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APRN Full Practice Authority Evidence: How Do We Use This Evidence?

New Research Findings

ACCESS

Barnes, H., Richards, R.R., McHugh, M.D. & Martsolf, G. (2018). Rural and nonrural primary care physician practices increasingly rely on nurse practitioners. *Health Affairs*, 37 (6). 908-914.

Data source was SK&A provider files and Area Health Resources Files. Nurse practitioners (NPs) increased from 17.6% of rural providers to 25.2% from 2008 to 2016.

Brom, H.A., Salsberry, P.J. & Graham, M.C. (2018) Leveraging health care reform to accelerate nurse practitioner full practice authority. *Journal of the American Association of Nurse Practitioners*, 30 (3). 120-130.

Since the enactment of the Affordable Care Act, eight states have adopted full practice authority (from 2011 to 2016), twice as fast as prior ten years. Seven states adopted Medicaid expansion.

Davis, M.A. et al (2018). Supply of healthcare providers in relation to county socioeconomic and health status. *Journal of General Internal Medicine*. 33 (4), 412-414.

Study linked providers listed in the 2014 National Plan and Provider Enumeration System to Medicare claims. Adjusted for county-level differences, the supply of primary care physicians increased across socioeconomic status. Chiropractors and physician assistants (PAs) had a similar pattern. NPs exhibited an inverse association between county socioeconomic and health status.

Martsolf, G., Baird, M., Cohen, C.C. & Koirala, N, (2019). Relationship between state policy and anesthesia provider supply in rural communities. *Medical Care*, 57 (3), 341-347.

Opt-out and less restrictive scope of practice regulations were consistently correlated with a greater supply of certified registered nurses anesthetists (CRNAs), especially in rural counties.

Neff, D.F. et al (2018). The impact of nurse practitioner regulations on population access to care. *Nursing Outlook*, 66(4), 379–385

Data sources were a 2011 American Medical Association masterfile and a subgroup sample of 2013 members of the American Association of Nurse Practitioners. Study showed estimated travel time was about 20 percent less to NPs or MDs in states with full practice authority.

Smith-Gagen, J. et al (2018) Scope-of-practice laws and expanded health services: the case of underserved women and advanced cervical cancer diagnoses. *Journal of Epidemiology Community Health*, 73, 278-284.

Medically underserved women living in states with laws that restrict NP full-scope of practice are twice as likely to be diagnosed with late-stage cancer, adjusted odds ratio (2.08) and confidence intervals (1.4 to 3.1). These disparities were not observed among underserved

women living in areas with NP full practice authority (OR 0.95, 95% CI 0.7 to 1.3). Note study limitations:

- Cross-sectional study – cannot establish a causal relationship between NP full practice authority and Pap testing
- Just 15 states participate in the cancer registry data source

Traczynski, J. and Udalova, V. (2018). Nurse practitioner independence, health care utilization, and health outcomes. *Journal of Health Economics*, 58, 90-109.

Using Medical Expenditure Panel Survey (MEPS) data from 1996-2012 the researchers found that NP independence increases the frequency of routine checkups, improves care quality, and decreases emergency room use by patients with ambulatory care sensitive conditions.

Xue, Y., Smith, J.A. & Spetz, J. (2019). Research Letter: Primary Care Nurse Practitioners and Physicians in Low-Income and Rural Areas, 2010-2016. *Journal of the American Medical Association*, 321, (1), 102-104.

From 2010 to 2016, the number of primary care NPs increased from 59, 442 to 123,316 and the number of primary care physicians increased from 225,687 to 243,738. Primary care NP supply increased more than physician supply, with the highest NP supply observed in rural health service areas (HSAs) and the highest physician supply observed in metropolitan areas.

QUALITY

Buerhaus, P. et al (2018). Quality of primary care provided to Medicare beneficiaries by nurse practitioners and physicians. *Medical Care*, 56 (6), 484-490.

Data source was Medicare parts A and B claims during 2012-2013. Beneficiaries attributed to NPs had lower hospital admissions, readmissions, inappropriate emergency department use, and low-value imaging for low back pain. Beneficiaries attributed to physicians were more likely to receive chronic disease management and cancer screenings. Findings are limited due to incident to billing which does not identify NP services.

Grimes, D.E. et al (2018). Do state restrictions on advanced practice registered nurses impact patient outcomes for hypertension and diabetes control? *The Journal for Nurse Practitioners*, 14 (8), 620-625.

Data source was Federally Qualified Community Health Clinics (FQHCs) data from six states with required physician contracts (Alabama, Missouri, Nevada, South Dakota, Texas, and Virginia) and ten states with full practice authority (Alaska, Arizona, Idaho, Iowa, Maine, New Hampshire, New Mexico, Oregon, Washington, and Wyoming) in 2013. No difference was found in rates of hypertension and diabetes control.

McMichael, B.J., Spetz, J., & Buerhaus, P.J. (2019). The association of nurse practitioner scope-of-practice laws with emergency department use. *Medical Care*, 57 (5), 362-368.

States which required physician oversight for NPs had higher rates of emergency department visits following Medicaid expansion than states without physician oversight.

McMichael, B. (forthcoming 2020). Health care licensing and liability. *Indiana Law Journal*, 95

Researcher examined all US births between 1998 and 2015 and found that allowing advanced practiced registered nurses (APRNs) and PAs to practice with more autonomy reduces the use of medically intensive procedures. Eliminating restrictive laws may better promote patient safety.

O'Reilly-Jacob, M. and Kandrack, R. (2019). Low-value back imaging in the care of Medicare beneficiaries: a comparison of physicians and nurse practitioners in primary care. Presentation at Academy Health Annual Research Meeting, Washington, DC. June 3, 2019

Data source is Medicare Part B claims 201-2013. Found no differences between primary care NPs and primary care MDs when accounting for organization.

Patel, E. and Kandrack, R. (2019). Differences in the number of services provided by advanced practice nurses and physicians in ambulatory care visits. Presentation at the Academy Health Annual Research Meeting, Washington, DC. June 3, 2019

Data from the National Ambulatory Medical Care Survey from 2011-2015 in which an NP or certified nurse midwife (CNM) and no physician or a physician only provided care during a patient visit. There were no differences in the number of services provided but NP or CNMs on average provided one fewer billed service in general medical visits compared to physicians.

Yang, Y. et al (2018), Nurse Practitioners, Physician Assistants and Physicians are comparable in managing the first five years of diabetes. *The American Journal of Medicine*, 131 (3), 276-283.

Data from the **VHA** corporate data warehouse. Patients managed by NPs, PA, and physicians had comparable hemoglobin A1C at diagnosis and initiation of oral medications and insulin after 4 years of follow up.

COST

Martin, B., and Alexander, M. (2019). The economic burden and practice restrictions associated with collaborative practice agreements. *Journal of Nursing Regulation*, 9 (4), 22-30.

The cost of required collaborative practice agreements (CPA) often exceeded \$6,000 annually, with numerous respondents reporting fees between \$10,000 and \$50,000. Although CPA fees are meant to compensate physicians for the time spent supervising APRN caseload, in person communication is infrequent and chart reviews rare.

Ritter, A. "Exploring Collaborative Practice Agreements Between Nurse Practitioners And Physicians" (2018). *Publicly Accessible Penn Dissertations*. 3176. <https://repository.upenn.edu/edissertations/3176>

Structures of regulation similar to collaborative practice agreements CPAs in various health disciplines increase the cost of health services and decrease the number of health professionals delivering care. CPAs include vague language and 24 percent of nurse practitioners in Florida report no terms of physician collaboration in the agreement. Ten percent of nurse practitioners report paying a physician for participation in a CPA. Fifty percent of self-employed NPs paid for their CPA compared to only 6.2 percent of non-self-employed CPAs.