

Promoting Primary Care Delivery in the U.S. Through Effective Utilization of Nurse Practitioner Workforce

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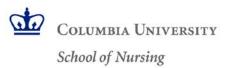
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Primary Care in the United States (U.S.)

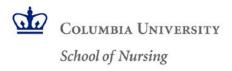
Demand for primary care services in the U.S. is $\widehat{\Box}$ due to:

- Aging population
- Growing chronic disease burden
- Insurance expansion



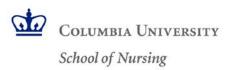
Nurse Practitioners in the United States

- The growing nurse practitioner (NP) workforce can help meet the demand for primary care services
- NP workforce is expected to grow by 93% between 2013 and 2025



Policy and Practice Barriers Faced by NPs

- Scope of practice (SOP): 29 states require supervisory or collaborative relationships with physicians to provide care
- Organizational barriers: NPs do not have adequate access to organizational resources for optimal practice or face lack of clarity in their role within employment settings

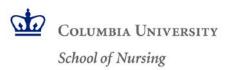


Purpose of the Study

- Examine NP practice, work environment, and NP outcomes (i.e. turnover) in two states with different SOP regulations
- Determine how state SOP and organizational barriers impact NP work environment, NP outcomes and patient panel status

Methods

- <u>Design</u>: Cross-sectional survey used to collect data from 314 primary care NPs in Massachusetts (MA) and 278 from New York (NY) in 2012
- Data Collection: Mail survey in MA and online survey in NY



Survey Tool

- NPs completed measures of work environment, job satisfaction, turnover & panel status
- Nurse Practitioner Primary Care Organizational Climate Questionnaire (NP-PCOCQ): Validated instrument used to measure NP work environment

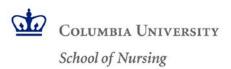
NP-PCOCQ

Contained the following four subscales:

- NP-Physician Relations (NP-PR)
- NP-Administration Relations (NP-AR)
- Independent NP Practice and Support (IPS)
- Professional Visibility (PV)

Independent Variables

- States: Massachusetts (MA) and New York (NY)
- Organization Types: Physician office, community clinic, and hospital

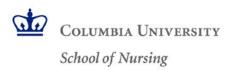


Dependent Variables

- NP Work Environment: Measured by the NP-PR, NP-AR, IPS, and PV subscale mean scores
- Job Satisfaction: Satisfied/dissatisfied
- Turnover: Intent on leaving position within next year
- Panel Status: Own or share patient panel

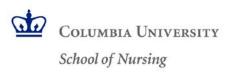
Statistical Analysis

- Multivariate Analysis of Variance: Used to determine effect of state SOP and organization type on NP work environment and outcomes
- <u>Chi-Square Tests</u>: Used to determine effect of state and organization type on job satisfaction, turnover & panel status



Demographic Characteristics of Sample

| Characteristics | NY | MA | p-value |
|-----------------|------------------------|----------|---------|
| | (n=278) | (n=314) | |
| Age (years) | | | |
| Mean (SD) | 52.0 (9.6) 49.3 (11.1) | | .004 |
| Range | 24-75 | 26-71 | |
| Sex % (N) | | | .0004 |
| Female | 90 (220) | 97 (291) | |
| Race % (N) | | | .88 |
| White | 93 (219) | 93 (258) | |



Work Environment by State

| Subscale | NY Mean (n=278) | MA Mean (n=314) | p-value |
|----------|--------------------|--------------------|---------|
| NP-PR | 3.18 | 3.36 | < 0.05 |
| NP- AR | 2.74 | 2.87 | < 0.05 |
| IPS | 3.29 | 3.48 | < 0.05 |
| PV | 2.85 | 3.15 | < 0.05 |

Note: All item responses on each subscale range from 1 (lower) to 4 (higher)



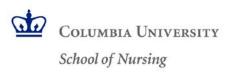
Work Environment by State

- Mean scores on all 4 subscales measuring work environment were statistically significantly different between 2 states
- NPs in MA reported statistically significantly higher levels of work environment than NPs in NY

Work Environment by Organization Type

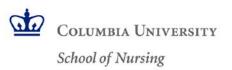
| Subscale | Physician | Community | Hospital | ANOVA |
|----------|-----------|-----------|----------|---------|
| | Office | Clinic | | p-value |
| | (n=225) | (n=111) | (n=118) | |
| NP- PR | 3.33 | 3.31 | 3.18 | 0.06 |
| NP- AR | 2.84 | 2.85 | 2.61 | < 0.05 |
| IPS | 3.40 | 3.47 | 3.21 | < 0.05 |
| PV | 3.00 | 3.16 | 2.81 | < 0.05 |

Note: All item responses on each subscale range from 1 to 4



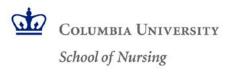
Work Environment by Organization Type

- NPs in community clinics reported statistically significant higher levels of work environment quality in 3 of 4 subscales than other organization types (NP-AR, IPS and PV)
- NPs in physician offices reported highest levels of quality in relationships with physicians (NP-PR)



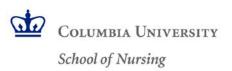
Job Satisfaction, Turnover and Panel Ownership by State

| Measure | MA (%) | NY (%) | p-value |
|---------------------|--------|--------|---------|
| Job Dissatisfaction | 22 | 30 | <0.05 |
| Turnover | 11 | 19 | <0.05 |
| Panel Ownership | 45 | 40 | 0.58 |



NP Outcomes and Panel Ownership by Organization Type (% of NPs)

| Measure | Physician Office | Community Clinic | Hospital | p-value |
|------------------------|---------------------|---------------------|----------|---------|
| Job Dissatisfaction | 24 | 29 | 28 | 0.71 |
| Turnover | 14 | 17 | 15 | 0.68 |
| Panel Ownership | 36 | 67 | 42 | <0.05 |



NP Outcomes and Panel Ownership by Organization Type

- Neither job dissatisfaction nor turnover varied significantly by organization type
- NPs in community clinics reported a statistically significant higher proportion of panel ownership than physician offices and hospitals

Conclusions

- Better work environments in MA might be explained by the state's less restrictive SOP regulations in 2012
- Poor work environments in hospital-based clinics attributable to the setting's hierarchical organizational structure

Implications

- Addressing work environment issues and creating effective environments is needed to fully exploit the capacity of the NP workforce
- State and organizational reforms should be considered to maximize the NPs' contribution to patient care



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