education and provide care in the underserved areas. After a few years other medical professionals, such as nurses, EMTs, and paramedics were admitted into PA programs across the

country. Overtime many programs dropped the required number of medical experience hours and increased the academic required courses for entry into their programs. These changes greatly influenced the students entering the programs. As the student population changed, the locations they have chosen to practice has changed dramatically from the original students.

With the success of the PA profession opportunities that were originally not imagined became available. The surgical PA was the one of the first changes from the original intent of PA's working in primary care underserved areas. As physicians became more specialized and moved away from primary and family medicine and into emergency medicine, obstetrics, and the various other specialties their colleagues in the PA profession followed suit. This led to the expansion of PA programs as there was a need and demand for more PA's. This has had an effect on the number of PA's entering into rural practice, as the majority of these specialty practices are located in large urban areas.

Rural Background/Influence

The greatest factor of the retention of rural PA's to remain working in a rural area is that they are from a rural area. Noted by MacQueen et.al, the overwhelming majority of research and studies list this as the major contributing factor for retention². Even a survey from 1994 about Washington MEDEX graduates noted that recruiting PA students from rural areas improved the chances of those providers working in a rural area after graduation³. Fleming, P. noted this as well with up to 1/3 of medical school graduates working rurally were from a rural background of less than 10,000⁴. This leaves the remaining 2/3 of those from an urban background, which Fleming notes that this group reported being influenced by a rural medicine rotation during training. A provider familiar with the challenges or difficulties of living in a rural area is at an advantage to those who have never lived in a rural area. The remoteness and logistics of living in

a rural area combined with a medical practice as a solo provider can be overwhelming. Having a familiarity with rural living provides an extra buffer in decreasing stress, especially for a new provider. In many rural areas acquiring food and necessities for daily living may require an entire day due to distance or weather. This was not just a major factor for PA retention, but also retaining other healthcare providers including physicians, nurse practitioners and nurses. Stough-Hunter notes that recruitment should be done in a rural area but also notes that community attachment is important as many people with attachments to a rural area but currently living in an urban area should be sought out as well⁵. With this being the identified as the major factor in retention in a rural practice, this must be the cornerstone of the recruiting plans of PA programs, as well as state and federal agency plans and guidelines to improve rural resident access to healthcare.

Professional Barriers

Many practice laws require a PA's supervising physician to be onsite for a certain period of time and they cannot be over a certain distance way when not in the clinic. This can be challenging for the PA and physician to work as a team as they might need to be in two separate locations to provide care or work in different areas of their rural community. Many state legislatures are changing these laws by allowing the PA and physician to dictate these standards. Several states have reduced the requirements for physician oversight of PA's. Recently the State of Montana passed law House Bill 313 allowing PA's to work independently after 8000 hours of physician supervision. This should increase the number of PA's practicing in Montana, by allowing those with experience to work independently, creating opportunities for new graduates and those with less experience to work with a supervising physician. In Alabama a study noted that even moderate improvements in the restrictive PA/NP laws would save an estimated \$729

million dollars over 10 years⁶. Glick, et al., reported in 2013 that only 3.4% of PA's practice where their supervising physician is off-site⁷. They did not report if the physician was available by any other means only that the PA and physician were at different locations. With a lack of data in the current percentage of physician supervisors being off-site, one can only infer that in the last decade with all of the legislative changes relaxing the requirements for physician supervision that this percentage is significantly higher today. Another area noted by Glick, et al., is States not allowing PA's work up to their scope of practice even with direct or indirect physician supervision⁷. As noted above allowing PA's to work to their full scope of practice improves both their satisfaction with their job but also substantially reduces medical costs and improves access to health care.

Bensen et al., noted that professional isolation was one condition brought up by rural PA's⁸. This includes not having other to providers network and work with and challenging communication issues. Isolation in rural areas is common with possible solutions to include professional visits to other providers in the area, attend regional CME courses or conferences.

Financial incentives

Many studies show financial incentives are a reason that PA's work in rural medicine, while some show it is not a factor. There are many different incentives for PA's to work and stay in rural medicine these include reduced tuition, national health scholarship and loan repayment programs, hospital loan repayments, sign on bonuses and re-location packages. According to Negrusa, recipients of NHSC funding working in primary care at HPSA sites notes that after 3 years there is a sharp drop in retention to 30% in the providers original HPSA but a significantly high retention 75% if the variable is changed to any HPSA site and not just the original site.⁹ This might indicate that the program is successful in its purpose. One challenge noted by Negrusa is the NHSC had a significant change in recruiting practices, including increase in

funding, during the studies time frame that may have change the outcome by increasing the number of providers. Also noted was that there was a significant retention for those providers that are non-NHSC recipients⁹. This research was only based on financial compensation versus no compensation in determining recruitment and retention which is a narrow view of retention as noted previous the two factors for working and staying in a rural practice are being from a rural area and having a clinical rotation in a rural area.

Recreational Factors

Recreational factors including amenities are another area that most studies show improve rural PA retention. There are differences in age as to recreational incentives with younger PA's responding they are important to them versus the older respondents rating it not as important. Recreational activities can increase community involvement, spirit as well as enhancing the quality of life. Providing discounted passes to recreational areas including ski areas and water sports areas can round out a benefit package that allows the PA and their family to build community bonds and maintain a positive healthy lifestyle. Lind, et. al., notes in a 20-year study of medical school graduates that lifestyle incentives including recreational opportunities were noted as high on the list in choosing places to work¹⁰. Although an indirect correlation with PA's one could infer that the same could be true for PA's. Also noted in this study that community recruiters recognize this fact, but most communities do not offer lifestyle incentives¹⁰. Some of these incentives include reduced prices for recreational areas or free passes for local attractions. Although some providers may not care about recreational activities, these activities may be a deciding factor in a PA choosing to work and stay in a rural area.

Other Factors

There are several medical schools that have made a concerted effort to correct the shortage of primary care rural physicians with solutions including holding seats for students from rural areas, population requirements from where the student is from or requiring students to have a clerkship or rotation in a rural practice during their education. Providing students with a rural rotation is a large indicator in them staying in a rural community.

One study reported other areas that can be difficult to overcome is meaningful work for a PA's partner and quality schools for their children¹¹. These are highly variable challenges that would be difficult to solve on a large scale, but individual communities could provide the needed assistance in enhancing partner employment. Providing employment opportunities for partners during the PA's application/ employment process is one way to improve upon this. Quality schools are important as most people including PA's want their children to be well educated. Providing employment for partners and high-quality education enhances recruitment but could also increase long term retention as the PA, partner and children become part of the community.

Discussion/Analysis

Although there are many reasons and solutions in improving medical access and care, the discussion and analysis is focused how to improve care through the recruitment and retention of physician assistants.

Many challenges need to be addressed to improve the recruitment and retention of rural physician assistants as noted. This will take a multifactorial approach with many groups involved. Federal, State, and local governments will need to step up and lead with several important tasks. Overwhelmingly noted in the literature two groups of PA's have the highest retention rates in rural areas, those from rural areas and those who performed a clinical rotation in a rural area. With that in mind two goals need to be discussed. First the goal of retaining those

currently practicing in rural areas and secondly recruiting from rural areas and requiring or incentivizing students to perform clinical rotations.

Supporting practicing PA's can be provided in several ways. The Federal government provides loan repayments and scholarships in various forms to increase recruitment and retention. After payments are completed, there is a significant outflux of providers most significantly stating in year three after stopping payments. A program to combat this reduction in PA's could be created as a type of continued rural practice bonus or retention bonus possibly make it tax free. This could possibly help with retention of current and future rural practicing PA's. This is similar to retention bonuses in the military. Each western state has a program to improve provider retention, each state varies as to which provider is compensated, for instance Montana provides funding for physicians, but not PA's¹³. Other ideas include State/Local property tax deduction for those providers, this could be similar to reduced or different tax structures on agricultural land. As a provider stays longer in the community the possibility of retention increases. Local governments and hospitals could assist with loan repayments and housing assistance could continue these as a retention bonus possibly helping providers financially and creating a path to staying in the rural environment. Money is not always the answer on an individual basis but broadly speaking money does incentivize actions at a certain level. There is a significant difference in pay of PA's in different specialties versus primary care, with those typically working in urban areas making more than a rural primary care PA. If these differences were decreased through incentives and retention bonuses this might increase the retention of PA's working in rural America.

Students from rural areas return most often to those areas more often than any other group of PA students. With this known, funding and bonuses for them should be made available

in greater numbers than is currently provided. Incentivizing those students from rural areas who care and are interested in returning to the rural environment should be given much support. improve funding to universities and PA programs that recruit and train students from rural areas and those that provide rural medicine rotations. Recruitment programs to identify those qualified and wanting to become PA's should be created at the state level for use by regional and local entities.

PA programs and universities should investigate and implement the technology needed to provide live online video format instruction, hybrid courses and integrate these to allow students to remain in their rural location which would decrease their cost of moving but also keep them connected to their local community. This can be done with excellent results but would take some changes in PA program teaching modalities. A program from the University of Minnesota Medical School allows 3rd year students to spend 9 months in a rural medicine location in a program called the Rural Physician Associate Program. The students get to work in these locations with family practice physicians building their knowledge of rural medicine and joining a community. This program notes a total of 1700 students taught over a 50-year span¹⁴. A similar program for PA's could be combined with a hybrid learning platform and provide an excellent education while reducing a rural students need to travel and allowing them to remain in the local community.

Many areas of improving the rural retention of PA's have been researched and discussed in studies that are primarily older, with a few less than 5 years old. These studies list the strategies of what was determined, but Parlier, et. al., notes in their work on physician retention, which lists nearly identical challenges for physician assistants, that no real clinical trials or interventional studies have been performed to assess these strategies and their effectiveness¹⁵.

Utilizing a mentor type process of identifying those members of a rural community that might be interested becoming a PA. Utilizing job fairs and education exploration days for junior high and high school students could be identified and mentored in the education process. Many rural communities utilize a volunteer ambulance service and providing EMT training could be a way of gaining health care experience. Another avenue to gain experience would be to train as a CNA working in a critical access hospital. After high school graduation, enrolling in community college or regional university to gain the requisite bachelor's degree and science courses with continued mentorship from the local healthcare providers. Assistance in applying to PA schools as well as providing financial aid guidance could be provided to ensure a successful application. If applicable the local provider, whether a PA or physician could assist with a rural rotation during the students clinical year.

Another area that many academic institutions have implemented is a combined undergraduate and masters PA programs, where a student would spend five years at an academic institution and finish with a completed master's degree qualified to take the PANCE licensing exam. There are approximately 44 PA programs that offer this innovative solution¹⁶. Although no research has been done specifically with PA programs to provide a clear answer as to if this is beneficial, there are several benefits from this plan. First it reduces student application processes as well as the necessity of moving schools and possibly locations to attend two separate schools. Reducing the financial burden on the student by reducing the numbers of years required to gain a master's degree would be another area of benefit.

Conclusion

There has been much research and discussion on ways to improve the retention of rural PA's. A large volume of new and old research delineating the reasons of how to improve this

challenge has stated the number one reason for retention of PA's in rural areas is recruiting students from those areas. Although the challenges are well known not much in the literature shows any real concerted direction or coordination to improve recruitment from and increase retention in rural areas. Small individual program efforts have been recognized but federal, state, hospital coordination seems lacking or haphazard. A local approach, recruiting from the community, providing mentorship and guidance through the entire process, utilizing funding from federal and state resources, support during undergraduate and prerequisite education, providing assistance for PA school application and clinical preceptorship would be an approach that would need excellent leadership, coordination, and determination.

A pilot project with a small group of focused providers and educators working within a local community. Engaging the local community, understanding their needs and wants for medical providers as well as ensuring they are willing to participant in the program. Ensuring a local approach in a rural community needs to be utilized to prove this concept. This would be very similar to how Army Special Forces work in a foreign county, seeing and assessing the needs of the community. Then together with the local community they create a plan together then providing the needed training, education and assistance. This would be a multi-year project that would need to have long term commitment from a leadership team composed the entities involved. This would include local providers and clinics, the funding source, and a college or university system and the prospective student. Creating a step-by-step plan for funding, prerequisites, required health care experience and other topics would need to be created to keep on track, maintain communications and provide a record for best practices. Starting with recruiting high school seniors, recent graduates as well as college students or graduates in the rural community. Due to the length of this plan, ensuring that retention of current PA's working

in the rural environment would need to be addressed concurrently. Retention bonuses, other financial incentives, and possibly tax reductions as discussed earlier could be established or broadened to improve retention. The challenge of ensuring adequate health care in rural America is one that has been studied for many years, studies with physicians, PA's and nurse practitioners show the number one way to attract and retain providers by far is from those interested in medicine that are from rural areas. A two-pronged approach of recruiting from rural areas and increasing strategies for retention is needed to combat this challenge.

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