



# Tapping the Potential of the Health Care Workforce:

## Scope-of-Practice and Payment Policies for Advanced Practice Nurses and Physician Assistants

BACKGROUND  
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*OVERVIEW — Expanding coverage and increasing delivery of team-based care are likely to entail a growing role in the health system for advanced practice nurses (APNs), physician assistants (PAs), and other nonphysician clinicians. These professions have already grown rapidly and have increased access to primary and specialty care, especially in rural and other underserved areas. This background paper provides an overview of the role of APNs and PAs. It reviews the primary features of the training and credentialing of these health professions, including the impact of public policies and market forces on their growth and deployment. It describes variations in state scope-of-practice policies and efforts to change them. Using a few brief examples, it also looks at the practices of APNs and PAs in the context of delivery system organization, reimbursement policy, and health care reform.*

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**Contents**

A QUIET TRANSFORMATION ..... 4  
     Table 1: Number and Earnings of Advanced Practice  
     Nurses and Physician Assistants in the United States ..... 6  
 A PROFESSION MATURES ..... 9  
     Expanding Scopes of Practice for APNs ..... 9  
     Physician Resistance ..... 11  
 COST AND ACCESS ..... 12  
     Access to Specialty Services ..... 14  
 THE SEARCH FOR SOLUTIONS ..... 15  
 ENDNOTES ..... 17

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The idea of an expanded role for advanced practice nurses (APNs) and physician assistants (PAs) figures prominently in many models of a less costly and more accessible health care delivery system. Innovative technologies, coverage expansions, and the increased prevalence of chronic illness all tend to increase demand for services, some of which the nursing and PA workforce can help deliver.<sup>1</sup> Experience suggests that APNs (a term encompassing nurse practitioners, nurse midwives, nurse anesthetists, and clinical nurse specialists) and PAs can perform some of the same services as doctors, with equivalent results, and can be trained in less time and at less expense. In some instances, however, efforts to expand the range of services that nurses and PAs are authorized to perform in settings such as store-based and other nurse-managed clinics have met with opposition from physicians contesting these professions' competency claims. Practice boundaries are defined and enforced through professional credentialing boards and state licensing and scope-of-practice laws, reinforced by the reimbursement policies of public and private payers. State scope-of-practice policies vary widely, and inconsistencies between the states complicate the training, credentialing, and employment of these professions. These inconsistencies may also obstruct delivery system innovation and the pursuit of promising models of team-based care. However, notwithstanding friction along the expanding frontiers of their practice, the delivery of services by APNs, PAs, and other nonphysician clinicians has increased dramatically in recent decades and quietly achieved substantial changes in health system organization, well in advance of the enactment of health reform legislation in 2010.

## A QUIET TRANSFORMATION

The new professions of nurse practitioner (NP) and PA both emerged in the 1960s in response to provider shortages, especially in primary care and in rural and underserved inner-city communities. NPs are registered nurses who have received additional training and are authorized to perform some services traditionally performed by physicians. They can, depending on the state where they practice, take patient histories, perform physical exams, make diagnoses and referrals, order tests, prescribe drugs, and help manage acute and chronic illnesses. Education and training requirements have increased over the years, and so have NPs' opportunities to practice independently or with only indirect physician supervision. Other types of APNs have developed and increased in numbers and are now working in fields such as oncology, cardiology, psychiatry, and obstetrics. New NPs have since the early 1990s almost always been required to hold a master's degree.

PAs must have several years of experience working in health care, must receive specialized training, and must practice under direct physician supervision. But PAs' training and responsibilities have also increased over time, and many have entered both surgical and nonsurgical specialty practice, performing some services that would otherwise have been performed by a doctor, such as performing physical examinations, ordering tests, or assisting in surgeries. In 2008, 40 percent held PA bachelor's degrees and 43 percent a PA master's. Independent practice is generally not an issue that PAs are concerned about, although state regulation of their scope of practice (SOP) while under physician supervision may be. (See text box, next page.)

According to recent estimates, the number of APNs in the United States is about 150,000; about two-thirds of these are NPs. The number of PAs is about 80,000.<sup>2</sup> The combined total of 230,000 is more than four times what it had been in 1990 and is more than one-fourth the size of the physician workforce. An estimated 600 million patient visits are made to NPs annually.<sup>3</sup>

Although NPs and PAs originally worked primarily in rural and underserved communities where physicians were scarce, they now practice in a wide variety of settings, including large and small physician practices, hospitals, surgical centers, specialty clinics, emergency departments, schools, correctional facilities, and managed care organizations. An estimated 85 percent of NPs work in primary

care, while a majority of PAs (about 65 percent) are in specialty care.<sup>4</sup> Nurse practitioners may also receive training and certification beyond their NP license in specialties such as acute care, adult health, pediatrics, family health, emergency care, geriatrics, and neonatal care.<sup>5</sup> About one-third of APNs hold specialized licenses as midwives, anesthetists, or clinical specialists, according to the National Council of State Boards of Nursing (NCSBN) (Table 1, next page).

### Training and Credentialing of Advanced Practice Nurses and Physician Assistants

**“Advanced practice nurse” (APN)** is an umbrella term that refers to four main types of nurses who have received advanced training beyond what is required for licensing as a registered nurse (RN): nurse practitioner, nurse anesthetist, clinical nurse specialist, and nurse midwife. However, requirements for licensing as an APN vary widely by state. Most states—but not all—require a master of science in nursing degree from an accredited educational facility. In most cases, state legislatures delegate to state boards of nursing the authority for setting requirements for certification exams in various APN categories and subspecialties, although in a few cases state boards of medicine hold this authority.

<p><b>Nurse Practitioner (NP)</b></p>	<p>Graduates of accredited programs must pass a certification exam administered by a certified state or national organization, which may be tailored to a variety of NP subspecialties, such as pediatrics or obstetrics and gynecology.</p>
<p><b>Nurse Anesthetist (NA)</b></p>	<p>A master’s degree and passage of a national certification exam is almost always required. A small percentage of NAs have post-master’s preparation.</p>
<p><b>Clinical Nurse Specialist (CNS)</b></p>	<p>More than 90 percent have master’s degrees and some others have post-master’s preparation. Certification exams vary by specialty.</p>
<p><b>Nurse Midwife (NM)</b></p>	<p>A master’s degree is usually required for new NMs, although RNs with at least nine months of post-RN training may be licensed. Passage of a national certification exam is required.</p>

**Physician assistant (PA)**—About 40 percent hold bachelor’s PA degrees and a like number have master’s PA degrees. Others may qualify through prior health care work experience and on-the-job training. PAs may take a national certification exam or meet specialty-specific requirements. State boards of medicine usually prescribe licensure standards.

**TABLE 1** Number and Earnings of Advanced Practice Nurses and Physician Assistants in the United States

Type	Number of Licensees*	Earnings in 2004†	Estimated Earnings in 2008†
<b>ADVANCED PRACTICE NURSES (All Types)</b>	150,000	n/a	n/a
Nurse Practitioners	100,000	\$70,000	\$80,000
Nurse Anesthetists	32,000	130,000	150,000
Clinical Nurse Specialists	13,000	64,000	74,000
Nurse Midwives	5,000	73,000	84,000
<b>PHYSICIAN ASSISTANTS</b>	80,000	n/a	\$90,000

\* Data on licensees from Kevin Kenward et al., "2007 Nurse Licensee and NCLEX Examination Statistics," NCSBN Research Brief, vol. 35 (January 2009), available at [www.ncsbn.org/WEB\\_08\\_2007LicExamRB\\_Vol35\\_CS3.pdf](http://www.ncsbn.org/WEB_08_2007LicExamRB_Vol35_CS3.pdf); and American Academy of Physician Assistants, "2008 AAPA Physician Assistant Census Report," September 25, 2008, available at [www.aapa.org/images/stories/2008aapacensusnationalreport.pdf](http://www.aapa.org/images/stories/2008aapacensusnationalreport.pdf).

† Data on current salaries of advanced practice nurses are estimated, based on salaries reported in U.S. Health Resources and Services Administration (HRSA), "The Registered Nurse Population: Findings from the March 2004 National Sample Survey of Registered Nurses," Appendix A; available at <ftp://ftp.hrsa.gov/bhpr/workforce/0306rnss.pdf>. 2004 earnings are trended forward to 2008 using a 15 percent upward adjustment, based on the 15 percent increase in RN salaries from 2004 to 2008 reported in a March 2010 summary of preliminary findings from HRSA's 2008 survey. Full results of the 2008 survey were not available for this paper. A margin of error should be assumed for the 2008 projections.

PAs are also dispersed across a wide range of specialties, reflecting patterns of demand that have prompted physicians to enlist their services. A 2008 survey by the American Academy of Physician Assistants (AAPA) found that about 26 percent of PAs practiced in family or general medicine; 25 percent were in various surgical specialties, the largest of which was orthopedics; 16 percent were in general internal medicine or an internal medicine subspecialty; 10 percent were in emergency medicine; and the remainder were scattered among pediatrics, obstetrics and gynecology, dermatology, and elsewhere. In all, the AAPA survey listed 18 surgical subspecialties, 17 pediatric subspecialties, and 14 internal medicine subspecialties. Practice settings were similarly varied. Thirty percent of PAs were in single-specialty medical practices, 12 percent worked for solo-practice physicians, 13 percent worked for multispecialty medical groups, 23 percent worked in hospitals, and about 6 percent worked at community health centers. Smaller numbers worked in nursing

homes, health maintenance organizations (HMOs), correctional facilities, or administrative jobs or were self-employed.<sup>6</sup>

APNs and PAs have gravitated toward diverse settings for meeting community care needs. NPs played an important part in the recent growth of nurse-managed clinics and federally qualified community health centers and currently help care for 16 million mostly underserved patients a year at 7,350 such sites. Integrated systems of care such as Kaiser Permanente have pioneered the use of NPs and PAs in team-based care coordinated with the services of multispecialty physician groups. One of the most visible examples of the potential for substitution has been the recent growth in the number of retail health clinics located in drug or discount stores and staffed by NPs or PAs under remote physician supervision. In part because of the increasing willingness of insurers to cover retail services, in 2008 retail clinics were operating in an estimated 1,000 locations and accounted for an estimated 3 million ambulatory visits annually.<sup>7</sup> The store-based clinics offer convenience and affordability for consumers who may otherwise forego treatment of simple conditions because of waiting time for appointments, limited physician office hours, or lack of insurance. Physicians have warned of potential threats to quality, but several studies have found that quality at store-based clinics is equivalent to that in physician offices.<sup>8</sup> Some pilot programs have also sought to utilize nurse clinicians in patient-centered medical home programs designed to promote primary and preventive care and to reduce fragmentation for patients with multiple medical needs. These experiments, too, have met with resistance from physicians.<sup>9</sup>

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Studies of the quality of services furnished by nonphysician providers have generally been favorable. As early as 1986, the now-closed federal Office of Technology Assessment found that NPs and PAs could furnish certain types of basic care of an equivalent quality to that provided by physicians and were better than physicians at tasks requiring patient communication and education. Subsequent studies have reached similar conclusions and have additionally found higher levels of patient satisfaction in care encounters with nonphysicians.<sup>10</sup>

But evidence on overall cost savings from the use of NPs and PAs is inconclusive. While per service costs may be lower, expanded supply may result in expanded utilization and higher total costs. In Massachusetts, where universal coverage legislation has in some areas

reportedly overwhelmed the physician workforce and created severe budget pressures, officials have expressed hope that nonphysician providers could fill gaps in provider supply and reduce costs.<sup>11</sup> A RAND study of the state's budget options noted that, while the average cost of an NP or PA visit is 20 percent to 35 percent lower than the cost of a physician office visit, increased use of PAs and NPs could drive up spending by increasing overall service volume. RAND concluded that increased use of NPs, PAs, and retail clinics in Massachusetts would generate only small savings over a 10-year period but added that investment in these economical approaches to expanding service capacity would help lay a foundation for more efficient care in the future.<sup>12</sup>

Use of NPs and PAs in primary care by historically underresourced organizations, such as the Indian Health Service and many community health centers, is one indication of their cost-reducing potential.

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Similarly, integrated delivery systems that operate under budgets created by capitated payment systems are often seen as models of interprofessional team care. According to a 2004 study, for example, Kaiser Permanente and other integrated delivery systems used fewer physicians per enrollee than the average U.S. physician-to-population ratio but

do not use a greater than average number of NPs and PAs.<sup>13</sup> An earlier study found more unequivocally that a sample of HMOs "relied heavily on NPs and PAs."<sup>14</sup> But these studies did not tackle the issue of net savings. A 2004 report on Kaiser Permanente's use of PAs and NPs for endoscopy services emphasized that extensive training and supervision is required for substitution of these professionals; and a Kaiser Permanente executive said that such organizational needs may offset savings on salaries.<sup>15</sup> Finally, nurses' argument that they should be paid the same as physicians when they perform the same services may influence payment policies in some cases.

More robust research on potential savings from the use of the allied professions has been stymied by inconsistencies in the way their services are billed for by the physician practices, hospitals, and other organizations that employ them. These employers may bill for APN or PA services under either the physician's or the nonphysician's provider number or as part of a bundled hospital payment. Inadequate data may result in an underestimation of the amount of care delivered by nonphysicians and may, as a result, skew projections of future workforce needs, researchers at Duke University warned in 2007.<sup>16</sup>



## A PROFESSION MATURES

Concerted efforts were required to provide an adequate foundation of education and training to enable nurses to assume a greater role in meeting expanding demands for health services. Federal funding was especially important in the start-up phase of new programs to train NPs and PAs in the 1960s and 1970s. The Nurse Training Act of 1964 and Title VIII of the Public Health Service Act, for example, have supported continuing expansion of nursing programs, creating a widening pool of RNs eligible for advanced nursing certification and master's level programs.<sup>17</sup> The Public Health Service Act was crucially important for the creation of PA training programs, which recruited heavily from the ranks of medical corpsmen returning from service in the Vietnam War. In addition to returning corpsmen, PA programs attracted applicants with backgrounds as nurses, emergency medical technicians, physical or rehabilitation therapists, and hospital technicians.<sup>18</sup>

Credentialing and licensing requirements vary by state, but the educational preparation for APNs and PAs has continued to grow in rigor and sophistication as these providers have deployed into increasingly specialized fields. By 2006, the United States had 336 accredited programs for NPs and 137 for PAs.<sup>19</sup> A 2002 study found that 88 percent of APNs had master's degrees (usually in nursing), as did 48 percent of PAs.<sup>20</sup> By 2008, all but seven states required a master's degree for an NP license.<sup>21</sup> In addition, an increasing number of institutions are now offering doctoral programs in nursing practice. Credentialing for PAs is overseen by state medical boards. Specific requirements are set by medical specialty organizations, so uniform standards are lacking, but prior health care experience is a prerequisite, and most PAs receive at least two years of specialized training, often in on-the-job settings.<sup>22</sup>

### Expanding Scopes of Practice for APNs

As their education and skills have increased and demand for their services has grown, APNs have been rewarded with a guarded and gradual broadening in the SOP allowed to them by state law and professional regulation. These laws, developed in collaboration with state boards of nursing and in a few cases boards of medicine, spell out in varying degrees of detail what services APNs may and may not provide, what levels of physician supervision are required

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for these services, or what services may be provided independently. Beginning in the 1970s, for example, some states began to give nurses the authority to write prescriptions, albeit with limitations applied for controlled substances. But it is only in recent years that this practice has been adopted in all 50 states and the District of Columbia, and many states still require collaborative arrangements with physicians to support nurses' prescriptive authority. Other areas typically involved in state SOP regulation include authority to make diagnoses, order tests, prescribe treatment, refer to other providers, and practice independently. PAs must in all cases work under physician supervision, although onsite supervision is not always a requirement when adequate communication links are in place.

States vary widely in the range of services they allow nurses to perform and, in some cases, may explicitly limit expanded authority to underserved areas. Practice acts defining SOP limits also vary in their degree of specificity, from highly detailed catalogues of permissible activity to vague provisions open to a wide range of interpretations. Most states call for some sort of collaboration with physicians as a condition of expanded practice authorities, but the nature of that collaboration may also be somewhat elastic, ranging from direct supervision to sketchy requirements for written protocols. The effectiveness and enforcement of such protocols may also vary, and some have been described as merely pro forma.<sup>23</sup> In states with highly prescriptive practice acts, the form that required physician supervision takes may vary from one procedure to another, according to a recent study of California's NP practice act.<sup>24</sup>

Nursing organizations, as well as some sympathetic medical groups and health reform advocates, contend that an inconsistent maze of state regulation restricts professional mobility, thwarts optimal workforce deployment, and wastes investments in training when APNs are not allowed to practice "to the top of their license." Variation is consistent with a long-established tradition of state regulation of professional practice. But the pattern set by the long, slow spread of prescriptive authority for nurses can also be observed in the glacial pace of diffusion of other authorities such as diagnosis, referral, and independent practice.<sup>25</sup> If nurses in one state are capable of performing such services, critics of the inconsistencies of the current system argue, it is illogical and wasteful for others with equivalent training and certification to be restricted from performing them

elsewhere.<sup>26</sup> Conversely, physicians reason that allowing excessive latitude in one jurisdiction does not justify allowing it in another,<sup>27</sup> although independent studies documenting safety or quality problems could not be found for this report.

Summary data on NP practice authorities provide an overview of the depth of SOP inconsistencies among the states. For example, 23 states and the District of Columbia have no requirement for physician involvement in NP diagnosis and treatment, 4 require involvement but not documentation, and the remaining 24 require both involvement and documentation. Fourteen states and the District of Columbia, most with substantial rural or other underserved populations, allow NP prescribing with minimal or no physician involvement.<sup>28</sup> Of the remainder, some require physician “supervision” (variously described), while others call for “collaboration,” and an overlapping group of jurisdictions require written protocols.<sup>29</sup> States that require onsite supervision for prescribing define this kind of oversight in a variety of ways, ranging from 10 percent of the time to 20 percent of the time to once a month to “regularly” to “periodically.” Other states define collaborative prescribing arrangements across a similarly broad range. These arrangements include sample chart reviews of a specified percentage of cases or at the discretion of the physician and NP or, in many cases, no chart review at all. Maximum nurse-to-physician collaboration ratios are specified in some states, typically three or four nurses to one physician, but just as often are held to no specific standard.<sup>30</sup> To get around physician resistance to NP prescribing, without losing the benefits of expanded access to care, California simply changed the language in its practice act to permit nurses to “furnish” or “order” medications, but denied authority to “prescribe,” although there was no practical difference between the two.<sup>31</sup> How closely written protocols and other supervisory arrangements are adhered to is to a large extent unobservable to researchers.

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*Twenty-three states and the District of Columbia have no requirement for physician involvement in NP diagnosis and treatment.*

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### Physician Resistance

The medical profession has unquestionably played a large role in fostering the growth of nonphysician practice. PAs have enabled surgeons and specialists to increase their clinical throughput and their revenues. APNs in primary care and generalist disciplines

have relieved burdens on physicians in underserved communities, where they might otherwise be unable to provide their patients with adequate attention.

Some medical specialty groups have relaxed their objections to SOP expansions. But the American Medical Association (AMA) has consistently opposed reductions in the level of medical oversight required for nonphysician providers, arguing that quality and patient safety may be compromised when oversight is reduced. AMA officials warned in 2008 that some 24 states were considering legislation to expand nurses' SOP and that, as medical workforce shortages increased, pressure for SOP expansions could be expected. State medical societies regularly appear in the forefront of the

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opposition to these bills, warning of safety and quality concerns that could result from any slippage in medical supervision. In 2009, the AMA House of Delegates instructed the organization's staff to develop advocacy tools to respond to state legislative and regulatory initiatives. The AMA and the Federation of State Medical Boards have also mounted legal challenges to some SOP proposals. The AMA has also sought state and federal investigation of retail clinics located in large chain stores, where the organization has expressed concerns about conflicts of interest when prescriptions are written and filled by the same business entity.<sup>32</sup> In Ohio, a state initiative to create nurse-led medical homes to help address a shortage of primary care doctors has stalled over objections from the state medical society to expanded authority for NPs.<sup>33</sup> However, in a 2010 advisory letter to the state of Kentucky advising against special regulations for such facilities, the Federal Trade Commission cited studies showing quality of basic services in store-based clinics to be equivalent to that provided by physicians.<sup>34</sup>

## COST AND ACCESS

To the extent that APNs and PAs provide services that are equivalent to those of physicians, the potential opportunities that they represent for reducing health care costs are suggested by the differences in the average earnings of different classes of providers. Estimated average earnings of NPs and PAs in 2008 were \$80,000 and \$90,000, respectively (see Table 1). In contrast, average annual earnings of primary care physicians are currently about \$186,000, while specialists earn

an average of \$340,000.<sup>35</sup> Small-scale studies of care in nursing homes, workplace clinics, and primary care centers have shown reductions in cost from the use of NPs. But increased use of NPs and PAs could also have the unintended consequence of driving up spending if it causes an increase in the volume of services.<sup>36</sup> Research methods are lacking for determining whether such an increase might be accounted for by legitimate need or by provider-induced demand.

However, PAs and all but a small number of APNs are employed by physician practices, hospitals, clinics, and others; because of their employers' billing practices and typical reimbursement arrangements, the cost to payers of the services provided by nonphysician practitioners often reflects little of these differences in income. For example, Medicare may pay for NP and PA services at the same rate as physicians are paid under the Medicare physician fee schedule, if those services are deemed to be "incident to" the physician services, generally meaning that they occur during a visit in which the patient sees the physician as well as an NP or PA. A 2002 analysis by the Medicare Payment Advisory Commission (MedPAC) concluded that the equal payment is justified because it represents a team approach to care that adds value for the payer. NP and PA services may also be billed separately, in which case Medicare pays at 85 percent of the physician fee schedule. MedPAC found the differential to be arbitrary but declined to recommend a change because it could find no empirical basis for an alternative rate. An underlying problem, the analysis explained, was that Medicare had no way of determining whether nonphysician provider services were essentially different from those provided by physicians. For example, it might be supposed that NPs and PAs would see less complex and difficult patients, but data to support or quantify this hypothesis were not available. Medicaid policies across the states are similar, although the differential for separately billed services is sometimes larger than Medicare's. The payment policies of private insurers vary. Some pay nonphysicians at 100 percent of physician rates, while others follow Medicare rates or do not cover nonphysician services. Some states require insurers to pay nonphysicians directly.<sup>37</sup> Improved risk adjusters or refinement of diagnostic codes to reflect differences in illness severity could create a foundation for more accurate payment to physicians and nonphysicians alike.

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### Access to Specialty Services

In the face of increasing demand for services, access to specialty care can be an issue for some patients. Depending on age, 4.2 percent to 10.2 percent of all respondents to the 2007 Medical Expenditure Panel Survey said access to specialty care was a “big problem” for them; 26 percent of respondents who were uninsured reported access as a big problem.<sup>38</sup> Specialties such as orthopedics and gastroenterology, where new treatments have widened the field for medical intervention, have seen waiting times increase as growth in demand outpaced the growth in physician supply. Growing use of APNs and PAs in these fields has helped ease access bottlenecks, reduce waiting times, increase patient satisfaction, and free physicians to handle more complex cases.<sup>39</sup>

In orthopedics, use of APNs and PAs is a long-standing practice. Ten percent of PAs in surgical specialties practice in orthopedics. They

see patients, order and interpret tests, set fractures, apply casts, or follow up with surgical patients. Some community clinics sponsor periodic orthopedic clinics staffed by NPs who are employees of a specialty physician practice. PAs and NPs in gastroenterology help meet the growing demand

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*PAs and NPs in gastroenterology help meet the growing demand for colon cancer screenings.*

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for colon cancer screenings, either in outpatient suites or hospital endoscopy centers. Specialized training programs are in short supply, so extensive on-the-job training is needed to prepare many of these personnel adequately for some of the more complex services they provide.<sup>40</sup> High-volume colonoscopy centers may utilize PAs and NPs for direct patient contact while a supervising gastroenterologist monitors multiple procedures from an electronic control room and intervenes only when problems arise or procedures such as polyp removal are indicated.<sup>41</sup> After a recent investigation, the Office of the Inspector General (OIG) in the U.S. Department of Health and Human Services found that some services billed to Medicare as “incident to” physician care were performed by personnel who lacked adequate qualifications and recommended a review of these billing rules. But the OIG’s report suggested that the bulk of the problem was with unlicensed personnel who had less training than APNs and PAs.<sup>42</sup>

Because PAs and APNs in specialty practice typically collaborate closely with physicians, regulatory hurdles and physician resistance are not important obstacles in that setting. Moreover, the business

case for utilization of nurses and PAs in specialty practice is attractive. Private insurance may follow the Medicare pattern described above, leaving providers the option of billing payers for these services at 100 percent or 85 percent of physician fee schedules, or at some other negotiated rate. However, as noted in a recent study by the Center for the Health Professions at the University of California, San Francisco, even services billed at 85 percent yield substantial earnings for a specialty practice because of increased patient volume and lower NP and PA salaries.<sup>43</sup> It should be noted, however, that these financial benefits accrue to the provider rather than the payer, unless the latter negotiates for a share of the savings. Demands for higher pay by APNs and PAs with advanced training, including graduates of emerging doctoral programs for nurses, may also offset potential savings. Observers emphasize that the main purpose that is served by increased use of nurses and PAs is improved access to care rather than putative cost savings.<sup>44</sup> But in view of research suggesting that demand for services may sometimes be driven by the supply of providers, the answer to the question of how much unmet need precedes the deployment of nonphysicians remains unsettled and may differ between primary and specialty care.

## THE SEARCH FOR SOLUTIONS

A variety of factors have prompted states to consider modifications in their procedures for regulating the health professions. Concern about access to care in areas of inadequate provider supply has been a consideration since APNs and PAs first began to practice. But many states have more recently been interested in greater use of these professionals in the context of exploring new models of care delivery that might improve coordination and efficiency. In 2008, for example, Colorado Governor Bill Ritter commissioned a study of the SOPs of NPs and PAs (as well as of dental hygienists) in order to evaluate “collaborative models of primary health care delivery” to meet the state’s access needs.<sup>45</sup> In Ohio, as noted above, expanding NPs’ SOP to allow independent practice was part of a state initiative to test the potential of a “patient-centered medical home” model, also in response to access concerns, and Massachusetts has commissioned research to estimate possible savings with nurses, PAs, and store-based clinics.<sup>46</sup>

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States have also moved to reconsider their regulatory processes because of the ad hoc, piecemeal nature of existing SOP statutes. The legislative process is in many cases perceived as inappropriately political and subject to conflicts of interest in the determination of professional boundaries, especially where state boards of medicine are involved in regulating nurses' SOP. Legislators also express concern that they are asked over and over to adjudicate narrow technical arguments over practice authorities that they do not feel qualified to assess. As a result, New Mexico, Iowa, Texas, and Virginia have all created independent review mechanisms to inform state legislators on professional regulation and workforce concerns and to insulate the SOP assessment process from territorial interests.<sup>47</sup>

While the lack of national uniformity may rightly be considered to be a barrier to professional mobility and optimal utilization of nurses' skills and training, the tradition of state regulation of the health professions is well established and would be difficult to challenge. As an alternative, some nursing and other professional organizations have proposed the promulgations of model practice acts and have recommended procedures for evaluating SOP legislation. In 2008, the NCSBN developed a consensus model of regulation of APNs that was subsequently endorsed by some 36 organizations representing a wide range of specialties. While the nursing profession has developed extensive standards for training, testing, and certifying its members, state licensing boards are "the final arbiters of who is recognized to practice" and follow no uniform model. The 2008 APRN consensus model is designed to fill that gap, although how widely it will ultimately be adopted remains to be seen.<sup>48</sup> The NCSBN has also proposed a nurse licensure compact, through which states recognize the licensure status of nurses from other states, which has been signed by more than 20 states.<sup>49</sup>

A consortium of six professional regulatory organizations representing both doctors and nurses (as well as social workers, physical and occupational therapists, and pharmacists) has produced a guide to assessing SOP proposals for state legislators, after acknowledging that "it is no longer reasonable to expect each profession to have a completely unique scope of practice, exclusive of all others," and that "changes should reflect the evolution of abilities of each healthcare discipline."<sup>50</sup> While signatory to the consortium guide, the Federation



of State Medical Boards has written its own guidelines for assessing SOP changes, emphasizing the importance of physician oversight and the protection of patients from “unqualified practitioners.”<sup>51</sup>

The potential for expansion of nonphysician scopes of practice has important implications for policymakers. In some geographic areas and specialties, especially primary care, concerns have been raised over the adequacy of the current workforce. Coverage expansions in the Patient Protection and Affordable Care Act (PPACA) of 2010, along with population growth and aging, will increase future demand for services. PPACA also includes provisions for increasing the supply of nurses, PAs, and other allied professions and creates a national workforce commission to assess needs and strategies. But future workforce needs remain uncertain at a time of experimentation with new models of team care, which PPACA also encourages. Maldistribution of providers across specialties and regions further complicates the estimation of future needs, as does lumping together different levels of service under the rubric of primary care. The supply of pediatric providers is expected to be adequate in the years ahead, for example, but a drop in the percent of internists and family practitioners accepting new patients has been documented in some areas. Physician-to-population ratios are two times higher in urban than in rural areas.<sup>52</sup> The potential of nurses and PAs to help redress such imbalances will depend partly on resolution of current tensions over their scopes of practice.

## ENDNOTES

1. James Robinson and Mark Smith, “Cost-Reducing Innovation In Health Care,” *Health Affairs*, 27, no. 2 (September/October 2008): pp. 1353–1356.
2. Kevin Kenward *et al.*, “2007 Nurse Licensee and NCLEX Examination Statistics,” National Council of State Boards of Nursing (NCSBN) Research Brief, vol. 35 (January 2009), available at [www.ncsbn.org/WEB\\_08\\_2007LicExamRB\\_Vol35\\_CS3.pdf](http://www.ncsbn.org/WEB_08_2007LicExamRB_Vol35_CS3.pdf); American Academy of Physician Assistants (AAPA), “2008 AAPA Physician Assistant Census Report,” (September 25, 2008), available at [www.aapa.org/images/stories/2008aapacensusnationalreport.pdf](http://www.aapa.org/images/stories/2008aapacensusnationalreport.pdf).
3. Linda Aiken, Robyn Cheung, and Danielle Olds, “Education Policy Initiatives To Address The Nurse Shortage In The United States,” *Health Affairs*, 28, no. 4 (July/August 2009): w646–w656.
4. Roderick S. Hooker, “Physician assistants and nurse practitioners: the United States experience,” *Medical Journal of Australia*, 185, no. 1 (2006); available at [www.mja.com.au/public/issues/185\\_01\\_030706/hoo10101\\_fm.html](http://www.mja.com.au/public/issues/185_01_030706/hoo10101_fm.html).

5. Kenward *et al.*, "2007 Nurse Licensee."
6. AAPA, "2008 Physician Assistant Census."
7. Aiken, Cheung, and Olds, "Education Policy"; Margaret Laws and Mary Kate Scott, "The Emergence Of Retail-Based Clinics In The United States: Early Observations," *Health Affairs*, 27, no. 5 (September/October 2008): pp. 1293–1298.
8. Susan S. DeSanti, Joseph Farrell, and Richard A. Feinstein, Federal Trade Commission, letter to Jill Brown, Kentucky Cabinet for Health and Family Services, January 28, 2010; available at [www.ftc.gov/os/2010/02/100202kycomment.pdf](http://www.ftc.gov/os/2010/02/100202kycomment.pdf).
9. Ben Sutherly, "Medical home bill ignites debate over nurses' role: Advanced practice nurses seek to be included in state pilot program," *Dayton Daily News* (Ohio), January 10, 2010; available at [www.daytondailynews.com/business/medical-home-bill-ignites-debate-over-nurses-role-485647.html](http://www.daytondailynews.com/business/medical-home-bill-ignites-debate-over-nurses-role-485647.html).
10. U.S. Office of Technology Assessment, *Nurse Practitioners, Physician Assistants, and Certified Nurse-Midwives: A Policy Analysis*, OTA-HCS-37, December 1986; available at [www.fas.org/ota/reports/8615.pdf](http://www.fas.org/ota/reports/8615.pdf). See also Mary Naylor and Ellen Kurtzman, "The Role Of Nurse Practitioners In Reinventing Primary Care," *Health Affairs* 29, no. 5 (May 2010), pp. 893–899; Ateev Mehrotra *et al.*, "Comparing Costs and Quality of Care at Retail Clinics with that of Other Medical Settings for 3 Common Illnesses," *Annals of Internal Medicine*, 151, no. 5 (September 1, 2009): pp. 321–328, available at [www.annals.org/content/151/5/321.full.pdf+html](http://www.annals.org/content/151/5/321.full.pdf+html).
11. Jennifer Wilson, "Primary Care Delivery Changes as Nonphysician Clinicians Gain Independence," *Annals of Internal Medicine*, 149, no. 8 (October 21, 2008): pp. 597–600; available at [www.annals.org/content/149/8/597.full.pdf](http://www.annals.org/content/149/8/597.full.pdf).
12. Christine Eibner *et al.*, "Controlling Health Spending in Massachusetts: An Analysis of Options," RAND Policy Brief (August 2009); available at [www.rand.org/pubs/technical\\_reports/2009/RAND\\_TR733.pdf](http://www.rand.org/pubs/technical_reports/2009/RAND_TR733.pdf).
13. Jonathan Weiner, "Prepaid Group Practice And U.S. Physician Supply: Lessons For Workforce Policy," *Health Affairs*, Web Exclusive (February 4, 2004): pp. W4-43–W4-58; available at <http://content.healthaffairs.org/cgi/reprint/hlthaff.w4.43v1>.
14. L. Gary Hart *et al.*, "Physician Staffing Ratios In Staff-Model HMOs: A Cautionary Tale," *Health Affairs* 16, no. 1 (January/February 1997): pp. 55–70; available at <http://content.healthaffairs.org/cgi/reprint/16/1/55>.
15. Elaine Gossman, "Endoscopy by nonphysicians," *Canadian Journal of Gastroenterology*, 21, no.1 (January 2007): pp. 17–18; available at [www.ncbi.nlm.nih.gov/pmc/articles/PMC2656625/](http://www.ncbi.nlm.nih.gov/pmc/articles/PMC2656625/).
16. Perri Morgan *et al.*, "Missing in Action: Care by Physician Assistants and Nurse Practitioners in National Health Surveys," *Health Services Research*, 42, no. 5 (October 2007): pp. 2022–2035, available at [www.ncbi.nlm.nih.gov/pmc/articles/PMC2254567/pdf/hesr0042-2022.pdf](http://www.ncbi.nlm.nih.gov/pmc/articles/PMC2254567/pdf/hesr0042-2022.pdf); Joanne Spetz, University of California, San Francisco, email communication with author, January 29, 2010.
17. Aiken, Cheung, and Olds, "Education Policy."

18. James F. Cawley, "Physician Assistants and Title VII Support," *Academic Medicine*, 83, no. 11 (November 2008): pp. 1049–1056; available at [http://journals.lww.com/academicmedicine/Fulltext/2008/11000/Physician\\_Assistants\\_and\\_Title\\_VII\\_Support.16.aspx](http://journals.lww.com/academicmedicine/Fulltext/2008/11000/Physician_Assistants_and_Title_VII_Support.16.aspx).
19. Hooker, "Physician assistants."
20. Roderick S. Hooker and Linda E. Berlin, "Trends In The Supply Of Physician Assistants And Nurse Practitioners In The United States," *Health Affairs*, 21, no. 5 (September/October 2002): pp. 174–181; available at <http://content.healthaffairs.org/cgi/reprint/21/5/174>.
21. Linda J. Pearson, "The Pearson Report 2008," *American Journal for Nurse Practitioners*, 12, no. 2 (February 2008); available at [www.acnpweb.org/files/public/2008\\_Pearson\\_Report.pdf](http://www.acnpweb.org/files/public/2008_Pearson_Report.pdf).
22. P. Eugene Jones, "Physician Assistant Education in the United States," *Academic Medicine*, 82, no. 9 (September 2007); available at [http://journals.lww.com/academicmedicine/Fulltext/2007/09000/Physician\\_Assistant\\_Education\\_in\\_the\\_United.14.aspx](http://journals.lww.com/academicmedicine/Fulltext/2007/09000/Physician_Assistant_Education_in_the_United.14.aspx).
23. Institute of Medicine, *Provision of Mental Health Counseling Services Under TRICARE*, (Washington, DC: National Academies Press, 2010); available at [http://books.nap.edu/openbook.php?record\\_id=12813&page=R1](http://books.nap.edu/openbook.php?record_id=12813&page=R1).
24. Sharon Christian and Catherine Dower, "Scope of Practice Laws in Health Care: Exploring New Approaches for California," Issue Brief, California HealthCare Foundation, March 2008; available at [www.chcf.org/topics/view.cfm?itemID=133590](http://www.chcf.org/topics/view.cfm?itemID=133590).
25. Sharon Christian, Catherine Dower, and Ed O'Neil, "Overview of NP Scopes of Practice in the United States," Center for the Health Professions, University of California, San Francisco, December 1, 2007; available at [http://futurehealth.ucsf.edu/Content/29/2007-12\\_Overview\\_of\\_Nurse\\_Practitioner\\_Scopes\\_of\\_Practice\\_In\\_the\\_United\\_States\\_Discussion.pdf](http://futurehealth.ucsf.edu/Content/29/2007-12_Overview_of_Nurse_Practitioner_Scopes_of_Practice_In_the_United_States_Discussion.pdf).
26. Pearson, "Pearson Report 2008"; Christian, Dower, and O'Neill, "Overview."
27. American Medical Association, *AMA Scope of Practice Data Series: Nurse practitioners*, October 2009; available at [www.aanp.org/AANPCMS2/publicpages/08-0424%20SOP%20Nurse%20Revised%2010-09.pdf](http://www.aanp.org/AANPCMS2/publicpages/08-0424%20SOP%20Nurse%20Revised%2010-09.pdf).
28. Linda J. Pearson, "The Pearson Report 2010," *American Journal for Nurse Practitioners*, 14, no. 3 (March 2010).
29. Sharon Christian, Catherine Dower, and Ed O'Neil, "Chart Overview of Nurse Practitioner Scopes of Practice in the United States," Center for the Health Professions, University of California, San Francisco, 2007; available at [http://futurehealth.ucsf.edu/Content/29/2007-12\\_Overview\\_of\\_Nurse\\_Practitioner\\_Scopes\\_of\\_Practice\\_In\\_the\\_United\\_States\\_Chart.pdf](http://futurehealth.ucsf.edu/Content/29/2007-12_Overview_of_Nurse_Practitioner_Scopes_of_Practice_In_the_United_States_Chart.pdf).
30. National Nursing Centers Consortium, "NNCC's State-by-State Guide to Regulations Regarding Nurse Practitioners and Physician Practice," June 20, 2008; available at <http://timeswampland.files.wordpress.com/2009/05/ncc-guide-to-np-practice-regulations-2008.pdf>.
31. Christian, Dower, and O'Neill, "Overview."

32. Amy Lynn Sorrel, "Scope of practice expansions fuel legal battles," *American Medical News*, March 9, 2009, available at [www.ama-assn.org/amednews/2009/03/09/prl20309.htm](http://www.ama-assn.org/amednews/2009/03/09/prl20309.htm); Julie Steenhuisen, "AMA to Seek Probe of Retail Health Clinics," *Reuters*, June 26, 2007, available at [www.reuters.com/article/idUSN2532441820070626](http://www.reuters.com/article/idUSN2532441820070626).
33. Sutherly, "Medical home bill."
34. DeSanti, Farrell, and Feinstein, "letter."
35. Jeffrey C. Bauer, "Nurse Practitioners as an underutilized resource for health reform: Evidence-based demonstrations of cost-effectiveness," *Journal of the American Academy of Nurse Practitioners*, 22, no. 4 (April 1, 2010): pp. 228–231; available at [www3.interscience.wiley.com/cgi-bin/fulltext/123339302/PDFSTART](http://www3.interscience.wiley.com/cgi-bin/fulltext/123339302/PDFSTART).
36. Eibner *et al.*, "Controlling Health Spending."
37. Medicare Payment Advisory Commission, "Medicare Payment to Advanced Practice Nurses and Physician Assistants," Report to the Congress, June, 2002; available at [www.medpac.gov/publications/congressional\\_reports/jun02\\_NonPhysPay.pdf](http://www.medpac.gov/publications/congressional_reports/jun02_NonPhysPay.pdf).
38. Kelly Carper and Steven Machlin, "Variations in Perceived Need and Access to Specialist Care among Adults in the U.S. Civilian Noninstitutionalized Population, 2007," Agency for Health Care Research and Quality, MEPS Statistical Brief 274, December 2009; available at [www.meps.ahrq.gov/mepsweb/data\\_files/publications/st274/stat274.pdf](http://www.meps.ahrq.gov/mepsweb/data_files/publications/st274/stat274.pdf).
39. Catherine Dower and Sharon Christian, "Physician Assistants and Nurse Practitioners in Specialty Care: Six Practices Make It Work," California HealthCare Foundation, June 2009; available at [www.chcf.org/~media/Files/PDF/N/NPPAModels.pdf](http://www.chcf.org/~media/Files/PDF/N/NPPAModels.pdf).
40. Gossman, "Endoscopy."
41. Robert Berenson, Joy Grossman, and Elizabeth November, "Does Telemonitoring Of Patients—The eICU—Improve Intensive Care?" *Health Affairs*, Web Exclusive, August 20, 2009: pp. w937–947; Dower and Christian, "Specialty Care."
42. Office of the Inspector General, "Prevalence and Qualifications of Nonphysicians Who Performed Medicare Physician Services," Department of Health and Human Services, OEI-09-06-00430, August, 2009; available at <http://oig.hhs.gov/oei/reports/oei-09-06-00430.pdf>.
43. Dower and Christian, "Physician Assistants."
44. Catherine Dower, University of California, San Francisco, interview by author, January 27, 2010; Gossman, "Endoscopy."
45. Collaborative Scopes of Care Advisory Committee, *Final Report of Findings* (Denver: Colorado Health Institute, December 30, 2008); available at [www.colorado-trust.org/attachments/0000/9371/CollaborativeScopesCare\\_final\\_report.pdf](http://www.colorado-trust.org/attachments/0000/9371/CollaborativeScopesCare_final_report.pdf).
46. Sutherly, "Medical home bill."
47. Catherine Dower, Sharon Christian, and Ed O'Neil, "Promising Scope of Practice Models for the Health Professions," Center for the Health Professions, University of California, San Francisco, 2007; available at <http://chpe.creighton.edu/events/roundtables/2009-2010/pdf/scope.pdf>.

48. APRN Consensus Work Group and NCSBN APRN Advisory Committee, "Consensus Model for APRN Regulation: Licensure, Accreditation, Certification & Education," July 7, 2008; available at [www.aanp.org/NR/rdonlyres/56292A59-8240-449D-910D-EF331FC7DC86/0/FinalAPRNJointDialogueReport7708.pdf](http://www.aanp.org/NR/rdonlyres/56292A59-8240-449D-910D-EF331FC7DC86/0/FinalAPRNJointDialogueReport7708.pdf); Dower, Christian, and O'Neil, "Promising Scope."
49. NCSBN, "Nurse Licensure Compact"; available at [www.ncsbn.org/nlc.htm](http://www.ncsbn.org/nlc.htm).
50. NCSBN, "Changes in Healthcare Professions' Scope of Practice: Legislative Considerations," February 2007; available at [www.ncsbn.org/ScopeofPractice.pdf](http://www.ncsbn.org/ScopeofPractice.pdf).
51. Federation of State Medical Boards, "Assessing Scope of Practice in Health Care Delivery: Critical Questions in Assuring Public Access and Safety," 2005; available at [www.fsmb.org/pdf/2005\\_grpol\\_scope\\_of\\_practice.pdf](http://www.fsmb.org/pdf/2005_grpol_scope_of_practice.pdf).
52. Thomas Bodenheimer and Hongmai H. Pham, "Primary Care: Current Problems and Proposed Solutions," *Health Affairs*, 29, no. 5 (May 2010): pp. 799–805.