

# Research Corner

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## Workforce issues impacting PAs

As the utilization of PAs in the US health care workforce increases, questions persist as to how the PA profession impacts the delivery of care. These three presentations from the October 2007 PAEA Education Forum addressed PA workforce issues.

Morgan P, Albanese M, Kaufman JS. Does participation of PAs in patient care increase office visit utilization [abstract]? Presented at: Physician Assistant Education Association Education Forum; October 27, 2007; Tucson, Arizona.

**INTRODUCTION:** Physician assistants (PAs) are providing a growing portion of medical care in the United States, and some analysts suggest that PAs may buffer predicted physician shortages. Some research suggests that, rather than relieving physician workload, use of nurse practitioners (NPs) may lead to overall increased use of health services. This research is subject to criticism and has not been replicated for PAs. If PAs provide primarily supplemental services, as opposed to standard-of-care services, then patients who see PAs might require more office visits per year than those who see physicians only, leading to increased health care utilization. This project addresses the following research question: After accounting for case-mix differences, is substantive PA involvement in patient care associated with increased office visit utilization? **METHODS:** This project uses 1996-2004 office-based visit data from the national Medical Expenditure Panel Survey (MEPS) to compare number of office visits per year between 2,475 patients who reported that PAs provided a "substantive portion" of their care (more than 30% of visits attended solely by a PA) with a group of patients who report-

ed seeing physicians only. Analysis controlled for case-mix differences between the two groups using matching and multiple regression analysis. **RESULTS:** Patients receiving a substantive portion of care from PAs averaged about one-half visit per year less than those who saw physicians only. Findings were statistically significant and robust to sensitivity analyses. Although the groups were balanced on available measures of health status, the lower utilization rate for the group with PA care could reflect higher patient complexity in the physician-only group not accounted for by case-mix adjustment. **DISCUSSION:** These findings indicate that inclusion of PAs should not be expected to increase office visit use and suggest that increased numbers of PAs may help to offset predicted physician shortages.

Jones PE. Physician and physician assistant distribution in frontier Texas counties [poster]. Presented at: Physician Assistant Education Association Education Forum; October 27, 2007; Tucson, Arizona.

**INTRODUCTION:** Texas is a state of health care contrasts, where models of success coexist with lack of access and numerous preventable diseases attributable to alcohol and tobacco use and lifestyle. Identifying the geographic distribution of physicians and PAs will assist with workforce planning and educational strategies to increase access to health care services, especially in remote and rural areas. **METHODS:** Database queries were performed on the Texas Medical Board Web site and the US Census Bureau County 2006 Population Estimate Web site. Queries were made of all 254 Texas counties by population, persons per square mile, N and specialty for practicing physicians, and by N of practicing PAs during the January 2007 licensure census. **RESULTS:** As of January 2007, there were 43,565 licensed physicians and 3,209 licensed PAs in Texas. According to 2006 population estimates of the 254 Texas counties, 60 (24%) counties were populated with 6 or fewer people per square mile, meeting the criterion for "frontier" designation. There was 1 PA per 13.6 physicians on an aggregate statewide basis. However, in the 60 frontier counties, there were 32 PAs and 75 primary care physicians, or 1 PA per 2.3 physicians. Fourteen of the 32 PAs (44%) were female. Seventeen Texas counties exceeding the combined total land mass of Connecticut, Vermont, and Rhode Island had no licensed physicians or PAs. **DISCUSSION:** Although access to health care services in frontier-designated Texas counties remains inadequate, PAs represent a disproportionately greater share of the provider total when compared to statewide physician to PA distribution data. Additional research could help to identify ways to extend services to the 17 counties with no licensed providers.



**ON THE WEB** Please see Research Corner Online at [www.jaapa.com](http://www.jaapa.com) for the accompanying Web-only article "Is meta-analysis the silver bullet of research?"

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Henry LR, Hooker RS. Retention of physician assistants in rural health clinics. *J Rural Health*. 2007; 23(3):207-214.

**CONTEXT:** Improvement of rural health care access has been a guiding principle of federal and state policy regarding 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, semistructured 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. To increase retention, PAs committed to autonomous, rural primary care would benefit from additional training, particularly in emergency medicine, community involvement, and adaptation to the local culture.

## DISCUSSION

Laurant and colleagues reported in 2005 that the lower salary cost of NPs was offset by an increase in resource utilization and lower productivity due to longer office visits.<sup>1</sup> This finding raises the question as to whether the result occurs by providing for unmet needs or by providing new services. Investigating whether the same finding would apply to PAs would help to address whether the addition of PAs to the health care workforce would provide needed manpower or instead generate additional demand for medical services.

Morgan and colleagues utilized MEPS, a massive database that surveys patient experiences concerning their medical encounters from 1996 through 2004. Morgan assembled two sets of visits from MEPS data, one group consisting of patients where PAs provided at least 30% of office visits over a year and a comparison group where all office visits were provided by physicians. Patients with visits to other provider types were excluded. The case mix of the groups was adjusted in terms of demographics, geography, socioeconomic status, funding status, health status, and diagnosis complexity. The outcome measurement was the number of clinic visits

the patients in each group averaged over the year, including hospitalizations, hospital outpatient clinics, and emergency department visits. The data showed an incident rate ratio of 0.84 ( $P < .001$ ) at 30% or greater PA-only visits, meaning the PA-treated group of patients had 16% fewer visits per year than the group treated by physicians only. Also, as the proportion of PA-only visits increased, the incident rate ratio decreased. These data demonstrate that the utilization of PAs in the health care system does not increase overall health resources utilization as far as number of encounters and that care by PAs may decrease utilization.

Jones addresses the issue of the distribution of PAs and physicians in remote and rural areas of Texas. The Texas Medical Board database was queried for the number of practicing PAs and physicians in each county. US Census Bureau data were used to calculate the county population per square mile, and 60 of the 254 counties containing 6 or fewer people per square mile were designated *frontier* counties. Statewide, the PA to physician ratio was 1:13.6, but in the frontier counties the ratio was 1:2.3. One finding of note was that in the frontier counties, 44% of the PAs were female, challenging the assumption that women are not attracted to clinical practice in remote areas. The data confirm that a greater proportion of the Texas PA population practice in remote and rural areas compared to physicians and these findings are consistent with findings in other states<sup>2</sup> and nationally.<sup>3</sup>

Henry and Hooker used sociological research techniques to investigate 8 PAs who practice in rural Texas autonomous single-provider settings. The qualitative research methods included direct observations of clinics, interviews with the PA, and focus groups with community residents. The data showed that factors contributing to retention of the PA are complex but likely involve personalities, relationships, the capacity to deal with medical uncertainty, provision of a clinic site, and adequate patient flow for economic viability.

These abstracts present evidence that the utilization of PAs currently does not lead to overall increased use of health services and in fact may produce a decrease in use of services as PA utilization increases. Additionally, PAs are more likely to practice in rural and remote geographical areas than physicians. Finally, a sociological survey method used to investigate autonomous PAs practicing in rural Texas suggests that factors leading to the successful recruitment and retention of these clinicians are likely numerous and complicated. **JAAPA**

## REFERENCES

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