Accept No Substitute: A Report on Scope of Practice

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EXECUTIVE SUMMARY

One of the most persistent and vexing challenges facing practicing physicians and the organizations that represent them—and an issue with profound implications for health care in this country—has been the growing demand by a broad array of non-physician providers for state legislatures to expand their scope of practice into areas that until now have been restricted to physicians. Because scope of practice is determined at the state level, these efforts to expand scope of practice must be countered state by state, often involving multiple provider groups in any given year. As one indicator of the level of activity, the National Conference of State Legislatures reports that just since January 2011, more than 350 scope of practice laws have been enacted in 48 states.

Yet on the whole, physicians and their advocates have so far been remarkably successful in holding the line on many of these expansionary forays. For example, after many years of concerted effort by nurse practitioner advocates, currently only 14 percent of the nation's nurse practitioners practice in states judged by the *American Journal of Nurse Practitioners* to allow nurses full autonomy. Optometrists have gained surgical privileges in only three states, and psychologists have won prescribing rights in only two.

Nevertheless, the pressure is relentless, driven by a range of underlying social, economic and political forces. These include the desire by payers and large delivery systems to contain costs; the demand for mid-level providers by physicians seeking to keep their practices afloat; the growing access problem as a result of the physician shortage and the Affordable Care Act; the increasing involvement in scope of practice conflicts by corporate retailers and government agencies; and the lack of hard evidence that physicians do in fact provide better care than non-physician providers.

Surprisingly little is known about what impact, if any, those scope of practice expansions that *have* been enacted are actually having on patients or physicians. In reviewing some of the data required by the Health Insurance and Portability Act, it appears that the rate of reported "adverse actions" is somewhat higher among nurse practitioners in states with the least restrictive scope of practice laws than it is in the most restrictive states, but is not clear whether this difference is balanced by any benefits to the public, such as improved access or reduced costs. And while there is one recent study that found no significant reduction in physician incomes in states that allowed nurse practitioners to practice independently, the data base for that study was limited to employed physicians—whose income is unlikely to be affected by competition from independent nurse practitioners.

This brings up another difficulty for physicians and medical societies seeking to hold off scope of practice expansions: the erosion of private practice. As the proportion of independent practices continues to shrink and the membership of state medical and specialty societies begins to include growing numbers of salaried physicians, scope of practice will most likely become less of a priority. Along the same lines, a number of the medical society executives interviewed for this report talked about the increased ambivalence and apathy among at least some physicians, coupled with the growing political

sophistication of some of the non-physician advocacy organizations—a divergence reflected in very substantial differences in fundraising between the two groups. In addition, some of the non-physician advocates, especially in nursing, have actively engaged consumer organizations and other non-medical allies to enhance their credibility and increase their political clout. To top it off, the recent proliferation of doctorates in many of the non-physician professions may well strengthen the hand of non-physician advocates seeking further scope of practice expansions.

In the face of all these challenges—both external and internal—medical society leaders have taken a number of steps that include: strengthening their lobbying capacity, working more closely with specialty societies, stepping up their fundraising and campaign contributions, fostering strong relationships with key legislators, and keeping the focus solely and relentlessly on patient safety. In addition, they have worked with the American Medical Association and other national medical organizations through the Scope of Practice Partnership. The AMA, in turn, has been active on federal policy issues related to scope of practice; produced its Scope of Practice data series on ten non-physician professions; launched a national Truth in Advertising campaign that has already generated new laws in fourteen states; and funded a major mapping study to document where non-physician providers are actually practicing.

Despite some differences among state medical society leaders regarding how confrontational to be—differences that most likely reflect different economic and political realities—most of those interviewed for this report are strongly committed to holding the line on scope of practice as best they can. Potential next steps offered for consideration include the following: (1) support and advocate for a program of research to examine the broader impact of non-physician providers on the quality, safety and cost-effectiveness of patient care; (2) develop a standardized central reporting system in each state to enable physicians to report negative health outcomes resulting from non-physician care; (3) create a password-protected website to enable state medical associations and their allies to share information and "lessons learned" across states; and (4) undertake a concerted effort to engage non-medical allies—especially patient and consumer groups—who could support physicians on scope of practice. This last step could be especially important as a way of counteracting the corrosive perception that physicians are "only in it for the money."

Finally, in the longer run, serious attention should be given to restoring the role of the primary care physician as the linchpin of the nation's health care system. Failure to do so—and the resulting influx of mid-level providers into that role—will ultimately leave us with a rudderless model of patient care that will result in greater fragmentation, higher costs, and inferior outcomes.

Purpose

One of the most persistent and vexing challenges facing practicing physicians and the organizations that represent them has been the growing demand by a broad array of non-physician providers for state legislatures to expand their scope of practice into areas that until now have been restricted to physicians. The issue has profound implications for health care in this country, both for the public and for physicians. But as one state medical society executive who was interviewed for this report bluntly told us, "It's not fun. It's all defense: you don't get credit for wins, but you get killed for losses. If there would be one thing I could take off my plate, it would be scope."[*]

The purpose of this report is to provide a broad overview of the scope of practice issue, including: (1) where things currently stand, (2) what the trends are, (3) the driving forces behind those trends, (4) the implications of those trends for the public and for physicians, (5) the challenges that physicians and their advocates face in responding to those trends, (6) how physicians and their advocates have responded to these challenges, and (7) some potential action steps for the Physicians Foundation and others with an interest in this area to consider.

Definition

Before getting into the issue, it is important to clarify what we mean by scope of practice. For the purposes of this report, we will use the definition set forth by the Federation of State Medical Boards in its 2005 report on scope of practice.[1] In that report, the Federation succinctly defines scope of practice as "the activities that an individual health care practitioner is permitted to perform within a specific profession." The report goes on to say that "those activities should be based on appropriate education, training and experience."

We should also note that the focus of this report is on the scope of practice as it relates to non-physician providers and not on the separate issue of physicians who may be practicing outside of their specialty or area of competence.[2]

Current status

Two factors that help to make scope of practice such a complex and challenging issue for physicians and their advocates are: (1) the sheer number of non-physician health professions seeking expansions in their scope of practice; and (2) the fact that scope of practice for each profession is largely determined at the state level, usually by state legislatures.

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[*] A list of people interviewed and sources for this report appears as Appendix A.

With regard to the number of professions seeking scope of practice expansions, the American Medical Association, in preparing its landmark Scope of Practice Data Series in response to a 2005 resolution by its House of Delegates, conducted a review of all the scope of practice bills that were being introduced in state legislatures across the country at that time and identified ten "distinct limited licensure professions that are currently seeking scope-of-practice expansions that may be harmful to the public."[3] The AMA's Scope of Practice Data Series, which is currently being updated, includes an in-depth report on each of these ten professions: audiologists, naturopaths, nurse anesthetists, nurse practitioners, optometrists, oral and maxillofacial surgeons, pharmacists, physical therapists, and psychologists. (A brief summary description of each of these professions, their level of training, and their current scope of practice is presented in Appendix B to this report.) The National Conference of State Legislatures, which actively monitors scope of practice bills at the state level, includes several additional professions in its data base, such as chiropractors, nurse midwives, occupational therapists, radiology technicians, and paramedics/emergency medical technicians.[4]

Multiply these dozen or more provider groups by fifty states, and the magnitude of the challenge becomes apparent. Although not every group is seeking scope of practice expansions in every state at the same time, the physicians and medical society staff with whom we spoke stressed the need to remain vigilant. As one state medical society executive put it, "When there's one group that's causing problems, don't take your eye off the others." Another declared, "It's like dragon's teeth. You knock one down and four more spring up."

The following bulletins, fresh from the front lines, provide some sense of the multifaceted and ever-changing nature of the challenge:

- California: "Another major scope-of-practice fight went to court in California Tuesday when two large physician groups filed suit to prevent optometrists from treating glaucoma. The California Medical Association and the California Academy of Eye Physicians and Surgeons say they object to new rules that took effect January 8 that allow optometrists to complete their certification process 'without having to treat a single patient with glaucoma.'"[5]
- New York: "The Office and Professional Employees Union Guild 45/The First National Guild for Health Care Providers of the Lower Extremity and the New York State Podiatric Medical Association congratulate Governor Cuomo for signing A9293A, a measure that will expand the scope of practice to include essential ankle and foot care services by podiatrists."[6]
- Colorado: "The Colorado Court of Appeals has upheld a lower-court decision affirming that state law does not require certified registered nurse anesthetists [CRNAs] to be supervised by a physician. The court likewise ruled that former Gov. Bill Ritter acted within his rights in September 2010 when he opted out of the federal physician supervision requirement for nurse anesthetists at critical access hospitals and 14 general hospitals in rural areas."[7]
- Massachusetts: "Get ready to see more advertisements in Massachusetts pharmacies for a wide variety of vaccines that consumers will now be able to receive in stores. A new policy adopted by state health regulators grants pharmacists the authority to administer 10 adult vaccines in addition to the annual flu shot they already can give."[8]

In all, in September 2012 the National Conference of State Legislatures reported that since January 2011, 353 scope of practice bills had been enacted in 48 states—an average of more than seven per state—and that just since February 15, 2012, some 245 bills directly related to scope of practice had been filed or carried over from the previous session. Of these 245 new or carried-over bills,

- 31 percent relate to licensure
- 21 percent to nursing/advance practice nursing
- 13 percent to dentistry
- 11 percent to physicians/physicians assistants
- 9 percent to prescriptive authority
- 9 percent to physical therapy
- 6 percent to surgical authority, podiatry, chiropractors, naturopaths, psychologists, pharmacists, nurse midwives, or paramedics/EMTs[9]

Small wonder, then, that many physicians and state medical societies are feeling overwhelmed. "It used to be just the optometrists and chiropractors," a veteran state medical society executive sighed. "Now it's everybody: nurse practitioners, audiologists, CRNAs, psychologists, dentists—you name it. And you have to monitor every single group."

So with all of this legislative activity, what is the score so far? Who is winning these scope of practice battles? Unfortunately, given the complexity of many of the issues, the fluid nature of the legislative and regulatory process, the fact that some of these disputes are negotiated before they ever reach the legislature while others wind up in court, as well as the sheer volume of scope of practice-related legislation, it is difficult to give a simple answer.

Our interviews with a cross-section of current and past state medical society executives suggest that while they are experiencing some losses, on the whole they have been holding their own:

- "The pharmacists in our state want to give immunizations and they want to go to prescriptions. The big retailers were behind the little guys, but we fought them head-on and we won. We also won with lay midwives and naturopaths. But I don't know how long we can fight them all off."
- "We've been pretty successful. The main actors recently have been the APRN's who wanted to be able to prescribe narcotics and optometrists wanting to prescribe oral meds. But from sheer political muscle, we've been able to hold back the tide—at least so far."
- "We blocked the psychologists on prescription privileges, mostly because the psychiatrists have mobilized."
- "We fought off the nurse practitioners seven or eight years ago; we worked out a compromise at that time. But we're gearing up for another round this year. It's going to be huge."
- "The optometrists have had some success, and now they want to do anesthesia of the eye. But they lost that one when one of their key people who was scheduled to testify came back from a training session wearing an eye patch."

- "Our latest issue has been CRNAs wanting to do spinal injections without supervision. We beat that back in the legislature."
- "About nineteen years ago, we had one give-away, when we allowed optometrists to use anti-biotic drops."

Yet despite these victories, a number of the physicians and medical society executives we spoke with expressed concern about their ability to continue to hold the line in the coming years. Several noted that their key legislative champions would soon be retiring; others cited the increasingly sophisticated tactics of some of the non-physician provider associations, as well as changes within the health care system itself. For example, one medical society executive reported, "This time when we went to the hospital association to help us on podiatrists, they sat on their hands. They told us, 'We *employ* podiatrists.'" A physician cited the shortage issue, which he expects will be exacerbated by the projected coverage expansions under the Affordable Care Act. "Legislators will want to do something," he warned. And one physician said simply, "The days of physician hegemony are over."

Because about one-third (209,000) of the estimated 625,000 actively practicing physicians in the United States specialize in primary care,[10] one of the non-physician provider groups whose expanding scope of practice has been of particular concern to many state medical societies has been nurse practitioners. As of 2010, the federal Agency for Healthcare Research and Quality estimated that more than half (52 percent) of the nation's 106,000 actively practicing nurse practitioners—or roughly 56,000—were providing primary care services,[11] although it appears that so far relatively few have actually opened independent practices of their own. (We were told by a source at the federal Health Resources and Services Administration that hard data on the number of nurse practitioners in independent practice won't become available until the end of 2012;[12] however, we contacted a leading authority in this field who estimated that the percentage of nurse practitioners "who have their own shingle and [are] practicing independently and in direct competition with physicians is… less than 5 percent, and probably closer to 1-2 percent."[13])

Yet while the actual number of nurse practitioners currently engaged in independent practice may still be relatively low, the potential exists that this number will increase substantially in the coming years. A recently published study by David Auerbach of the RAND Corporation projects that the number of nurse practitioners will nearly double by 2025.[14] Meanwhile, the most recent Pearson Report, which is published by the *American Journal of Nurse Practitioners* and provides an ongoing national overview of state legislative and regulatory developments affecting nurse practitioners, cites the following developments as of 2012, which suggest that the legal barriers to independent practice by nurse practitioners are continuing to erode:

- Twenty-seven states now have no requirement for any physician involvement in diagnosing and testing—three more states than last year.
- Nineteen states now have no requirement for any physician involvement in nurse practitioner prescribing—also an increase of three states over last year.

- Nineteen states reported "some degree of legislative or regulatory expansion" in nurse practitioners' scope of practice over the past year, including "major expansions" in Hawaii, North Dakota, and Vermont.[15]

But despite these legislative and regulatory gains by nurse practitioners, the 2012 Pearson Report still gives 14 states a "D" or "F" grade for "patient access" to nurse practitioners, which it defines as "full access to unrestricted care" by nurse practitioners (the 14 states graded "D" or "F" are: Arkansas, Florida, Georgia, Illinois, Indiana, Michigan, Missouri, Nebraska, North Carolina, South Carolina, South Dakota, Texas, and Virginia). And while the Pearson Report awards another 15 states and the District of Columbia an "A" grade on this item, this means that fewer than one-third of the states so far have granted the full scope of practice that advocates for nurse practitioner independence are seeking (the 15 states awarded an "A" are: Alaska, Arizona, Colorado, Hawaii, Maine, Maryland, Montana, New Hampshire, New Mexico, North Dakota, Oregon, Rhode Island, Vermont, Washington, and Wyoming).[16]

Moreover, because many of these 15 "A" states are fairly rural and therefore sparsely populated, the nurse practitioners in these states account for only 14 percent of the total number of nurse practitioners in the United States (based on state and national totals reported in the 2012 Pearson Report).[17] Thus, based on the Pearson Report's grading system, it appears that: (1) most of the nation's nurse practitioners (86 percent) are still practicing under at least some scope of practice restrictions; and (2) about one in three (34 percent) are practicing in states graded "D" or "F" by the Pearson Report—meaning that, as the Pearson Report sees it, there are still strict limits to their scope of practice.

As for the other non-physician professions, the current status of their scope of practice varies both by profession and across the states. For example:[†]

- Since the enactment of a 2001 rule allowing states to "opt out" of a Medicare requirement that CRNAs must practice under the supervision of a licensed physician, 16 states have done so, so that CRNAs are now legally able to practice in those states without physician supervision. (The 16 states are: Alaska, California, Colorado, Iowa, Idaho, Kansas, Minnesota, Montana, Nebraska, New Hampshire, New Mexico, North Dakota, Oregon, South Dakota, Washington, and Wisconsin.)[18]
- Forty-three states now allow pharmacists to "initiate, modify and/or discontinue medication therapies" under Collaborative Drug Therapy Agreements (CDTA's) that enable a prescriber (usually a physician) to authorize pharmacists to prescribe directly to patients without a prior physician visit or consult, but so far only three states—Montana, New Mexico, and North Carolina—allow pharmacists to actually *initiate* drug therapy on their own.[19]
- In 1998, Oklahoma became the first to allow optometrists to perform eye surgery. Since that time, optometrists have sought similar scope of practice expansions in 25 other states, but they were generally unsuccessful. In 2007, New Mexico has allowed optometrists to perform minor

[†] See Appendix B for the scope of practice status of all ten non-physician healthcare professions covered in the AMA Scope of Practice Data Series.

non-laser surgical procedures that had been authorized by the New Mexico Board of Optometry but that previously had not been permitted under state law,[20] and in 2011, Kentucky enacted legislation allowing optometrists to perform certain forms of post-cataract and glaucoma surgery.[21]

- Sixteen states (Alaska, Arizona, California, Connecticut, Hawaii, Idaho, Kansas, Maine, Minnesota, Montana, New Hampshire, North Dakota, Oregon, Utah, Vermont, and Washington) and the District of Columbia currently license naturopathic doctors, although their scope of practice varies by state.[22] But two states (South Carolina and Tennessee) expressly prohibit the practice of naturopathy, and three states (Florida, Virginia and Texas) have abolished previous naturopathy licensing provisions.[23]

It is worth noting that while scope of practice gains by some of these professions (such as nurse practitioners, pharmacists, and naturopaths) have the potential to affect a relatively broad cross-section of primary care and specialty physicians, gains by others (such as nurse anesthetists and optometrists) tend to impact a smaller subset of specialty physicians (in this case, anesthesiologists and ophthalmologists)—although in both cases, of course, patients may be affected. Also, while it is true that physicians and their advocates are usually playing defense on scope of practice, the elimination of naturopathic licensing in Florida, Virginia and Texas indicates that on occasion they are in fact able to move the ball up the field.

Trends

With regard to the pace at which scope of practice has been expanding, a 2010 report on advanced practice nurses and physician assistants for the National Health Policy Forum describes it as an incremental process, at least for advance practice nurses. "As their education and skills have increased and demand for their services has grown," the report states, "advance practice nurses have been rewarded with *a guarded and gradual broadening* in the scope of practice allowed to them by state law and professional regulation… Beginning in the 1970's, for example, some states began to give nurses the authority to write prescriptions, albeit with limitations 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."[24] [emphasis added] The report then goes on to say that "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."[25] [emphasis added] This kind of language suggests that, over time, physicians and their advocates have indeed been quite successful in holding the line on scope of practice expansions for advanced practice nurses.

However, a look at the changes in the Pearson Report's distribution of "patient access grades" over the past several years indicates that the pace of expansion may be picking up. As noted above, these grades are intended to measure the extent to which a state allows "full access to unrestricted care" by nurse practitioners—that is, unrestricted scope of practice. The quantitative scoring system on which these

grades are based was first published by four nurse practitioner researchers in 2007 (using 2006 data), and at that time, only seven states and the District of Columbia were awarded an "A" grade (compared with 15 states and the District of Columbia in the 2012 Pearson Report), while 21 states were given a "D" or "F" (compared with 14 states in the 2012 Pearson Report).[26] While the grading protocol is clearly arbitrary and reflects the perspective of the nurse practitioners who developed it, the change in the Pearson Report's grade distribution does suggest that the number of states with the least restrictive scope of practice for nurse practitioners has roughly doubled in just the last five or six years, while the number of states with the strictest limits on scope of practice has fallen by a third.

On another front, pharmacists have made impressive gains over the past decade in winning the right to administer vaccines. In fact, in 2009, Maine—the last hold-out—became the fiftieth state to approve the administration of flu vaccines by pharmacists. (Specifically, the Maine statute allows appropriately trained and certified pharmacists "to administer all forms of influenza vaccines to people over age nine years without a prescription.")[27] It appears that this final victory on flu shots was aided in part by the influenza epidemic of 2009 and in part by the leadership role that the Rite-Aid Corporation and the Hannaford Brothers Company—a leading regional supermarket chain that includes pharmacy services—played in the legislative process. Whatever the causes, as the chairman of the College of Pharmacy in Portland observed, the initial group of pharmacists to receive the necessary training "were very eager to embrace this new scope of practice."[28]

But pharmacists have not stopped with influenza vaccines. This year, for example, Florida enacted the Vaccines Access Act allowing pharmacists to offer shingles and pneumonia vaccines in addition to flu shots.[29] And, as noted, Massachusetts has just added ten more vaccines (in addition to influenza) that its pharmacists can now provide: MMR, DPT, shingles, pneumonia, hepatitis A, hepatitis B, polio, HPV, chickenpox, and meningitis.[30] Nationally, a total of 41 states now allow pharmacists to administer the Zostavax vaccine for shingles, and 46 states allow them to give pneumonia immunizations.[31] This is indeed a far cry from where things stood less than two decades ago, when in 1994 the Washington State Pharmacists Association initiated the nation's first formal training program in vaccine administration for pharmacists.[32]

Other professions, however, have had a harder time of it. Psychologists, for example, have been trying for almost thirty years to win prescription privileges, but so far only two states—Louisiana and New Mexico—have granted this expansion in their scope of practice (although bills for this purpose continue to be introduced in legislatures around the country, including Arizona, Hawaii, Montana, New Jersey, Oregon and Tennessee in 2011).[33] Podiatrists, too, have found the going tough, as noted in a December 2011 legislative update published in *Podiatry Today*: "When it comes to expanding podiatry's scope to include the ankle, momentum has been slow in recent years… Podiatrists in restrictive states [like Texas, New York, and South Carolina] keep pushing at the limited definition of their field, only to be met with massive and well-funded resistance from medical and orthopedic associations."[34] And as noted earlier, optometrists—after an initial victory on securing surgical privileges in Oklahoma in 1998—had to wait another nine years to obtain very limited surgical privileges in a second state (New Mexico), and four more years after that to obtain them in a third state (Kentucky).

But whether the pace is fast or slow—or even "glacial"—the bottom line is that *the overall trend, with very occasional exceptions, has been towards an increasing scope of practice for just about all of the non-physician health professions*. Often, these professions have deliberately taken an incremental approach. One of the physicians we spoke with called it "the camel's nose under the tent," and said, "It begins with 'under a physician's supervision;' then it goes to less or no supervision; and after that it goes to a further expansion of powers—like prescribing narcotics." He cited the naturopaths in his state as an example, who he said had won prescription privileges last year and were now seeking to extend those privileges to include "natural painkillers, including opiates." Another example, noted above, is the pharmacists in Florida and Massachusetts who, after first winning the right to administer flu shots, soon afterwards succeeded in extending that right to include additional vaccines.

Driving forces

What is behind this trend toward expanding scope of practice for non-physician providers? Our interviews and our review of the literature point to a number of key driving forces.

The pressure to cut costs

As is so often the case in health care, economics has probably been the single most powerful factor driving the trend toward expanded scope of practice. And a recent *Businessweek* story on nurse practitioners sums up the reason succinctly: "Nurses are less expensive than doctors." The story points out that Medicare pays nurse practitioners "about 85 percent of what doctors get," while private insurance payment for nurse practitioners "can be as low as 50 percent" of what physicians are paid for comparable services.[35] Moreover, the appeal of these lower cost providers is heightened as health care costs continue to rise more rapidly than inflation. As a 2005 article in *U.S. News and World Report* on scope of practice noted, "Rising healthcare costs are a huge factor for consumers, health insurers, states, and employers… looking for less costly alternatives."[36] And although the growth of health care costs has leveled off somewhat over the past few years, the high cost of health care clearly remains a "huge factor" for all of these key stakeholders.

The following table, drawing from current data reported on Salary.com (unless otherwise indicated), illustrates the sometimes stark income differences between physicians and non-physicians practicing in corresponding domains:

Table 1: Comparison of Non-physician and Physician Income/Salaries

Non-physician	Median income/salary	Physician	Median income/salary
Audiologist	$69K	Otolaryngologist	$316K
CR Nurse Anesthetist	$157K	Anesthesiologist	$337K
Certified Nurse Midwife	$92K	OB-GYN	$255K
Chiropractor	$131K	Orthopedic surgeon	$414K
Naturopath	$62K (Naturopathic DoctorSalary.org, 2012)	Family Practitioner General Internist	$176K $188K
Nurse Practitioner	$91K	Family Practitioner General Internist	$176K $188K
Optometrist	$107K	Ophthalmologist	$251K
Oral and Maxillofacial Surgeon	$217K (Bureau of Labor Statistics, 2011)	Dermatologist Otolaryngologist Plastic Surgeon	$280K $316K $325K
Pharmacist	$115K	Family Practitioner General Internist	$176K $188K
Physical Therapist	$75K	Orthopedic surgeon	$414K
Psychologist	$83K	Psychiatrist	$194K

Not surprisingly, the cost-saving argument is often invoked by advocates seeking to expand the scope of practice for non-physicians, as the following examples illustrate:

- American College of Traditional Midwives: "Non-physician providers of medical care are in high demand in the United States. But licensure laws and federal regulations limit their scope of practice and restrict access to their services. The result has almost inevitably been less choice and *higher prices for consumers*… Studies have repeatedly shown that qualified non-physician providers—such as midwives, nurses, and chiropractors—can perform many health and medical

services traditionally performed by physicians—with comparable health outcomes, *lower costs*, and high patient satisfaction."[37] [emphases added]

- American Physical Therapy Association [responding to a *USA Today* article on collaboration in health care]: "As stated in the article, early access to physical therapists can play *a key role in reducing costs*, improving patient satisfaction, and getting our nation's workers back on the job as soon as possible… A recent study… found that patients who visited a physical therapist directly for outpatient care had fewer visits and *lower overall costs* on average than those who were referred by a physician…"[38] [emphases added]
- Arizona Association of Chiropractic [in a recent scope of practice application to the Arizona Legislature]: "… A change in scope to allow for the use of natural substances, homeopathic medications and orthomolecular therapy is an opportunity for doctors of chiropractic to enhance care for their patients. We also see this as *a potential cost savings for patients (and their insurance companies*)."[39] [emphasis added]

Interestingly, in its recent report on the future of nursing, the Institute of Medicine takes a somewhat more cautious approach to the cost-saving argument. Although the report advocates that "nurses should practice to the full extent of their education and training" and declares that "federal and state actions are required to update and standardize scope-of-practice regulations to take advantage of the full capacity and education of APRN's,"[40] the authors acknowledge that "compared with support for the role of nurses in improving quality and access, there is somewhat less evidence that expanding the care provided by nurses will result in cost savings to society at large." "However," they quickly add, "the evidence base in favor of such a conclusion is growing."[41]

Whatever the actual evidence for cost-savings, the argument that non-physician providers are, as the *Businessweek* article put it, "less expensive than doctors," clearly has broad appeal, not only to state legislators—who, among other things, bear responsibility for financing their state's share of Medicaid, as well as the health insurance premiums for state employees and retirees—but also to health insurance companies, employers, hospital and health care systems, the federal government, and patients who in many cases are footing an increasing share of their health care costs.

Physician demand for midlevel providers

In fact, the cost-saving argument has apparently also been persuasive to large numbers of practicing physicians, especially those in private practice. Faced with declining reimbursement rates and the need to increase patient volume in order to keep their practices afloat, many physicians now employ non-physician providers in their practice.[42] Results from the 2009 National Ambulatory Medical Care Survey, conducted by the National Center for Health Statistics, indicate that at that time almost half of all office-based physicians (49.1 percent) were in practices that used nurse practitioners, certified nurse midwives or physician assistants.[43] Thus, it appears that physicians themselves have been an important source of demand for at least some of the non-physician professions—largely because these non-physician providers offer a way for physician practices to increase patient volume (and revenues) at considerably

lower cost than they could by bringing on additional physicians. As Elizabeth Woodcock, a practice management expert, wrote in *Dermatology Times* last year, non-physician providers working for dermatologists "*provide a turbo boost to their practice's bottom line*."[44] [emphasis added]

In other words, physicians are caught in a conundrum partly of their own making: their increasing demand for nurse practitioners and other midlevel providers as a means of preserving or enhancing their practices' bottom line has helped to drive up wages for these professions, which in turn has contributed to their rapid growth—and consequently, to their growing political clout in legislatures across the country.

The pressure to increase access

Along with cost-savings, probably the most frequently invoked argument for expanding the scope of practice of non-physicians is that it will increase the public's access to care. For example, in its recent report on the future of nursing , the Institute of Medicine puts the access issue front and center in its call for expanded scope of practice: "To ensure that all Americans have access to needed health care services and that nurses' unique contributions to the health care team are maximized, federal and state actions are required to update and standardize scope-of-practice regulations to take full advantage of the full capacity and education of APRN's [Advance Practice Registered Nurses]."[45] Other examples, from the state level, include the following:

- New Jersey: "As many of you know, it is my dream—in fact, my public life's work—that the health care system becomes accessible to everyone who lives here… Quite honestly, we will fail in our accessibility goal without the best use of every member of the health care team." [Testimony of State Senator Joseph Vitale in support of a bill to expand scope of practice for CRNAs.][46]
- Texas: "Texas has a significant problem with access to primary care around our state… The reality is that 'more physicians' is no longer a viable solution on its own… Giving APN's [Advance Practice Nurses] the ability to practice to the extent of their education and training will improve patient access to prompt treatment as well as efficient and effective patient-centered care without changing quality." [Testimony of The Honorable Arlene Wohlgemuth, Texas Public Policy Foundation, in support of bills expanding scope of practice for APN's.][47]
- Hawaii: "[One of] the purposes of this legislation [is] to… help solve the critical shortage of primary care providers by providing insurance coverage for patients to see naturopathic physicians… Access to primary care is critically limited in Hawaii, particularly on the neighbor islands." [Testimony of Michael Traub, ND, Hawaii Society of Naturopathic Physicians, in support of a bill requiring insurers to cover naturopathic services.][48]

Meanwhile, advocates have seized upon the projected surge in the number of insured Americans under the federal Affordable Care Act as another compelling reason for states to expand the scope of practice of non-physician providers, especially nurse practitioners. In an article in the *New England Journal of*

Medicine, several of the individuals responsible for the Institute of Medicine's report on the future of nursing (including Donna Shalala, the committee chair) wrote: "The Affordable Care Act promises to add 32 million Americans to the rolls of the insured at a time when there is a shortage of primary care providers… We believe that if we are to bridge the gap in primary care and establish new approaches to care delivery, all health care providers must be permitted to practice to the fullest extent of their knowledge and competence."[49] And the president of the American Academy of Nurse Practitioners told the *Washington Post*, "We know that the Affordable Care Act will extend health coverage to millions of Americans. It's important for consumers to understand what we do and that we're fully prepared to care for them." Toward that end, she said that her organization planned to launch a major public awareness campaign to raise the profile of nurse practitioners, followed up by state-level lobbying efforts to expand their scope of practice.[50] Indeed, several of the state medical society executives we spoke with expected that the Affordable Care Act would result in stepped-up pressure on state legislatures to loosen existing restrictions on scope of practice. (In addition, one of them noted that the non-discrimination clause of Affordable Care Act could result in pressure by non-physician providers "to receive equivalent pay—for instance, that nurse midwives have to be paid the same as obstetricians for their services." This, however, could prove self-defeating for the non-physician providers, since it would remove what is arguably their primary competitive advantage: lower cost.)

The physician shortage

A key aspect of the access argument has been the growing shortage of primary care physicians, which is leaving a primary care vacuum that nurse practitioners and others are seeking to fill.[51] The *New York Times* recently cited projections from the Association of American Medical Colleges (AAMC) that the nation will be short 45,000 primary care physicians in 2020, a number that is expected to grow to 65,000 by 2025.[52] Part of the problem, say the experts quoted by the *Times*, is a medical school culture that discourages students from pursuing primary care, and another big part of the problem is the substantial income differential between primary care and specialty physicians (as reflected in Table 1 above). As a result of these factors, only 15 to 20 percent of all medical students actually wind up practicing primary care.[53] Thus, in making her case for further expanding the scope of practice for nurse practitioners, a nurse practitioner from Morgantown, West Virginia, last year told legislators that 40 percent of the patients admitted to the local hospital in Morgantown did not have primary care providers, adding, "I can't even imagine what it's like in the rest of West Virginia that's rural and underserved."[54]

But the vacuum is not limited to primary care. In addition to projecting a gap of 45,000 primary care physicians by 2020, the AAMC also projects a shortage of 46,000 surgeons and specialists by that time,[55] a shortage that is already making itself in many parts of the country and is being used as an argument for scope of practice expansions by a range of non-physician providers. A representative of the Utah Psychological Association, seeking prescription rights for psychologists, told state legislators about a bipolar patient who had to wait eight weeks to see a psychiatrist and in the meantime was hospitalized following a suicide attempt.[56] And Kentucky optometrists, in their successful bid for the right to perform laser surgery, made the point that two-thirds of the state's 120 counties did not have an ophthalmology

practice, while 106 counties had optometry practices. “We’re concerned about elderly patients with impaired vision who have to drive long distances to receive care they could receive from their hometown eye doctor,” the president-elect of the Kentucky Optometric Association declared—meaning, no doubt, their hometown optometrist.[57]

Corporate interests

Another issue raised by several of the medical society executives we interviewed was the growing role that various corporate interests have been playing, especially in expanding the scope of practice for pharmacists. “The retail pharmacists wanted to immunize,” one recalled. “We fought it and lost everything” (although another, quoted earlier, told us that his association had fought the big retailers “head-on” and prevailed—at least for the time being). As we also noted, in 2009 Rite-Aid and the Hannaford Brothers supermarket chain weighed in on allowing pharmacists in Maine to administer flu shots. And in 2010, the *Chicago Tribune* reported that “drugstore giants such as Walgreen Co. and CVS/Caremark Corp. want [age] restrictions [on those to whom pharmacists can administer vaccines] permanently dropped in Illinois, and they’re lobbying for changes to restrictions in other states”—adding that this was “causing the physician community some concern.”[58]

A more recent *Chicago Tribune* story, from September 2012, makes it clear what’s at stake for these corporations: “Last year, Walgreen Co.’s pharmacists and nurse practitioners vaccinated about 5.5 million people against the influenza virus, *making it the nation’s second-largest provider, behind only the federal government*. That’s 5.5 million opportunities to sell a bottle of aspirin, a sack of trail mix, a pack of gum and a magazine. It’s also that many more chances to remind customers of the additional health care services the Deerfield-based company offers, from shingles vaccines to primary care. Vaccinations have become big business for Walgreen and its competitors.”[59] [emphasis added]

Meanwhile, beyond giving vaccinations, a number of corporations—including, as the *Tribune* story indicates, Walgreen—have also been getting into the actual delivery of health care. Starting a little over ten years ago, Walgreen and other retailers like Wal-Mart, CVS/Caremark, Kroger, and Target have begun opening in-store retail clinics, many of them staffed by nurse practitioners.[60] And although last year Wal-Mart, the world’s largest retailer, ranked only a distant third in the industry with 140 clinics (CVS/Caremark had 550, and Walgreen had 355), in November 2011 National Public Radio and Kaiser Health News reported on an internal Wal-Mart document indicating its intention to become “*the largest provider of primary healthcare services in the nation*.”[61] [emphasis added] Reportedly, however, one source of frustration for these retail giants has been what they view as overly restrictive oversight requirements for the nurse practitioners who staff their clinics, at least in some states. “In particular,” write two attorneys active in health care, “retail clinics complain that onsite supervision is expensive and a significant waste of resources… Given the varying state requirements, retail clinic operators are likely to lobby for greater uniformity in state NP scope of practice, prescriptive authority, and physician supervision requirements.”[62]

Although it is not yet clear how much of a factor the retailers have been in the most recent battles over nurse practitioner scope of practice, the entry of these politically and financially powerful corporate interests into the scope of practice arena clearly has the potential to shift the balance of power further toward non-physician providers.

The FTC

In addition to various corporate interests, another important "outside player" that has begun to weigh in on scope of practice in recent years is the Federal Trade Commission (FTC). Although one of the medical society executives we interviewed told us that the FTC "has not been an issue, because we base our argument on patient safety, not income," others said they had not been as fortunate. "The FTC is looking at all of this, saying you can't pass anti-competitive laws," one of them told us. "That's a whole new wrinkle." Another reported that the FTC had become active in his state. "They send letters to legislators with the message that if you don't have patient safety data, you can't restrict practice," he said, adding that he expected that there will be a test case on this, possibly involving a multi-million dollar lawsuit, and that most medical societies could not afford to risk losing a suit of that magnitude.

In a fairly typical letter, commenting on a CRNA scope of practice bill that was under consideration by the Missouri legislature earlier this year, the FTC warned the legislature to proceed with caution: "FTC staff urge legislators to carefully consider whether there is evidence to justify the broad restriction on CRNA practice that HB 1399 would impose… If the legislature finds that regulation is warranted—for example, with respect to particular procedures or indications—we recommend that the legislature consider how best to tailor provisions and restrict CRNA practice only to the extent required to ensure patient safety… In our view, HB 1399 threatens to raise costs, limit access, and reduce choices for Missouri patients. We therefore recommend that the House carefully investigate patient safety issues and ensure that any statutory limits on CRNAs are no stricter than patient safety requires." The letter was co-signed by the directors of the FTC's Office of Policy Planning, Bureau of Economics, and Bureau of Competition.[63] In other cases, the FTC has written in support of state legislation to expand scope of practice for non-physician providers, such as a recent Louisiana bill that would drop the requirement for a collaborative practice agreement for advanced practice nurses "who work in underserved areas or treat medically underserved populations."[64]

Earlier this year, the FTC's aggressive intervention into state scope of practice deliberations prompted an angry letter from five Members of Congress (including three Republicans and two Democrats) to the FTC's chairman charging that "the FTC [has] taken a number of actions in direct conflict with the legislatively mandated responsibility of state health regulatory boards to make policy determinations to protect the public," and citing recent examples of such actions in Texas and North Carolina.[65] Two months later, the FTC chairman received another, very different letter—this one from AARP and 46 nursing associations—expressing their support for the FTC's involvement in scope of practice: "As Baby Boomers retire and demand increases for primary care, maternity care, and anesthesia care, healthcare professionals such as RN's and APRN's must be utilized to the fullest extent of their education and

training to advance patient safety, promote competition, ensure access to care, and lower cost. We applaud the agency's efforts to review regulations and legislation and to express views from the standpoint of the marketplace when the effect of these actions would lower or eliminate competition, and we urge the agency to continue its efforts in this area."[66] Just how active the FTC remains on scope of practice will probably depend in part on the outcome of this year's presidential election.

The evidence gap

Finally, one other key "driving force" behind the recent scope of practice expansions has been the lack of evidence that physicians provide higher quality care than non-physician providers. A number of the state medical society executives we spoke with expressed concern that they had very little hard data and few, if any, empirical studies with which to refute the growing body of research presented by non-physicians and their advocates—research that tends to show that their clinical outcomes are at least as good as those of physicians. Among the executives' comments:

- "I don't think we can hold back scope of practice much longer without data. If there's no data, we're on thin ice."
- "The CRNAs have data [showing favorable outcomes], but we don't have any data showing that physician outcomes are better."
- "We don't have a strong policy argument [against allowing optometrists to prescribe oral medications] because we don't have any data showing that there's a problem in the other 46 states that *allow* prescriptions."
- "We just don't have the outcome data."
- "The doctors tell me anecdotally that they see a lot of patients from the [nurse-run] clinics with adverse outcomes, but there's no systematic data."

Interestingly, a source we spoke with at the American Medical Association appeared to be less concerned about this evidence gap. While acknowledging that there was a lack of empirical evidence documenting better outcomes for physicians, she felt that the need for such evidence would begin to fade as health care moved towards larger systems of care. Those systems, she said, would determine "who should do what" largely on cost-effectiveness grounds, and she expressed confidence that physicians would "come out on top" in that process.[67]

Meanwhile, however, non-physician provider advocates have continued to wield studies supporting their position in legislative battles around the country and in their public relations campaigns—and in some cases, the findings from those studies do sound impressive. One of the most frequently cited is a randomized clinical trial conducted by Mary Mundinger (then professor and dean of the Columbia University School of Nursing) and her colleagues and published in the *Journal of the American Medical Association* in 2000.[68] The study compared outcomes for patients treated by nurse practitioners with outcomes for comparable patients who were treated by primary care physicians. The patients were predominantly Medicaid-eligible Hispanic women in New York City who received their primary care from

a network of community clinics established by the Columbia Presbyterian Medical Center, including one clinic that was staffed exclusively by nurse practitioner faculty (according to the authors, New York State at that time allowed nurse practitioners to practice under a collaborative agreement with a physician that required the physician to respond if the nurse practitioner requested consultation).

As the authors noted, there had been a number of earlier studies suggesting that "the quality of primary care delivered by nurse practitioners is equal to that of physicians," but those studies "did not directly compare nurse practitioners and physicians in primary care practices that were similar both in terms of responsibilities and patient panels."[69] It was those limitations that this randomized trial was designed to overcome. And indeed, according to the authors, the positive results from those earlier, less rigorous studies were confirmed: "The hypothesis predicting similar patient outcomes was strongly supported by the findings of no significant differences in self-reported health status, 2 of the 3 disease-specific physiologic measures, all but one of the patient satisfaction factors after 6 months of primary care, and in health services utilization after 6 months and 1 year."[70‡] Moreover, these initial positive findings for nurse practitioners were sustained in a subsequent two-year follow-up study.[71]

Yet, as Mundinger and her colleagues themselves acknowledged, even this landmark study had its limitations that "limit the generalizability of the results."[72] For example, it was conducted in medical center-affiliated community clinics "which may differ from individual practices or small group practices," the providers were university faculty and therefore "not necessarily typical of those in non-academic settings," and the patients were demographically and economically different from those found in a typical private primary care practice.[73] In his editorial accompanying the original *JAMA* article, Harold Sox, a professor of medicine at Dartmouth Medical School and recent past president of the American College of Physicians, praised the study's internal validity but said that the study's external validity—which, as he put it, "measures whether the authors' findings are likely to apply to other study sites and other populations of patients"—was "quite weak."[74] But Sox predicted that despite its admitted shortcomings, the Mundinger study would be used as ammunition by those seeking to expand the role of nurse practitioners. Sounding almost despondent, he wrote: "Because the Columbia study leaves so many questions unanswered, its evidence that nurse practitioners and primary care physicians could be interchangeable is far from convincing, but the marketplace is not given to fine judgments. The Columbia study, taken in the context of cost control and the growth of the nurse practitioner workforce, is likely to mean more competition for general internists and family physicians."[75]

The Mundinger study is not the only one of its kind to have limitations. In 2004, the Cochrane Collaboration published the results of an extensive review of the literature on the issue of nurse-physician substitution.[76] After combing through 4,253 "potentially relevant articles," the authors were able to identify only 16 studies that met their rigorous inclusion criteria, and of these 16 studies, only

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‡ The nurse practitioners actually did a little better than the physicians on the diastolic hypertension measure (82 mm for the nurses vs. 85 mm for the physicians), while the physicians scored slightly higher—4.22 vs. 4.12—on a 5-point scale measuring patients' ratings of their providers' technical skill, personal manner, and time spent with patient. Both of these differences were small but statistically significant.

13—including the Mundinger study—were actually randomized or quasi-randomized controlled trials. Using nine standard methodological criteria to assess these 13 studies, the authors concluded that "all [13] studies had methodological shortcomings." For example, they reported that in 12 of the 13 studies (including the Mundinger study), "it was unclear whether or not contamination had occurred;" and they found that "concealment of allocation was not reported in seven studies" (again including the Mundinger study). The bottom line was that of the 13 randomized or quasi-randomized trials in the Cochrane analysis, not one met all nine, or even eight, of their methodological criteria. (Seven of the trials met between four and seven of the nine criteria, and the remaining six met at most three of the nine criteria.)[77]

Yet despite these many methodological flaws and limitations, the authors of the Cochrane review seem to conclude—perhaps based on the cumulative weight of all these studies—that nurses can in fact provide primary care as well as physicians. As they very carefully put it, "The findings suggest that nurses and doctors generate similar health outcomes for patients, at least in the short-term, over the range of care investigated." [78] And although they are quick to add the caveat that "the findings must be viewed with caution, given that only one study was powered [that is, had sufficient statistical power] to assess equivalence of care," that caveat—like those in the Mundinger study—is not mentioned when their review (along with the Mundinger study and others) is cited in the Institute of Medicine report on the future of nursing.[79] Nor, we imagine, are any of these methodological shortcomings or caveats likely to be mentioned when these studies are cited by advocates for scope of practice expansion in legislative hearings across the country.

We should point out that a number of the studies supporting scope of practice expansion were either led by nurses—as in the case of the Mundinger study and several of the other studies included in the Cochrane review—or funded by nursing organizations, such as the Lewin Group's recent study documenting the cost-effectiveness of CRNAs[80] and a 2010 study by Dulisse and Cromwell comparing inpatient mortality and complication rates in states with and without the Medicare opt-out on CRNA supervision,[81] both of which were funded by the American Association of Nurse Anesthetists. The Dulisse and Cromwell study, which appeared in *Health Affairs*, was roundly criticized by the American Society of Anesthesiologists on a number of methodological grounds.[82]

Implications

The combined impact of all of these economic, political, and social forces that are driving the expansion of scope of practice help to explain why many of the physicians and medical society executives we spoke with feel so beleaguered by this issue—and why it is so difficult to fight. What's more, because many of these underlying forces are, if anything, likely to intensify as policy makers, payers, and large health and hospital systems double down on finding ways to reduce costs and expand access, it doesn't look like the battle over scope of practice will end anytime soon, at least in most states. The fact that only 15 states, which together account for only 14 percent of the nation's nurse practitioners, received an "A" grade in the most recent Pearson Report means that nurse practitioners still have a long way to go to

achieve the level of professional autonomy they want nationwide. And presumably, the same is true for psychologists, who so far only have prescription privileges in two states; for optometrists, who only have surgical privileges in three states; for naturopaths, who are only licensed in 16 states; and so on.

But meanwhile, what do we know about the *impact* of the expansions in scope of practice that have already occurred, either on the public or on physicians? Surprisingly little, it turns out. Although the literature on scope of practice is replete with claims that expanding scope of practice for nurse practitioners and other non-physician providers will increase access and reduce costs, and although those claims make a certain amount of intuitive sense, we were not able to identify any hard data from states that have lifted scope of practice restrictions that these gains in access and cost savings have actually occurred. This does not mean that those gains didn't occur; only that we weren't able to find any actual documentation one way or the other.

Absent such documentation, we tried to take a look at quality of care. To do this, we compared nurse practitioner state ratios for Healthcare Integrity and Protection Data Bank (HIPDB) occurrences reported in the 2012 Pearson Report for the 15 states (and DC) that had received an "A" grade (that is, those with the least restrictive scope of practice) in the same Pearson Report with nurse practitioner HIPDB ratios for the 14 states had received a "D" or "F" grade (most restrictive). The HIPDB, which was created under the Health Insurance Portability and Accountability Act of 1996 and measures "accumulated adverse action reports, including licensure actions and any other negative actions, findings, or adjudicated actions, and civil actions or criminal conviction reports," was designed to serve as "a flagging system whose goal is to alert users that a comprehensive review of a practitioner, provider, or supplier's past actions may be prudent."[83] So the state ratios for HIPDB occurrences tell us the number of nurse practitioners there are in a state for each "adverse action" reported—which means that the higher a state's ratio is, the lower the rate of "adverse actions" is among its nurse practitioners. We found that the 15 "A" graded states and DC had an average ratio of 1:456, while the 14 "D" and "F" graded states had an average ratio of 1:576. In other words, based on the HIPDB ratios, the states with the most restrictive scope of practice laws for nurse practitioners had about a 20 percent lower rate of reported "adverse actions" than the states with the least restrictive laws. What we cannot ascertain from the available data is whether the somewhat greater likelihood of "adverse actions" in the least restrictive states is balanced by potential benefits to the public such as increased access or reduced cost.

One other important point with regard to quality of care has to do with the *focus* of the existing research on scope of practice. The existing studies generally show that the care provided by non-physician health professionals—"*within their education, training, and experience*"—is on a par with the care provided by physicians. [emphasis added] But just what those words mean is often undefined or left to the individual non-physician provider to determine. Thus, these providers may not be prepared to handle complex cases, or might miss things that a better trained physician would catch. In a letter to the *New England Journal of Medicine*, the leadership of the American Academy of Physicians wrote: "We agree that certified nurse practitioners can provide many core primary care services, but it is important that this not be misunderstood as suggesting that nurses are interchangeable with physicians in providing the full depth and breadth of services that primary care physicians provide. The two

professions are complementary but not equivalent. For diagnostic evaluation of clinical presentations that are not straightforward and for the ongoing management of complex or interacting medical problems, the most appropriate clinician is the physician."[84] This point was underscored in a recent report by researchers from the Center for Studying Health System Change who noted that "while multiple studies show that APN's [advance practice nurses'] performance on such quality measures as delivery of recommended preventive services, patient satisfaction and short-term mortality are at least equal to that of physicians, *these measures represent only a subset of primary care competencies*. Different patients have different needs, and *little is known about what types of patients would benefit more from the experience and skill set associated with physician training and which would benefit equally well or more from the experience and skill set of APN's*."[85] [emphases added] This, it strikes us, is a critical area for future research, not only as it relates to scope of practice but also as the health care system moves increasingly toward a team-based approach to patient care.

As for the impact that scope of practice expansion is having on physicians, we did find one recent study, published in *Nursing Research and Practice*, that compared primary care physician earnings in states that allow nurse practitioners to practice independently of physicians with their earnings in states that do not.[86] Using 2009 earnings data from the Bureau of Labor Statistics, the authors found that average earnings for family and general physicians were slightly higher in the restrictive states ($81.15 per hour) than in the non-restrictive states ($79.36 per hour), while the reverse was true for general pediatricians ($78.43 in the restrictive states vs. $83.94 in the non-restrictive states). But in neither case were the differences statistically significant.

While these findings were quickly seized upon by advocates for expanding nurse practitioners' scope of practice,[87] it is important to note—as the authors do—that "the BLS data *includes only 'employed' physicians*."[88] [emphasis added] It seems to us quite likely that self-employed independent physicians, who are not on a fixed salary and who depend on patient fees and volume for their revenues, would be more directly and more significantly impacted by any new competitive pressure that independent nurse practitioners might introduce into their market. A family physician in private practice in one of the least restrictive states (that is, a state with an "A" grade in the Pearson Report) told us that, of all the non-physician providers, nurse practitioners are his greatest concern. "All of us in small practice are experiencing economic hardship," he said, "and I'm losing revenue to some of these nurse-managed clinics. I'm definitely feeling it."

Additional challenges

Physicians and their advocates face a number of tough challenges in their efforts to resist what they regard as inappropriate scope of practice expansions. Some of these—the large number of professions vying for expansions, the pressure on policy makers to reduce costs and expand access, the lack of empirical evidence demonstrating superior patient outcomes for physicians, and the increasing role of

outside players such as corporate retailers and the FTC—have already been discussed. But there are additional challenges that further complicate physicians' response, including the following:

Erosion of private practice

As we have described in previous reports, the proportion of U.S. physicians in private practice has been declining since at least the 1980's,[89] and the pace of decline appears to have accelerated in recent years as private practices have increasingly been squeezed by falling reimbursement rates and rising costs.[90] And because scope of practice tends to be of greater concern to physicians in private practice than it is to employed physicians on a fixed salary, over time the erosion of private practice is likely to weaken the resistance of state medical societies and specialty societies to scope of practice expansions. One state medical society director told us that 60 percent of his members are now employed and that "they are silent on this issue, although the independents are still very vocal." He believed that in the short run most state medical societies would continue to fight "vigorously" against inappropriate scope of practice expansions, but, he said, "If hospitals threaten to withdraw their members from the medical society, we will have to back off from scope of practice fights that impact large hospital systems." He added that so far, his medical society does not allow corporate memberships, although that could change if and when the pressure to grow the medical society's membership increases.

Another state medical society executive we talked with had recently relocated from a state where 50 percent of the physicians are still in small practices (five or fewer physicians) to a state where 70 percent of the physicians are in large groups or health systems (fifty or more physicians). He said that when podiatrists had pushed for a scope of practice expansion in the first state, "the orthopedists screamed," but not so in the second state. "The majority of my members here are in the big health systems," he explained, "and they're not going to fight scope of practice."

Physician ambivalence and apathy

Along with the erosion of private practice, several of the physicians and medical society executives we interviewed talked about the growing ambivalence among some physicians about scope of practice. "There are different views within medicine," one former medical society executive commented, adding that many of the physicians in his state who testified before the legislature on scope of practice were married to or in relationships with nurse practitioners. "Legislators see the mixed views within medicine, and then when you also have a medical school that sees nurse practitioners as part of the team, it makes it that much harder to deal with." Talking about optometry, another medical society executive said, "Most of the time, *we* are the problem. For instance, some of the ophthalmologists are *employed* by optometrists, or vice versa." And a physician told us, "It's not a black and white issue. Mid-levels are becoming part of the team—you can't get around it."

Adding fuel to the fire, a controversial 2010 editorial by Jeffrey Susman, a family physician and editor-in-chief of the *Journal of Family Practice,* attracted a good deal of attention in nursing circles with its call for physicians to "collaborate—not compete" with nurse practitioners.[91] In his editorial, Susman wrote: "It is time… to abandon our damagingly divisive, politically Pyrrhic, and ultimately unsustainable struggle with advanced practice nurses (APN's). I urge my fellow family physicians to accept—actually, to *embrace*—a full partnership with APN's." [emphasis in original] On a more modest note, a veteran medical society executive we talked with quietly suggested that maybe "instead of complaining about the Walgreen clinic," physicians should "work out a relationship."

Several of the physicians and medical society executives we spoke with also cited what they see as a problem of apathy or complacency, at among least some physicians. One told us, "The optometrists in our state have become very active now, and at the same time the ophthalmologists have become passive." He noted that in the most recent election cycle, the optometrists' political action committee had raised *ten times* as much in contributions as the ophthalmologists. The same concern was echoed by a state medical society executive who told us, "The mid-levels are highly energized to expand their scope, and the doctors aren't as engaged in fighting it." And a physician who has long been active on scope of practice issues said that in his state, "A lot of doctors are apathetic and overwhelmed. They feel like they're always blocking—always on the defensive." Indeed, when we reviewed all of the testimony that had been submitted on a recent bill in this physician's state that would require insurance companies and other payers to cover services provided by naturopaths, we found that only one physician and the state medical society had testified against the bill, while 13 naturopathic physicians, 66 patients, 12 other advocates, and the state society of naturopathic physicians had testified in support—outnumbering the physicians by a factor of 46 (the state association of health plans and Blue Cross-Blue Shield called for further study).[92]

Of course, not all physicians are ambivalent or apathetic about scope of practice. Indeed, several of the medical society executives we interviewed indicated that scope of practice remained a high priority for many of their members. "Even if we lose a fight," one of them said, "the members love us for standing up, and it makes them want to belong." Another told us, "There's pressure from members and from specialty societies to focus on scope of practice—even though it distracts time and capital from some of the more important systemic issues." The question remains, however, how many of these members are actually willing to make the personal financial and time commitments that will increasingly be required to win these scope of practice battles.

Sophisticated advocates

Another challenge, suggested by the optometrists' fund-raising edge and the naturopaths' strong legislative presence referenced above, is the growing political sophistication of some of the non-physician advocacy organizations. Nurses, in particular, seem to have stepped up their game. A recent article from the American Academy of Family Physicians provides an example from Texas, where nurse practitioners had made "a really strong push in 2009," but had been turned back. Noting that "the

nurses' failure in 2009 only seemed to strengthen their resolve for the 2011 legislative session," the article says that in 2010, staff at the Texas Association of Family Physicians started noticing editorials in newspapers across the state urging lawmakers to pass legislation that would grant APRN's independent diagnostic and prescriptive authority: "The editorials were written by representatives from both state and national APRN organizations, making this the first time the state nurses collaborated with their colleagues on the national level for independent practice authority in Texas. This, in turn, demonstrated that the APRN's had become more sophisticated in their efforts…"[93]

Similarly, a medical society director from another state told us that the nurse practitioners in his state "are really geared up this time," and that they have adapted the Institute of Medicine's report on the future of nursing to help them make their case to the legislature. In addition, he said, a national nursing organization was now targeting his state for a scope of practice win—probably because physicians have lost a key advocate in the state senate while nurses have gained several physician allies in the other chamber.

This same medical society director went on to say that the optometrists in his state (as in his colleague's state, mentioned above) had also become more sophisticated politically, and that they had outspent the ophthalmologists by a wide margin on campaign contributions (about 6 to 1). In part, he felt, the reason for the disparity was that "physicians don't see the need to give." He said the optometrists, on the other hand, fought hard to expand their scope of practice, "because they feel like they've been treated like second-class citizens." And although he emphasized the importance of cultivating "the right relationships" within the legislature, he said there were occasions when campaign contributions were critical. With some key legislators, he explained, "If you don't give the max, you don't get in the door." Along the same lines, another medical society executive talked about how the optometrists in his state had "ratcheted up their political activity a few years ago" by hiring new lobbyists and changing their strategy to include more grassroots activity. He said that a state senator friendly to physician interests on this topic had recently told him that "he didn't know how much longer [the physician advocates in the legislature] could hold out."

On the subject of campaign contributions, one state medical society executive acknowledged that "we all give them," but said, "The big difference is that the alternative providers have a single focus on their scope of practice, while we have to focus on everything." Kentucky appears to be a case in point. A report on the top lobbyists in Kentucky's 2011 general assembly indicates that the Kentucky Medical Association spent a total of $56,162 that year and managed to derail scope of practice expansion attempts by nurse practitioners, physician assistants, pharmacists and other non-physician practitioners. But the next biggest spender, just below the Medical Society at $55,667, was the Kentucky Optometric Association—which, as we noted earlier, successfully persuaded the legislature to make Kentucky the third state in the nation to grant optometrists the right to perform certain eye surgeries.[94]

Lack of non-medical allies

Advocates for non-physician providers often argue that although physicians resisting scope of practice expansions claim to be motivated by concerns for patient safety, their real motivation is financial. For example, in an article about the American Medical Association's negative reaction to the provider non-discrimination clause in the Affordable Care Act, the editor of a chiropractic publication wrote: "While the AMA and its specialty groups frame their pro-discrimination campaign in terms of protecting public health, saving taxpayer and patient dollars, helping the public avoid 'massive confusion,' and supporting the highest possible standards of health care quality, *the underlying motivation is transparently self-serving*."[95] [emphasis added] An article on the American College of Traditional Midwives website quoted earlier makes a similar assertion: "Safety and consumer protection issues are often cited as reasons for restricting non-physician services… [But] licensure laws appear to be designed to limit the supply of health care providers and restrict competition… The primary result is *an increase in physician fees and income* that drives up health care costs."[96] [emphasis added] And a nurse practitioner in Georgia, speaking in opposition to a physician supervision requirement in a bill that was then under consideration by the state senate, declared, "They have gone overboard trying to protect the patients and *they're trying to protect their wallets*."[97] [emphasis added]

The difficulty for physicians is that, although most are genuinely concerned about patient safety and quality of care, in fact they often *do* have a financial stake in these scope of practice conflicts—a reality that almost all of the physicians and medical society executives we interviewed acknowledged (although they differed on how much of a factor it was). Of course, the non-physicians on the other side of the table often have at least as great a financial stake themselves,[98] which is why they are willing and able to raise and spend substantial sums for the necessary campaign contributions, lobbyists, legal fees, research, and public advocacy campaigns.

But in addition, some of these non-physician groups have actively sought out and secured the support of non-medical allies, including allies who do *not* have a direct financial stake in the scope of practice issue (although they may benefit in the long run from lower health care costs or expanded access). The most striking example of such an alliance is the one that exists between nurses and AARP—arguably the most powerful consumer advocacy voice in the nation. As referenced earlier, AARP recently joined with a large number of nursing organizations in supporting the FTC's interventions related to nursing scope of practice, but it is doing much more than that. With funding from the Robert Wood Johnson Foundation, AARP has established a Center to Champion Nursing in America which is coordinating a national campaign that now includes state action coalitions in 49 states to implement key recommendations of the Institute of Medicine's report on the future of nursing—including "removing barriers to practice and care." [99] These state action coalitions generally reach well beyond nursing. New Jersey's coalition, for example, includes AARP New Jersey, the Chamber of Commerce, the Horizon Foundation of New Jersey (Blue Cross Blue Shield's corporate foundation in New Jersey), and the New Jersey Hospital Association,[100] while the Texas action coalition, which is co-led by the Texas Nursing Association and Blue Cross Blue Shield of Texas, includes numerous individual nursing organizations, hospitals, health care systems, businesses, and educational institutions, as well as other statewide organizations such as the Texas Association of Business and the Texas Hospital Association.[101] Similarly broad-based coalitions exist in most of the other states as well, although at varying stages of development.

Physicians, on the other hand, appear to be waging these scope of practice battles largely on their own, primarily through their state medical associations and specialty societies. “We don’t have allies and we don’t really cultivate them—probably because we’re really busy,” a physician told us. A medical society executive said that most his alliances around scope of practice were with specialty societies (“It depends on whose ox is getting gored”) and said that consumer groups were generally more focused on cost of care and access. The same seems to be true at the national level. The Scope of Practice Partnership, formed in 2005,[102] now includes all state medical associations except Rhode Island, 37 state osteopathic associations, 13 national medical specialty societies, the American Medical Association and the American Osteopathic Association—but no consumer groups or others who do not have a direct financial stake in scope of practice.[103] (However, we were told that the AMA does intend to reach out to some of these groups in its current “Truth in Advertising” campaign to promote greater provider transparency, discussed below.)

Occasionally, there is even a falling out among physicians themselves, as happened recently in Florida when the state ophthalmology society strongly objected to a decision by the state medical society to change its position on optometric scope of practice in exchange for support on a key piece of medical malpractice legislation that had long been stalled in committee. “We all support tort reform, but to give in on this is patently wrong,” the president of the state ophthalmology society fumed.[104] Meanwhile, the state medical society, for its part, was frustrated that the ophthalmologists had raised far less money than they believed was needed to counter the optometrists.

Clearly, some of the member organizations of nursing action coalitions do have a financial interest in expanding the scope of practice for nurse practitioners and other non-physician providers, including insurers and employers who pay for care, as well as hospital systems looking for ways to cut costs. But the presence of consumer voices like those represented by AARP helps these coalitions to make the case that they truly are acting in the public interest—an argument that is sometimes more difficult for physicians, acting on their own, to make.

Public confusion

One additional challenge that is increasingly coming into play, both in clinical settings and in the political process, is the proliferation of doctoral degrees throughout many of the non-physician professions. “We need a massive education of the public so they really understand who’s taking care of them,” a physician in private practice told us. “There are nurse practitioners with doctorates who are intentionally passing themselves off as doctors. There’s one here locally who’s doing that,” he added, “and it’s definitely confusing to patients.”

In fact, as the *New York Times* put it, “Doctorates are popping up all over the health professions”—not only in nursing, where the number of doctoral degrees awarded soared from just 170 in 2004 to more than 7,000 in 2010, but also in other areas such as pharmacy, optometry, audiology, podiatry, and physical therapy.[105] There have even been calls from within dentistry for dentists to be renamed as “oral physicians.”[106] Indeed, pharmacy students and optometrists are now *required* to obtain a

doctorate in order to practice, and beginning in 2015 the same will be true for those wanting to become nurse practitioners and physical therapists—a change that is intended to increase their competencies beyond those previously required.

As the *Times* story points out, not only has this proliferation of doctorates caused confusion among patients but also, at least with respect to nursing, it has prompted a concern among physicians that "the real reason behind the creation of the doctor of nursing practice degree is to persuade more state legislatures to grant nurses the right to treat patients without supervision from doctors."[107] Nursing leaders, on the other hand, insist that it is only about keeping up with the increasing complexity of patient care. "We are reconceptualizing the educational requirements to stay current with a complex health environment," the executive director of the American Association of Colleges of Nursing maintains. "It is clear that changing demands of practice require taking more course work to stay safe and current."[108]

Whatever the real motivation behind the "doctor-mania"—and in some cases, such as dentistry, it may be more the fear of encroachment by less highly trained paraprofessionals (such as dental technicians) than any desire to encroach on medical turf[109]—physicians are increasingly concerned about the potential for public confusion, and in response, the American Medical Association has launched its Truth in Advertising campaign, as mentioned above. Citing data from a survey that found, among other things, that 67 percent of the public think that a podiatrist is a medical doctor while only 32 percent think that an otolaryngologist is (55 percent don't know), the campaign is intended to persuade lawmakers to require all health professionals (including physicians and non-physicians) to "accurately and clearly disclose their training and qualifications to patients."[110] AMA staff informed us that as of October 10, 2012, eleven states (Arizona, California, Connecticut, Illinois, Oregon, Oklahoma, Maryland, Mississippi, Pennsylvania, Tennessee, and Utah) have enacted laws based "in whole or in part" on its model legislation since the Truth in Advertising campaign was launched in 2010.[111]

Responses

In reviewing the almost overwhelming list of driving forces and challenges facing physicians and their advocates—the economic pressures to cut costs, the primary care vacuum, the involvement of powerful new corporate and government players, the lack of supportive evidence, the erosion of private practice, the ambivalence and apathy among some physicians, the growing political sophistication of some of the non-physician advocates, the lack of non-medical allies, and the growing public confusion—it is nothing short of remarkable that they have been able to hold the line on scope of practice as effectively and for as long as they have.

How have they done it? "Pure political might," one veteran state medical society executive told us bluntly. "And you have to have a specialty society that will fight." He also stressed that it was important to pick one's battles: "How important do your docs think it is?"

We heard essentially the same thing from another veteran medical society executive, who said, "From sheer political muscle, we've been able to hold back the tide." Asked what that involved, he told us that his medical society had:

- strengthened its lobbying core by bringing in a new in-house lobbyist
- worked more closely with specialty societies
- stepped up fund-raising efforts for its political action committee
- set up a 527 organization, using scope of practice as one of its litmus tests

But despite the added firepower, he acknowledged that there were times when it made more sense to negotiate and to compromise than to pursue a futile all-or-nothing strategy. For example, he said, the first time that pharmacists in his state—with the backing of some of the big retailers—sought to expand their scope of practice to allow them to administer vaccines, the medical society fought them and lost everything. "So when they came back and wanted to give additional vaccines, we negotiated a mandatory training course and mandatory reporting of adverse events, and we got a provision that a shingles vaccine can only be given with a doctor's prescription."[112] And last year in California, the state medical society and orthopaedic association joined in an "unprecedented partnership" with the California Podiatric Association to evaluate and upgrade podiatric training—a step that could one day lead to licensure for California podiatrists as physicians and surgeons.[113]

However, another medical society executive we spoke with had a different strategy, at least during his first few years on the job. He told us that after mending fences with the specialty societies and a key legislative leader, he took a very aggressive approach on scope of practice. "We did *not* negotiate with the alternative provider groups," he said. "We had to show them that we were fighters and that we won't back down. So *now* if we decide that it's in our interest to negotiate on something, we do so from a position of strength." And in a newsletter last year, the president of the Illinois State Medical Society cautioned his members about the risks of compromise: "Each year, state lawmakers hear from a number of professions pressing for scope of practice expansions, and they hear from us why these expansions aren't good for patient care. After a few years of the same debate, lawmakers usually seek compromise, thinking if they get both sides to agree, it will be the end of the issue. However, compromise often isn't the end of the story." As an example, he cited a compromise that had been reached with the state's optometrists in 2007 that allowed them to prescribe certain oral medications. Yet now, he said, "here we are in 2011, and guess what Illinois optometrists are seeking again; full prescriptive authority!"[114]

But while there are differences of opinion about how aggressive to be—differences that in part probably reflect different political realities across the states—there was general agreement among the medical society executives we interviewed that campaign contributions are an important and necessary part of the process (although one did comment that campaign contributions weren't as much of a factor in his state because the legislative races in most districts were so inexpensive). And almost everyone talked about the importance of cultivating good relationships with key legislative leaders. As one medical society executive put it, "Campaign contributions are a factor, but relationships are just as important." And a former medical society president whose medical society has successfully halted scope of practice forays by optometrists, psychologists, podiatrists, and nurse practitioners told us, "The secret to our

success has been: (a) having an effective lobbying team, (b) having representation on all the relevant boards, like the board of medical examiners, and (c) *having friends on the key committees in the legislature*. We invite them to our functions, we contribute to their campaigns, and we serve as a resource to them." [emphasis added]

Another point on which there was broad agreement was that the focus of the physicians' position on scope of practice has to be *solely and relentlessly on patient safety*. Asked how his medical society had defeated a recent scope of practice challenge by CRNAs, an experienced medical society CEO replied, "It was partly political—having the right relationships. But most of it is still on the science: that they don't have the training and therefore it's not safe for patients." Another told us that the FTC has not been an issue for him so far "because we base our argument strictly on patient safety." And while the AMA's scope of practice series was mentioned as a useful resource, two of the medical society leaders we talked with said that a particularly compelling way for them to make their case about patient safety to the legislature had been to present testimony by a physician who had previously been a non-physician provider. As one recalled, "The most powerful testimony we had was from a CRNA who had gone on to medical school and told them, 'I didn't know how much I didn't know.'"

In addition to these broad strategies, some of the medical society leaders shared steps they had taken to address specific challenges that they faced. For example, one executive who was concerned that his board didn't fully appreciate just what the medical society was going to be up against in an upcoming scope of practice challenge from CRNAs scheduled a mock debate at an upcoming board retreat between two anesthesiologists—with one of them playing the role of the CRNA. Another executive, who has been trying to boost membership by providing corporate discounts, became concerned that this might inadvertently weaken the medical society's willingness to fight on scope of practice—and so, he told us, he decided not to include the dues from those sources in putting together the medical society's budget: "So if they walk away, we won't be hurt." And in West Virginia, where last year optometrists were aggressively pushing to be allowed to use lasers on patients with glaucoma and to advertise as "optometric physicians," the state medical society and the ophthalmologists decided to reach out beyond ophthalmology to the American College of Surgeons for support—even though presumably surgeons would not be directly affected the proposed legislation. As a regional state affairs associate at the College of Surgeons explained, "Whereas an orthopaedic surgeon's practice may not be directly affected by optometrists expanding their scope of practice, *his or her patients certainly will be affected* if they visit an optometrist who is unqualified to perform a procedure."[115] [emphasis added] Indeed, the very fact that the surgeons did *not* have a direct financial stake in the outcome but were motivated by a concern for their patients probably brought an added credibility to the physician response.

The role that the American College of Surgeons played in West Virginia is a reminder that, even though scope of practice is ultimately a state issue, national organizations also have a role to play. As we said earlier, the American Medical Association has been active on a number of fronts, including:

- Serving as an active member of the Scope of Practice Partnership, and providing it with critical staff and financial support

- Updating its Scope of Practice Data Series to document the differences in education and training between physicians and non-physician providers[§]
- Launching a national "Truth in Advertising" campaign that has already resulted in legislation in 14 states

In addition, the AMA is supporting a geographic mapping initiative at the University of North Carolina at Chapel Hill to determine where non-physician providers actually practice,[116] and has actively weighed in on a range of federal policy issues related to scope of practice, such as the way the Centers for Medicare and Medicaid Services define "physician" for reimbursement purposes,[117] the terms of the provider non-discrimination clause of the Affordable Care Act,[118] and the role of the FTC in scope of practice policy.[119] Other national physician organizations, such as the American College of Physicians and the American Academy of Family Physicians, have produced position statements on scope of practice,[120] and as noted, fourteen national specialty societies—as well as the AMA and the American Osteopathic Association—participate in the Scope of Practice Partnership.

Yet in spite of their strong track record overall and an impressive string of scope of practice victories, many of the physicians and medical society executives we spoke with—even in some of the most restrictive states—were skeptical about the future. "It's going to get tougher," one veteran director warned. A medical society executive from one of the more restrictive states said, "We point to other states and show them how it's a foot in the door to independence, but I think we can only hold them off a few more years." "I don't think there's a solution," another worried. "I don't think we can win in the legislatures, and we're also up against the insurance companies." A physician who shared this concern about the insurers told us, "The insurance industry supports these efforts to 'dumb down' medicine because they think it will save them money." He added that "we may need to rethink the model of care—more like a medical home where the physician sees the most complex cases."

In fact, several of the respondents thought the model of care was already evolving. "A lot of doctors are still in denial," a medical society executive in another restrictive state said. "But sooner or later they will realize that while their practice is still a pyramid, and while they're still on top of the pyramid, it will be a much flatter pyramid, with less of a pay differential between the doctor and the mid-levels—and they'll be angry about it." Another told us, "There are fewer and fewer good arguments. If medical care goes to the team model, a lot of the scope arguments go away because everyone will have to cooperate"—a perspective which, as we noted earlier, we also heard from one of our sources at the AMA. And the medical society director from the state where 70 percent of the physicians are now in groups of fifty or more declared, "The world is changing. Are we going to be the protectors of the status quo?"

But even with these doubts about the future, many of those we spoke with—especially the physicians—still believed strongly that the scope of practice battles were very much worth fighting. "I have mid-levels in my office and we work well together, but they know where their limits are," one physician in

[§] AMA sources told us that they expect the Data Series to be fully updated in 2013.

private practice told us. “If we can’t expand the number of physicians and we’re going to use nurse practitioners, I want them to at least be supervised. Mid-levels just don’t have the breadth of knowledge [to practice on their own].” Another physician was concerned that “while the people who initiated this were highly trained and experienced, a lot of the new ones go through accelerated programs and have a lot less experience.” A family physician told us that while nurse practitioners might appear to be less expensive than physicians, they would prove to be more expensive in the long run because of increased errors and specialty referrals. And another practicing physician said that “in some states, the nursing scope of practice could be interpreted to include surgery—which is outrageous! I don’t see how you can have something that requires four years of training and seven years of residency, and then expect to be able do it with just minimal training.”

Next steps

Given all that physicians and their advocates are already doing to stop what they view as inappropriate scope of practice expansions by non-physician providers, is there anything more that can be done to respond to this relentless multi-front challenge to medical care? Below, we suggest several possible next steps for consideration by the Physicians Foundation and others with a concern for the quality of patient care in this country:

1. Support and advocate for a program of research to examine the broader impact of non-physician providers on the quality, safety and cost-effectiveness of patient care. Although there has been a wealth of studies on this topic over the years—especially on advanced practice nursing—many of them were either conducted or funded by non-physician provider advocates, and most have clear methodological limitations. More importantly, as pointed out by the researchers we quoted from the Center for Studying Health System Change, the measures used in these studies “represent only a subset of primary care competencies.”[121] And as James King, former president of the American Academy of Family Physicians, has aptly observed, “On a given day, a nurse practitioner *can* take care of about 80 percent of the patients—based on *quantity*. But it’s not 80 percent of the knowledge to recognize life-threatening presentations and the more acutely sick patients.”[122] [emphases in original] Studies of sufficient rigor and scale to capture the full breadth of primary care competencies that physicians bring to their practice—and with the external validity necessary to generalize the results to mainstream primary care—would be an invaluable addition to our understanding of this vitally important topic. And of course similar studies will ultimately be needed to answer the same fundamental questions about the other non-physician professions. Decisions with potentially profound implications for the health and safety of the public are currently being made on the basis of a research literature that, despite the profusion of studies, still has serious limitations.
2. Develop a standardized central reporting system in each state to enable physicians to report negative health outcomes resulting from non-physician care. Several of the medical society executives we spoke with alluded to anecdotal reports from their members about patients who had experienced such negative outcomes, but to our knowledge these incidents are not yet

being captured and monitored systematically. We were told by one of the state medical society executives we interviewed that "national organizations support mid-levels by testifying that [the proposed scope of practice expansion] has been done in X other states with no negative effects." Systematic state-level reporting and tracking of negative incidents would enable physicians and their advocates to respond to claims of this kind with actual data.

3. Create a password-protected website to enable state medical associations and their allies to share information and "lessons learned" across states. In the course of our interviews for this report, we were struck by the fact that in many cases state medical society executives were not fully aware of the strategies and experiences of their colleagues in other states with respect to scope of practice. Hopefully, this report will be of some value in that regard, but going forward we believe that it would be useful to all state medical societies who are grappling with this issue to have a systematic way to share their experiences and learn from the experiences of other states, especially since state-level activities by non-physician providers are increasingly being coordinated at the national level. Maintenance of such a website would probably require staffing in order to ensure that it is kept up to date; perhaps the Scope of Practice Partnership, which already has a website and a listserv, could serve as an organizational "home" for the website.
4. Undertake a concerted effort to engage non-medical allies—especially patient and consumer groups—who could support physicians on scope of practice. As we have discussed, one of the basic challenges that physicians (and non-physician providers) face in addressing scope of practice is the fact that they often have a direct financial stake in the issue—which, in the eyes of some, greatly undermines their position that they are acting in the public interest. Some non-physician providers (especially nurses) have sought to blunt this criticism by engaging non-medical allies, including consumer groups who do not have such a financial stake. So far, however, it appears that physicians have generally limited their alliances to other physician groups and organizations. Because there is a strong *prima facie* case that many of the proposed scope of practice expansions *do* in fact put the public at risk—as well as evidence from a recent telephone survey conducted by Baselice & Associates for the AMA that indicates a strong public preference for physician care and physician supervision of nurse practitioners[123]—it should be possible, with a concerted and deliberate outreach effort, to engage patient and consumer allies who would enhance the credibility of physicians on scope of practice issues.

Beyond these steps which have a fairly direct bearing on scope of practice, there is a more fundamental challenge that we believe will ultimately need to be addressed to get at the root of the scope of practice problem: the restoration of the primary care physician as the linchpin of the health care system.

As we noted earlier, one of the key driving forces behind the recent scope of practice expansions—especially for nurse practitioners—has been the primary care vacuum created by the growing shortage of primary care physicians in this country. As it is, the expansions in nurse practitioners' scope of practice are leading some primary care physicians to question why they bothered going into primary care in the first place. As one of the medical society executives we spoke with observed, "Most of this is playing out in primary care. If a nurse practitioner can get full autonomy after just two years [of

additional training], the primary care physician is going to say, 'Why did I go through all this extra education and training and debt?' It's just one more reason why medical students won't go into primary care." And a physician who has been active on scope of practice issues for many years told us that he warns the legislators in his state: "If you give the nurse practitioners too much autonomy, you'll lose your doctors, especially in the rural areas."

To the extent that these trends play out and further accelerate the already rapid decline in the number of primary care physicians, growing numbers of patients could soon find themselves receiving their primary care from an independent or clinic-based nurse practitioner. As a result, they would be more likely to be referred for specialty care, and that specialty care would be coordinated by the nurse practitioner—who in many cases would probably not have the knowledge, experience or status to go toe to toe with the specialty physicians. The upshot, for many of these patients, could be greater fragmentation of care, higher costs, and inferior outcomes.

So what, if anything, could be done to reverse the decline of primary care physicians and to return them to their rightful role as the patient's *primary physician*? At a minimum, we believe it would require three major steps:

- Elevation of the *status* of primary care within academic medicine. To be effective, this would probably mean adding additional years of post-graduate training, on a par with other specialties and subspecialties. While adding to the training requirements might seem counterintuitive at a time when primary care enrollment is in such sharp decline, we believe that it is warranted—just as the conductor of an orchestra must be its most highly trained musician.
- Restoration of the full range of functions for which the primary care physician has been trained, including diagnosis and treatment as well as referral. A family practice physician we spoke with felt particularly strongly about this point and told us, "Family practice physicians have become gatekeepers and are underutilizing their skills compared with specialists… They've become just a referral factory."
- Rebalancing the payment system to provide a competitive income to primary care physicians, commensurate with their increased training and their central role in patient care. In fact, without a significant increase in primary care compensation, no real reversal of the present negative spiral can be expected.

We recognize, of course, that the chances that such giant steps will be taken any time soon are slim to none. But given the direct connection that exists between the collapse of primary care medicine and the rise of the nurse practitioner and other non-physician providers, we felt that it was incumbent on us to at least present some ideas on the subject. And of course it is always possible, if the current trends toward large systems of care continue, that the logic of reinvigorating primary care as a pre-eminent medical specialty will once again become self-evident to policy makers and health system CEOs seeking the most efficient and cost-effective model of care.

Appendix A: People Interviewed and Sources for this Report

Rick Abrams, JD, CEO, Wisconsin Medical Society

Don Alexander, CEO, Tennessee Medical Association

Subhi Ali, MD, Tennessee Board of Medical Examiners

Karl Altenburger, MD, past president, Florida Medical Association

Todd Atwater, JD, CEO, South Carolina Medical Society

Peter Beurhaus, PhD, Vanderbilt University

Lawrence Downs, JD, CEO, Medical Society of New Jersey

Louis Goodman, PhD, CEO, Texas Medical Association

Catherine Hanson, JD, vice president, American Medical Association

Paul Harrington, executive vice president, Vermont Medical Society

Ripley Hollister, MD, board member, Colorado Medical Society

Palmer Jones, past executive vice president, New Hampshire Medical Society

Gerald McKenna, MD, past president, Hawaii Medical Association

Jennifer Nooney, Health Resources and Services Administration

Tim Norbeck, CEO, Physicians Foundation

Donald Palmisano, JD, CEO, Medical Association of Georgia

Gary Price, MD, past president, Connecticut State Medical Society

Kristin Schleiter, JD, American Medical Association

Jeff Scott, JD, general counsel, Florida Medical Association

Robert Seligson, CEO, North Carolina Medical Society

Michaela Sternstein, JD, director, Advocacy Resource Center, American Medical Association

Joseph Valenti, MD, past committee chairman, Texas Medical Association

Appendix B: Scope of Practice Summaries

- Audiologists
- Naturopaths
- Nurse Anesthetists
- Nurse Practitioners
- Optometrists
- Oral and Maxillofacial Surgeons
- Pharmacists
- Physical Therapists
- Podiatrists
- Psychologists

Audiologists

The Issue: Whether scope of practice policies should permit audiologists to practice autonomously—that is, independent of physician referral and supervision.

The Context: According to the Academy of Doctors of Audiology, an audiologist is a person "who, by virtue of academic degree, clinical training, and license to practice is uniquely qualified to provide a comprehensive array of professional services related to the identification, diagnosis, and treatment of persons with auditory and balance disorders, and the prevention of these impairments."[124]

Until recently, the entry-level credential for audiologists was a master's degree, which required two years of academic coursework followed by a one-year clinical fellowship. The profession phased out the master's-level programs and replaced it with the doctor of audiology degree (AuD), which, as of 2012, is the required entry-level degree to become an audiologist. One of the reasons for the change, as the audiology literature makes abundantly clear, is to make audiology a "doctoring profession."[125]

An implication of the change from master's level practitioners to "a doctoring profession" is the capacity to diagnose and treat hearing disorders without a referral from or supervision by a medical doctor and to become an initial entry point into the health care system. As the Academy of Doctors of Audiology has stated, "The audiologist is an independent practitioner…All professional activities related to this central focus [identifying, evaluating, and treating individuals with auditory impairments] fall within the purview of audiology."[126] The American Academy of Audiology writes, "The professional doctorate…strengthens our position as autonomous practitioners and providers of audiological services."[127]

In its report on audiologists for its scope of practice series, the AMA took exception to this expansion of the role of audiologist, stating, "The education and training of audiologists prepares them to provide essential and significant nonmedical and nonsurgical treatment for hearing and balance disorders. It does not, however, prepare them to collect and assess the clinical information necessary to make a medical diagnosis."[128] The president of the American Speech-Language-Hearing Association (ASHA), the association representing audiologists, lambasted the AMA's report, terming it "inaccurate," "misleading," and "rife with opinions, misstatements, innuendos, and factual errors."[129]

Education and Training

As of 2012, all new entrants to the profession must receive an AuD degree from an accredited institution. The current AuD degree requires four years of post-baccalaureate graduate study, including both classroom learning and clinical experience. The AMA notes, however, that some programs require only three years—a "source of much contention and debate in the audiology community."[130]

An extremely divisive issue within the audiology field has been how to bring master's-degree audiologists up to the doctoral level. There were a variety of attempts to develop what the AMA termed "shortcuts" to a doctoral credential—such as granting academic credits for work experience—which led

to the creation of competing accreditation organizations sponsored by competing professional organizations.[**] The AMA, citing prominent individuals within the audiology field, has been critical of transition programs, commenting on the ease with which master's level audiologists can earn a doctoral degree.[131]

Whatever the divisions within the audiology field over the transition from master's degree to doctoral degree, at some future time all audiologists will have earned their AuD through an accredited four-year program. Nonetheless, the education and training of audiologists is, and will continue to be, substantially shorter than that of otolaryngologists, who pursue four years of medical school and then a five-year ENT residency.

Otolaryngologist	**Audiologist**
• 4 years undergraduate • 4 years medical school • 5 years ENT residency	• 4 years undergraduate • 4 years AuD program

Number of Audiologists and Practice Patterns: There are approximately 12,000 audiology practices, about a quarter of which are independent.[132]

Scope of Practice: State laws regarding scope of practice are generally silent on the issues of audiologists' independence and physician supervision. They are framed in more general terms, though some states, such as Illinois, limit the practice of audiology to "nonmedical" methods and procedures…related to hearing and disorders of hearing.[133] According to the ASHA, as of 2012:

- All states have licensing requirements for audiologists.
- 24 states require a doctoral degree for audiologists.
- 18 states require a master's degree for audiologists.
- 35 states allow licensed audiologists to dispense hearing aids.
- 18 states require a hearing aid dispenser license before an audiologist can dispense hearing aids.[134]

[**] The major accrediting body is the Council on Academic Accreditation in Audiology and Speech Language Pathology (CAA) of the American Speech-Language-Hearing Association. A competing organization, the Accreditation Commission on Education, was established by the Audiology Foundation of America in 2002 to accredit programs created to ease the transition from master's to doctoral training by crediting work experience toward an academic degree. This body, which is not recognized by the U.S. Department of Education, has accredited two programs. The existence of two competing accreditation bodies led to a lawsuit, settled out of court in 2000 with an agreement that effectively led to the end of what are called "earned entitlements [academic credit for work experience]." See AMA, endnote 6, pp. 18-26.

Medicare covers diagnostic tests administered by an audiologist as long as the beneficiary is referred by a physician. A high priority of ASHA is a comprehensive benefit that would cover diagnostic, monitoring, and rehabilitative services provided by audiologists.[135]

Naturopaths

The Issues: Whether scope of practice policies should enable naturopaths to be primary care providers and, by implication, receive mandated insurance payment for their services and liberal prescription authority.

The Context: According to the American Association of Naturopathic Physicians, naturopathic medicine is a distinct method of primary health care that seeks to restore and maintain optimum health by emphasizing nature's inherent self-healing process. This is accomplished through the use of natural treatment modalities (that is, treatment not involving pharmaceuticals or surgery). Naturopaths assert that they are identifying and removing the underlying causes of illness, rather than merely eliminating or suppressing the symptoms.[136] The American Association of Naturopathic Physicians states that current naturopathy blends modern and traditional therapies: "Naturopathic physicians craft comprehensive treatment plans that blend the best of modern medical science and traditional natural medical approaches to not only treat disease, but to also restore health."[137]

Naturopathy is one branch of a group of complementary and alternative practices that emphasize natural healing. These include acupuncture and traditional Chinese medicine, use of herbs/aromatherapy, nutritional counseling, homeopathy, biofeedback, massage therapy, and hydrotherapy, among others.[138] A 2007 survey revealed that nearly two out of five Americans use some form of complementary and alternative practices.[139]

There is a gulf between "naturopathic physicians"—who receive a doctor of naturopathy or doctor of medical naturopathy degree after four years of post-graduate training—and "traditional naturopaths," who may or may not have a degree and who generally oppose the licensure of naturopathy in any form, believing that it will take away their right to practice natural healing.[140] This report is concerned with the former.

Education and Training: Naturopathic doctors are trained in four-year doctoral-level naturopathic medical schools; currently, seven such schools in the U.S. and Canada are accredited or are being considered for accreditation by Council on Naturopathic Medical Education. Candidates must have completed a baccalaureate degree, with a pre-med focus. There is no entrance examination requirement, such as the MCAT. The first two years focus on basic and diagnostic sciences, including anatomy, physiology, biochemistry, histology, pharmacology, neuroscience, and pathology. The final two years are spent in clinical rotations. Naturopathic practices are woven in throughout the program; these include naturopathic theory; diet and nutrition; botanical medicine; homeopathy; hydrotherapy; massage; naturopathic manipulation; case management; and counseling. No residency requirement, except in Utah.[141]

Primary Care Physician	**Naturopathic Physician**
• 4 years undergraduate • 4 years medical school • 3 years residency	• 4 years undergraduate • 4 years naturopathic school • 3 years residency

To be licensed as a naturopathic physician, graduates of naturopathic universities must pass the Naturopathic Physicians Licensing Exam. It is a two-part exam; the first part (basic science) is generally taken after completion of two years of study, and the second part upon graduation.

Numbers and Practice Patterns: It is difficult to get a definitive count of the number of naturopathic physicians. According to an overview article published in 2010, at the beginning of 2006, there were roughly 4,000 licensed naturopathic physicians practicing in the United States and Canada, primarily working in private practice.[142] About 300-400 students graduate from naturopathic universities every year.

Current Status of Scope of Practice: Currently, sixteen states and the District of Columbia license naturopathic doctors.[143] Their scope of practice laws vary by state.[144] The AMA strongly opposes the licensing of naturopathic physicians. Despite the objections of the state medical society, over the past year, New Hampshire mandated insurance coverage for naturopathic physicians, and Vermont included naturopathic physicians as primary care providers and medical homes.[145] South Carolina and Tennessee expressly prohibit the practice of naturopathy. Florida abolished its naturopathic licensing laws in 1959, and a legislative committee in 2004 recommended against licensing of naturopaths as not cost-effective. Texas and Virginia have also abolished previous naturopathy licensure provisions.[146]

The Literature on Effectiveness and Patient Safety

Although millions of Americans swear by their naturopath, acupuncturist, or other complementary-alternative practitioner, evidence of their effectiveness and safety is very sparse indeed. There are very few randomized controlled trials, nearly all of them conducted under the auspices of the NIH's National Center for Complementary and Alternative Medicine (NCCAM), which was created in 1998. In fact, many natural practitioners believe that peer-reviewed, evidence-based studies are inappropriate for determining the effectiveness of treatments whose effect on the whole person has been shown over many centuries.

The AMA has pointed out, "In many instances, such as the NCCAM-funded clinical trials, the efficacy of naturopathic treatments is not supported by clinical evidence."[147] It cites trials showing the lack of effectiveness of Ginkgo extract's effect on dementia, black tea on cardiovascular disease, shark cartilage on lung cancer, Echinacea on the common cold, and St. John's wort on depression. The AMA concluded, "The naturopathic profession's reluctance and/or inability to apply evidence-based principles and scientific study to its treatment modalities is of great concern… Some naturopathic treatments are blatantly unsafe and place the health of the patient at great risk for additional health complications."[148]

For their part, some researchers studying naturopathic interventions point to studies demonstrating the positive effects of the treatment. A comprehensive review article cited NCCAM studies and Cochrane Collaborative Reviews that showed the beneficial effects of multivitamins containing folic acid and zinc on women of childbearing age; of hydrotherapy on relieving pain in people with fibromyalgia; of nasal irrigation on chronic rhinitis; and of St. John's wort on depression. The authors note, however, that "research on naturopathic physical modalities is limited and results are inconsistent." [149]

Nurse Anesthetists

The Issues: Whether scope of practice policies should be expanded to permit certified registered nurse anesthetists (CRNAs) to administer anesthesia care without physician supervision. The issue is similar to the one that arises in the case of all advanced practice registered nurses, but it comes up particularly in the context of Medicare. A subsidiary issue is whether CRNAs should be permitted to deliver interventional pain management without physician supervision.

The Context: CRNAs are advanced practice registered nurses who receive master's level education and training in nurse anesthesia. They generally deliver anesthesia care under the supervision of a physician—either a surgeon or an anesthesiologist—and such supervision was a requirement for Medicare reimbursement until 2001. In November of that year, the Centers for Medicare & Medicaid Services issued a rule that allowed states to "opt out" of the physician-supervision requirement, which means that Medicare will reimburse services provided by a CRNA in those states, whether or not that person is supervised by a physician. The CMS rule states, however, that even if a state opts out, individual hospitals can require physician supervision of nurse anesthetists.[150] The AMA has noted that one of the primary goals of the American Association of Nurse Anesthetists is to remove the requirement of physician supervision of CRNA practice in all 50 states.[151]

Current Status of Scope of Practice Policies: Seventeen states, many of them largely rural states where the shortage of anesthesiologists is most acute, have chosen to opt out of the Medicare requirement of physician supervision of CRNAs. The states are: Alaska, California, Colorado, Idaho, Iowa, Kansas, Kentucky, Montana, Minnesota, Nebraska, New Hampshire, New Mexico, North Dakota, Oregon, South Dakota, Washington, and Wisconsin.

Education and Training: To become a CRNA, a person must have a bachelor of science in nursing degree, be certified as a registered nurse, have at least one year of experience working in an ICU, and have obtained a master's degree in nurse anesthesia.[152] A master's in nurse anesthesia requires following a two- to three-year curriculum which includes both didactic courses in the sciences and a clinical training component.[153]

The AMA contends that this training is inadequate, stating, "The clinical judgment and acumen developed through eight years of medical and anesthesiology training prepares physicians to make clinical decisions for patients with all types of health conditions and levels of severity, [and] cannot be duplicated through nurse anesthetist master's or doctoral degree educational programs, or weekend or week long courses focusing on this subject."[154]

Anesthesiologist	**CRNA**
• Four years undergraduate • Four years medical school • Four years residency	• Four years undergraduate • Two-three years graduate nursing school (including 550 or more anesthesiology cases)

Numbers: There are approximately 34,000 CRNAs in the United States, and about 35,000 anesthesiologists.[155]

The Literature on Quality and Safety: There are a limited number of studies on the quality and safety of the care provided by CRNAs who practice independently. Almost all of them have found that nurse anesthetists provide the same level of quality and safety as anesthesiologists.[156] The most recent research study—commissioned by the American Association of Nurse Anesthetists, conducted by Research Triangle Institute health economists Brian Dulisse and Jerry Cromwell, and published in *Health Affairs*—has been widely cited by proponents of nurse anesthetists practicing independently. As a spokesman for the American Association of Nurse Anesthetists said recently, "When it comes to giving anesthesia, CRNAs and anesthesiologists are identical."[157]

The *Health Affairs* study, which examined 1999-2005 Medicare data in the fourteen states that had "opted out" of the Medicare provision requiring physician oversight of CRNAs, compared inpatient mortality and complications of CRNAs and anesthesiologists in both opt-out and non-opt-out states. The researchers found that (1) "In opt-out states, there were no statistically significant mortality differences between the periods before and after opting out," and (2) nurse anesthetists practicing solo in opt-out states had a lower incidence of complications relative to solo anesthesiologists in non-opt out states—leading them to conclude, "our data do not support the hypothesis that patients are exposed to increased surgical risk if nurse anesthetists work without physician supervision."[158]

The American Society of Anesthesiologists (ASA) blasted the *Health Affairs* study, calling it "an advocacy manifesto masquerading as science [that] does a disservice to the public."[159] The ASA's statement criticized the study's methodological flaws, among them its reliance on Medicare billing data ("meaningful analysis of anesthesia outcomes is impossible from billing codes alone"), the small number of cases examined ("the 481,000 cases analyzed…would have produced two deaths related to anesthesia, an obviously insufficient number to support any conclusions about mortality,"), and failure to account for anesthesiologists providing care to sicker patients. The ASA pointed to the results of a study by Jeffrey Silber and colleagues at the University of Pennsylvania—commissioned by the Agency for Healthcare Research and Quality and published in *Anesthesiology* in 2000—that that found "the presence of an anesthesiologist prevented more than six excess deaths per 1,000 cases in which an anesthesia or surgical complication occurred."[160]

Pain Management: Although it has not yet surfaced as a major issue, expanding CRNAs' scope of practice to include pain management has been proposed from time to time. The American Association of Nurse Anesthetists position statement "Pain Management," adopted in 1994 and revised most recently in 2005, states that: "By virtue of education and individual clinical experience, CRNAs possess the necessary knowledge and skills to employ therapeutic, physiological, pharmacological, interventional and psychological modalities in the management of acute and chronic pain."[161] The American Society of Interventional Pain Management (ASIPP) has expressed disagreement, considering interventional pain management to be the practice of medicine. "We do not approve of CRNAs, or any other nonphysicians, performing interventional pain management procedures," said David Schultz, M.D., president of ASIPP.[162] In 2008, the Louisiana First Circuit Court of Appeals ruled that, "The practice of interventional pain management is solely the practice of medicine." The Louisiana Supreme Court upheld the ruling.[163]

Nurse Practitioners

The Issues: Nurse practitioners are registered nurses who have earned a master's degree (or higher) in nursing, often in primary care.[164] The principal scope-of-practice issue at this time is the extent to which they should be permitted to provide independent patient care (that is, to diagnose, prescribe and treat) unsupervised by a physician. The issue has become increasingly important with the growth of nurse-administered clinics and health centers.

The Context: In the less than 50 years since the establishment of the first program to train nurse practitioners as "physician extenders" in underserved rural areas, the number of nurse practitioners has grown to more than 180,000 today, and increasingly nurse practitioners are demanding, as the AMA notes, "that they be allowed to deliver the same medical care that physicians do..."[165] This position was stated most baldly by Susan Apold, health policy director at the American College of Nurse Practitioners, who was quoted as saying, "You don't need a medical degree to provide primary care, and you haven't needed a medical degree for almost 100 years."[166]

The wording commonly used by advocates of expanding the scope of practice laws is that nurse practitioners should be permitted to practice "to the full extent of their education and training."[167] For many, this means practicing independently of physician supervision.[168] An influential IOM report, *The Future of Nursing*, concluded, "APRNs [advanced practice registered nurses] are educated, trained and competent to provide safe, high quality care without the need for physicians supervision."[169]

The case for independent care by nurse practitioners is argued on two grounds. The first is the shortage of primary care physicians—a shortage that will certainly be exacerbated by the coverage expansions under the Affordable Care Act. The Association of American Medical Colleges predicts a shortfall of 66,000 primary care physicians by 2025.[170]

The second is the assertion that, as four members of the IOM Commission wrote, "evidence from many studies indicates that primary care services…can be provided by nurse practitioners at least as safely and effectively as by physicians."[171]

There appears to be widespread agreement that physicians and nurse practitioners do, in practice, work collaboratively and that nurse practitioners can provide many core primary care services.[172] But as J. Fred Ralston and Steven Weinberger of the American College of Physicians observed, this should "not be misunderstood as suggesting that nurses are interchangeable with physicians in providing the full depth and breadth of services that primary care physicians provide."[173] The leaders of four leading medical associations wrote in *JAMA*, "These additional years of physician education and training [seven years postgraduate education compared with two or three for nurse practitioners] are vital to optimal patient care, especially in the event of a complication or medical emergency."[174]

Education and Training: Nursing education has undergone a revolution over the past decade as the profession attempted to improve the capacity of the nursing profession. Initially, the entry level was a hospital apprenticeship leading to a diploma; this was essentially phased out in favor of a two-year associate's degree in nursing. Now, there is a strong push within nursing to make the Bachelor of Science

in Nursing (BSN) the entry-level degree.[175] Whatever pathway nursing students pursue, graduates must pass the NCLEX-RN exam (National Council Licensure Examination for Registered Nurses) before being eligible for a license to practice.

For advanced practice nursing, there has been a similar upgrading. In 2004, the American Association of Colleges of Nursing proposed changing the entry-level qualification for an APRN from a master's degree to a new Doctor of Nursing Practice, or DNP, by 2015. Despite concerns within the nursing profession about this new entry-level requirement, DNP programs are proliferating: there were 120 programs in 2010, with another 161 in development.[176]

In brief summary, nurse practitioners currently must have, in addition to a BSN (four years), a master's in nursing (two years). As of 2015, when a DNP becomes the norm, entry-level nurse practitioners will need an additional three or four years of advanced nursing education beyond their bachelor's degree. But these seven to eight years of training are still less than primary care physicians' training of 11 years.

Primary care physician	**NP education—current**	**NP education—as of 2015**
• 4 years undergraduate • 4 years medical school • 3 years residency	• 4 years undergraduate nursing • 2 years master's training	• 4 years undergraduate nursing • 3-4 years doctorate

The Literature on the Safety and Quality of Nurse Practitioners

The research literature shows, without exception, that within their areas of training and experience, nurse practitioners provide care that is as good as or better than that provided by physicians. This was the conclusion of a meta-analysis done by the U.S. Office of Technological Assessment back in 1986,[177] and its conclusions were corroborated in research by, among others, Feldman and colleagues,[178] a meta-analysis published by Brown and David Grimes in 1993,[179] and more recently by Hansen-Turton et al., who looked at nurse-practitioner-administered health centers.[180]

Notwithstanding the apparently overwhelming body of research demonstrating that nurse practitioners and physicians are virtually interchangeable as providers of primary care, the base on which this conclusion rests in not as solid as its proponents assert.

- A Cochrane Collaboration report issued in 2009 found that "the findings must be viewed with caution, given that only one study was sufficiently powered to assess equivalence of care.[181]
- A widely cited study—often considered dispositive of the issue—conducted by the former dean of the Columbia University School of Nursing Mary Mundinger and colleagues and published in *JAMA* in 2000, concluded, "Using the traditional medical model of primary care, patient outcomes for nurse practitioner and physician delivery of primary care do not differ."[182] But upon close examination, the study does not settle the issue. In an editorial in *JAMA* accompanying Mundinger's article, Harold Sox praised the study as "a remarkable accomplishment, the most

ambitious and well executed comparison of nurse practitioners with physicians," but pointed out some serious shortcomings. These include a sample comprised largely of a relatively young Latino patients from whom results cannot easily be generalized to a wider—especially an older and sicker—population, and a lack of information about the clinicians and their practices in the study sites. Sox concluded, "Because the Columbia study leaves so many questions unanswered, its evidence that nurse practitioners and primary care physicians are interchangeable is far from convincing."[183] Additional studies of comparable rigor to Mundinger's have not been conducted.

Current Status of Scope of Practice Laws and Regulations: Most states require some form of a collaborative agreement with a local physician in order to provide professional care, and the scope of the permitted agreement varies among them.[184] According to the Pearson Report, which has tracked scope of practice laws related to nurse practitioners every year for the past 24 years, in 2012:

- Twenty-six states permit nurse practitioners to practice completely autonomously or with minor restrictions.
- Twenty-seven states permit nurse practitioners to diagnose and treat without any physician involvement.
- Nineteen states allow nurse practitioners to prescribe medication without any physician involvement.[185]

Additional Comments

- With regard to the physician shortage, it is not yet known whether nurse practitioners are practicing in underserved areas or whether they are congregating in the same locations as physicians. Thus, it is unclear whether expanded scope of practice rules are increasing coverage or duplicating it.
- With regard to independent practice, it is not yet clear how many nurse practitioners are, in fact, practicing without physician supervision— that is, whether this is an issue that affects a large or small percentage of practices.
- With regard to the future, the health care system is tending toward larger and more collaborative practices involving a variety of health professionals. As team-based care becomes more the norm and as the proportion of independent physicians continues to decline, the apparent competition between physicians and nurse practitioners may diminish.

Optometrists

The Issue: Whether scope of practice policies should be expanded to permit optometrists to do eye surgery and, in at least one state, to administer systemic oral drugs.

The Context: According to the American Optometric Association, "Doctors of Optometry (ODs) are the primary health care professionals for the eye. Optometrists examine, diagnose, treat, and manage diseases, injuries, and disorders of the visual system, the eye, and associated structures as well as identify related systemic conditions affecting the eye."[186] The practice of optometry traditionally has involved examining the eye for vision prescription and dispensing corrective lenses if needed, as well as screening eyes. Optometrists also provide nonsurgical management of certain eye diseases.[187] The licensing laws of most states prohibit optometrists from performing surgery. Over the last ten years or so, as eye surgery—especially LASIK surgery—has become increasingly popular, optometrists' associations have lobbied to extend their scope of practice to include surgery and administration of drugs. The AMA has strongly opposed this expansion, stating, "The education and skills of optometrists cannot duplicate either the surgical skills or clinical judgment of physicians."[188]

Education and Training: In making its case that expanding the scope of practice to allow optometrists to perform surgical procedures, the AMA points out that the education and training of optometrists is far inferior to that of ophthalmologists.[189] Whereas ophthalmologists must undergo four years of medical followed by a four-year residency, optometrists need only study for four years at a college of optometry, with no requirement for a residency.

Ophthalmologist	**Optometrist**
• 4 years undergraduate • 4 years medical school • 4 years residency, including three years devoted to ophthalmology	• 4 years undergraduate • 4 years college of optometry

Furthermore, according to the AMA, optometrists receive minimal or no instruction in surgical treatment of eye diseases or conditions. Students of optometry are not required to undergo a residency. And there is no board certification in optometry. The issue of whether to have board certification has been a divisive one in the optometry field.

Number of Optometrists and Practice Patterns: Of the roughly 36,000 optometrists in the United States, 66 percent are in private practice.[190]

Current Status of Scope of Practice: Most states prohibit optometrists from performing surgery. However, three states have revised their scope of practice laws to enable optometrists to perform certain surgical procedures:

- Oklahoma was the first state to pass a law, in 1998, that allows optometrists to perform some types of eye surgery—but not LASIK retina procedures or cosmetic lid surgery.[191] In 2005, the state legislature passed a law enabling the board of optometry to determine its own surgical scope of practice, and the board authorized optometrists to perform non-laser surgical procedures.[192]
- In 2007, New Mexico passed a law allowing optometrists to perform a number of specific "in-office minor procedures," such as removing foreign bodies from the cornea and non-laser removal or drainage of superficial conjunctivitis cysts. The law specifies that scalpels can be used only on the skin surrounding the eye.[193]
- The Kentucky General Assembly passed a law in 2011 allowing optometrists to perform various types of eye surgery, including laser surgery and surgery by injections directly into the eye, and giving the Kentucky Board of Optometric Examiners the power to determine the scope of practice for optometrists. The justification for the bill was improved access to quality eye care for rural Kentucky residents. "While optometrists are located in 106 of Kentucky's 120 counties, two-thirds of the state's counties do not have an ophthalmologist," said a proponent of the bill.

According to the American Academy of Ophthalmology, the Kentucky Medical Association and Kentucky Academy of Eye Physicians and Surgeons became aware of the proposed bill only 16 hours before the first committee hearing. Moreover, according to the *Louisville Courier-Journal*, "optometrists greased the legislative machinery with campaign contributions to all but one legislator (a physician)."

Bills giving optometrists the authority to perform some surgeries have been introduced in Colorado, Nebraska, South Carolina, Texas, and West Virginia. A bill to enable optometrists to prescribe oral medication—particularly anti-glaucoma drugs—has been introduced into the Florida legislature for the past few years. It was defeated each time.[194] The president of Florida Optometric Associated warned, however, that "we are in a prolonged battle for our profession, and it is important to keep a long-range focus."[195]

Oral and Maxillofacial Surgeons

The Issue: Whether the scope of practice for oral and maxillofacial surgeons should include cosmetic procedures beyond the oral and maxillofacial area. These procedures include, but are not necessarily limited to, injection of Botox and surgery on the face (facelifts or rhytidectomy), nose (rhinoplasty) and eyelids (blepharoplasty).

The Context: There is no question that oral and maxillofacial surgeons are qualified to perform surgical procedures treating or correcting dental conditions within the maxillofacial area.[196] Recently, however, legislatures have expanded the scope of practice for oral and maxillofacial surgeons to include cosmetic surgery, in some cases by adopting the American Dental Association's model definition of the practice of dentistry: "The evaluation, diagnosis, prevention, and/or treatment (non-surgical, surgical or related procedures) of diseases, disorders, and/or conditions of the oral cavity, maxillofacial area *and/or the adjacent and associated structures* and their impact on the human body…"[197][emphasis added] By implication, this enables oral and maxillofacial surgeons to do procedures on the face, and potentially other parts of the body, that were previously done only by plastic surgeons, dermatologists, and otolaryngologists.

This opens up the Botox market to oral and maxillofacial surgeons—a market accounting for a quarter of all cosmetic procedures done in the United States, or 2.5 million procedures a year,[198] with the potential to bring in an additional $150,000 annually to the person doing Botox injections.[199] The oral and maxillofacial surgeons are likely to be followed by general dentists, who argue that their experience in injecting anesthesia qualifies them to inject Botox.[200]

In its Scope of Practice Data Series, the AMA opposed the expansion of oral and maxillofacial surgeons' role, noting that while plastic surgeons pursue a six-year residency and otolaryngologists a five-year residency, "the training a dentist receives in facial cosmetic and head and neck surgery is minimal."[201]

For its part, the president of the American Association of Oral and Maxillofacial Surgeons (AAOMS), Ira Cheifetz, blasted the AMA report, pointing to what he termed its "numerous errors, inaccuracies and basic misrepresentations" and its "rash conclusions."[202] He observed that facial cosmetic surgery "has been a component of OMS [oral and maxillofacial surgery] training since 1992. The AAOMS advertises, in fact, that "oral and maxillofacial surgeons are *uniquely qualified* to perform cosmetic procedures that involve the functional and aesthetic aspects of the face…"[203] [emphasis added]

Education and Training: After completing dental school, oral and maxillofacial surgeons complete a four-year hospital-based surgical residency program. There are 99 accredited training programs in the United States, of which 47 offer a single degree and 42 offer a joint MD/OMS degree (the remainder are military or federal government programs). Training focuses almost exclusively on the hard (i.e., bone) and soft (i.e., skin and muscle) tissue of the face, mouth, and jaws, and it includes hands-on clinical work. After completing their residency, oral and maxillofacial surgeons are, according to the AAOMS, "well prepared to perform facial cosmetic procedures to enhance facial appearance and function."[204] The American Board of Oral and Maxillofacial Surgery is the certification body, and requires recertification every ten years.

By contrast, after completing medical school, plastic surgeons pursue a six-year residency (three years of general surgery followed by three years of reconstructive and aesthetic surgery) and otolaryngologists a five-year residency (one year in general surgery internship and four years of medical and surgical care of the head and neck area). Dermatologists receive four years of internship-residency training following medical school. The AMA writes, "Oral and maxillofacial training programs for dentists simply cannot duplicate the medical education that physicians receive…"[205]

Plastic Surgeon	**Otolaryngologist**	**Dermatologist**	**Oral and Maxillofacial Surgeon**
• 4 years undergraduate • 4 years medical school • 6 years residency	• 4 years undergraduate • 4 years medical school • 5 years residency	• 4 years undergraduate • 4 years medical school • 4 years residency	• 4 years undergraduate • 4 years dental school • 4 years residency

The AAOMS argues that training of oral and maxillofacial surgeons is comparable to that of physicians, writing, "OMSs complete a hospital-based surgical residency-training program of at least four years, during which they train alongside medical residents in anesthesiology, surgery, and other medical specialties…The truth is that the same training requirements for single and MD-integrated OMS programs and residents must be met for accreditation."[206]

Numbers and Practice Patterns: There are nearly 6,000 oral and maxillofacial surgeons in the United States, roughly 80 percent of whom work in office-based practices.[207] There are more than 150,000 dentists.[208]

Current Status of Scope of Practice Policies: The American Dental Association classifies states' scope of practice policies into four categories, depending on how they define the practice of dentistry:

- Fourteen states have adopted the ADA's definition of dentistry (see above). This is the most expansive definition, permitting dentists to perform procedures on structures adjacent to or associated with the maxillofacial area or allowing dentists to perform procedures within the scope of their education and training.
- Three states employ only a brief formal definition of dentistry.
- Fifteen states use a formal definition of dentistry and have adopted a list of procedures that dentists are authorized to perform.
- Nineteen states define the practice of dentistry by using a list of procedures that dentists can perform.[209]

Moreover, fourteen states have a separate definition of oral-maxillofacial surgery. Many of them limit the practice to "the functional and esthetic aspects of the hard and soft tissues of the oral and maxillofacial region," though some, such as Tennessee (which includes the oral cavity and maxillofacial area or adjacent or associated structures and specifies cranio-facial surgery, rhytidectomy, and Botox injections as within the scope of practice) and Virginia (which permits cosmetic procedures above the clavicle or within the head and neck region) are more expansive.[210]

Pharmacists

The Issue: Whether scope of practice policies should permit pharmacists to prescribe and offer other direct patient services independently.

The Context: Over the past quarter century, the role of pharmacists has been evolving from one of dispensing drugs pursuant to a physician's prescription to one of providing medication therapy management services directly to patients. Pharmacists in many states, for example, are now authorized to administer vaccinations, counsel patients on individual drug therapies, and provide emergency contraception. The 2003 Medicare Modernization Act speeded this trend by authorizing federal reimbursement for medication therapy management to qualified providers, including pharmacists. Medication management therapy is carried out through collaborative drug therapy agreements (CDTAs) under which a physician grants a pharmacist authority to provide specified medication-related services.

Medication therapy management, say influential voices within the pharmacy profession, should include initiating, modifying, and continuing medication regimens, ordering laboratory tests, and performing patient assessments.[211] Some see this as necessary for the survival of pharmacy as a profession. As a physician recently warned the pharmaceutical profession, "You have come to one of the rare crossroads…You will either take your place as providers of care, or your numbers will dwindle as most dispensing activities are replaced by robotics and pharmacy technicians."[212]

According to the AMA, expansion of the role of pharmacists is intended to further the goal of the pharmaceutical profession to become providers of health care services[213]—a goal that is contained in the *Future Vision for Pharmacy Practice 2015* adopted by the Joint Commission of Pharmacy Practitioners.[214] In its scope of practice report on pharmacists, the AMA wrote that it "opposes the independent practice of medicine by pharmacists, including pharmacist initiation of medication therapy, pharmacist modification of any prescription drug and/or pharmacist cessation of prescribed medications, except in those cases where the medications were prescribed by a physician who has duly entered into a collaborative agreement with the pharmacist." The AMA's report further observed that, "While pharmacists are admirably trained in pharmacology issues, the clinical judgment gained by a physician during years of training cannot be duplicated."[215] In response, the CEO of the American Society of Health-System Pharmacists wrote a letter to the CEO of the AMA requesting a retraction, charging that the report contained "inaccuracies, false statements, errors of fact, and mischaracterizations," and declaring that "the AMA document…failed to acknowledge that pharmacists are the only health professionals with the depth of education, training, experience, and interest to apply their full-time collaborative efforts to preventing and resolving [medication-use] problems," and requesting a retraction.[216]

In 2012, the FDA invited comments on a proposed regulation that would allow pharmacists to dispense certain prescription drugs (for example, medication for asthma attacks or migraine headaches) without a physician's prescription. Both the AMA and the American Academy of Family Physicians opposed it.[217]

Education and Training: The entry-level degree for a pharmacist is a Doctor of Pharmacy, which typically requires at least two years of undergraduate course work, followed by four years of professional

pharmacy studies. However, many currently practicing pharmacists hold only bachelor's degrees, which was the entry-level standard through 2000. As the AMA notes, "Pharmacists' education and training is simply not comparable to that of physicians…first, the pharmacist work force remains largely a bachelor's degree-trained field."[218] In the states where it is permitted, pharmacists authorized to prescribe medication must obtain additional training to become clinical or advanced-practice pharmacists.

Primary Care Physician	**Pharmacist**
• 4 years undergraduate • 4 years medical school • 3 years residency	• 2-4 years undergraduate • 4 years pharmacy study

Number of Pharmacists and Practice Patterns: There are about 275,000 pharmacist jobs in the U.S.[219] Two-thirds of pharmacists work in the community.[220] The number of pharmacists currently certified as advance practitioners is not available; in 2009, there were 189.[221]

Current Status of Scope of Practice: Forty-three states permit CDTAs, under which pharmacists have limited pharmaceutical management authority under the supervision of a physician. Pharmacists in all states can now administer flu vaccines, and many states also give pharmacists authority to administer other vaccines: for example, 41 states allow pharmacists to administer a vaccine for shingles and 46 states allow them to give pneumonia vaccine. Three states—Montana, New Mexico, and North Carolina—allow pharmacists to initiate drug therapy on their own, as does the Veterans Health Administration.[222]

Research on Safety and Effectiveness: The research on collaborative arrangements—including a widely cited experiment in Asheville, North Carolina, where pharmacists assumed responsibility for patients' diabetes and asthma management, and the Diabetes Ten City Challenge, which used an approach similar to Asheville's—indicates that these arrangements produce positive clinical outcomes and cost savings. However, the AMA, while recognizing that "the pharmacy literature is replete with clinical studies and economic analyses demonstrating the benefits of pharmacist involvement in patient care," has pointed out that results had been reported only for hospital and institutional pharmacies—not community pharmacies.[223] A 2010 Cochrane Review found only one valid research study comparing outcomes of community pharmacists and physicians, and it was unable to draw a conclusion regarding the comparative safety and effectiveness of the two.[224] Thus, the literature on the safety and effectiveness of community pharmacists' prescribing is insufficient to draw meaningful conclusions at this time.

Physical Therapists

The Issues: Whether scope of practice policies should permit physical therapists to be the initial point of contact for patients with muscular-skeletal problems—that is, without referral by and supervision of a physician.

The Context: Physical therapists have traditionally treated patients with muscular-skeletal problems upon referral by a physician, often an orthopedist. Recently, the American Physical Therapy Association (APTA) has been lobbying to rewrite federal and state laws to abolish the physician-referral requirement. The APTA aims to establish physical therapists as primary care providers.[225]

To carry out this agenda, the APTA has changed the entry-level requirement from the master's degree to the doctoral degree. Its V*ision Statement 2020,* adopted in 2000, states, "physical therapy, by 2020, will be provided by physical therapists who are doctors of physical therapy and who may be board-certified specialists. Consumers will have direct access to physical therapists in all environments for patient/client management, prevention, and wellness services."[226]

The medical profession has objected to this expansion. In its *Scope of Practice* report on physical therapists, the AMA wrote, "The AMA holds that the education and training of physical therapists is inadequate to prepare them to diagnose a patient's health condition and coordinate necessary medical care. Patient safety may be jeopardized…"[227]

Education and Training: Since 2001, all PTs have been required to obtain at least a master's degree in order to sit for the National Physical Therapy Examination, a prerequisite for licensure. In 2000, the APTA's House of Delegates adopted a resolution stating that by 2020 all PTs would h

old a doctor of physical therapy (DPT) degree. The Commission on Accreditation in Physical Therapy Education is requiring the DPT as the entry-level degree program as of 2016.[228] The DPT programs generally include two years of post-baccalaureate classroom study and one year of clinical training. The AMA notes, however, that the majority of PTs in practice today do not have even a graduate degree in physical therapy.[229]

Orthopedic surgeon	**Physical therapist (requirements per *Vision 2020*)** [230]
• 4 years undergraduate • 4 years medical school • 5 years residency, including 4 in orthopedic surgery	• 4 years undergraduate • 3 years post-graduate training leading to a DPT degree.

Number of Physical Therapists and Practice Patterns: The APTA estimates the number of PTs at 184,000. Roughly two out of five PTs work in private outpatient offices, though the percentage practicing in freestanding PT offices is not known.

Current Status of Scope of Practice: According to the APTA, 47 states and the District of Columbia allow direct access to physical therapists; that is, they do not require a referral from a physician. The three states that do not allow direct access are Indiana, Wisconsin, and Oklahoma.[231] In reality, however, the state laws are more nuanced. Louisiana and Mississippi, for example, allow direct access to PTs in specified circumstances, such as pursuant to a plan of care for patients in nursing homes or served by a home health care agency; New York permits direct access to a PT for the shorter of ten days or thirty visits; and Idaho prohibits PTs from doing radiology, surgery, or medical diagnosis of disease.[232]

The Literature on Patient Safety and Satisfaction: The literature on safety and effectiveness of physical therapists in the context of direct access and independent practice is limited and inconclusive. A descriptive study of physical therapy in the military, which allows direct access to PTs, found that patients were at minimal risk for adverse events whether they saw PTs directly or were referred by a physician (no adverse incidents were reported for either group). The authors noted, however, that military PTs practice in collaboration with physicians, not independently.[233] A study based on insurance claims data in Maryland concluded that episodes of care by PTs who were seen directly were less costly and shorter than those where patients were referred by a physician.[234] A study in which physical therapists were given a series of hypothetical situations and their responses were judged by a panel of expert physical therapists found mixed results, including one that raised a red flag: "In general, PTs make correct decisions regarding the management of hypothetical patients when the problems are muscular-skeletal in nature and can be managed by a physical therapist. They are less often correct in making decisions about medical conditions that require referral to a medical practitioner."[235]

Podiatrists

The Issue: Whether scope of practice policies should authorize podiatrists to perform ankle and lower leg surgery.

The Context: It is well established that podiatrists are qualified to perform surgery on the foot—"that portion of the lower limb situated below the ankle joint."[236] The podiatric profession has been pushing to expand scope of practice laws to enable podiatrists to perform surgery on the ankle and on the lower leg and, at the same time, to improve the educational qualifications of podiatrists to give them the capacity to carry out this expanded role.[237] According to the website of the American Podiatric Medical Association, "Doctors of podiatric medicine are podiatric physicians and surgeons, also known as podiatrists, qualified by their education, training, and experience to diagnose and treat conditions *affecting the foot, ankle, and related structures of the leg* [emphasis added]."[238] The stated goal of the APMA is by 2015 to have "podiatrists being defined as physicians who treat patients in the physician's specialty without restrictions."[239]

The American Medical Association, the American Association of Orthopaedic Surgeons, and the American Orthopaedic Foot and Ankle Society have contested the expansion of scope of practice laws. The American Association of Orthopaedic Surgeons, for example, has argued that, "In many areas of the country, practitioners with inadequate training are performing reconstructive surgery, despite the risk of harm to patients."[240]

The issue of expanded scope of practice for podiatrists has arisen recently in New York, South Carolina, and Texas.

Education and Training

Over the past four decades, the podiatry profession has upgraded the education and training of podiatrists. Currently, all practitioners entering the field must receive a Doctor of Podiatric Medicine degree, which requires four years of undergraduate education, four years of graduate education at one of nine podiatric medical colleges, and three years of hospital-based post-graduate residency training.[241]

The APMA observes that "the education, training, and experience podiatrists receive…is more sophisticated and specialized than that of broadly trained medical subspecialists."[242] The AMA and the associations representing orthopedic surgeons argue that the current educational standards are not on a par with those required for orthopedists. The AAOS takes the position that "patients will be best served if *all* providers of surgical care of the lower extremities meet the uniform education, training, and certification standards established by the Accreditation Council for Graduate Medical Education and the American Board of Medical Specialties [emphasis added]."[243]

Furthermore, the AMA notes that the vast majority of podiatrists currently in practice were trained before the current educational and residency training reforms were uniformly implemented and "have comparatively little formal education or clinical training beyond the anatomy of the foot and may have little, if any, formal surgical training."[244]

Orthopedic surgeon	Podiatrist[††]
• 4 years undergraduate • 4 years medical school • 5 years residency, including 4 in orthopedic surgery	• 4 years undergraduate • 4 years at podiatric medical college • 3 years of hospital-based post-grad training

The AMA points out the certification of podiatrists is also an issue. The APMA recognizes two certifying boards, which certify roughly two-thirds of podiatrists. The remainder are certified by other boards (there are at least five) or are not board certified. The AMA states, "The requirements for certification from these boards vary greatly, and because of these multiple boards, it is difficult for the public and other health care professionals to determine a uniform level of competence and qualifications of practicing podiatrists." Orthopedists, on the other hand, are certified by the American Board of Orthopaedic Surgery.

Number of Podiatrists and Practice Patterns: There are about 13,000 podiatrists, most of them practicing on their own or in offices with other podiatrists.[245]

Current Status of Scope of Practice

- All states permit treatment of the foot.
- 44 states permit treatment at or above the ankle (the ones that do not are Alabama, Kansas, Massachusetts, Mississippi, South Carolina, and Texas).

[††] These are the current educational requirements for podiatrists, based on the recent revisions. Many practicing podiatrists were grandfathered in and do not have the training outlined above.

Psychologists

The Issue: Whether scope of practice policies should be expanded to allow clinical psychologists to prescribe psychotropic drugs.

The Context: For the past two decades, the American Psychological Association (APA) has been pushing for doctoral-level clinical psychologists to be allowed to prescribe psychotropic drugs on the grounds, among others, that (a) given the physician shortage, it will increase access for patients who otherwise would wait a long time to see a psychiatrist or other physician;[246] (b) it will improve continuity of care by eliminating the need for patients to see an additional provider; and (c) trained psychologists are as capable of prescribing drugs as general physicians, who write 60 to 80 percent of psychotropic drug prescriptions, and nurse practitioners, who are allowed to prescribe in some states. The APA asserts that, "Although psychologists have more training in the assessment, diagnosis and treatment of mental disorders than any other health care professionals, the majority of all psychotropic medications are prescribed by health care providers with little to no training."[247]

The American Medical Association and the American Psychiatric Association oppose giving psychologists the authority to prescribe drugs. Testimony of the American Psychiatric Association opposing such a bill in Arizona in 2001 highlighted the crux of the physicians' argument: "Legislation to give psychologists prescribing authority would be a high-risk experiment in which the state's most vulnerable populations—persons with mental illnesses—would be subjected to second-class health care by a group of inadequately trained providers who want to be physicians without the requisite medical training and education. Psychologists are social scientists…The modest training required of certified psychologists under this proposal in no way provides an adequate substitute for the extensive training required of licensed psychiatrists and other physicians."[248]

Education and Training: The issue, at the moment, concerns only doctoral-level clinical psychologists, that is, those holding a degree requiring five to seven years of post-graduate study leading to a Psy.D or a Ph.D degree, with a specialty in clinical psychology. Roughly 2,000 Psy.D and Ph.D degrees are awarded yearly. All states require psychologists to pass the Examination for Professional Practice in Psychology in order to obtain a license to practice.

The APA's current standards require 300 hours of didactic training and a practicum consisting of seeing 100 patients with a minimum of two hours of supervision a week. These requirements, which are less demanding than those recommended by an APA blue-ribbon panel in 1992 and the Department of Defense curriculum, have been criticized as insufficient.[249]

Physician	Psychologist
• 4 years undergraduate • 4 years medical school • 4 years residency for psychiatrists, 3 years for primary care physicians	• 4 years undergraduate • 5-7 years post-graduate leading to Ph.D. or Psy. D. • Additional training in psycho-pharmacology (300 hours plus a practicum)

Number of Psychologists and Practice Patterns: There are approximately 175,000 psychologists in the U.S., about two-thirds of whom are in office practice.

Current Status of Scope of Practice: Psychologists have prescribing authority in the Indian Health Service and in an experiment taking place in the Department of Defense, where ten psychologists, working closely with psychiatrists, can prescribe psychotropic drugs. Currently, New Mexico and Louisiana are the only states that allow trained psychologists to prescribe psychotropic drugs, though Louisiana requires that a psychologist prescribe only in collaboration with and the concurrence of a patient's physician. Both states set out educational requirements for psychologists seeking authority the prescribe psychotropic drugs:

- New Mexico requires psychologists to hold a doctoral degree in psychology; to have been in practice for five years; to have completed 450 didactic hours in core areas such as pharmacology, neuroscience, and psychopharmacology; to have completed a 400-hour practicum with at least 100 patients, supervised by a psychiatrist; to have passed a national certification exam; and to have two years of experience prescribing psychotropic drugs under the supervision of a licensed psychiatrist.

- Louisiana requires psychologists to hold a Louisiana license with an applied clinical specialty; to have a post-doctoral master's degree in clinical psychopharmacology with instruction in areas including biochemistry, pharmacology, neurosciences, and psychopharmacology; and to pass a national proficiency exam in psychopharmacology developed by the APA. All told, this amounts to more than 450 hours of didactic coursework and nearly 500 hours of supervised practicum training.[250]

In 2011, bills to permit psychologists to prescribe psychotropic drugs were considered by legislatures of six states: Arizona, Hawaii, Montana, New Jersey, Oregon, and Tennessee.[251] The Oregon legislature passed such a law in 2010, and the governor vetoed it.

It should be noted that the field of psychology does not speak with a single voice on this issue. Many psychologists believe that psychopharmacology is a distraction from the main role of clinical psychologists—psychotherapy or talk therapy. The National Alliance for the Mentally Ill, a consumer group advocating for mental health parity, also opposes psychologist prescribing.

The Literature on Safety and Effectiveness: There are so few prescribing psychologists (ten in the military; seven in Mexico and 52 in Louisiana) that there is almost no literature on their safety or effectiveness. The Department of Defense Psychopharmacology Demonstration Project is hailed by the APA as proof that psychologists can safely prescribe psychotropic drugs. This claim has been dismissed by the AMA as follows: "Not only were the participants carefully screened and selected, but the didactic and clinical training they received far exceeds the curriculum of any post-graduate psychopharmacology training course in existence today. In addition, participants spent a second year training full time under the direct supervision of military psychiatrists."[252] After reviewing the evidence in their exhaustive study, the psychologists Kim Lavoie and Silvana Barone concluded, "It is extremely difficult to draw any firm conclusions from so little data…more research is needed before we can conclude that prescription privileges for psychologists are a safe and logical solution to the problems affecting the mental healthcare system."[253]

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[249] Stuart, RB. and Heiby, EE. state that "Rather than building on [the Defense Department's] program and abiding by the recommendations of its own committee, the APA incredulously elected to *lower* the bar for training requirements." "To Prescribe or Not to Prescribe: Eleven Exploratory Questions," *The Scientific Review of Mental Health*, 5:4-27 (2007).
[250] Lavoie, KL. and Barone, S., "Prescription Privileges for Psychologists: A Comprehensive Review and Critical Analysis of Current Issues and Controversies," *CNS Drugs* 20:51-66 2006).
[251] Krupta, C., "Psychologists seek prescribing rights in six states," *Amednews.com*, www.ama-assn.org/amednews/2011/03/07/prl20307.htm. Accessed August 20, 2012. The Oregon legislature passed a law permitting psychologists to prescribe drugs; Governor Kulongoski vetoed it.
[252] AMA, "Psychologists," *AMA Scope of Practice Data Series*, 2009, p. 5.
[253] Lavoie, KL. and Barone, S, op. cit. n. 5.