

Community Health Center Expansion: Roles of Nurse Practitioners and Physician Assistants



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BACKGROUND

Community Health Centers (CHCs) fill an important role in providing health care to underserved populations. Recent infusions of federal support have expanded this role. Nurse practitioners (NPs) and physician assistants (PAs) have been used extensively in CHCs for decades, but their use has increased. This project compares the patient care characteristics of NPs and PAs with those of physicians in CHCs from 2006-2010.

RESEARCH QUESTIONS

1. What are the trends in use of PAs and NPs in CHCs between 2006 and 2010?
2. How do patient and visit characteristics vary among provider types?
3. How does time spent with patients vary by provider type, adjusting for patient, provider, and visit characteristics?

METHODS

Data Source

National Ambulatory Medical Care Survey (NAMCS) Community Health Center strata from 2006-2010.

Sample

- 1118 providers
 - 670 Physicians
 - 245 NPs
 - 103 PAs
- 23931 patient visits

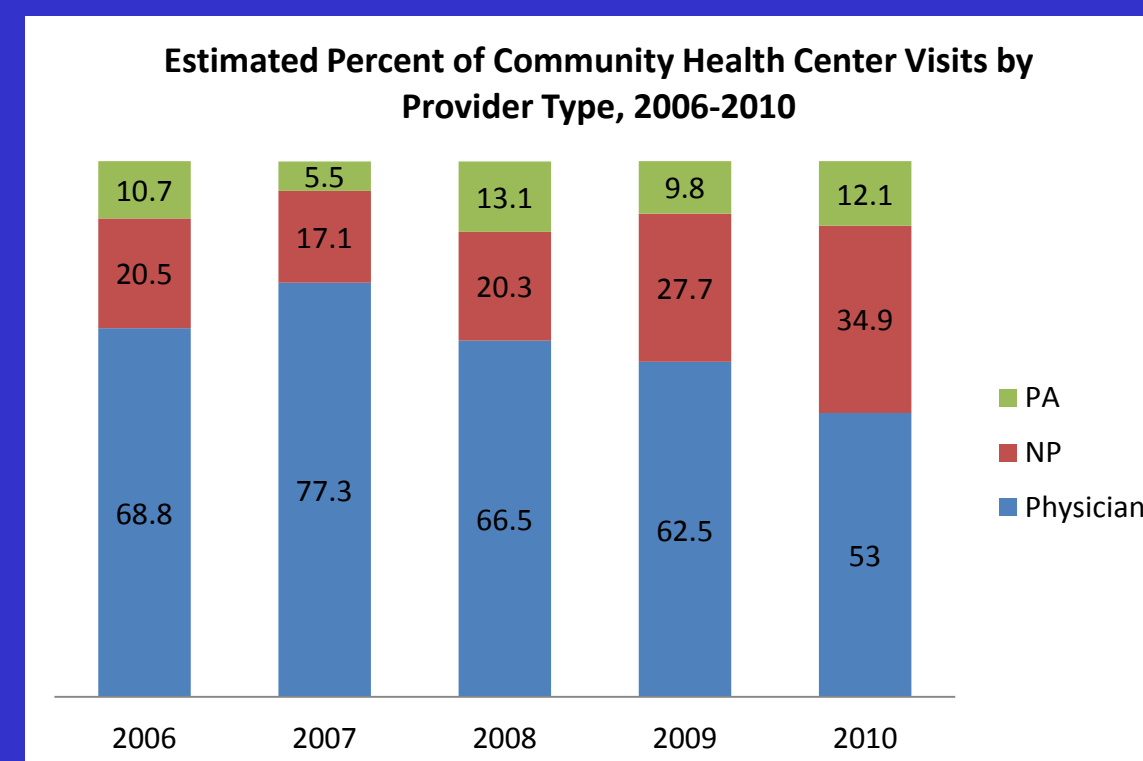
Analysis

- Descriptive statistics
- Bivariate analysis to evaluate differences in patient and visit characteristics
- Multivariate regression analysis to compare time spent with patients by provider type
- Survey weights are used to produce national estimates. Standard error calculation accounts for the complex survey design.

RESULTS

Trends

- PAs and NPs attended 35% of CHC visits, with NPs attending 25% and PAs attending 10%.
- The proportion of visits attended by NPs and PAs increased over the time period studied.



Patient and visit characteristic comparison

- NPs see patients who are more likely children or young adults and female.
- Physicians and PAs see patients who are older and have more chronic disease.
- Physicians and PAs see more patients for whom they are the primary care provider.
- PAs see more rural patients, followed by NPs.

Characteristic	Provider type			P values < .05	
	Physician	NP	PA	Physician vs. NP	Physician vs. PA
Age group				*	
0-18	27	29	23		
19-45	33	44	39		
46-64	28	22	28		
>65	12	6	11		
Sex				*	
Female	62	70	61		
Male	39	31	39		
Race/ethnicity					*
NHW	39	43	52		
NHB	20	22	22		
Hispanic	34	29	21		
Other	8	6	6		
MSA					*
Urban	92	84	69		
Rural	9	16	31		
Major reason for visit				*	
Acute	38	39	43		
Chronic-routine	26	16	27		
Chronic-flare up	7	6	8		
Pre/post surgery	1	1	1		
Preventive care	28	38	22		
Percent with selected chronic conditions					
Hypertension	27.3	19	27.4	*	
Hyperlipidemia	15.8	11.8	15.8		
Diabetes	14.7	10.1	14.1	*	
Depression	11.2	11.1	13.2		
Arthritis	9.3	6	11.2	*	
Asthma	7.9	8	8.2		
Obesity	9.8	11	11.6		
Cancer	1.6	1	1.9	*	
COPD	4.3	2.8	5.3		*
Ischemic heart disease	2.7	1.2	0.9	*	
CHF	1.2	0.5	1	*	
Osteoporosis	2	0.8	1.2	*	
CVD	1.1	0.5	1.1	*	
CKD	0.9	0.6	0.5	*	
Mean # chronic conditions*	1.12	0.87	1.17	*	
Seen before in this clinic?					
% yes	88	87	88		
Mean # times seen past 12 months				*	*
1	12	14	12		
2 to 3	27	34	34		
4 to 6	31	25	28		
>7	30	27	26		
Are you this patient's PCP? (% yes)				*	
% yes	76	58	70		

Time spent with patients comparison

- PAs see fewer patients per day than physicians.
- There is not a statistically significant difference among provider types in time spent with each patient.

	Mean		
	Physician	NP	PA
Number of visits in reporting week*	58	47.3	51
Number of days patients seen in reporting week**	3.6	3.3	3.9
Number of visits per day in reporting week***	15.7	14.1	13
Time spent with patient (minutes)	18.6	19	20

* p<.05 for comparison between physicians and NPs
 ** p<.05 for comparison between NPs and PAs
 *** p<.05 for comparison between physicians and PAs

Regression analysis of time spent with patients

- Time spent with the patient did not vary by provider type, adjusted for patient, provider, and visit characteristics

Provider type	Beta	P value
Intercept	18.71	0.0000
NP	0.97	0.1763
PA	0.27	0.5286
MD (reference)	0.00	-

*Adjusted for patient age, patient sex, patient race/ethnicity, patient number of chronic conditions, whether the provider is the patient's primary care provider, whether the patient has been seen in the clinic before, how many times the patient has been seen in the past year, major reason for visit, number of health education services provided, number of prescriptions provided, number of other services provided, payer type, year and quarter of the year, and type of service category based on ICD9 codes (acute, chronic, dermatologic, mental health, prevention and pregnancy, ill-defined symptoms, or vision and hearing).

CONCLUSIONS

- NPs and PAs are 31 % of the clinicians in CHCs and provide 35% of CHC visits.
- There is substantial overlap in the patient and visit characteristics of the three provider types, but differences include:
 - NPs provide more preventive care to younger patients with fewer chronic illnesses for whom they do not act as primary care provider
 - PAs provide more acute care to rural patients for whom they act as primary care provider
 - PAs and physicians provide more chronic disease care than NPs
- There are differences in the number of visits and days providing care, but physicians, NPs, and PAs spend similar amounts of time with each patient

IMPLICATIONS

- The Healthy People 2020 objective of increasing access to care, particularly in CHCs, could be partially achieved through increased utilization of NPs and PAs.
- Because NPs and PAs fill unique roles in some settings, health services researchers should determine for each project whether it is appropriate to combine them into one analytic category.

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