Articles and Reports on the PA Profession
Selected Topics

Quality and Outcomes of Care Provided by PAs

   This study found that patients with diabetes who received primary care services at VA facilities from a physician, an NP, or a PA over a two-year period saw no significant variation in health outcomes. Authors conclude that “similar chronic illness outcomes may be achieved by physicians, NPs, and PAs.”


   For patients recovering from acute myocardial infarction, there was no difference in medication adherence, readmission, mortality, or major adverse cardiovascular events for patients seen by PAs and NPs and those seen by physicians. The authors also note that the prevalence of PAs and NPs providing follow-up for MI appeared to be less in certain regions (e.g., the southeast) due to licensure, supervision/collaboration, and scope of practice-related restrictions.

   [https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6201421/](https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6201421/)


   The article posits that the increased use of NPs and PAs is a potential solution to the issue of primary care provider shortages in the United States. In this specific investigation, the study found that diabetes management by NPs and PAs were similar to the treatment provided by physicians. Consequently, the researchers believe that employing NPs and PAs in a broader sense may combat the shortages of providers observed in the health care setting.


A first-of-its-kind study found that PAs and NPs delivered similar quality of care, services, and referrals in community health centers as physicians. Researchers at The George Washington University School of Nursing reviewed five years of data from the National Ambulatory Medical Care Survey's Community Health Center subsample and compared nine patient outcomes by practitioner type. The study could have implications for the structure of community health centers in the future.

http://journals.lww.com/lww-medicalcare/Abstract/publishahead/A_Comparison_of_Nurse_Practitioners,_Physician.98777.aspx (abstract)


The article looks for a possible remedy to readmission rates among patients discharged to skilled nursing facilities (SNFs). Authors conclude that a program of frequent visits by hospital-employed physicians, NPs and PAs at SNFs can reduce 30-day readmission rates.


The article investigates the educational demands and restricted hours of practice incurred by residents limiting the ability to provide adequate care at academic hospitals. This study sought to ascertain whether or not the employment of PAs would effect, and improve, patients eligible for discharge, resident workload, and residents perception of PAs as part of the physician and surgical team. The study concluded that PAs lessened the residents’ workload and improved the residents’ perception of PAs as part of surgical teams.

https://journals.lww.com/jaapa/fulltext/2016/02000/Physician_assistants_reduce_resident_workload_and.7.aspx


A PA-driven venous thromboembolism (VTE) risk assessment process resulted in a dramatic increase in the number of patients within the health system who were prescribed appropriate orders for VTE prophylaxis according to published guidelines and according to individual patient risk.


Utilization of a trauma surgeon-PA model resulted in a 43% decrease in transfer time to the OR, 51% decrease in transfer time to the ICU, 13% decrease in overall length of stay and 33% decrease in length of stay for neurotrauma intensive care.


A PA home care (PAHC) program was initiated to improve the care of patients who had undergone cardiac surgery. The 30-day readmission rate was reduced by 25% in patients receiving PAHC visits. The most common home intervention was medication adjustment, most commonly to diuretic agents, medications for hypoglycemia, and antibiotics.

http://www.jtcvsonline.org/article/S0022-5223(12)01200-7/abstract (abstract)


Nationally, there were 1,399 liability claims paid against PAs in the 10 years from 2005-2014. The ratio of claims to PAs averaged 1 claim for every 550 PAs (1:550). By comparison, the number of physician claims paid from 2005-2014 totaled 105,756; the ratio for physicians during that decade averaged one claim for every 80 physicians (1:80). This data can be extracted from the Data Analysis Tool on the NPDB website.

https://www.npdb.hrsa.gov/analysistool/ (Data Analysis Tool)


The authors followed a stroke quality improvement clustered randomized trial and a national acute ischemic stroke directive in the VHA in 2011. The study examined the role of PAs and NPs in quality improvement activities among stroke teams. The authors conclude that the presence of PAs and NPs related directly to group-based evaluation of performance data, implementing stroke protocols, monitoring care through data audit, convening interprofessional meetings involving planning activities, and providing direct care. Further, the authors state that, because of their boundary spanning capabilities, the presence of PAs and NPs is an influential feature of local context crucial to developing an advanced, facility-wide approach to stroke care.


This study found that physicians and PAs and NPs provided comparable diabetes and cardiovascular disease (CVD) care quality with clinically insignificant differences. The authors conducted the research with diabetic and CVD patients in 130 Veterans Affairs facilities, and found that there is a need to improve performance regardless of provider type.


PAs and NPs can conduct evaluations, prescribe medications, order and interpret testing, and perform some procedures independent of direct physician supervision. They can provide many aspects of care that neurologists currently perform, such as education of patients and families, counseling, resource management, and follow-up care. PAs and NPs have the potential to improve outcomes at a lower cost to patients and to the system by improving outpatient access, potentially reducing the need for emergency care. They also perform patient education, which may also decrease the overuse of the medical system.


Compared to patients cared for by physicians, patients cared for by PAs and NPs were more likely to receive short acting bronchodilator, oxygen therapy and been referred to pulmonologist. Patients cared for by PAs and NPs were less likely to visit an ER for COPD compared to patients cared for by physicians, conversely there was no difference in hospitalization or readmission for COPD between physicians and PAs/NPs.

http://journals.plos.org/plosone/article?id=10.1371%2Fjournal.pone.0148522


Greater use of NP/PAs in primary care visits in the Kaiser Permanente system in Georgia was not associated with higher specialty referrals, advanced imaging, ED visits, or inpatient stays. The authors conclude that using PAs and NPs in face-to-face primary care may be a promising primary care delivery model from an efficiency standpoint.

http://journals.lww.com/lww-medicalcare/Abstract/2017/01000/The_Impact_of_Using_Mid_level_Providers_in.3.aspx (abstract)


The researchers found that an expanded PA hospitalist staffing model at a community hospital provided similar outcomes and a lower cost of care than a conventional model. Researchers did a retrospective study comparing two hospitalist groups at a 384-bed community hospital in Annapolis, MD. One group had an expanded PA staffing model, with three physicians and three PAs. The other group had a "conventional" staffing model, with nine physicians and two PAs.


The article discusses overcapacity issues that routinely inhibit various emergency departments. According to this article, studies suggest that triage liaison providers (TLPs) may benefit emergency departments struggling with overcapacity by shortening a patient's length of stay (LOS). Additionally, the article posits that enabling PAs to serve in such a role, TLPs, may reduce the number of patients who leave the emergency department without being seen. The findings of this study suggest that the LOS for patients was shorter, treatment room times were shorter, and fewer patients left without being seen.

https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3506172/


Patient charts were analyzed to compare care provided in the neonatal intensive care unit by teams of resident physicians and teams of PAs and NPs. Results demonstrated no significant differences in management, outcome, or charge variables between patients cared for by the two teams.


Governor Ritter issued Executive Order B 003 08 establishing the Collaborative Scopes of Care Study and creating an advisory committee to oversee the conduct of an evidence-based review that would inform the study findings. In issuing this executive order, the governor acknowledged "that it is clear from health manpower studies that we do not have sufficient numbers of providers, especially physicians and dentists, to meet the current [health care] needs of Coloradans." In general, the studies reviewed found no significant differences in patient outcomes or satisfaction with the care provided by PAs when compared to physicians.


ICUs are increasingly staffed with NPs and PAs. The authors examined the association between NP/PA staffing and in-hospital mortality for patients in the ICU, and found NPs/PAs to be a safe adjunct to the ICU team. The findings support NP/PA management of critically ill patients.


This study describes a comparative analysis of replacing medical residents with PA-hospitalist teams on patient outcomes in a community hospital. Quality of care provided by the PA-hospitalist model was equivalent to resident physician provided care.

http://ajm.sagepub.com/content/24/2/132.abstract (abstract)

Medicare claims and electronic health record data from a large physician group was used to compare outcomes for two groups of adult Medicare patients with diabetes whose conditions were at various levels of complexity: those whose care teams included PAs or NPs in various roles, and those who received care from physicians only. Outcomes were generally equivalent in thirteen comparisons.

[http://content.healthaffairs.org/content/32/11/1942.abstract](http://content.healthaffairs.org/content/32/11/1942.abstract) (abstract)


The data demonstrated equivalent mortality and ICU transfers, with a decrease in length of stay, readmission rates, and consults for patients cared for in the PA service. This suggests that the PA service is associated with increased operational efficiency and decreased health service use without compromise of healthcare outcomes.

[http://jop.ascopubs.org/content/9/5/e228.full](http://jop.ascopubs.org/content/9/5/e228.full)


Despite an increased volume of patients and increase in case severity, increasing the role of PAs in a cardiothoracic ICU resulted a decreased length of stay, increased survival post-arrest and very low invasive procedure complication rate.


Based on the outcome measure of 72-hour recidivism, PA management of pediatric patients 6 years or younger is similar to that of attending emergency physicians (EPs). In addition, this study suggests that the PAs have the ability to recognize more severely ill children and elicit the input of a physician in those cases.


This study looked at the best primary care practices in the country and put together a list of what makes them so good. Those practices that work closely with their PAs and ensured that PAs were able to work to the full extent of their education and experience ranked the highest.


Within their areas of competence, PAs, NPs and CNMs provide care whose quality is equivalent to that of care provided by physicians.

http://ota.fas.org/reports/8615.pdf


The large national study sought to determine whether there were clinically meaningful differences in the quality of care delivered by teams of physicians and PAs or NPs versus physicians-only teams. Patients with coronary artery disease (CAD), heart failure and atrial fibrillation received comparable outpatient care from physicians, PAs and NPs. There was a higher rate of smoking cessation screening and intervention and cardiac rehabilitation referral among CAD patients receiving care from PA/NPs.


For the measures examined, the quality of HIV care provided by NPs and PAs was similar to that of physician HIV experts and generally better than physician non–HIV experts. NPs and PAs can provide high-quality care for persons with HIV. Preconditions for this level of performance include high levels of experience, focus on a single condition, and either participation in teams or other easy access to physicians and other clinicians with HIV expertise.

http://annals.org/article.aspx?articleid=718840


Seventeen years of data compiled in the United States National Practitioner Data Bank (NPDB) was used to compare and analyze malpractice incidence, payment amount and other measures of liability among physicians, PAs and APNs. Seventeen years of observation suggests that PAs may decrease liability, at least as viewed through the lens of a national reporting system. During the first 17-year study period, there was one payment report for every 2.7 active physicians and one for every 32.5 active PAs. In percentage terms, 37 percent of physicians, 3.1 percent of PAs and at least 1.5 percent of APNs would have made a malpractice payment during the study period. The physician mean payment was 1.7 times higher than PAs and 0.9 times that of APNs, suggesting that PA employment may be a cost savings for the healthcare industry along with the safety of patients. The reasons for disciplinary action against PAs and APNs are largely the same as physicians.

PA Cost Effectiveness and Productivity


   Advanced practice clinicians (including PAs) can be a cost-effective way for clinically integrated networks to improve healthcare delivery and efficiency and increase access to primary care services. The article notes research showing that PAs can improve quality of care in a variety of settings and specialties and examines ways in which team-based care can lead to better patient value and outcomes.

   https://www.hfma.org/Content.aspx?id=54272


   PAs and NPs who provide primary care services in medically-underserved areas can help offset physician shortages and positively impact the local economy.

   https://journals.lww.com/jaapa/Fulltext/2016/10000/The_economic_effect_of_a_physician_assistant_or_8.aspx


   The study investigated whether or not the introduction of duty hour restrictions and the ensuing house trainee shortages required a long-term solution to provide safe and efficient patient care. A proposed solution was the employment of NPs and PAs in numerous health care settings. The study found that the employment of NPs and PAs in surgical and trauma services was cost-efficient while simultaneously not sacrificing quality of care.

   https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5453759/


   Retail clinics are ambulatory care sites typically located in and associated with brand-name retailers, including pharmacies, groceries and “big-box” stores and are typically staffed by NPs and PAs with some physician oversight. The expertise and training of NPs and PAs is well-suited for retail settings. However, states’ varying regulatory and licensure schemes constrain the ability of retail clinics to make full use of these professionals in every state. Also, the authors argue that telehealth has the potential to reduce cost and improve both access to care for rural and underserved communities and support treatment of patients with acute and chronic conditions at retail clinics and beyond.

   https://www.manatt.com/uploadedFiles/Content/5_Insights/White_Papers/Retail_Clinic_RWJF.pdf


   RAND identified a few options that appear to have the potential to slow the rate of increase in health spending in Massachusetts over the next decade. Those ideas include expanding the scope of practice of PAs and NPs and encouraging the greater use of PAs and NPs in primary care.

   http://www.rand.org/pubs/technical_reports/TR733.html

The study sought to identify whether or not model PA practice in a family or general medicine practice environment was comparable, in terms of care provided and financial productivity, to a physician-only practice. The study found that the employment of family and/or general medicine PAs lead to significant economic benefits to the practices where they are employed.

http://www.ajmc.com/journals/issue/2002/2002-07-vol8-n7/jul02-165p613-620 (link to PDF of entire study available at this website)


This study examines the cost associated with employing PAs from the employer’s perspective. Analysis of data on record for episode, patient characteristics, health status, etc., found that for every medical condition managed by PAs, the total episode cost was less than similar episode managed by a physician.


Cost-benefit analysis of PA-delivered primary care suggests the use of resources is less than physicians under comparable conditions. The PA compensation to production ratio establishes the PA as one of the most cost-effective clinicians to employ.


The author examines how changes to occupational licensing laws for nurse practitioners and physician assistants have affected cost and intensity of health care for Medicaid patients. The results suggest that allowing physician assistants to prescribe controlled substances is associated with a substantial (more than 11%) reduction in the dollar amount of outpatient claims per Medicaid recipient. Relaxing occupational licensing requirements by broadening the scope of practice for healthcare providers may represent a low-cost alternative to providing quality care to America’s poor.

http://www.healthpolicyjrnli.com/article/S0168-8510(16)30344-X/abstract (abstract)


In this report, healthcare industry influencer Medical Group Management Association (MGMA) aims to help healthcare executives, practice administrators, and others understand how to incorporate PAs and nurse practitioners (NPs) into medical practice to maximize efficiency and profitability. MGMA found that 78% of better performing medical practices employ PAs and NPs. The analysis gives an overview of the PA and NP workforce, reimbursement, licensure, median salary, and state practice environments.


In 2014, the authors’ practice opened the first dedicated orthopaedic urgent care in the region staffed by PAs and supervised by orthopaedic surgeons. Dedicated musculoskeletal urgent care clinics operated by orthopaedic surgery practices can be extremely beneficial to patients, physicians, and the health care system. They clearly improve access to care, while significantly decreasing overall health care costs for patients with ambulatory orthopaedic conditions and injuries. In addition, they can be financially beneficial to both patients and orthopaedic surgeons alike without cannibalizing local hospital surgical volumes.


The Utah Medical Education Council believes that the demand for PAs will be high over the next 10 to 15 years, with several factors fueling this growth. Productivity is one of these factors. Even though Utah PAs make up only approximately 6.3% of the state's combined clinician (physician, PA, APRN) workforce; the PAs contribute approximately 7.2% of the patient care full-time equivalents (FTE) in the state. This is in contrast to the 10% FTE contribution made by the state's APRN workforce, which has nearly triple the number of clinicians providing patient care in the state. The majority (73%) of Utah PAs work at least 36 hours per week. Utah PAs also spend a greater percentage of the total hours worked in patient care, when compared to the physician workforce. The rural PA workforce reported working a greater number of total hours and patient care hours when compared to the overall PA workforce.

http://journals.lww.com/jaapa/Abstract/2008/01000/The_productivity_of_PAs,_APRNs,_and_physicians_i n.10.aspx (abstract)


Analysis of Medicare's Medical Expenditure Panel Survey (MEPS) data found adult patients who saw PAs for a large portion of their yearly office visits had, on average, 16 percent fewer visits per year, than patients who saw only physicians. These findings account for adjustments for patient complexity.


The indirect economic and patient care impact of PAs on the community-based orthopaedic trauma team was evaluated. By increasing emergency room pull through and decreasing times to OR, operative times, lengths of stay, and complications, PAs are clearly beneficial to hospitals, physicians, and patients.

http://journals.lww.com/jorthotrauma/Abstract/2013/04000/Impact_of_Hospital_Employed_Physician_Ass istants.16.aspx

In this national survey of family medicine practices, PA productivity, as defined by mean annual patient encounters, exceeds that of both nurse practitioners (NPs) and physicians in physician-owned practices and of NPs in hospital or integrated delivery system-owned practices. Total compensation, defined as salary, bonus, incentives, and honoraria for physicians, is significantly more compared to both PAs and NPs, regardless of practice ownership or productivity. PAs and NPs earn equivalent compensation, regardless of practice ownership or productivity. Not only do these data support the value and role of PAs and NPs on the primary care team, but also highlight differences in patient encounters between practice settings.


A comparison of NPs, PAs and physicians found that the three practitioners provided an equivalent amount of low-value health services. The purpose of the comparison was to dispel physicians’ perceptions that PAs and NPs provide lower-value care than physicians for patients presenting with upper respiratory infections, back pain, or headaches.


The addition of PAs into the procedural components of an outpatient oral and maxillofacial surgery practice resulted in decreased costs whereas complication rates remained constant. The increased availability of the oral and maxillofacial surgeon after the incorporation of PAs allows for more patients to be seen during a clinic session, which has the potential to further increase efficiency.


Data from twenty-six primary care practices and approximately 2 million visit records found PAs/NPs attended to 1 in 3 adult medicine visits and 1 in 5 pediatric. Primary care practices that used more PAs/NPs in care delivery realized lower practitioner labor costs per visit than practices that used fewer.

[https://www.ncbi.nlm.nih.gov/pmc/articles/PMC1361027/](https://www.ncbi.nlm.nih.gov/pmc/articles/PMC1361027/)
**Public Policy, Workforce and Access to Care**


   This report jointly written by the U.S. Departments of Health and Human Services, Treasury, and Labor recommends that states update their scope of practice laws to allow PAs and other healthcare practitioners to practice to the full extent of their education and experience and receive direct payment for services they provide. It also recommends that states remove requirements for “rigid collaborative practice and supervision agreements” for healthcare practitioners when they are not necessary for patient safety and improve licensure procedures to allow greater mobility for PAs and other providers.


   The economist authors of this policy proposal explore the potential positive effect on health-care spending of incorporating PAs and NPs more fully. The authors surmise that the main barriers to doing this lie within restrictive scope of practice laws currently in place. The proposal concludes with questions and answers surrounding removal of these barriers.


   The authors of the above-cited Hamilton Project Policy Proposal, go further in this commentary, advocating for not only the removal of barriers to PA practice, but stating that the least restrictive environment for PAs is optimal team practice. The authors further state that a requirement that a PA have an agreement with a specified physician is a restriction that should be eliminated.

   https://journals.lww.com/jaapa/Fulltext/2019/01000/Loosening_restrictions_on_the_scope_of_practice.1.aspx


   This editorial, written in response to the Jackson et al article (above), notes that the study’s results support greater innovation in caring for chronic conditions (like diabetes) within primary care. The author further suggests that PAs and NPs are no longer “midlevel providers” and should be considered full primary care providers.


The use of collaborative care models in primary care (utilizing physicians, PAs, and NPs) has grown in response to the increased number of U.S. patients with two or more chronic conditions (1 in 4, in 2012) as well as new Medicare payment policies. This study also found evidence that (1) most care provided by PAs and NPs was under a collaborative model and (2) most PAs and NPs preferred collaborating with physicians. Patient care provided solely by PAs and NPs typically occurred in rural and underserved areas and often served to mitigate primary care physician shortages in these locations.

https://journals.sagepub.com/doi/pdf/10.1177/2150131917736634


The study investigates the growing role of NPs and PAs which has enabled patients to choose their primary care provider. This begs the question as to whether or not there is any preference in what medical professional a patient wishes to see. The study concluded that the provider’s qualifications and the patient’s prior health care experiences were determinative. However, the study did find that physicians were preferred for their technical skills as opposed to PAs and NPs who were favored for their interpersonal skills.


Evidence suggests that there is an impending physician shortage in the United States. Should the shortage come to fruition, alternative providers, like PAs and NPs, may become necessary to meet health care demands. The survey conducted in this study investigates whether or not there is a health care provider preference among patients seeking treatment. The study found that approximately half of those surveyed desired to have a physician as their primary care provider. However, when the preference was inquired into with varying hypotheticals and circumstances enabling the patient to be seen by a PA or NP more quickly, a majority of those surveyed decided to see a PA or NP. Consequently, it appears that health care consumers are at least open to the idea of receiving treatment from NPs and PAs.


The potential shortage of primary care physicians is a rising global trend. A possible solution to the decrease in available primary care physicians but similar health care demands is the employment of PAs. Studies conducted, globally, insinuate that PAs can bridge the shortage by providing primary care functions; including the provision of comprehensive care while not sacrificing accountability or accessibility.

https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3903046/

Substantial variation exists in the PA-to-population ratio among states, which may be related in part to state practice laws. At a more local level, counties without PAs are more likely to be rural than counties with PAs. States with more favorable laws governing PA practice have a higher PA-to-population ratio.

The distribution of PAs is likely to remain geographically uneven in the absence of significant policy efforts to attract PAs to practice in rural communities.


Increased use of PAs, NPs and pharmacists will decrease the impact of the predicted physician shortage. Concerns that quality will be reduced with the use of these clinicians are unfounded for a variety of reasons, including the increasing focus on safety, high professional, educational and credentialing standards and the increase of team-based care which has the potential to allow for better use of the skills of each member of the team, including the physicians.

http://journals.lww.com/academicmedicine/Fulltext/2015/09000/Is_the_Physician_Shortage_Real__Implications_for.17.aspx


Most existing estimates of the shortage of primary care physicians are based on simple ratios, such as one physician for every 2,500 patients. These estimates do not consider the impact of such ratios on patients’ ability to get timely access to care. They also do not quantify the impact of changing patient demographics on the demand side and alternative methods of delivering care on the supply side. The authors provide estimates of the number of primary care physicians needed based on a comprehensive analysis considering access, demographics, and changing practice patterns. They conclude that some increasingly popular operational changes in the ways clinicians deliver care—including the use of teams or “pods,” better information technology and sharing of data, and the use of PAs and other providers—have the potential to offset completely the increase in demand for physician services while improving access to care, thereby averting a primary care physician shortage.

http://m.content.healthaffairs.org/content/32/1/11.full.html


The author examines how important changes to occupational licensing laws for nurse practitioners and PAs have affected cost and access to healthcare for Medicaid patients. The results suggest that allowing PAs to prescribe drugs (including controlled substances) is associated with a substantial (more than 11 percent) reduction in the dollar amount of outpatient claims per Medicaid recipient. Relaxing occupational licensing requirements by broadening the scope of practice for healthcare providers may represent a low-cost alternative to providing quality care to America’s poor.

https://www.mercatus.org/system/files/Timmons-Scope-of-Practice-v2.pdf

A cost analysis was undertaken to determine how changing restrictive practice laws would impact the cost of care. The authors’ case study focused on the state of Alabama because of its restrictive PA and NP laws. The cost analysis found that even modest changes to Alabama PA and NP laws would result in a net savings of $729 million over a 10-year period. Underutilization of PAs and NPs by restrictive state law inhibits the cost benefits of increasing the supply of PAs and NPs.

http://www.nursingeconomics.net/necfiles/14ND/Hooker.pdf


Based on a survey of primary care clinicians in early 2015, this Visualizing Health Policy infographic examines the experiences and attitudes of primary care practitioners (PCPs) after the Affordable Care Act’s (ACA’s) major coverage provisions took effect in January 2014. Generally, primary care physicians have a more negative view of health reform’s effect on the cost of patient care, but a more positive view of the law’s impact on patient access to healthcare and insurance. Large shares—66% of nurse practitioners and physician assistants and 50% of physicians—report that they’re currently accepting new Medicaid patients.

http://jamanetwork.com/journals/jama/fullarticle/2470432


After controlling for practice characteristics, higher use of PAs and NPs was found in three states (Minnesota, Montana, and South Dakota). Higher availability of PAs or NPs was associated with favorable PA scope-of-practice laws.


This 2016 report examines five scenarios commonly expected to affect physician supply (e.g., early or delayed retirement of physicians) and six scenarios expected to affect the demand for physician services over the next decade (e.g., changing demographics, greater adoption of managed care models, or greater integration of advanced practice registered nurses and PAs). The U.S. could experience a shortfall of between 14,900 and 35,600 primary care physicians by 2025.


The use of PAs in the state has helped address the maldistribution of physicians. PAs have high productivity and increase the number of patients being seen in a wider variety of healthcare settings.


The study used a computer model to predict future staffing needs due to the impact of changes in resident work hours and service growth. The study estimates in the next 5 years the hospitals will need to hire 10 PAs at the cost of $1,134,000, which is $441,000 less expensive than hiring hospitalist physicians.


Despite state and federal efforts to encourage PAs to help fill primary care gaps, the proportion of PAs practicing in primary care continues to decline. Using job posting data from a leading labor analytics firm, this study finds that the decline could be due to a lack of job availability. In 2014, for example, only 18 percent of PA job postings were in primary care, compared with specialty positions. While policies have focused on increasing primary care PA supply, additional efforts are needed to increase labor demand via financial incentives, job-locating assistance and educational outreach.


State imposed limits on PA practice impact the PA workforce. In 1989 Montana authorized prescriptive authority for PAs and by 1991 the number of PAs in Montana increased nearly three-fold. Initiation of prescriptive authority for Texas PAs saw a three-fold increase in the number of PAs practicing in rural areas.
Modern Regulation of PA Practice/Future of the Profession


The Guidelines seek to enhance and standardize PA practice among jurisdictions. The 2017 amendments to the Guidelines include emphasizing PAs’ commitment to team practice with physicians; replacing obsolete supervisory agreement laws with practice-level decision making about collaboration; creating separate majority-PA boards to regulate PAs, or give that authority to healing arts or medical boards that have as members both PAs and physicians who practice with PAs; and authorizing PAs to be directly reimbursed by all public and private insurers.


The education that PAs receive produces a sophisticated and flexible workforce, well suited to succeeding in a rapidly changing healthcare environment. The profession offers a scalable and affordable source of healthcare. States can ensure that PAs are used efficiently by reviewing state laws and regulations—especially the definition of provider—for appropriateness and by facilitating educational and clinical training opportunities for PAs. Finally, states can consider creating financial incentives to encourage PAs to work in underserved communities.


This document provides a framework for organizations or practices across all specialties to develop team-based care. Team-based care will work toward the triple aim of 1) improving the experience of care of individuals and families; 2) improving the health of populations; and 3) lowering per capita costs. Team-based care has the ability to more effectively meet the core expectations of the healthcare system proposed by the Institute of Medicine.


This article examines The Health Resources and Services Administration’s 2025 supply and demand projections for primary care physicians, NPs, and PAs. Thirty-seven states are projected to have shortages of primary care physicians in 2025. The article finds that due to potential workforce shortages, it may be necessary to address state licensure and scope of practice laws that limit PAs and NPs. The authors also highlight the importance of developing interstate compacts for PAs and NPs so their licenses have reciprocity with other states.


The U.S. Bureau of Labor Statistics estimates that the PA profession is expected to grow by 30.4 percent by 2024.

[http://data.bls.gov/cgi-bin/print.pl/emp/ep_table_103.htm](http://data.bls.gov/cgi-bin/print.pl/emp/ep_table_103.htm)

**Background on the Profession**


ARC-PA recognizes and accredits educational programs that meet the requirements detailed in these *Standards*. The *Standards* ensure that accredited PA programs maintain a core professional curriculum and offer sufficient depth and breadth of education to prepare all PA graduates for practice.


Drawing on the responses of PAs certified as of December 31, 2017, NCCPA profiles information on clinical settings, practice area, and salary ranges of the PA profession. The data describes the role PAs fulfill in promoting healthcare equity and meeting the needs of practices and patients throughout the medical and surgical specialties and subspecialties.


NCCPA outlines the organization of its certification and recertification examinations for PAs. This overview lists the knowledge and cognitive skill areas covered in the exams as well as the categories of diseases, disorders, and medical assessments tested. The blueprint describes how NCCPA develops and scores the exam. NCCPA’s Physician Assistant National Certification Examination (PANCE) serves as the *de facto* licensing exam for PAs. The Content Blueprint depicts the depth and breadth of medical knowledge required for PA licensure.

[https://www.nccpa.net/examscontentblueprint](https://www.nccpa.net/examscontentblueprint)


The Centers for Medicare and Medicaid Services (CMS) attested to the quality of PA education through a proposed rule published in the June 16, 2016 issue of the Federal Register. In justifying a recommended change CMS stated, “PAs are trained on a medical model that is similar in content, if not duration, to that of physicians. Further, PA training and education is comparable in many ways to that of APRNs, and in some ways, more extensive.”


The authors provide an in-depth analysis of the evolution of PA scope of practice over the nearly 50 year history of the profession. The analysis also provides recommendations of how states can maximize laws to allow for PAs to practice to the fullest extent of their education and experience and looks to the potential future of PAs.


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