

Maximizing Access to Health Care In New Jersey

The Case for Full Practice Authority

White Paper III ©

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Executive Summary: Maximizing Access to Health Care in NJ: The Case for Full Practice Authority

- New Jersey (NJ) is currently experiencing a shortage of primary and mental health care providers, a shortage made more glaring in the face of the opioid crisis and the COVID-19 pandemic. 84% of 11, 867 NJ Advanced Practice Nurses (APNs) practice in primary care and another 7% provide psychiatric mental health care. Acute care APNs and APNs-anesthesia have been indispensable to the care of severely ill COVID-19 patients during the pandemic.
- New Jersey APNs are required to have a contractual relationship in the form of a joint protocol with a licensed physician in order to prescribe medications.
- This joint protocol requirement has become an increasingly expensive contract that creates red tape, limits patients' access to APN care, and adds real costs to the health care system. A recent survey determined that NJ APNs pay an average of \$1,000/month for these contracts.
- In April, 2020, Governor Murphy issued Executive Order #112 which removed the joint protocol requirement for APNs during the public health emergency so that they could practice "...without the statutory barriers that deprive the healthcare system of the agility to best utilize resources." The suspension of the joint protocol requirement has now been legislatively extended through January 1, 2022.
- During the 16 months that the joint protocol has been suspended, there have been no reports to the NJ Board of Nursing that this action has undermined patient safety.
- With the exception of the joint protocol requirement for prescribing, APNs have been practicing autonomously in NJ for nearly 30 years.
- NJ APNs are responsible and accountable for the care they provide and accordingly, carry malpractice insurance. Over a thirty-year period from 1990-2020, only 1.9% of NJ APNs have been reported to the National Practitioner Data bank for involvement in malpractice suits or settlements- a very low rate.
- APNs in Full Practice Authority states are no more likely to be reported to the National Practitioner Data Bank than those working in more legally restricted states.
- Outcome studies find that APNs provide care comparable to that of other clinicians when caring for comparable conditions, but that APNs' care more often prevents costly emergency room visits and re-hospitalizations.
- APNs are more likely to care for the vulnerable, and the disabled, and they are more likely to serve patients in underserved communities; this is especially true in states where APNs have Full Practice Authority. Nationwide, in 2021, 82 % of APNs working full time as nurse practitioners see Medicare patients and 78.7% see Medicaid patients. States with FPA experienced 17% lower outpatient costs and 10.9% lower prescription drug costs per Medicaid beneficiary than those states with restricted practice.
- Now is the time for New Jersey to join 25 other states and the District of Columbia by legislatively eliminating a contractual agreement that gets in the way of patient care. Decades of evidence demonstrate that APNs are fully qualified to practice to the full extent of their educational preparation, clinical training, and national certification. Patients deserve the right to unrestricted access to their care!

Maximizing Access to Health Care in New Jersey: The Case for Full Practice Authority: White Paper III

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Abstract

In New Jersey (NJ) the demand for primary care providers has risen, driven by an increasing number of residents with health insurance, provisions for preventive care services in the Affordable Care Act, and an aging population. Concurrently, the need for psychiatric providers has surged in parallel to the mental illness and opioid crises as individuals seek comprehensive psychiatric care, and medication- assisted treatment for substance use disorders. APNs are well poised to provide the workforce necessary to meet these increased demands, but the statutory requirement that an APN prescribe medications in accordance with a joint protocol with a licensed physician puts constraints on their accessibility, efficiency, and cost effectiveness. In April 2020, recognizing the benefits of APN autonomy, Governor Murphy issued an Executive Order suspending the joint protocol requirement during the public health emergency associated with the COVID-19 pandemic. The suspension has now been statutorily extended to January 2022. Since the suspension began, there have been no reports to the NJ Board of Nursing that this policy has undermined patient safety. It is time for NJ to bridge the practice gap between what APNs are educated and clinically prepared to do, and what they are allowed to do because of an unnecessary and outdated law. It is time to permanently remove the joint protocol requirement from APN statutes.

Current State of Advanced Practice Nursing in New Jersey

Mary's cell phone rings at 6:15 am just as she is loading the heavy briefcase into her car to head off to the clinic. Expecting to hear the familiar voice of her friend and practice partner, Dr. John Smith, a woman's voice softly delivers the shocking news: last evening, John had suddenly collapsed and died of a massive heart attack. Mary, an Advanced Practice Nurse (APN) is fully prepared to take over the responsibilities of the appointment-crammed day, but she realizes that her joint protocol agreement with John, her contracting physician, prevents her by law from writing or renewing a single prescription without his signature on that document. With relief, she then gratefully remembers that during the current public health emergency caused by the COVID-19 pandemic, the New Jersey (NJ) Governor, through Executive Order (E.O.), has temporarily suspended the requirement for an APN to have a contractual relationship with a physician for the sole purpose of prescribing. As long as the public health emergency lasts, most of her patients will not be without her care, and she will not be without her livelihood. However, the temporary nature of the Executive Order is daunting: she will need to scramble to find a new

physician both for her Joint Protocol agreement and for insurance purposes as soon as possible since some insurance carriers will not reimburse her for care without a co-existing and active contract with a linked physician.

Mary’s quandary begs the question: If APNs can safely and effectively deliver care in a public health emergency without the tether of a Joint Protocol, why not remove this barrier to practice permanently? This White Paper examines the case supporting Full Practice Authority (FPA)* for NJ APNs.

Factors in NJ that drive the need for Full Practice Authority

With the implementation of the Affordable Care Act (ACA) between 2014-2019, nearly one million New Jersey residents gained health care coverage, 218,000 directly through the ACA and another 600,000 through a state expansion of Medicaid made possible by the ACA.ⁱ In 2018, concerned about the possibility of Federal changes to the ACA, the NJ Legislature passed and the governor signed *The NJ Health Marketplace Protection Act*. The law requires that all NJ taxpayers obtain health insurance or pay a penalty (more than the cost of subsidized insurance).ⁱⁱ In 2019, the year this law became operative, only 7.9 percent of New Jersey taxpayers were without insurance.ⁱⁱⁱ

This significant rise in the number of insured individuals, combined with provisions in the ACA that reimburse providers for preventive care, a growing population, and an upswing in those over age 65, have increased the demand for primary care providers both in New Jersey and nationwide, particularly in rural and underserved urban areas. At the same time, primary care workforce shortages exist and are expected to persist, most notably among physicians, fewer of whom now choose primary care for residency and practice.^{iv v vi vii viii ix x} In contrast, a growing number of advanced practice nurses (APNs) are being educated for primary care. It is estimated that 16,000 APNs graduate from primary care programs each year, compared to the 5,000 physicians who enter primary care residencies.^{xi} Whereas the National Center for Health Workforce Analysis predicts a shortfall of more than 1,000 physicians in NJ by 2025,^{xii} the number of APNs** certified by the New Jersey Board of Nursing, including nurse practitioners, clinical nurse specialists, and nurse anesthetists continues to increase, and the total number of APNs certified in NJ stands at 11,687 as of June 11, 2021.^{xiii}

**Full Practice Authority is defined as "the collection of state practice and licensure laws that allow Advanced Practice Nurses to evaluate patients, diagnose, order and interpret diagnostic tests, initiate and manage treatments, and prescribe medications under the exclusive licensure authority of the state board of nursing." (AANP Policy Statement, 2021,*

*<https://www.aanp.org/advocacy/advocacy-resource/policy-briefs/issues-full-practice-brief>) ** In NJ, the title APN= nurse practitioner (NP), clinical nurse specialists (CNS) and APN-anesthesia (APN-A); APNs are licensed and regulated by the NJ Board of Nursing. Nurse-Midwives in NJ are licensed and regulated by the NJ Board of Medical Examiners. Approximately 2/3*

of NJ APNs are NPs; the largest number of CNSs practice in psychiatry; Because NPs are APNs in NJ, and because most outcomes studies on APN care have been done on NPs, the titles APN and NP are used interchangeably throughout this paper.

Approximately 33 percent of 27,305 physicians licensed in NJ in 2018, practiced in primary care areas^{xiv}; in comparison, the NJ Collaborating Center for Nursing reports that in 2021, 84 percent of APNs (not including those working as psychiatric APNs) in the state are practicing primary care.^{xv} When nurse practitioners and physician assistants are included in modeling related to the nationwide availability of primary care providers, projected shortfalls are reduced by more than two-thirds.^{xvi}

NJ is currently experiencing an acute need for more psychiatric providers, exacerbated, by an exponential rise in those seeking medication-assisted treatment for substance use disorders. In 2019 out of a population of nearly seven million New Jersey residents, 94,050 were in demand of treatment for substance abuse, yet for 40.1 percent that demand went unmet^{xvii xviii} The NJ Collaborating Center for Nursing reports that in 2021, 71 percent of counties in the state have limited access to mental health providers.^{xix} The average patient waits 2 months or longer for a psychiatric care appointment in NJ.^{xx} In 2020, the American Psychiatric Nurses Association Board of Directors reaffirmed its position that psychiatric-mental health nurses are primary care providers, and constitute a vital link in the provision of primary psychiatric- mental health care and indeed, they do so in NJ.^{xxi}

On March 4, 2020, New Jersey recorded its first case of COVID-19 in the rapidly emerging pandemic; as of March 7, 2021, 64,396 individuals had been hospitalized with the infection,^{xxii} and as of June 4, there had been 1,017,044 confirmed cases, and 26,253 deaths attributed to the infection.^{xxiii} The pandemic has put enormous strain on New Jersey's nursing workforce. LPNs, RNs, and APNs have been at the forefront in providing care: testing and treating patients in outpatient settings, nursing homes, state hospitals, prisons, colleges, in the intensive care units of acute care hospitals, and now, vaccinating New Jersey citizens. Nationwide, nurses have borne 32 percent of the 3,604 deaths from COVID-19 among health care workers. New Jersey's nurses have incurred the fourth highest death rate (268) among the states, after New York, Texas, and California.^{xxiv}

Amita Avadhani, an acute care APN working in intensive care in NJ, recounts the “roller-coaster” days of caring for many COVID patients, including otherwise healthy young people who died.^{xxv} A survey of NJ APNs conducted in May 2020

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indicated that 87 percent of respondents reported moderate to severe increased level of physical and mental stress. 56 percent reported anxiety, and 41 percent reported significant sleep disturbances. Symptoms of trauma including flashbacks and nightmares, depression, changes in appetite and substance use were also reported, according to A. Avadhani RN, PhD, APN and S. Drake, RN, PhD, APN (written communication, July 16, 2021). Subsequently, one year after the beginning of the

pandemic, a Kaiser Family Foundation/Washington Post survey found that nationally, 62 percent of frontline health care workers described feelings of stress or anxiety associated with COVID-19, 16 percent acknowledged increased alcohol or drug use, 13 percent of respondents having received mental health services or medication related to these feelings, and an additional 18 percent of having considered treatment.^{xxvi} Psychiatric APNs in NJ are now not only providing mental health care to individuals and families directly impacted by the pandemic and its attendant loss and isolation, but also to the health care workers who have been caring for those same patients.^{xxvii}

Supporting Full Practice Authority

On April 4, 2020, a month into the pandemic, NJ Governor Phil Murphy signed Executive Order (E.O.) #112 which, among other provisions, allows APNs to practice without the legal requirement for a joint protocol contract with a licensed physician so that “...they can be deployed to meet the anticipated needs with more autonomy, greater agility, and all the necessary tools, including independent authority to prescribe controlled dangerous substances,” without the statutory barriers that “... deprive the healthcare system of the agility to best utilize resources.”^{xxviii}

NJ E.O. #112 was renewed every 30 days, thereafter, consistent with the governor’s monthly re-declarations of the Public Health Emergency. In late May 2021, as vaccinations became widely available to NJ adults and children age 12 and up, and the number of COVID infections and hospitalizations related to the infection fell substantially, the governor began to relax COVID restrictions. Anticipating that even with the suspension of the public health emergency, some of the changes instituted by associated executive orders would need to be sustained, at least temporarily, the governor signed A5820/S3866 (P.L. 2021, c. 103) on June 4, 2021. This law exempts E.O. #112 (among thirteen others) from the public health emergency termination until January 1, 2022.^{xxix} Subsequently, on June 4, 2021, the governor issued E.O. #244, ending the public health emergency.^{xxx}

NJ was among 20 states that issued either temporary suspensions or waivers of practice agreements during the 2020/2021 public health emergency.^{xxxvi} While several states have allowed these suspensions/waivers to expire, in Massachusetts, a Full Practice Authority law for APNs became permanent on January 1, 2021.^{xxxvii} California enacted a Full Practice Authority law for APNs on September 29, 2020, but it does not become operative until 2023; according to the American Association of Nurse Practitioner, the new law is encumbered with regulatory entanglements that may make it more, rather than less difficult for APNs to practice autonomously.^{xxxviii} Florida APNs were granted Full Practice Authority on March 11, 2020, restricting the law's reach to those practicing in primary care, including psychiatry.^{xxxix} In total, 25 states (including Florida, Massachusetts, California and most recently Delaware), the District of Columbia and 2 territories (Guam, the Northern Marianas), have now passed legislation granting APNs FPA.^{xl}

In 2009 and again in 2014, Torre and colleagues detailed how the removal of statutory, regulatory, and reimbursement barriers to APN practice in New Jersey could improve access to health care, achieve greater efficiency in the provision of care, lower the costs of care, without sacrificing quality, and offer broader patient choice.^{xli} Unless policymakers in NJ permanently remove the requirement for a joint protocol with a physician in APN statutory language, the benefits of the autonomous practice APNs have exercised throughout the 15 months of the COVID-19 pandemic will be lost.

A new report from the National Academy of Medicine, released in May 2021, *The Future of Nursing: 2020-2030: Charting a Path to Health Equity*, chronicles the “harmful consequences” of continuing to restrict APN’s scope of practice, and asserts: “Clearly...if government leaders conclude that removing restrictions on (NPs) was beneficial in expanding the public’s access to care during the pandemic, it would be counterproductive to re-impose those restrictions once the pandemic eases, thereby decreasing access to care.”^{xlii}

Over the past decade, there has been steadily increasing documentation that FPA is associated with improved access to care, and a growing demand to eliminate those practice barriers that impede such access.^{xliii} The NJ Collaborating Center for Nursing released a report to the NJ Legislature in 2019, *Policy Analysis: Improving Access to Care for New Jersey*, showing that counties with lower income levels and poorer health outcomes are associated with a shortage of primary care physicians; when APNs are counted with primary care physicians, the shortage is reduced from 13 counties to six. However, in the same report, the authors describe how the joint protocol restriction on APN prescribing practice in NJ has the potential to cause a brain drain of highly skilled APNs to a full

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practice authority state like neighboring New York. 17 percent of NJ APNs are also licensed in NY and/or PA where FPA legislation is pending. Failing to keep pace with legislation in neighboring states may lead to out-migration that can adversely affect long-term health outcomes in NJ^{xliii} by reducing NJ patients' access to APNs' care, and by limiting APNs' capacity to help alleviate the state's shortage of primary and mental health care providers.

Primary care nurse practitioners in comparison to their primary care physician colleagues have been shown to work in a greater variety of settings (community clinics, schools, universities, parishes, prisons). They are also more likely treat vulnerable populations, including the disabled, women, those dually eligible for Medicare and Medicaid, those on Medicaid alone or new to Medicaid and those in rural and health care shortage areas.^{xliv xlv xlvi} APN supply is more likely to meet demand and to improve access to care in states with FPA.^{xlvi xlvi} Specifically, the probability of having a consistent source of care, the ability to get an appointment, the length of driving time to an appointment site, and the availability of appointments at retail clinics are all more favorable in states with FPA.^{xlix l li} Yang and colleagues found more than twice the odds of nurse practitioner- provided mental health visits to community health centers in FPA states.^{lii} Nurse practitioners were 13 percent more likely to see Medicaid patients in states with full practice authority, and this rose to 20 percent in states that paid NPs 100 percent of the physicians' rate, demonstrating that autonomy and reimbursement can positively impact accessible care.^{liii}

National organizations calling for the removal of barriers to APN practice include, but are not limited to the National Academy of Medicine, The Robert Wood Johnson Foundation, the National Governor's Association, the Veteran's Administration, and AARP.^{liv}

Joint Protocol: A Barrier to Care in NJ

A number of barriers involving statutes, regulations, and insurance reimbursement, limit APNs from being both directly consumer-accessible and from practicing to the full extent of their education, clinical training, and experience. The most significant of these barriers in NJ is the statutory requirement (N.J.S.A. 45:11-49.2) mandating that APNs prescribe drugs only according to a written joint protocol developed in agreement with and signed by a licensed physician.

The Joint protocol requirement was inserted into the language of the first NJ APN bill in 1991, as a compromise to assure the bill's passage.^{lv} This policy action was similar to compromises made to APN bills all over the United States that were necessary to allow APN practice to move forward, but placed APNs in a legally dependent position relative to Medicine. The bill was amended in 1999 to change the titles Nurse Practitioner/Clinical Nurse Specialist to Advanced Practice Nurse, and to permit limited prescribing of controlled dangerous substances (CDS), then again in 2004, authorizing full CDS prescribing for APNs.

After a 2008 vote of the New Jersey State Nurses Association membership to remove the Joint Protocol from APN statutes, the association developed and initiated the introduction of the Consumer Access to Health Care Act:(A3512 Munoz/Jasey/Benson/Coughlin)

(S2354/Vitale/Madden) in November /December 2012.^{lvi} This bill slumbered through successive legislative sessions without action until 2019, when, as S1961, it was reported out of the Senate Health Committee, but it was not posted for a full Senate vote, and it was never heard in the Assembly Health Committee.^{lvii} The bill-A1760 (Munoz/Jasey/Benson/Coughlin), reintroduced in January 2020, seeks to eliminate the joint protocol. The bill would retain the requirement for a joint protocol for prescribing only for those APNs with less than two years or 2400 hours of experience. It would continue to require that APNs complete NJ Board of Nursing educational

A1760 does not expand APNs' scope of practice. Beyond prescribing, all other aspects of APN practice in NJ are already fully autonomous.

requirements for a masters or doctorate in an advanced practice specialty, achieve national board certification in that specialty, and meet the biennial continuing nursing education requirements. A1760 would also allow APNs to legally manage the paperwork that reflects the care they are already authorized to provide for a patient.^{lviii} It must be emphasized that all other aspects of APN practice in New Jersey are already fully autonomous, including physical assessment, diagnosis and management of episodic and chronic illnesses, ordering of laboratory and diagnostic tests, ordering and performing needed treatments and procedures, and referring to and collaborating with other providers.

Unintended consequences of the current law include:

- The law requires a signed joint protocol contract between the APN and a NJ licensed physician that requires a minimum of one chart review a year and availability for consultation as needed. This is for prescribing only. The physician seldom sees the patient and may have no relationship to the patient. The APN instead appropriately collaborates with the patient's primary and specialty care providers to create a team that may or may not include the mandated "collaborating" physician.
- Sudden loss of the contracted physician through death, retirement, relocation or any other reason leaves patients without a provider often precipitously, and APNs who are unable to practice.
- Since the law requires the name and contact information of the physician on the APN's prescription blanks, confusion ensues for pharmacies, and insurance companies. Diagnostic and lab results are frequently sent to the physician who has never seen the patient instead of the APN resulting in delays in care for the patient.
- Contracted physicians charge a range of fees for this agreement, from \$0 to over \$50k a year with the median of \$1000 a month. NJ Hospitals pay hundreds of thousands of dollars a year for physician-APN joint protocol contracts.

A1760 does not expand APNs' scope of practice since APNs have been prescribing for nearly thirty years; removing the Joint Protocol, simply changes the parameters under which that prescribing must occur.

Organized Medicine's Opposition to Full Practice Authority

The Consumer Access to Health Care Act has met with resistance from organized medicine. In 2013, soon after its first introduction as S3454/A3512, the American Medical Association president sent a letter to NJ Senate President Sweeney claiming that APNs should practice only in physician-led, team based care settings because, he asserted, physicians are the most qualified providers of care and teams are the most cost effective means of care delivery.^{lix} The letter was a direct outgrowth of the call to action articulated by the AMA in its 2009, publication, "Scope of Practice Data Series: Nurse Practitioners". In it they sounded an alarm that any and all attempts by health care providers of "... limited licensure to seek ...unwarranted scope of practice expansion should be challenged because [they] may endanger the health and safety of patients."^{lix}

After S1961 failed to advance in the 2019 legislative session, the AMA claimed victory in suppressing the bill through its "Scope of Practice Partnership" grant to the NJ Medical Society.^{lxi} Underscoring the reality that the votes often follow the money, a recent survey of physician political spending revealed that where organized medical organizations invest more in opposition, there is a greater likelihood that states will retain restrictive practice laws for APNs.^{lxii} The relentless efforts by organized medical groups to resist any and all APN autonomous practice emerges from their historical position: since medicine encompasses every element of health care (as defined by broad state medical practice acts), other health care professions are deemed not competent to perform elements of that care, independent of medicine.

Safriet contends that this attitude constitutes a "...profound misapprehension of the dynamic nature of knowledge and skill acquisition and it stands in stark contrast to a more realistic version of shared versus exclusive prerogatives."^{lxiii} In 2007, the National Council of State Boards of Nursing in cooperation with five other professional regulating bodies, including the Federation of State Medical Boards published a monograph that concluded, in part ... "Simply because a skill or activity is within one's professional skill set does not mean another profession cannot and should not include it in its own scope of practice."^{lxiv} In a supplemental statement to the 2021 NASEM report on the Future of Nursing, a physician, William Sage, MD, JD, explains the opposition to FPA succinctly: "The laws and norms that constrain nurses' ability to practice to the full extent of their skills and training (were) put in place by physicians to protect their privileges, independence, and income."^{lxv}

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In an open letter dated November 5, 2020 to the AMA, the president of the American Association of Nurse Practitioners asked the AMA to stop its "disingenuous attacks" on the NP profession and stated: "During a global pandemic, while NPs and physicians are working diligently each day to care for millions of American patients sickened, hospitalized and in the worst cases dying from COVID-19, your association has chosen to focus its energies on an

offensive campaign designed to alarm and misinform the public and policymakers. This strategy is out of touch with the facts and the real challenges faced by our nation's health care system.^{»lxvi}

Quality of APN Care

Outcomes for NPs compared to MDs (or teams without NPs) are comparable or better for all 11 outcomes reviewed.

Beyond claims of medical scope of practice infringement, organized medicine's opposition to APN's practicing absent physician direction, supervision or mandated collaboration is typically framed around assertions that APNs do not provide the same quality of care as physicians and are not as safe.^{lxvii} These assertions are not borne out by repeated research over three decades detailed in both the 2010 Institute of Medicine (IOM) and the 2021 NASEM reports on the Future of Nursing.^{lxviii lxix} Indeed, as the IOM authors point out, "...no data suggest that nurse practitioners in states that impose greater restrictions on their practice provide safer and better care than those in less restrictive states or that the role of physicians in less restrictive states has changed or deteriorated."^{lxx}

A comprehensive, 2013 study which examined research between 1990-2009 evaluating the comparative health care quality, safety, and effectiveness of care delivered by either physicians or nurse practitioners, found that outcomes for NPs were comparable to physicians in ten of eleven instances (satisfaction with care, health status, functional status, number of emergency department visits and hospitalizations, blood glucose, blood pressure, and mortality) and better, in the 11th instance, serum lipid levels.^{lxxi} Buerhaus and colleagues determined that Medicare beneficiaries receiving care from nurse practitioners had lower rates of preventable hospitalizations, hospital readmissions, emergency department visits, higher breast cancer screening rates and lower rates of wasted services of low-value.^{lxxii}

FPA status for NPs has been shown to be associated with lower levels of advanced cervical cancer, an increased number of education, counseling, or medication-related visits in community health centers, an improvement in self-reported mental health status, and a reduction in opioid-related mortality rates.^{lxxiii lxxiv lxxv lxxvi}

The authors of a systematic review of nurse practitioner health care outcomes relative to practice regulations between 2000 and 2019 conclude that FPA laws "...are associated with expanded care access among rural and underserved populations without decreased care quality."^{lxxvii}

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A report regarding NP/PA (physician assistant) opioid prescribing practice emerged in 2020 from Lozada and colleagues. After an examination of a single year of Medicare, Part D, data; they concluded that NPs and PAs more often fit their definition of overprescribing than primary care physicians, and they concluded that overprescribing occurred more often in FPA states than others. The authors did acknowledge that the majority of NPs and PAs have opioid prescribing

patterns similar to physicians, but pointed to a few outliers who prescribed opioids at higher doses or more frequently than physicians.^{lxxviii} A number of confounding variables in this study exist. Practice characteristics were not scrutinized. Relevant variables such as chronic, palliative and end of life care, more often delivered by APNs and PAs than their physician colleagues were omitted from the study. Also not considered were variations in state prescribing duration limits. For example, states that don't allow NPs/PAs to write for a 90 day supply may lead to more prescriptions being written.

One important justification for the continuation of restrictive scope of practice laws is preventing the over-prescription of certain medications, particularly opioids. McMichael examined approximately 1.5 billion individual opioid prescriptions filled between 2011 and 2018 that were aggregated to the individual provider-year level. Prescription fills vary in terms of which opioid is prescribed, and the quantity, strength and route of delivery of the opioid. Morphine milligram equivalents (MMEs) provide a useful measure that combines all of these dimensions in a single, standardized measure of the potency of each fill. Across all NPs and physicians, independent NP

Across all NPs and physicians, independent NP practice was associated with a statistically significant decline in total annual opioids prescribed as measured in MMEs.

practice was associated with a statistically significant decline in total annual MMEs prescribed. The results do not support the contention that allowing NPs to practice independently increases opioid prescriptions. Rather, the results support policy changes that allow NPs to practice independently.^{lxxix}

Cost of APN Care

APNs are especially effective at those health promotion and disease prevention strategies that can indirectly reduce health care costs by decreasing the need for hospitalizations and emergency room visits, borne out in several of the studies cited above. This is increasingly important in the United States where the incidence of chronic disease, especially diabetes, has risen dramatically; research also points to direct cost savings associated with APN care. An analysis of a large national sample of medically complex diabetic patients in the Veteran's Affairs system comparing nurse practitioner (NP) and physician assistant (PA) care to that of physicians, revealed that physicians' care was related to higher expenditures, and resulted in increased emergency room use and hospitalizations.^{lxxx}

Muench and colleagues examined Medicare data between 2009-2013 to compare medication adherence, cost, and emergency room utilization in Medicare beneficiaries attributed to nurse practitioners (NP) and primary care physicians (PCP). Patients of both types of providers showed similar medication adherence (physicians' patients were slightly more adherent regarding statin use), but NPs' patients experienced fewer office-based

Removing restrictions and allowing for FPA for NPs could provide significant economic benefits to states, as well as lower health care costs and improve access to care.

and specialty care costs, and were less likely to use emergency room services.^{lxxxix} A review of after-hours care provided by either physicians or nurse practitioners revealed no differences in patient outcomes, but NPs wrote fewer prescriptions, referred fewer patients to the emergency department, and achieved lower overall cost.^{lxxxii} The economic impact of FPA is reflected in the following studies: lower outpatient costs and lower prescription drug costs were associated with FPA in a longitudinal study of Medicaid data;^{lxxxiii} FPA increases the cost savings that can be realized through increased utilization of retail clinics;^{lxxxiv} well child clinic visits costs are increased by 3-16% in states with restricted APN practice authority.^{lxxxv}

Moaven and colleagues analyzed claims data of care given by a random sample NPs and physicians billing under independent Medicare National Provider Identification numbers. They determined that the “driving factor” behind the higher cost of primary care given by physicians compared to nurse practitioners is the higher “service volume,” related to physician care, specifically including more laboratory tests, more evaluation and management visits, and more imaging studies.^{lxxxvi}

Collaborative agreement requirements have been shown to reduce the number and slow the growth of available NPs in communities^{lxxxvii} and as noted above, they have been found to increase the cost of care. Independent analyses in three states found that removing restrictions and allowing for FPA for NPs could provide significant economic benefits to states, as well as lower health care costs and improve access to care.^{lxxxviii lxxxix xc}

Safety and Liability

Physicians may express concern about the liability risk of working with APNs, but the reality is that they are at far less risk relative to APNs than to their physician colleagues. Over the thirty-year period between 1990-2020, 15,853 (out of 31,545 actively practicing NJ physicians) were reported to the National Practitioner Data Bank for having been named in a malpractice suit, or settlement; that is 50 percent of the total.^{xcix xcii} Over the same period, 227 APNs (out of 11,867 licensed by the NJ Board of Nursing) were so reported; that is 1.9 percent of the total.^{xciii xciv}

Among the reasons physicians may be sued more often than APNs involve attention to and time spent with patients. Communication failures have been found to be a key factor in malpractice cases.^{xcv} In a CNA/NSO claims study, generally the longer time spent in an encounter, the fewer claims were made against NPs.^{xcvi} Physicians see large numbers of patients on a daily basis in an effort to maximize income for a practice, potentially resulting in less time spent with individual patients communicating about their concerns and complaints. When patients perceive physicians as empathetic, they are significantly less likely to conclude that physicians have made medical errors and fostering empathy takes time.^{xcvii xcvi} One meta-analysis of primary care provided by physicians and APNs found that resource utilization and costs were equivalent for comparable care, but that patients were more satisfied with the care of nurses.^{xcix} Physicians also incur more liability risk because they see more complex patients including those associated with the highest number of claims (neurosurgery, plastic surgery, orthopedics, and obstetrics/gynecology).^c

In NJ, APNs are required to have a joint protocol with a licensed physician, only for the purposes of prescribing medication and devices; all other aspects of their practice are already independent. For a physician to be found liable in a lawsuit against an APN when the physician is the legal collaborator, Buppert's scrutiny of court records show that the physician must have been involved in the care and either failed to have followed the standard of care, or failed to follow state law with regard to the contractual relationship.^{ci} In NJ, the mandated nature of the relationship means the physician must sign the joint protocol, review at least one record with an APN annually, and be available for consultation either in person or by electronic communication.

APNs working as fully autonomous professionals, pose the least risk to physicians. This makes the continued efforts of organized medicine to resist the removal of the joint protocol requirement related to APN prescribing from NJ statutes, puzzling.

Because the NJ Board of Medical examiners Corporate Practice Rules (N.J.A.C. 13:355-6.5 i) preclude physicians from being employees of professionals of "lesser licensure," most APNs in NJ are employees of physicians. This places physicians at greater liability risk than if an APN is an independent practitioner (working as a limited liability partner), under the theory of respondeat superior (an employer may be held liable for the negligence of an employee).^{cii} From a legal standpoint, APNs working as fully autonomous professionals, pose the least risk to physicians. This

makes the continued efforts of organized medicine to resist the removal of the joint protocol requirement related to APN prescribing from NJ statutes, puzzling.

An analysis of medical malpractice and scope of practice laws concludes that malpractice risks faced by physicians could be reduced by the elimination of supervisory or collaborative practice mandates for APNs.^{ciii} In NJ, fear of the threat of legal liability has resulted in physicians charging high fees to work with APNs, or refusing to work with APNs at all. By current law, NJ APNs are fully responsible and accountable for the care they provide. Accordingly, they carry their own malpractice insurance.

No evidence exists that the removal of the joint protocol requirement for NJ APNs by Executive Order over the past 15 months, has undermined patient safety; there have been no complaints to the NJ Board of Nursing about APNs related to the waiver.^{civ}

Education

The American Medical Association frames its opposition to FPA around its contention that APNs have fewer years of education and hours of clinical practice. Ignored, is the fact that an APN's post-graduate (masters or doctoral) education of two-five years is in addition to 4 years of undergraduate education and hands on clinical training to obtain a baccalaureate degree in nursing.^{cv} Furthermore, many APNs have spent years in clinical

Time alone, is not the best measure of the integration of knowledge and skill. Educational effectiveness should be determined by patient outcomes.

practice as registered nurses before returning to a post-graduate APN program. John Rowe, co-author of the landmark IOM 2010 report on the future of nursing, remarks, “Of course (physicians) know more, but it is well established that they do not know more about providing the core elements of basic primary care.”^{cv}

It must be emphasized, that APNs are not practicing as physician substitutes but as professionals in their own right who bring a holistic, patient- within- the-family-and community perspective to bear on the process of evaluation and care. Time alone, is not the best measure of the integration of knowledge and skill. Educational effectiveness should be determined by patient outcomes. Patient outcomes as demonstrated in the many papers cited in this document and across the spectrum for half a century, have been shown to be comparable, and in some cases, improved, particularly as related to the prevention of costly hospitalizations, readmissions to hospitals and emergency room use.^{cvii}

Team Based Care

In a changing health care environment, teams and their leadership need to remain fluid and responsive to those changes. The National Academy of Medicine describes team-based health care as “...the provision of health services to individuals, families, and/or their communities by at least two health providers who work collaboratively with patients and their caregivers to the extent preferred by each patient to accomplish shared goals within and across settings to achieve

Eliminating the joint protocol from NJ APN statutes will not remove the professional responsibility for collaboration.

coordinated, high-quality care.”^{cviii} Collaboration is a mutual professional responsibility that cannot be assured by mandate, but which APNs and physicians undertake continually related to every element of their practice, not just prescribing. Eliminating the joint protocol from NJ APN statutes will not remove this professional responsibility any more than it will prevent APNs from reaching out to their physician and other health care

colleagues for counsel and referral for care, as physicians do themselves. Sometimes the most cost-effective, patient-centered team leaders are not physicians, but nurses, including APNs. Team management and coordination of care have long been core essentials of nursing practice.

Economic Competition

Underlying the opposition of organized medicine to APNs’ FPA is their concern about economic competition, but that concern has been shown to be unfounded. Salaries of physicians and surgeons have risen to the same extent in states with full APN scope of practice laws as in those with more restrictive laws.^{cx} The Federal Trade Commission issued a report in 2014, calling for elimination of APN scope of practice barriers which the Commission views as anticompetitive, reducing access to care, particularly among the underserved, increasing costs, and limiting innovative health care delivery.^{cx}

Reimbursement Barriers to APN Practice

NJ law, the Health Care Quality Act: P.L. 1997, c.192,^{cxii} permits but does not require health care insurers to credential, empanel and directly reimburse APNs as primary care providers. This provision is a barrier that results in decreased patient access. With this in mind, Massachusetts instituted legislative change in 2008 that requires that insurers define nurse practitioners as primary care providers, reimburse them as such, and list them along with physicians in provider directories.^{cxiii} Mandated physician involvement in APN prescribing, and restricted scope of practice law have been shown to reduce the likelihood that health care insurers will credential and empanel APNs independently.^{cxiiicxiv} NJ health care insurers have increasingly reimbursed APNs at a rate between 70-85 percent of what they pay physicians for the same service. Still, a number of health care insurers in the state continue to require that in order to become and remain credentialed and empanelled, the APN must be linked to a physician who is also credentialed and empanelled by the company. If the physician then dies, retires, moves from the state, or loses a license to practice, the APNs' patients are rendered provider-less, and the practice effectively stops until the APN succeeds in securing another insurer-approved credentialed and empanelled physician willing to link to their practice. These kinds of restrictions limit APNs' practice choices and opportunities, making it less likely for them to be able to independently provide care in underserved areas.

Removal of state regulations restricting autonomous APN practice while providing full Medicaid reimbursement for APN services, are actionable policy changes that hold significant promise for increasing access to care

The US is experiencing shortages of primary care providers and practices that accept Medicaid, that will only increase as health care reform extends insurance coverage and the population ages and grows. NPs offer the potential to moderate these shortages, but our findings suggest that their contributions are undermined by state regulations that unnecessarily restrict practice and reduce Medicaid reimbursement rates that are already low for physicians. Removal of state regulations restricting autonomous NP practice as well as providing full Medicaid reimbursement for NP services, are actionable policy changes that hold significant promise for increasing access to care.^{cxv}

Summary

In April, 2020, the Governor of NJ, recognizing that barriers to practice could impede patient access to care during the COVID-19 pandemic, issued an executive order suspending the requirement that APNs must prescribe in accordance with a joint protocol with a licensed physician, for the duration of the public health emergency. That suspension has now been extended, by statute, until January 2022. No diminished health outcomes or safety complaints associated with the suspension of this law have been reported, over the past 15 months.

APNs are well positioned to bolster the workforce needed to meet the increasing demand for care in NJ, where more people now have health insurance and more people are in need of both

primary and psychiatric services. Studies show that APNs provide high quality, cost-effective care with outcomes comparable to that of physician colleagues. Working cooperatively without licensure barriers, APNs and physicians along with other health care providers, can cover the full spectrum of patient care needs. APNs are educated for and skilled at team management and care coordination. Team leadership should be shared among APNs and physicians. Teams are most effective when all members are free to work to their full educational and clinical capacity.

Professions determine their own scopes of practice, and areas of practice necessarily overlap and evolve. Mutual collaboration is a professional responsibility. True team-based care is non-hierarchical with all members respected for their talent and expertise. Keeping the patient at the center rather than the physician promotes a focus on a shared goal that is accomplished through interdependent actions and accountability to each other.^{cxvi}

APNs provide high quality, cost-effective care with outcomes comparable to that of physician colleagues. Working cooperatively, without licensure barriers APNs and physicians, along with other health care providers, can cover the full spectrum of patient care needs.

Studies do not show APNs to be less safe than physicians, or that safety is increased by physician oversight. Removing statutory and regulatory barriers imposed on NJ APNs' practice will;

- Improve patient access to primary and psychiatric care
- Relieve workforce shortages
- Increase health care efficiency, timeliness, seamlessness, quality and safety
- Reduce health care costs
- Prevent precipitous loss of service
- Permit patients to exercise provider choice

Conclusion:

Currently, a divide exists between what NJ APNs can do by virtue of educational and clinical preparation, and what they are allowed to do because of statutory and regulatory limitations. The suspension of the joint protocol requirement over the past 15 months has demonstrated that APNs can safely and effectively deliver care in NJ without this restriction. It is time to permanently retire an unnecessary barrier that both prevents advanced practice nurses from practicing to the full extent of their education, clinical training, and national certification, and limits consumer access to their care.

References:

ⁱ Washburn L. NJ residents expected to pay less for health coverage through new state-run portal. *Northjersey.com*. October 14, 2020. Accessed February 7, 2021. <https://www.northjersey.com/story/news/health/2020/10/14/nj-launches-new-state-run-marketplace-health-insurance/3653855001/>

-
- ⁱⁱ New Jersey Legislature . P.L. 2018, c.31: The New Jersey Health Insurance Market Preservation Act. Chapter Laws, 2018. Accessed June 9, 2021. https://www.njleg.state.nj.us/2018/Bills/PL18/31_.HTM .
- ⁱⁱⁱ Kaiser Family Foundation. *Health insurance coverage of the total population. State health facts: NJ*. Kaiser Family Foundation. 2021. Accessed June 9, 2021. <https://www.kff.org/other/state-indicator/total-population/?currentTimeframe=0&selectedRows=%7B%22states%22:%7B%22new-jersey%22:%7B%7D%7D%7D&sortModel=%7B%22colId%22:%22Location%22,%22sort%22:%22asc%22%7D>
- ^{iv} National Center for Health Workforce Analysis. Projecting the supply and demand for primary care practitioners through 2020. Health Resources and Services Administration. Rockville, Maryland: U.S. Department of Health and Human Services, 2013; 1-31. Accessed July 10, 2021. <https://bhw.hrsa.gov/sites/default/files/bureau-health-workforce/data-research/projecting-primary-care.pdf>
- ^v National Center for Health Workforce Analysis (a). National and regional projections of supply and demand for primary care practitioners: 2013-2025. 2016. Accessed June 10, 2021. Health Resources and Services Administration. <https://bhw.hrsa.gov/sites/default/files/bureau-health-workforce/data-research/primary-care-national-projections-2013-2025.pdf>
- ^{vi} National Center for Health Workforce Analysis (b). *State-level projections of supply and demand for primary care practitioners: 2013-2025*. 2016. Accessed June 10, 2021. Health Resources and Services Administration. <https://bhw.hrsa.gov/sites/default/files/bureau-health-workforce/data-research/primary-care-state-projections2013-2025.pdf>
- ^{vii} Cadmus E, de Cordova P, & Weaver S. Access to care in NJ: making the case for modernizing legislation. *Journal of Nursing Regulation*. 2020; Vol. 11(1): 36-41. [https://www.journalofnursingregulation.com/article/S2155-8256\(20\)30059-4/ppt](https://www.journalofnursingregulation.com/article/S2155-8256(20)30059-4/ppt)
- ^{viii} Zhang X, Lin D, Pforsich H, & Lin HV. Physician workforce in the United States of America: Forecasting nationwide shortages. *Human Resources for Health*. 18 (8). Published online Feb. 6, 2020. <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7006215/>
- ^{ix} Buerhaus P. *Nurse practitioners: A solution to America's health care crisis*. American Enterprise Institute, September, 2018: 1-30.
- ^x Dall T, West T, Chakrabarti R, Reynolds R, Iacobucci W. *The complexities of physician supply and demand: Projections from 2016-2030*. HIS Markit LTd. Prepared for: Association of American Medical Colleges (AAMC). 2018. https://black.global.ssl.fastly.net/production/media/filer_public/85/d7/85d7b689-f417-4ef0-97fbecc129836829/aamc_2018_workforce_projections_update_april_11_2018.pdf
- ^{xi} United Health Group [UHG] . *Addressing the nations' primary care shortage: advanced practice Clinicians and innovative care delivery models*. 2018; 1-4. United Health Group. Primary Care Report. Accessed July 9, 2021. <https://www.unitedhealthgroup.com/content/dam/UHG/PDF/2018/UHG-Primary-Care-Report-2018.pdf>
- ^{xii} National Center for Health Workforce Analysis (2013), op. cit., p. 12.

-
- ^{xiii} Personal communication with Lucille Joel RN, PhD, APN, member, NJ Board of Nursing, June 11, 2021.
- ^{xiv} American Association of Medical Colleges . *New Jersey workforce profile*. AMA physician masterfile. December 31, 2018. 2019. <https://www.aamc.org/media/37986/download>
- ^{xv} Cadmus E, de Cordora, P. & Weaver, S. (2021): *Update on improving access to care in NJ: Executive Summary*. NJ Collaborating Center for Nursing. 2021; 1-8. Accessed July 9, 2021. <https://www.njccn.org/wp-content/uploads/2021/05/Update-on-Improving-Access-to-Care-in-NJ-1.docx>
- ^{xvi} National Center for Workforce Analysis (2013), op.cit.
- ^{xvii} Borys S, Zhu L, Hailu, J. NJ drug and alcohol treatment: Substance abuse overview, statewide, 2020 Department of Human Services, Division of Mental Health and Addiction Services: Office of Planning, Research, Evaluation, Prevention, and Olmstead. Trenton: NJ, Oct 2020 .
- ^{xviii} National Institute of Drug Abuse [NIDA]. New Jersey: Opioid-involved deaths and related harms. NIDA. National Institutes of Health U.S. Department of Health and Human Services. April 3, 2020. <https://www.drugabuse.gov/drug-topics/opioids/opioid-summaries-by-state/new-jersey-opioid-involved-deaths-related-harms>
- ^{xix} Cadmus (2021), op. cit., p. 3.
- ^{xx} Personal communication with Laura Leahy RN, DNP, APN, FAANP, FAAN, Psychiatric APN in NJ, February, 2021.
- ^{xxi} American Psychiatric Nurses Association. *Position statement: Psychiatric-mental health nurses role in primary care*. February 23, 2013. Revised July 14, 2020. <https://www.apna.org/i4a/pages/index.cfm?pageid=6721> Accessed June 12, 2021
- ^{xxii} The Atlantic Monthly Group. *NJ: Hospitalizations*. The COVID Tracking Project. Report as of 3/7/21. Accessed June 12, 2021. <https://www.covidtracking.com>
- ^{xxiii} The New York Times. Tracking coronavirus in N.J.: latest map and case count. *The New York Times*. Updated June 4, 2021. Accessed June 12, 2021. <https://www.nytimes.com/interactive/2021/us/new-jersey-covid-cases.html> Accessed June 6, 2021
- ^{xxiv} The Guardian. Lost on the frontline: 3,607 U.S. health care workers deaths. *The Guardian/Kaiser Health News*, April, 2021. <https://www.theguardian.com/us-news/ng-interactive/2020/aug/11/lost-on-the-frontline-covid-19-coronavirus-us-healthcare-workers-deaths-database>
- ^{xxv} Esposito L. How COVID vaccinations improved nurses' work days. *US News & World Report*. May 6, 2021. <https://health.usnews.com/health-news/articles/2021-05-06/how-covid-19-vaccination-improved-nurses-workdays>
- ^{xxvi} Kirzinger A, Kearney A.,Hamel L, Brodie M. The toll of the coronavirus pandemic on health care workers. Frontline Health Care Workers Survey. *Kaiser Family Foundation/Washington Post*, April 6, 2021.

<https://www.kff.org/report-section/kff-the-washington-post-frontline-health-care-workers-survey-toll-of-the-pandemic/>

^{xxvii} Personal communication with Suzanne Drake, RN, APN, PhD, Psychiatric APN in NJ, June 1, 2021.

^{xxviii} NJ Office of the Governor. Executive Order 112: Temporarily suspends requirements for physician oversight of APNs/PAs, permits temporary licensure of out of state and other providers. April 4, 2020, pp. 3-4. Accessed June 12, 2021. https://nj.gov/infobank/eo/056murphy/approved/eo_archive.htm

^{xxix} New Jersey Legislature. P.L. 2021, c. 103 (A5820/S3866). Provides for termination of Public Health Emergency. Chapter Laws, 2021. Accessed June 7, 2021. https://www.njleg.state.nj.us/2020/Bills/A9999/5820_I1.HTM.

^{xxx} New Jersey Office of the Governor. Executive Order #244. Suspends the public health emergency. June 4, 2021. https://nj.gov/infobank/eo/056murphy/approved/eo_archive.html Accessed June 7, 2021.

^{xxxi} AANP. COVID-19 state emergency response: temporarily suspended and waived practice agreement requirements. Updated May 13, 2021. <https://www.aanp.org/advocacy/state/covid-19-state-emergency-response-temporarily-suspended-and-waived-practice-agreement-requirements>

^{xxxii} Credentialing Resource Center. Nurse practitioners in Massachusetts granted full practice authority. *Healthleaders*, January 6, 2021. <https://www.healthleadersmedia.com/nursing/nurse-practitioners-massachusetts-granted-full-practice-authority>

^{xxxiii} Brusie C. California grants nurse practitioners full practice authority by 2023. *Nurse.org*, October 5, 2020. <https://nurse.org/articles/california-nurse-practitioners-full-practice/#:~:text=California%20has%20joined%20the%20roster,into%20legislature%20earlier%20this%20week>.

^{xxxiv} Thomas L. Florida nurse practitioners gain full practice authority. *DailyNurse*, March 24, 2020. <https://dailynurse.com/florida-grants-advanced-nps-full-practice-authority/>

^{xxxv} AANP News. August 4, 2021. <https://www.aanp.org/news-feed/delaware-law-expands-health-care-access-choice-1>

^{xxxvi} Torre C, Drake S. Maximizing access to health care in New Jersey: The case for APNs. *New Jersey Nurse*, 2014; March/April, 10-12. [WP II Final corrected PDF ctt.pdf](#)

^{xxxvii} Torre C, Joel L, Aughenbaugh A. Maximizing access to health care in New Jersey: The case for APNs. A White Paper. *New Jersey Nurse*. 2009; 39(2): 12, 10-1.

^{xxxviii} National Academies of Sciences, Engineering, and Medicine [NASEM] (2021). *The future of nursing 2020-2030: Charting a path to achieve health equity*. Washington, DC: The National Academies Press. <https://doi.org/10.17226/25982>.

^{xxxix} Buerhaus (2018), op.cit.

-
- ^{xl} Bosse J, Simmonds K, Hanson C, Pulcini J, et. al. Full practice authority for advanced practice registered nurses is necessary to transform primary care. *Nursing Outlook*. 2017; 65(6): 761-765.
- ^{xli} UHG (2018), op.cit.
- ^{xlii} Yang BK, Johantgen M, Trinkoff A, Idzik S, et. al. *Medical Care Research and Review*. 2021; 78(3):183-196. doi: 10.1177/1077558719901216
- ^{xliii} Cadmus (2019), op.cit., p.38.
- ^{xliv} Buerhaus (2018), op.cit., p. 8.
- ^{xlv} DesRoches, C., Gaudet, J., Perloff, J. Donelan, K., et. al. (2013). Using Medicare data to assess nurse practitioner-provided care. *Nursing Outlook*, 61(6): 400-7. doi:10.1016/j.outlook.2013.05.005
- ^{xlvi} Perloff J, DesRoches C, Buerhaus P. Comparing the cost of care provided to Medicare beneficiaries assigned to primary care nurse practitioners and physicians. *Health Services Research*, 2016; 51(4):1407-23.
- ^{xlvii} Xue Y, Kannan V, Greener E, Smith J, et. al. Full scope-of-practice regulation is associated with higher supply of nurse practitioners in rural and primary health care shortage counties. *Journal of Nursing Regulation*. 2018; 8(4):5-13. doi: [10.1016/S2155-8256\(17\)30176-X](https://doi.org/10.1016/S2155-8256(17)30176-X)
- ^{xlviii} Xue Y, Ye Z, Brewer C, Spetz J. Impact of state nurse practitioner scope-of-practice regulation on health care delivery: Systematic review. *Nursing Outlook*, 2016; (64(1): 71-85. doi: 10.1016/j.outlook.2015.08.005
- ^{xlix} Traczynski J, Udalova V . Nurse practitioner independence, health care utilization, and health outcomes. *Journal of Health Economics*. 2018; 58(1):90-109. doi: 10.1016/j.jhealeco.2018.01.001
- ^l Neff D, Yoon S, Steiner R, Bejler I, et.al. The impact of nurse practitioner regulations on population access to care. *Nursing Outlook*. 2018; 68(4):379-385. doi: 10.1016/j.outlook.2018.03.001
- ^{li} Carthon, J., Sammarco, T., Pancir D., Chittams, J., et.al. (2017). Growth in retail-based clinics after nurse practitioner scope of practice reform. *Nursing Outlook*. 2017; 65: 195-201. doi: 10.1016/j.outlook.2016.11.001
- ^{lii} Yang B, Johantgen M, Trinkoff A, Idzik S, et.al. Nurse practitioner independent practice authority and mental health service delivery in U.S. community health centers. *Psychiatric Services*. 2017; 68(10): 1032-1038. doi: [10.1016/S2155-8256\(17\)30176-X](https://doi.org/10.1016/S2155-8256(17)30176-X)
- ^{liii} Barnes H, Maier C, Altares Sarik D, Germack H, et. al. Effect of regulation and payment policies on nurse practitioners' practices. *Med Care Res Rev*. 2017; 74(4): 431-451. doi: [10.1177/1077558716649109](https://doi.org/10.1177/1077558716649109)
- ^{liv} AANP . *Think tank and stakeholder position statements*. 2017. Accessed June 8, 2021. <https://www.aanp.org/advocacy/advocacy-resource/think-tank-and-stakeholder-position-statements>

^{lv} Torre C, Curry K. *Battles hard fought: The video story of historic NJ nursing pioneers*. Producers: Carolyn Torre & Kim Curry; Editors: Carolyn Torre, Travis Ruscil, Giselle Ramos; Audiographers: Travis Ruscil & Jay Wes. Grant funded June, 2019 by University of Virginia The Eleanor Crowder Bjoring Center for Nursing Historical Inquiry, Advanced Practice History Research Scholar Award. First screening at: Fellows of the American Association of Nurse Practitioners; March 1, 2020; Austin Texas.
<https://www.nursing.virginia.edu/nursing-history/>

^{lvi} NJ Legislature. S2354/A3512. The Consumer Access to Health Care Act. 2012-2013 Legislative Session. Introduced November 29, 2012. Accessed July 11, 2021.
https://www.njleg.state.nj.us/2012/Bills/S2500/2354_11.HTM

^{lvii} NJ Legislature. S1961/A854: The Consumer Access to Health Care Act. 2018-2019 Legislative Session. Introduced February 22, 2018. Accessed July 11, 2021.
https://www.njleg.state.nj.us/2018/Bills/S2000/1961_R1.HTM

^{lviii} NJ Legislature. A1760: The Consumer Access to Health Care Act. 2020-2021 Legislative Session. Introduced January 14, 2020. Accessed June 8, 2021.
https://www.njleg.state.nj.us/2020/Bills/A2000/1760_11.HTM

^{lix} Madara J. *Letter to Senate President Sweeney*, February 7, 2013. NJSAOHN News. Accessed February, 2014 at <http://www.njsaohn.org/new/news.aspx> (No longer available online).

^{lx} American Medical Association. *Scope of Practice Data series*. American Medical Association. October, 2009, p.4. Accessed February, 2014. <https://docplayer.net/2778048-Ama-scope-of-practice-data-series-nurse-practitioners-demographics-education-and-training-licensure-and-regulation-professional-organization.html>

^{lxi} O'Reilly K. NJ rejects bill to weaken doctor's role as care team leaders. *AMA Scope of Practice*. January 20, 2020. Accessed June 14, 2021. <https://www.ama-assn.org/practice-management/scope-practice/new-jersey-rejects-bill-weaken-doctors-role-care-team-leaders>

^{lxii} McMichael B. The demand for healthcare regulations: The effect of political spending on occupational licensing laws. *Southern Economic Journal*. 2017; 84 (1): 297-316. <https://doi.org/10.1002/soej.12211>

^{lxiii} Safriet B. Closing the gap between can and may in health-care providers' scopes of practice: a primer for policymakers. *Yale Journal on Regulations*, Summer, 2002, p.310.

^{lxiv} NCSBN [National Council of State Boards of Nursing] *Changes in healthcare professions' scope of practice: legislative considerations*, p.9. 2007.

^{lxv} NASEM (2021), op.cit., p.427.

^{lxvi} Thomas S. Open letter to the AMA. AANP News. November 5, 2020. Accessed July 16, 2021. <https://www.aanp.org/news-feed/open-letter-to-the-american-medical-association>

^{lxvii} AMA. *AMA successfully fights scope of practice expansions that threatens patient safety*.

AMA Scope of Practice. 2020. <https://www.ama-assn.org/practice-management/scope-practice/ama-successfully-fights-scope-practice-expansions-threaten>

^{lxxviii} Institute of Medicine [IOM]. *The Future of nursing: Leading change, advancing health*. Washington, DC: The National Academies Press; 2010.

^{lxxix} NASEM (2021), op.cit.

^{lxxx} Fairman J, Rowe J, Hassmiller S, Shalala D. Broadening the scope of nursing practice. *New England Journal of Medicine*. 2011; 364(3): 193-195. <https://www.nejm.org/doi/full/10.1056/nejmp1012121>

^{lxxxi} Stanik-Hutt J, Newhouse R, White K, Johantgen M, et. al. The quality and effectiveness of care provided by nurse practitioners. *Journal for Nurse Practitioners*. 2013; 9(8): 492-500. <https://jhu.pure.elsevier.com/en/publications/the-quality-and-effectiveness-of-care-provided-by-nurse-practitio-3>

^{lxxxii} Buerhaus P, Perloff J, Clarke S, O'Reilly-Jacob M, Zolotusky G, & Des Roches CM. Quality of primary care provided to Medicare beneficiaries by nurse practitioners and physicians. *Medical Care*. 2018;56 (6): 484-490. Doi: 10.1097/MLR.0000000000000908

^{lxxxiii} Smith-Gagen J, White L, Santos A, Hasty S, et.al. Scope of practice laws and expanded health services: The case of underserved women and advanced cervical cancer diagnoses. *Journal of Epidemiology & Community Health* 2019; 73(3):278-284. doi: [10.1136/jech-2018-210709](https://doi.org/10.1136/jech-2018-210709)

^{lxxxiv} Kurtzman E, Barnow B, Johnson J, Simmens S, et.al. Does the regulatory environment affect nurse practitioners' patterns of practice or quality of care in health centers? *Health Services Researc*. 2017; 52(S1):437-458. <https://onlinelibrary.wiley.com/doi/abs/10.1111/1475-6773.12643>

^{lxxxv} Alexander D, Schnell M. Just what the nurse practitioner ordered: Independent prescriptive authority and population mental health. *Journal of Health Economics*. 2019; 66(1):145-162. doi: [10.1016/j.jhealeco.2019.04.004](https://doi.org/10.1016/j.jhealeco.2019.04.004)

^{lxxxvi} Grecu, A.M. & Spector, L. Nurse practitioners' independent prescriptive authority and opioids abuse. *Health Economics*. 2019; 28(10):1220-1225. <https://doi.org/10.1002/hec.3922>

^{lxxxvii} Yang (2020), op. cit.

^{lxxxviii} Lozada MJ, Raji MA, Goodwin JS, Kuo, YF. Opioid prescribing by primary care providers: a cross-sectional analysis of nurse practitioner, physician assistant, and physician prescribing patterns. *J Gen Intern Med*. 2020; 35(9): 2584-2592. doi: [10.1007/s11606-020-05823-0](https://doi.org/10.1007/s11606-020-05823-0)

^{lxxxix} McMichael, Nurse Practitioner Scope-of-Practice Laws and Opioid Prescribing. *Milbank Quarterly*. June 2021.

<https://doi.org/10.1111/1468-0009.12524>

-
- ^{lxxx} Morgan P, Smith V, Berkowitz T, Edelman D, et. al. Impact Of physicians, nurse practitioners, and physician assistants on utilization and costs for complex patients. *Health Affairs*. 2019; 38(6). <https://www.healthaffairs.org/doi/10.1377/hlthaff.2019.00014>
- ^{lxxxi} Muench U, Guo C, Thomas C, Perloff J. Medication adherence, costs, and ER visits of nurse practitioner and primary care physician patients: Evidence from three cohorts of Medicare beneficiaries, *Health Services Research*. 2019; 54(1): 187-197. <https://onlinelibrary.wiley.com/doi/abs/10.1111/1475-6773.13059>
- ^{lxxxii} Van Der Biezen M, Adang E, Van Der Burgt R, Wensing M, et. al. The impact of substituting general practitioners with nurse practitioners on resource use, production and health-care costs during out-of-hours: A quasi-experimental study. *BMC Family Practice*. 2016; Article No. 132. <https://bmcfampract.biomedcentral.com/articles/10.1186/s12875-016-0528-6>
- ^{lxxxiii} Poghosyan L, Timmon E, Abraham C, Martsoff C. The impact of the expansion of nurse practitioner practice in Medicaid. *Journal of Nursing Regulation*. 2019; 10(1): 15-20. [https://www.journalofnursingregulation.com/article/S2155-8256\(19\)30078-X/fulltext](https://www.journalofnursingregulation.com/article/S2155-8256(19)30078-X/fulltext)
- ^{lxxxiv} Spetz J, Parente S, Towne R, Bazarko D. Scope of practice laws for nurse practitioners limit cost saving that can be achieved in retail clinics. *Health Affairs*. 2013; 32(1): 1977-1984. doi: 10.1377/hlthaff.2013.0544
- ^{lxxxv} Kleiner M, Marier A, Park KW, Wing C. Relaxing occupational licensing requirements: Analyzing wages and prices of a medical service. *The Journal of Law and Economics*. 2016; 59(2). <https://www.journals.uchicago.edu/doi/pdf/10.1086/688093>
- ^{lxxxvi} Moaven R, O'Reilly-Jacob M, Perloff J, Buerhaus P. Drivers of cost differences between nurse practitioner practitioner and physician attributed beneficiaries. *Medical Care*. 2021; 59(2): 177-184. https://journals.lww.com/lww-medicalcare/Fulltext/2021/02000/Drivers_of_Cost_Differences_Between_Nurse.13.aspx
- ^{lxxxvii} Reagan P, Salsberry P. The effects of state-level scope-of-practice regulations on the number and growth of nurse practitioners. *Nursing Outlook*. 2013; 61(6). <https://doi.org/10.1016/j.outlook.2013.04.007>
- ^{lxxxviii} Conover C, Richards R. Economic benefits of less restrictive regulation of advanced practice nurses in North Carolina. *Nursing Outlook*. 2015; 63(5): 585-92. doi: 10.1016/j.outlook.2015.05.009
- ^{lxxxix} Eibner C, Hussey P, Ridgely M, McGlynn E *Controlling health care spending in Massachusetts: An analysis of options*. Rand Health. Submitted to the Commonwealth of Massachusetts Division of Health Care Finance and Policy, August, 2009; 83-108.
- ^{xc} Weinberg M, & Kallerman P. *Full practice authority for nurse practitioners increases access and controls costs*. Bay Area Council Economic Institute, April, 2014.
- ^{xci} Singh H. *Adverse Action and Medical Malpractice Reports (1990 - March 31, 2021)*. National Practitioner Data Bank. Generated using the Data Analysis Tool. 2021. <https://www.npdb.hrsa.gov/analysisistool>.

-
- ^{xcii} Michas F. Leading U.S. states based on the total number of active physicians. *Statista.com*, June 1, 2021. <https://www.statista.com/statistics/250141/us-states-with-highest-total-number-of-active-physicians/>
- ^{xciii} Singh (2021), op.cit.
https://www.hpso.com/documents/Individuals/Professional%20liability/NP_Claims_Study_2021.pdf
- ^{xciii} Moudatsou, M
- ^{xciv} Joel (2021), op.cit.
- ^{xcv} CRICO. Malpractice risk in communication failure: 2015 annual benchmarking report. *CRICO strategies*. 2020. <https://www.rm.harvard.edu/Malpractice-Data/Annual-Benchmark-Reports/Risks-in-Communication-Failures>
- ^{xcvi} CNA/NSO (2012). *Nurse practitioner 2012 liability update: A three part approach*.
https://www.hpso.com/documents/Individuals/Professional%20liability/NP_Claims_Study_2021.pdf
- ^{xcvii} Moudatsou M, Stravropoulou A, Philalithis A, Koukouli S. The role of empathy in health and social care professionals. *Healthcare (Basel)*. 2020; 8(1): 26. <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7151200/>
- ^{xcviii} Hannan J, Sanchez G, Musser E, Ward-Peterson M, et. al. The role of empathy in the perception of medical errors in patient encounters: A preliminary study. *BMC Research Notes*. , June, 2019; 12: Article 327. <https://bmresnotes.biomedcentral.com/articles/10.1186/s13104-019-4365-2>
- ^{xcix} Laurant M, Reeves D, Hemens R, Braspenning J, et. al. Substitution of doctors by nurses in primary care. *Cochrane Database of Systematic Reviews*. 2005; 82(2). <https://ncbi.nlm.nih.gov/pubmed/15846614>
- ^c Schaffer A, Jena A, Seabury S, Singh H, Chalasani V, et. al. Rates and characteristics of paid malpractice claims among physicians by specialty. *JAMA Int Med*. 2017; 177(5):710-718.
- ^{ci} Buppert C. Physicians who work with NPs: What's the liability risk? *Medscape Nurses*. September 1, 2017. https://www.medscape.com/viewarticle/884585#vp_2
- ^{cii} Torre C. Malpractice and the Advanced Practice Nurse. In: Joel, L. (Ed.) *Advanced Practice Nursing: Essentials for Role Development* (4th ed.). FA Davis; 2018: 445-473.
- ^{ciii} McMichael M, Safriet B, Buerhaus, P. The extra-regulatory effect of NP scope of practice laws on physician malpractice rate. *Medical Care Research and Review*. 2018; 75(3): 312-326. <https://journals.sagepub.com/doi/10.1177/1077558716686889>
- ^{civ} Joel (2021), op.cit.
- ^{cv} Heath S. Nurse practitioners challenge AMA on practice authority, care access. *Patient Engagement Hit*, November 10, 2020. <https://patientengagementhit.com/news/nurse-practitioners-challenge-ama-on-practice-authority-care-access>

-
- ^{cvi} Rowe J. Why nurses need more authority. *The Atlantic*, May, 2012.
<https://www.theatlantic.com/health/archive/2012/why-nurses-need-more-authority/256798>
- ^{cvii} American Association of Nurse Practitioners. *Clinical outcomes: The yardstick of educational effectiveness*. AANP Policy Statement. 2017. Accessed June 18, 2021. <https://www.aanp.org>
- ^{cviii} Mitchell P, Wynia M, Golden R, McNellis B, et. al. *Core principles and values of effective team-based health care*. National Academy of Medicine. October 2, 2012. <https://bit.ly/3wpQRnq>
- ^{cix} Pittman P, Williams B. Physician wages in states with expanded APRN scope of practice. *Nursing Research and Practice*, 2012; Article ID 671974. <https://www.hindawi.com/journals/nrp/2012/671974/>
- ^{cx} Federal Trade Commission *Competition and the Regulation of the Advanced Practice Nurse. Policy Perspectives*. March 14, 2014. Policy Papers, p. 6. <https://www.ftc.gov>
- ^{cxii} New Jersey Legislature . P.L. 1997, c. 192: *Health Care Quality Act*. Chapter Laws, 1997. Accessed June 18, 2021.
https://www.njleg.state.nj.us/9697/bills/pl97/192_.htm
- ^{cxiii} Commonwealth of Massachusetts. *An act to promote cost containment, transparency and efficiency in the delivery of quality health care in Chapter 305 of the Acts of 2008*. Approved by the Governor, August 10, 2008. The Commonwealth of Massachusetts.
- ^{cxiiii} Hansen-Turton T, Line L, O’Connell M, Rothman N, et. al. The Nursing Center model of health care for the underserved. *National Nursing Centers Consortium* (for the Centers for Medicare and Medicaid Services). 2004. Available at National Nursing Centers Consortium, 18 S. Broad St. Philadelphia, PA.
- ^{cxv} Yee T, Boukas E, Cross D, Samuel D. Primary care workforce shortages: Nurse practitioner scope-of-practice laws and payment policies. *NIHCR Research Brief No. 13*. February, 2013.
<https://www.nihcr.org/analysis/improving-care-delivery/prevention-improving-health/pcp-workforce-nps/>
- ^{cxvi} Barnes (2017), op.cit.
- ^{cxvii} Armstrong, J.H. Leadership and Team-Based Care. *Virtual Mentor*. 2013;13(6):534-537. doi: 10.1001/virtualmentor.2013.15.6.msoc2-1306.