

A Decision-Maker's Guide to Scope of Practice

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One of the most persistent and vexing challenges facing state legislators across the country is how to deal with the growing demand by a broad array of non-physician health care professionals for authority to expand their scope of practice into areas that until now have been restricted to physicians.* For example, optometrists now seek authority to perform laser surgery; oral and maxillofacial surgeons to inject Botox; pharmacists to prescribe medications; nurse anesthetists to administer anesthesia, and, most significantly, nurse practitioners to provide patient care—all independently; that is, without physician supervision.

What is ultimately at stake in the debate about scope of practice is the safety and well-being of the public—of ourselves and our loved ones. It is therefore of paramount importance that those who provide and manage our health care have the competence needed to meet our, and the nation's, medical needs.

We entrust our state legislators with the responsibility for ensuring that those who are legally permitted to provide our health care have the education, training, and experience to do so competently. This is no easy task. The issues are often complex and even arcane, and the number of scope of practice bills brought before the nation's state legislatures is staggering. According to the National Conference of State Legislatures, between January 2011 and September 2012, more than 350 scope of practice bills were enacted in 48 states—an average of more than seven per state. In just the eight months from February to September 2012, almost 250 scope of practice bills had been filed or carried over from the previous session.† Small wonder that many legislators feel overwhelmed.

Moreover, scope of practice issues rarely lend themselves to easy resolution. Passions often run high on both sides, and the empirical evidence of safety and quality of care, even in areas where large numbers of studies exist, often turns out to be far less robust than it appears at first.

The purpose of this guide is to provide state legislators and others with an interest in scope of practice issues with a concise, balanced summary of scope of practice as it relates to 10 non-physician health professions: audiologists, naturopaths, nurse anesthetists, nurse practitioners, optometrists, oral surgeons, pharmacists, physical therapists, and psychologists. The guide includes a short chapter on each of these professions, and each chapter briefly describes:

- The principal scope of practice issues facing the profession
- The context or background for those issues

* In its 2005 report on scope of practice, the Federation of State Medical Boards defined scope of practice as “the activities that an individual health care practitioner is permitted to perform within a specific profession.”

† National Conference of State Legislatures, “Scope of Practice Legislative Data Base, 2011-2012,” <http://www.ncsl.org/issues-research/health/scope-of-practice-legislation-tracking-database.aspx>, accessed October 18, 2012

- How the profession's education and training requirements compare with the corresponding physician requirements
- The existing evidence base
- The current status of the scope of practice laws and regulations pertaining to the profession

While by no means exhaustive, this guide can help to shed some light on a complex and vitally important area of public policy in which the nation's state legislators play a critical role.

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.”³

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.”⁴

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.”⁵ The American Academy of Audiology writes, “The professional doctorate...strengthens our position as autonomous practitioners and providers of audiological services.”⁶

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.”⁷ 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.”⁸

³ Academy of Doctors of Audiology, Scope of Practice, www.audiologist.org/scope-of-practice. Accessed September 19, 2012.

⁴ See, for example, the American Academy of Audiology, *Choosing an Audiology Program*, “Individuals completing an AuD will be...competent to interact with other doctoring professions,” www.audiology.org/education/students/Pages/choosingprogram.aspx. Accessed September 17, 2012, and the Audiology Foundation of America, *Audiology: A Doctoring Profession*, “The AuD title [is] the expected title of an individual who is providing a doctoring service.”

⁵ Academy of Doctors of Audiology, op. cit. n. 1.

⁶ American Academy of Audiology, op. cit. n. 2.

⁷ AMA, “Audiologists,” *Scope of Practice Data Series*, p. 5 (2009).

⁸ Letter of Sue T. Hale to Michael D. Maves, “ASHA Response to AMA Scope of Practice Data Series: Audiologists,” December 18, 2009

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.”⁹

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.¹⁰ 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.¹¹

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
<ul style="list-style-type: none">• 4 years undergraduate• 4 years medical school• 5 years ENT residency	<ul style="list-style-type: none">• 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.¹²

⁹ AMA, op. cit. n. 6, p. 19.

¹⁰ 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, op. cit. n. 6, pp. 18-26.

¹¹ AMA, op. cit. n.6, p. 5.

¹² Smriga, D., “How Many Independent, Autonomous Hearing Care Practices Exist in the U.S.?” www.audiologyonline.com/askexpert/display_question.asp?question_id=800. Accessed September 15, 2012.

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.¹³ 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.¹⁴

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.¹⁵

¹³ 225 Ill. Comp. Stat 110/3, summarized in AMA, op. cit. n. 6, fig. 2.

¹⁴ ASHA, *State Licensure Trends*, <http://www.asha.org/uploadedFiles/StateLicensureTrends.pdf>. Accessed September 20, 2012.

¹⁵ ASHA, *Agenda in Action: Report to the Membership on 2011-2012 Advocacy Efforts* (2012)

Naturopaths

The Issues: Whether scope of practice policies should enable naturopaths to be primary care providers and, by implication, receive both 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.¹⁶ 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."¹⁷

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.¹⁸ A 2007 survey revealed that nearly two out of five Americans use some form of complementary and alternative practices.¹⁹

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.²⁰ 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. There is no residency requirement, except in Utah.²¹

¹⁶ American Association of Naturopathic Physicians, "Definition of Naturopathic Medicine," House of Delegates Position Paper, amended 2011.

¹⁷ AANP, "What is Naturopathic Medicine," www.naturopathic.org. Accessed August 18, 2012.

¹⁸ The definition of naturopath and complementary and alternative practice is somewhat fluid. For example, homeopathy, acupuncture, and aromatherapy are sometimes considered as elements of naturopathy because they rely on natural healing, but are sometimes are considered as non-naturopathic complementary and alternative practices.

¹⁹ National Center for Complementary and Alternative Medicine, *Use of Complementary and Alternative Medicine in the United States*, http://nccam.nih.gov/news/camstats/2007/camsurvey_fs1.htm. Accessed August 18, 2012.

²⁰ AMA, "Naturopaths," *Scope of Practice Data Series*, July 2009, p. 9.

²¹ Fleming, SA. and Gutknecht, NC. "Naturopathy and the Primary Care Practice," *Primary Care* 37:119-136 (2010)

Primary Care Physician	Naturopathic Physicians
<ul style="list-style-type: none"> • 4 years undergraduate • 4 years medical school • 3 years residency 	<ul style="list-style-type: none"> • 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.²² 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.²³ Their scope of practice laws vary by state.²⁴ 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.²⁵ 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.²⁶

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.

²² Ibid.

²³ Alaska, Arizona California, Connecticut, Hawaii, Idaho, Kansas, Maine, Minnesota, Montana, New Hampshire, North Dakota, Oregon, Utah, Vermont, Washington, and the District of Columbia. AANP, "Licensed States and Licensing Authorities," www.naturopathic.org/content.asp?contentid=57. Accessed August 18, 2012.

²⁴ Ibid.

²⁵ American Association of Naturopathic Physicians, "July 2012 Legislative Report," www.naturopathic.org/content.asp?admin=Y&contentid=614. Accessed August 18, 2012.

²⁶ AMA op. cit., n. 5, p. 33.

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.”²⁷ 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.”²⁸

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.”²⁹

²⁷ Ibid. p. 13.

²⁸ Ibid. p.6.

²⁹ Fleming and Gutknecht, op. cit. The fact that the naturopaths cite the use of St. John’s wort as an effective treatment for depression and the AMA cites it as ineffective illustrates the difficulty of evaluating the effectiveness of naturopathic treatment. A 2009 Cochrane Review of 29 studies, cited by the naturopaths, concluded, “Overall, the St. John’s wort extracts tested in the trials were superior to placebo, similarly effective as standard antidepressants, and had fewer side effects than standard antidepressants.” But it noted that evidence of the plant’s effectiveness was limited to German-speaking countries and that “it cannot be ruled out that some smaller studies from German-speaking countries were flawed and reported overoptimistic results.”

<http://summaries.cochrane.org/CD000448/st.-johns-wort-for-treating-depression>. Accessed August 18, 2012. The results of a randomized double-blind control study published in *JAMA* in 2002 and cited by the AMA concluded, “An extract of the herb St. John’s wort was no more effective for treating major depression of moderate severity than placebo.” NCCAM, “St John’s Wart and Depression Clinical Trials Result,” <http://nccam.nih.gov/news/2002/stjohnswort/pressrelease.htm>. Accessed August 18, 2012.

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.³⁰ 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.³¹

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.³² 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.³³

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.”³⁴

³⁰ Matusaki, T. and Sakia, T. “The Role of Certified Registered Nurse Anesthetists in the United States,” *Journal of Anesthesiology*, 25:734-740 (2011)

³¹ AMA, “Nurse Anesthetists,” *Scope of Practice Data Series*, p. 5 (2009)

³² About half of nurse anesthetists practicing as recently as 2009 were grandfathered in and did not possess a master's degree.

³³ Matusaki and Sakia, *op. cit.*

³⁴ AMA, “Nurse Anesthetists,” *Scope of Practice Data Series* (2009).

Anesthesiologist	CRNA
<ul style="list-style-type: none"> • Four years undergraduate • Four years medical school • Four years residency 	<ul style="list-style-type: none"> • Four years undergraduate • Two-three years graduate nursing school (including 550 or more anesthesiology)

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

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.³⁶ 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.”³⁷

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.”³⁸

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.”³⁹ 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

³⁵ International Federation of Nurse Anesthetists, “USA Info,” <http://ifna-int.org/ifna/page?25>. Accessed August 29, 2012

³⁶ See, for example, Pine, M. et al., “Surgical Mortality and Type of Anesthesia Provider,” *AANA Journal* 71:109-116 (2003)

³⁷ Christopher Bettin, as quoted by Frosch, D. “Debate Over Who Should be Allowed to Administer Anesthesia Moves to Courts,” *New York Times*, May 1, 2012

³⁸ Dulisse, B. and Cromwell J. “No Harm Found When Nurse Anesthetists Work Without Supervision by Physicians,” *Health Affairs* 29:1469-1475 (2010)

³⁹ ASA, “Statement Regarding AANA-Sponsored Paper Published in *Health Affairs*, August 2010, <http://www.asahq.org/Home/For-the-Public-and-Media/Press-Room/ASA-News/ASA-Statement-Regarding-AANA-Sponsored-Paper-Published-in-Health-Affairs>. Accessed August 29, 2012

anesthesiologist prevented more than six excess deaths per 1,000 cases in which an anesthesia or surgical complication occurred.”⁴⁰

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.”⁴¹ 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.⁴² 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.⁴³

⁴⁰ Silber, JH. Et al., “Anesthesiology Direction and Patient Outcomes,” *Anesthesiology* 93:152-163 (2000)

⁴¹ See Huddleston, J. “States Debate CRNAs’ Scope of Practice,” *Anesthesiazone.com*, www.anesthesiazone.com/featured-news-article.aspx?id=6516. Accessed August 29, 2012.

⁴² Ibid.

⁴³ AMA, op. cit., n. 2

Nurse Practitioners

The Issues: Nurse practitioners are registered nurses who have earned a master's degree (or higher) in nursing, often in primary care.⁴⁴ 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...”⁴⁵ 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.”⁴⁶

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.”⁴⁷ For many, this means practicing independently of physician supervision.⁴⁸ 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.”⁴⁹

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 2025.⁵⁰

⁴⁴ Nurse practitioners are one among a number of APRNs or advanced practice registered nurses. In 2008, the National Council of State Boards of Nursing issued a consensus statement to guide state boards of nursing. Among other elements, it designated advanced practice nurses as APRNs, with further credentialing in six specialties: certified nurse practitioners, certified registered nurse anesthetists, certified nurse midwives, and certified nurse specialists. The time line for states to adopt these categories was set at 2015.

⁴⁵ AMA, “Nurse Practitioners,” *Scope of Practice Series*, 2009.

⁴⁶ Quoted in Lopatto, E., “Nurse Practitioners, Handmaidens No More,” *Bloomberg Business Week*, <http://www.businessweek.com/articles/2012-03-22/nurse-practitioners-handmaidens-no-more#r=auth-s>. Accessed September 7, 2012.

⁴⁷ “Nurses should practice to the full extent of their education and training...outdated policies, regulations, and cultural barriers, including those related to scope of practice, will have to be lifted.” Key Message # 1, IOM, *The Future of Nursing: Leading Change, Advancing Health*, National Academies Press, 2011.

⁴⁸ In 2010, the AARP adopted a policy statement incorporating this perspective: “Current state nurse practice acts and accompanying rules should be interpreted and/or amended where necessary to allow APRNs to fully and independently practice as defined by their education and certification.” Quoted in IOM report, note 1 op. cit., p. 106.

⁴⁹ IOM report, op. cit., n. 1, p. 144.

⁵⁰ See Rowe, J., “Why Nurses Need More Authority,” *The Atlantic*, www.theatlantic.com/health/archive/2012/05/why-nurses-need-more-authority/256798. Accessed September 6, 2012.

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.”⁵¹

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.⁵² 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.”⁵³ 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.”⁵⁴

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.⁵⁵ 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.⁵⁶

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
<ul style="list-style-type: none"> • 4 years undergraduate • 4 years medical school • 3 years residency 	<ul style="list-style-type: none"> • 4 years undergraduate nursing • 2 years master’s training 	<ul style="list-style-type: none"> • 4 years undergraduate nursing • 3-4 years doctorate

⁵¹ Fairman, JA. et al., “Broadening the Scope of Nursing Practice,” *NEJM* 364:193-196 (2011)

⁵² These include care such as wellness and prevention services and diagnosis, management of many acute illnesses, and management of chronic diseases such as diabetes and asthma. See Fairman, J. et al., op cit. n. 8.

⁵³ Ralston, JF. and Weinberger, SE., Letter to the Editor, *NEJM* 364: 280-281 (2011)

⁵⁴ Wilson, CB. et al., Letter to the Editor, *NEJM* 364: 280-281 (2011)

⁵⁵ See, for example, Aiken, L., “Nurses for the Future,” *NEJM* 364:196-198 (2011).

⁵⁶ Mason, D., *The Nursing Profession: Development, Challenges, and Opportunities*, Jossey-Bass (2011)

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 1986,⁵⁷ and its conclusions were corroborated in research by, among others, Feldman and colleagues,⁵⁸ a meta-analysis published by Brown and David Grimes in 1993,⁵⁹ and more recently by Hansen-Turton et al., who looked at nurse-practitioner-administered health centers.⁶⁰

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 is 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.”⁶¹
- A widely cited study—often considered dispositive of the issue—conducted by the former dean of the Columbia University School of Nursing Mary Munding 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.”⁶² But upon close examination, the study does not settle the issue. In an editorial in *JAMA* accompanying Munding’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.”⁶³ Additional studies of comparable rigor to Munding’s have not been conducted.

⁵⁷ OTA, *Nurse Practitioners, Physician Assistants, and Certified Nurse-Midwives: A Policy Analysis*, Health Technology Case Study 37 (1986).

⁵⁸ Feldman, MJ. et al., “Studies of Nurse Practitioner Effectiveness,” *Nursing Research* 36:303-308 (1987)

⁵⁹ Brown, SA. and Grimes, DE., *Nurse Practitioners and Certified Nurse-Midwives: A Meta-Analysis of Studies on Nurses in Primary Care Roles*, American Nurses Publishing, 1993.

⁶⁰ Hansen-Turner, T. et al., “The Nursing Center Model of Health Care for the Underserved,” submitted to CMS in June 2004. <http://www.nncc.us/site/pdf/Briefing%20Paper%20on%20Nurse-Managed%20Health%20Center%20Evaluation.pdf>. Accessed September 8, 2012.

⁶¹ Reeves, LM. et al., “Substitution of Doctors by Nurses in Primary Care,” *The Cochrane Library* 2009, Issue 1 pp. 9-10 (2009). The authors specified “Most studies included only small numbers of nurses and very few considered the potential for variation in outcomes by practitioner...In addition, studies intended to demonstrate the comparability of nurse and doctor care need to be powered to assess the equivalence, not difference, of outcomes. That was done in only one study (Lattimer, 1998). A final concern is the narrow range of nurse roles that has been subjected to rigorous evaluation.”

⁶² Munding, MO., et al., “Primary Care Outcomes in Patients Treated by Nurse Practitioners or Physicians,” *JAMA*, 283:59-68 (2000).

⁶³ Sox, HC., “Independent Primary Care Practice by Nurse Practitioners,” *JAMA*, 283: 106-107 (2000). Sox also criticized the short time period—six months—in which to measure results; Munding took another look after two years, and found the conclusions did not differ.

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.⁶⁴ 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.⁶⁵

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.

⁶⁴ Hansen-Turton, T. and Ware, J., "Nurse Practitioners in Primary Care," *Temple Law Review* 82:1235-1262 (2010).

⁶⁵ Pearson, L.J., *The Pearson Report*, www.pearsonreport.com. Accessed September 9, 2012.

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.”⁶⁶ 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.⁶⁷ 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.”⁶⁸

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.⁶⁹ 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
<ul style="list-style-type: none"> • 4 years undergraduate • 4 years medical school • 4 years residency, including three years devoted to ophthalmology 	<ul style="list-style-type: none"> • 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.

⁶⁶ AOA website, July 11, 2012 report (January 2010)

⁶⁷ AMA, “Optometrists,” *Scope of Practice Data Series*, 2010, p. 10

⁶⁸ *Ibid.*, p. 5

⁶⁹ *Ibid.*, pp. 5-6

Number of Optometrists and Practice Patterns: Of the roughly 36,000 optometrists in the United States, 66 percent are in private practice.⁷⁰

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.⁷¹ 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.⁷²
- 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.⁷³
- 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.

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.⁷⁴ The president of Florida Optometric Association warned, however, that “we are in a prolonged battle for our profession, and it is important to keep a long-range focus.”⁷⁵

⁷⁰ AOA, *2011 Survey of Optometric Practice*, [http://www.aoa.org/Documents/Research%20Information/Income%20From%20Optometry%20-%20Exec%20Summary\(0\).pdf](http://www.aoa.org/Documents/Research%20Information/Income%20From%20Optometry%20-%20Exec%20Summary(0).pdf). Accessed October 4, 2012.

⁷¹ Krupa, C., “Optometrists Seek Surgery Rights in More States After Kentucky Victory,” Amednews.co, www.ama-assn.org/amednews/m/2011/05/23/pl20523. Accessed October 6, 2012.

⁷² AMA op. cit., n. 2, p. 34

⁷³ Ibid., p. 36

⁷⁴ Mallon, WJ. (president of the Florida Society of Ophthalmology), “Florida Legislators Playing Dangerous Game with Your Health Care: Don’t Let Optometrists Prescribe Oral Medication,” *TC Palm*, 2012

⁷⁵ Boyle, D., “President’s Message,” *Insight E-News: the E-News Magazine of the Florida Optometric Association*, March/April 2012.

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.⁷⁶ 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..."⁷⁷ [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,⁷⁸ with the potential to bring in an additional \$150,000 annually to the person doing Botox injections.⁷⁹ 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.⁸⁰

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."⁸¹

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."⁸² He observed that facial

⁷⁶ AMA, "Oral and Maxillofacial Surgeons," *Scope of Practice Data Series*, 2009, p. 5.

⁷⁷ ADA, Definition of Dentistry, Adopted by the House of Delegates October 21, 1997. <http://www.centreams.com/admin/storage/news/ADA%20Definition%20of%20OMS%20and%20Dentistry.pdf>. Accessed September 24, 2012.

⁷⁸ American Academy of Facial Esthetics, Botox Therapy for Every Dental Practice, www.facialesthetics.org/esthetics/wrinkle-treatment/botox. Accessed September 23, 2012.

⁷⁹ Sharpe, R., "Dental Botox Gains Popularity—and Adversaries," *DrBiscuspid.com*, www.drBiscuspid.com/index.aspx?sec=prt&sub=def&pag=dis&itemid=304578&printpage=true&fsec=bai. Accessed September 22, 2012.

⁸⁰ See Burgess, J., "Botox Use in Dentistry: Is There Scientific Support?" <http://dental.healthimaginghub.com/portals/dental-health-news-article/articles/2525-botox-use-in-dentistry-is-there-scientific-support.html>. Accessed September 24, 2012.

⁸¹ AMA, op. cit., n.1, p. 6

⁸² Cheifetz, I., "AAOMS Challenges AMA Data Series Comments on OMS, Dentistry," *Journal of the American Dental Association*, June 2010.

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...”⁸³ [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.”⁸⁴ 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...”⁸⁵

Plastic Surgeon	Otolaryngologist	Dermatologist	Oral and Maxillofacial Surgeon
<ul style="list-style-type: none"> • 4 years undergraduate • 4 years medical school • 6 years residency 	<ul style="list-style-type: none"> • 4 years undergraduate • 4 years medical school • 5 years residency 	<ul style="list-style-type: none"> • 4 years undergraduate • 4 years medical school • 4 years residency 	<ul style="list-style-type: none"> • 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,

⁸³ AAOMS, “Facial Cosmetic Surgery,” www.aaoms.org/facial_cosmetic_surgery.php. Accessed September 21, 2012.

⁸⁴ AAOMS, “The Oral and Maxillofacial Surgeon,” www.aaoms.org/theoms.php. Accessed September 24, 2012.

⁸⁵ AMA op. cit. n. 1, p. 6.

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.”⁸⁶

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.⁸⁷ There are more than 150,000 dentists.⁸⁸

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.⁸⁹

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.⁹⁰

⁸⁶ Cheifetz, I., op. cit n. 7.

⁸⁷ Bureau of Labor Statistics, *Occupational Employment Statistics: Oral and Maxillofacial Surgeons*, www.bls.gov/oes/current/oes291022.htm. Accessed September 24, 2012.

⁸⁸ Bureau of Labor Statistics, *Occupational Employment Statistics: Dentists*, <http://www.bls.gov/ooh/healthcare/dentists.htm>. Accessed September 24, 2012.

⁸⁹ American Dental Association, “A Summary of States’ Definitions of Dentistry,” June 2003, updated January 2009.

<http://www.centreams.com/admin/storage/news/ADA%20Definition%20of%20OMS%20and%20Dentistry.pdf>. Accessed September 24, 2012.

⁹⁰ See AMA op. cit. n.1, fig. 2. See also “Tennessee Legalizes Botox Use for Oral Surgeons,”

Drbicuspids.com.,

http://www.drbicuspids.com/index.aspx?sec=sup_n&sub=cos&pag=dis&ItemID=306827c=bai. Accessed September 24, 2012.

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.⁹¹ 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."⁹²

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 services⁹³—a goal that is contained in the *Future Vision for Pharmacy Practice 2015* adopted by the Joint Commission of Pharmacy Practitioners.⁹⁴ 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."⁹⁵ In response, the CEO of the American Society of Health-System Pharmacists wrote a letter to the

⁹¹ See, for example, Murawski, M. et al., "Advanced-practice pharmacists: Practice characteristics and reimbursement of pharmacists certified for collaborative clinical practice in New Mexico and North Carolina," *American Journal of Health-System Pharmacy*, 68:e47-56 (2011) and Tally, CR, "Prescribing Authority for Pharmacists," *American Journal of Health-Systems Pharmacy*, 68:2333 (2011)

⁹² Dole, E. "ASHP Meeting is an Exciting Place for Change," <http://connect.ashp.org/blogs/viewblogs/?BlogKey=ee77120b-870d-40c2-b066-bc811e68680a>. Accessed August 24, 2012.

⁹³ AMA, "Pharmacists," *Scope of Practice Data Series*, 2009

⁹⁴ Council on Credentialing in Pharmacy, "Scope of Contemporary Pharmacy Practice: Roles, Responsibilities, and Functions of Pharmacists and Pharmacy Technicians," 2009, reprinted the Future Vision Statement, which states, "Pharmacists will be the healthcare professionals responsible for providing patient care that ensures optimal medication therapy."

⁹⁵ AMA, op. cit., n. 3, p. 7

CEO of the AMA 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.⁹⁶

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.⁹⁷

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.”⁹⁸ 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
<ul style="list-style-type: none"> • 4 years undergraduate • 4 years medical school • 3 years residency 	<ul style="list-style-type: none"> • 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.⁹⁹ Two-thirds of pharmacists work in the community.¹⁰⁰ The number of pharmacists currently certified as advance practitioners is not available; in 2009, there were 189.¹⁰¹

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

⁹⁶ Letter from Manasse, HR to Maves, MD, March 25, 2010, <http://ashp.org/DocLibrary/News/NewsCapASHPlettertoAMAreScopeofPractice032510.aspx>

⁹⁷ “FDA Proposal to Allow Pharmacists to Prescribe Some Drugs Sparks Swift Rebuke from AAFP,” *AAFP News Now*, www.aafp.org/online/en/publications/news/news-now/government-medicine/20120502pharmprescribing.pinterviewview.html. Accessed August 21, 2012

⁹⁸ AMA, op. cit.

⁹⁹ BLS, “Pharmacists,” *Occupational Outlook Handbook*, www.bls.gov/ooh/Healthcare/Pharmacists.htm. Accessed August 27, 2012

¹⁰⁰ Council on Credentialing in Pharmacy, op. cit., n. 4

¹⁰¹ Murawski, M., op. cit., n. 1

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.¹⁰²

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.¹⁰³ 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.¹⁰⁴ Thus, the literature on the safety and effectiveness of community pharmacists’ prescribing is insufficient to draw meaningful conclusions at this time.

¹⁰² Dole, E. op.cit., n. 2

¹⁰³ AMA, op. cit., n. 3

¹⁰⁴ Nkansa, N. et al. “Effect of outpatient pharmacists' non-dispensing roles on patient outcomes and prescribing patterns,” *Cochrane Database Systems Review*, www.ncbi.nlm.nih.gov/pubmed/20614422. Accessed August 27, 2012

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.¹⁰⁵

To carry out this agenda, the APTA has changed the entry-level requirement from the master's degree to the doctoral degree. Its *Vision 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."¹⁰⁶

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..."¹⁰⁷

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 hold 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 2016.¹⁰⁸ 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.¹⁰⁹

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.

¹⁰⁵ AMA, "Physical Therapists," *Scope of Practice Data Series*, 2009, p. 5

¹⁰⁶ APTA website, www.apta.org/vision2020. Accessed August 10, 2012.

¹⁰⁷ AMA op. cit., n. 1, p. 5

¹⁰⁸ APTA, "Today's Physical Therapist: A Comprehensive Review of a 21st-Century Health Care Profession," 2012.

¹⁰⁹ AMA, op. cit. n. 1, p. 6.

Orthopedic surgeon	Physical therapist (requirements per <i>Vision 2020</i>) ¹¹⁰
<ul style="list-style-type: none"> • 4 years undergraduate • 4 years medical school • 5 years residency 	<ul style="list-style-type: none"> • 4 years undergraduate • 3 years post-graduate training leading to a DPT degree.

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.¹¹¹ 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.¹¹²

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.¹¹³ 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.¹¹⁴ 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

¹¹⁰ Based on APTA, *Vision 2020*, www.apta.org/Vision2020. Accessed August 11, 2012 and AMA, *op cit.* note 1 at page 6.

¹¹¹ APTA website, www.apta.org/stateissues/directaccess/faqs. Accessed August 11, 2012.

¹¹² APTA, “Direct Access to Physical Therapy Laws, May 2012,” www.apta.org/uploadedFiles/APTAorg/Advocacy/State/Issues/Direct_Access/DirectAccessbyState.pdf. Accessed August 11, 2012.

¹¹³ Moore, JH. et al., “Risk Determination for Patients with Direct Access to Physical Therapy in Military Health Care Facilities,” *J. Orth & Sports Phys Therapy*, 35:674-678 (2005).

¹¹⁴ Mitchell, JM. and Lissovoy, G., “A Comparison of Resource Use and Cost in Direct Access Versus Physician Referral Episodes of Physical Therapy,” *Physical Therapy*, 77:1 (January 1997).

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.”¹¹⁵

¹¹⁵ Jette, DU. et al., “Decision-Making Ability of Physical Therapists: Physical Therapy Interventions or Medical Referral,” *Physical Therapy*, 86: 1619-1629 (2006).

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.”¹¹⁶ 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.¹¹⁷ 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].”¹¹⁸ 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.”¹¹⁹

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.”¹²⁰

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.¹²¹

The APMA observes that “the education, training, and experience podiatrists receive...is more sophisticated and specialized than that of broadly trained medical subspecialists.”¹²² 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

¹¹⁶ AMA, “Podiatrists,” *Scope of Practice Data Series*, 2010, p. 5, citing Black’s Medical Dictionary

¹¹⁷ Ibid.

¹¹⁸ APMA, *Resources for Policymakers*, <https://www.apma.org/content.cfm?ItemNumber=1598>. Accessed October 6, 2012.

¹¹⁹ AAOS, *Surgical Care of the Lower Extremities*, <http://www.aaos.org/about/papers/position/1148.asp>. Accessed October 6, 2012.

¹²⁰ Quoted in AMA n. 1, p. 42

¹²¹ APMA, op. cit. n. 3

¹²² APMA, *Podiatric Medicine: A Factsheet for Policymakers*, <https://www.apma.org/files/FileDownloads/policymakerfactsheet.pdf>. Accessed October 6, 2012.

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].”¹²³

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.”¹²⁴

Orthopedic surgeon	Podiatrist ¹²⁵
<ul style="list-style-type: none"> • 4 years undergraduate • 4 years medical school • 5 years residency 	<ul style="list-style-type: none"> • 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.¹²⁶

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).

¹²³ AAOS, op. cit., n. 4

¹²⁴ AMA, op. cit., n. 1, p. 5

¹²⁵ 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.

¹²⁶ Bureau of Labor Statistics, *Podiatrists*, <http://www.bls.gov/ooh/healthcare/podiatrists.htm>. Accessed October 6, 2012.

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 advocating 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;¹²⁷ (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.”¹²⁸

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.”¹²⁹

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.¹³⁰

¹²⁷ A survey conducted for the Tennessee Psychological Association found that patients had to wait between 54 and 90 days to see a psychiatrist. Andrews, M., “Psychologists Seek Authority to Prescribe Psychotropic Medications,” *Washington Post*, March 21, 2011.

¹²⁸ APA website, www.apapracticecentral.org/advocacy/authority/index.aspx. Accessed August 20, 2012.

¹²⁹ AMA, “Psychologists,” *AMA Scope of Practice Data Series*, 2009, p. 48

¹³⁰ 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).

Physician	Psychologist
<ul style="list-style-type: none"> • 4 years undergraduate • 4 years medical school • 4 years residency for psychiatrists, 3 years for primary care physicians 	<ul style="list-style-type: none"> • 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.¹³¹

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.¹³² 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

¹³¹ 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).

¹³² Krupta, C., “Psychologists seek prescribing rights in six states,” *Amednews.com*, www.ama-assn.org/amednews/2011/03/07/pr120307.htm. Accessed August 20, 2012.

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.”¹³³ 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.”¹³⁴

¹³³ AMA, “Psychologists,” *AMA Scope of Practice Data Series*, 2009, p. 5.

¹³⁴ Lavoie, KL. and Barone, S, op. cit. n. 5.