Comparative Analysis of PAs' Characteristics in Urban vs. Rural Settings

Kasey Puckett, MPH, Andrzej Kozikowski, PhD, Mirela Bruza-Augatis, PhD, PA-C, Colette Jeffery, MA, Alicia Quella, PhD, PA-C, Sheila Mauldin, MNM, ICE-CCP, Dawn Morton-Rias, EdD, PA-C, ICE-CCP, FACHE, and Joshua Goodman, PhD

National Commission on Certification of Physician Assistants

Background/Objective

- The scarcity of healthcare providers has intensified the challenge of accessing healthcare services in rural areas
- The past decade has witnessed a marked decrease in the number of primary care physicians serving these areas
- The challenge of attracting and retaining healthcare professionals in rural environments remains a pressing issue
- Physician assistants/associates (PAs) contribute significantly to the rural primary care workforce
- Our aim was to analyze and characterize the PA workforce across various urban-rural settings

Methods

- We conducted a comparative analysis of demographic, practice-related, and other important attributes of PAs residing in the following settings: urban (n=138,452), large rural (n=6,125), small rural (n=2,505), and isolated (n=1,925)
- The 2023 dataset includes responses from 149,007 PAs who updated or certified their information within the past three years
- Analyses included descriptive statistics and bivariate tests to detect significant differences for PAs practicing in urban-rural settings

Email questions to Kasey Puckett at kaseyk@nccpa.net

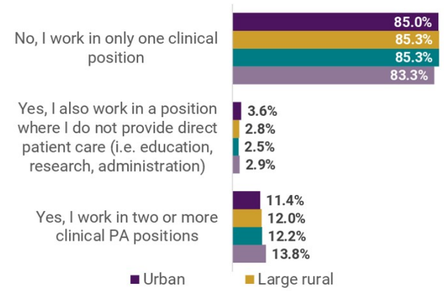
Results

Demographic Characteristics of PAs in Urban vs. Large Rural vs. Small Rural vs. Isolated Settings

	PAs in **urban** settings (N=138,452)	PAs in **large rural** settings (N=6,125)	PAs in **small rural** settings (N=2,505)	PAs in **isolated** settings (N=1,925)	P-value
Gender:					
Male	39,508 (28.6%)	2,114 (34.5%)	818 (32.7%)	575 (29.9%)	<0.001
Female	**98,858 (71.4%)**	4,010 (65.5%)	1,686 (67.3%)	1,349 (70.1%)	
Age group:					
<30	23,809 (17.2%)	869 (14.2%)	309 (12.3%)	237 (12.3%)	<0.001
30-39	53,775 (38.8%)	2,067 (33.7%)	788 (31.5%)	528 (27.4%)	
40-49	32,431 (23.4%)	1,533 (25.0%)	605 (24.2%)	469 (24.4%)	
50-59	17,584 (12.7%)	944 (15.4%)	446 (17.8%)	359 (18.6%)	
60+	10,854 (7.8%)	712 (11.6%)	357 (14.3%)	**332 (17.2%)**	
Age:					
Mean (SD)	40.3 (11.3)	42.6 (12.1)	43.9 (12.6)	45.0 (13.0)	<0.001
Median (IQR)	38 (31-47)	40 (33-51)	42 (34-53)	**43 (34-55)**	
Years certified:					
Up to 10	76,739 (55.4%)	2,956 (48.3%)	1,117 (44.6%)	790 (41.0%)	<0.001
11-20	37,397 (27.0%)	1,786 (29.2%)	708 (28.3%)	557 (28.9%)	
21+	24,317 (17.6%)	1,383 (22.6%)	680 (27.1%)	**578 (30.0%)**	
Ethnicity:					
Non-Hispanic/Latino	123,015 (92.4%)	5,675 (96.4%)	2,341 (97.3%)	1,822 (98.5%)	<0.001
Hispanic/Latino	**10,065 (7.6%)**	212 (3.6%)	65 (2.7%)	27 (1.5%)	
Speaks language other than English:					
No	103,289 (76.9%)	5,150 (86.3%)	2095 (86.1%)	1,642 (87.7%)	<0.001
Yes	**30,958 (23.1%)**	818 (13.7%)	337 (13.9%)	231 (12.3%)	

Compared to their counterparts in large rural, small rural, and urban areas, PAs in isolated settings were more likely to be older (p<0.001) and certified for 21+ years (p<0.001). However, PAs in urban settings were more likely to be female (p<0.001), Hispanic (p<0.001) and speak a language other than English with their patients (p<0.001).

Secondary Position (p<0.001)

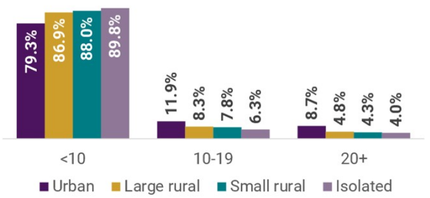


PAs in isolated areas, compared to those in large rural, small rural and urban areas, were more likely to work in two or more clinical positions (13.8% vs. 12.0%, 12.2%, and 11.4%).

Participation in Telemedicine (p<0.001)

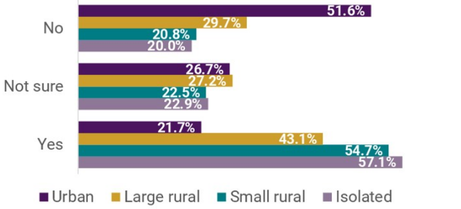
PAs residing in isolated areas are slightly more likely to participate in telemedicine compared to PAs who live in large rural, small rural, and urban areas (50.5% vs. 46.9%, 47.8%, and 42.3%).

Hours in Telemedicine (p<0.001)



Compared to their counterparts in large rural, small rural, and isolated settings, PAs in urban areas were more likely to report dedicating 20 or more hours on telemedicine services each week (8.7% vs. 4.8%, 4.3%, and 4.0%).

Providing Care in Designated HPSAs/MUAs (p<0.001)



More than half (57.1%) of PAs in isolated areas provide care in health professional shortage areas/medically underserved areas, compared to PAs in urban (21.7%), large rural (43.1%), and small rural (54.7%) locations.

Practice and Other Important Characteristics of PAs in Urban vs. Large Rural vs. Small Rural vs. Isolated Settings

	PAs in **urban** settings (N=138,452)	PAs in **large rural** settings (N=6,125)	PAs in **small rural** settings (N=2,505)	PAs in **isolated** settings (N=1,925)	P-value
Practice setting:					
Hospital	**49,481 (42.5%)**	1,791 (33.7%)	696 (31.7%)	537 (31.7%)	<0.001
Office-based private practice	43,548 (37.4%)	**1,989 (37.5%)**	687 (31.3%)	451 (26.6%)	
Urgent care	6,797 (5.8%)	340 (6.4%)	106 (4.8%)	98 (5.8%)	
Federal government	5,082 (4.4%)	282 (5.3%)	136 (6.2%)	92 (5.4%)	
Community health center	2,931 (2.5%)	261 (4.9%)	139 (6.3%)	116 (6.8%)	
Rural health clinic	894 (0.8%)	270 (5.1%)	287 (13.1%)	**302 (17.8%)**	
Other	7,802 (6.7%)	376 (7.1%)	144 (6.6%)	100 (5.9%)	
Specialty:					
Primary care*	24,250 (17.5%)	1,846 (30.1%)	1,016 (40.6%)	**897 (46.6%)**	<0.001
Surgery – subspecialties	25,159 (18.2%)	918 (15.0%)	303 (12.1%)	200 (10.4%)	
Emergency medicine	12,591 (9.1%)	572 (9.3%)	267 (10.7%)	218 (11.3%)	
Internal medicine – subspecialties	11,922 (8.6%)	365 (6.0%)	114 (4.6%)	62 (3.2%)	
Dermatology	5,123 (3.7%)	220 (3.6%)	50 (2.0%)	32 (1.7%)	
Hospital medicine	4,232 (3.1%)	176 (2.9%)	75 (3.0%)	50 (2.6%)	
Other	55,176 (39.8%)	2,028 (33.2%)	680 (27.1%)	466 (24.2%)	
Patients seen each week:					
Up to 40	35,664 (30.5%)	1,250 (23.5%)	542 (24.6%)	455 (26.8%)	<0.001
41-60	29,271 (25.1%)	1,381 (26.0%)	643 (29.2%)	504 (29.7%)	
61-80	21,489 (18.4%)	1,171 (22.0%)	499 (22.7%)	390 (23.0%)	
81-100	16,993 (14.6%)	892 (16.8%)	311 (14.1%)	219 (12.9%)	
101+	13,329 (11.4%)	**618 (11.6%)**	206 (9.4%)	131 (7.7%)	
Patients per week average:					
Mean (SD)	66.2 (41.9)	69.7 (37.2)	66.2 (34.6)	64.0 (34.2)	<0.001
Median (IQR)	60 (40-85)	**65 (45-90)**	60 (45-80)	60 (40-80)	
Total educational debt:					
No educational debt	46,347 (42.1%)	2,328 (45.6%)	1,005 (47.6%)	**826 (50.8%)**	<0.001
Less than $25,000	6,066 (5.5%)	276 (5.4%)	120 (5.7%)	91 (5.6%)	
$25,000 - $49,999	6,001 (5.4%)	255 (5.0%)	121 (5.7%)	87 (5.4%)	
$50,000 - $74,999	6,137 (5.6%)	296 (5.8%)	116 (5.5%)	89 (5.5%)	
$75,000 - $99,999	6,703 (6.1%)	270 (5.3%)	117 (5.5%)	75 (4.6%)	
$100,000 - $124,999	7,706 (7.0%)	339 (6.6%)	132 (6.3%)	94 (5.8%)	
$125,000 - $149,999	7,460 (6.8%)	334 (6.5%)	143 (6.8%)	93 (5.7%)	
$150,000 - $199,999	10,570 (9.6%)	468 (9.2%)	148 (7.0%)	135 (8.3%)	
$200,000 or more	7,050 (6.4%)	298 (5.8%)	121 (5.7%)	70 (4.3%)	
Not sure	1,197 (1.1%)	49 (1.0%)	23 (1.1%)	13 (0.8%)	
Prefer not to answer	4,935 (4.5%)	191 (3.7%)	66 (3.1%)	52 (3.2%)	
Primary place of employment is recruiting/hiring:					
No	63,918 (58.2%)	3,133 (62.2%)	1,314 (62.9%)	978 (60.1%)	<0.001
Yes	**45,981 (41.8%)**	1,900 (37.8%)	775 (37.1%)	649 (39.9%)	
Average number of prescriptions/refills written per week:					
1-10	23,249 (21.9%)	765 (15.3%)	297 (14.3%)	225 (13.9%)	<0.001
11-20	17,537 (16.5%)	721 (14.4%)	299 (14.4%)	197 (12.2%)	
21-30	12,636 (11.9%)	604 (12.1%)	190 (9.1%)	187 (11.6%)	
31-40	6,744 (6.3%)	384 (7.7%)	147 (7.1%)	116 (7.2%)	
41-50	13,003 (12.2%)	639 (12.8%)	258 (12.4%)	247 (15.3%)	
Over 50	33,200 (31.2%)	1,892 (37.8%)	**888 (42.7%)**	644 (39.9%)	

*Primary care includes family medicine/general practice, internal medicine – general, and pediatrics - general

Statistically significant differences were found for the number of prescriptions/refills written per week, with PAs in small rural settings prescribing over 50 (42.7%) compared to those in urban (31.2%), large rural (37.8%), and isolated (39.9%) settings.

Key Findings and Conclusion

- Compared to PAs in large rural, small rural, and urban areas, PAs in isolated areas were more likely to work in primary care (46.6% vs. 30.1%, 40.6%, and 17.5%), provide care in rural health clinics (17.8% vs. 5.1%, 13.1%, and 0.8%), and report no educational debt (50.8% vs. 45.6%, 47.6%, and 42.1%), respectively
- PAs in large rural areas had the highest proportion of practicing in office-based private practice (37.5%) and the highest median number of patients seen per week (65)
- Conversely, PAs in urban settings had the highest percentage of PAs practicing in hospital settings (42.5%) and reported that their primary place of employment is currently hiring PAs (41.8%)
- Assessing the PA workforce allows for a better understanding of current PA practice trends and can inform more precise workforce planning and projections
- Developing strategies to recruit more PAs in large rural, small rural, and isolated settings is crucial to expanding access to care

References

- Doescher et al. (2014, June). The Contribution of Physicians, Physician Assistants, and Nurse Practitioners Toward Rural Primary Care: Findings from a 13-State Survey. 52(6):549-556. Retrieved December 2023, https://www.jstor.org/stable/24466014.
- Davis JC, Cromartie J, Farrigan T, Genetin B, Sanders A, Winikof JB. Rural America at a Glance: 2023 Edition.; 2023. Report No. EIB-261
- National Commission on Certification of Physician Assistants, Inc. (2024, April). 2023 Statistical Profile of Board Certified Physician Assistants: An Annual Report of the National Commission on Certification of Physician Assistants. https://www.nccpa.net/resources/nccpa-research/