# Academia and Clinic

# **Credentialing Complementary and Alternative Medical Providers**

David M. Eisenberg, MD; Michael H. Cohen, JD; Andrea Hrbek; Jonathan Grayzel, MD; Maria I. Van Rompay, BA; and Richard A. Cooper, MD

Since the late 19th century, state legislatures and professional medical organizations have developed mechanisms to license physicians and other conventional nonphysician providers, establish standards of practice, and protect health care consumers by establishing standardized credentials as markers of competence. The popularity of complementary and alternative medical (CAM) therapies presents new challenges. This article describes the current status of, and central issues in, efforts to create models for health care credentialing of chiropractors, acupuncturists, naturopaths, massage therapists, and other CAM practitioners. It also suggests a strategy of CAM provider credentialing for use by physicians, health care administrators, insurance companies, and national professional organizations.

The credentialing debate reflects fundamental questions

about who determines which providers and therapies will be accepted as safe, effective, appropriate, and reimbursable. More nationally uniform credentialing mechanisms are necessary to ensure high standards of care and more generalizable clinical research. However, the result of more uniform licensure and credentialing may be excessive standardization and a decrease in individualization of services. Thus, increased standardization of credentialing for CAM practitioners may alter CAM practice substantially. Furthermore, even credentialed providers can deliver ineffective therapy. The suggested framework balances the desire to protect the public from dangerous practices against the wish to grant patients access to reasonably safe and effective therapies.

Ann Intern Med. 2002;137:965-973. For author affiliations, see end of text. www.annals.org

Cince the late 19th century, state legislatures and profes-Isional medical organizations have developed mechanisms to license physicians and other conventional nonphysician providers, establish standards of practice, and protect health care consumers by establishing standardized credentials as markers of competence. The recent explosion in the popularity of complementary and alternative medical (CAM) therapies (for example, chiropractic, acupuncture, naturopathy, massage therapy, homeopathy, and herbal medicine) presents new questions. Legislative recognition trumps medical recognition: State legislatures can license providers and thereby grant citizens access to certain therapies, even if scientific debate has not concluded in favor of those modalities. We describe the central issues in credentialing CAM providers and provide a framework for use by physicians, health care administrators, insurance companies, and national professional organizations.

### CURRENT CREDENTIALING PRACTICES Licensing and Credentialing of Medical Doctors, Doctors of Osteopathy, Registered Nurses, and Other Conventional Health Care Professionals

Credentialing is "the process of obtaining, verifying, and assessing the qualifications of a health care practitioner to provide patient care services in or for a health care organization" (1). Such qualifications may include a state license (granting the right to practice), which includes, in the case of providers other than medical doctors, a legislatively designated scope of practice (that is, the right to offer a specified range of clinical services that is narrower than medical diagnosis and treatment). Clinical "privileges," also known as medical staff privileges, are the authorization granted by the appropriate authority (for example, a governing body) to a practitioner to provide specific care services in a health care organization or network within welldefined limits (2). Thus, credentialing a provider to deliver clinical services does not necessarily make the provider a member of the medical staff with clinical "privileges."

Licensure requirements for medical doctors and doctors of osteopathy include graduation from a Liaison Committee on Medical Education (LCME)-accredited school or the equivalent, a passing grade on all three parts of the United States Medical Licensing Examination, and a minimum of 1 year postgraduate training in an accredited program (Appendix Table 1, available at www.annals.org). Requirements for nursing licensure include graduation from an accredited nursing program and a passing grade on the National Council Licensure Examination (NCLEX) (3). Licensing requirements and scope of practice for other conventional health care providers, such as physical therapists, optometrists, and podiatrists, vary by profession and by state (Appendix Table 2, available at www.annals.org) (4).

### Licensing and Credentialing of CAM Providers

Licensing of CAM practitioners also varies by type of practitioner and by state (Appendix Table 3, available at www.annals.org). For example, chiropractic is licensed in every state, whereas massage therapy is licensed in some states but not others and is less amenable to a national credentialing process. Some practices (for example, homeopathy) by and large lack formal recognition through state licensure and, therefore, afford hospitals and health plans no coherent credentialing process (5) (Table 1). Moreover, the type of license granted to each kind of provider varies by state (that is, mandatory license, title license, or registration) (6). Finally, as with conventional nonphysician providers, legal recognition of CAM providers through licensure is a political process, with attendant debates over scope of practice, prescriptive authority, and role of physician supervision (4).

Table 1. Overview of Licensing Requirements for Complementary and Alternative Medical Practitioners\*

Profession	States with Licensure, n	Education		
		Training	Internship/Residency	
Chiropractors (DC)	50 and District of Columbia	4-5 years or 4200 hours; includes basic medical sciences as well as clinical experiences	None	
Non-MD acupuncturists	42 and District of Columbia	3 years or 1800 hours; includes 300 hours Chinese herbology and 500 clinical hours; some states require anatomy, physiology, and pathology, but 17 have no specific requirement	None	
MD acupuncturists	31 states expressly include acupuncture in MD and DO licensure; 11 states require additional training or an examination; 4 states do not have any ruling; 2 states do not permit	200–300 hours	None	
Naturopathic doctors (ND)	11	4-year postgraduate program; years 1 and 2 emphasize natural sciences; years 3 and 4 emphasize the clinical sciences and a range of natural therapeutics	None required; however, graduates are increasing participating in residency training programs	
Massage therapists	25	100–1000 hours; most states specify a minimum of 500 hours; states may specify graduation from a Commission on Massage Therapy Accreditation (COMTA)–approved program, an equivalent program, or training in a specific area (e.g., anatomy or theory)	None	
Homeopathic physicians†	3; Licensure as a homeopathic physician is available only to MDs and DOs in Nevada, Arizona, and Connecticut	Nevada specifies 6 months of postgraduate training; Arizona requires 300 hours of postgraduate training; Connecticut does not specify any educational requirements	NA	

<sup>\*</sup> Verified as of July 2001. CE = continuing education; CEU = continuing education unit; DO = doctor of osteopathy; NA = not applicable.

#### Chiropractic

Chiropractic, first licensed in 1904 by Illinois, is now licensed in all states. Currently, approximately 70 000 licensed chiropractors are practicing in the United States (Figure 1 and Appendix Table 4, available at www.annals .org) (7). Students train at 1 of 16 chiropractic colleges accredited by the Council on Chiropractic Education, an organization recognized by the U.S. Department of Education (DOE) (7, 8). The Federation of Chiropractic Licensing Boards has developed uniform standards of education and examination, including the National Board of Chiropractic Examiners' four-part standard national certification examination; parts 1 to 3 are required for licensing by almost all states (Table 1) (9, 10).

However, obstacles to standardized credentialing persist, including understanding the scope of practice variations across states for chiropractors (6). For example, states vary in authorizing chiropractors to dispense or sell dietary supplements or to use ancillary CAM therapies, such as homeopathy and acupuncture (7). Indeed, current debates

surrounding the safety and efficacy of dietary supplements highlight dilemmas involved in regulating providers' authority to recommend or offer such supplements (11, 12).

Yet another conundrum is the status of chiropractors as "primary care providers" (PCPs). The Joint Commission on the Accreditation of Healthcare Organizations (JCAHO) defines a primary care provider as an individual "who provides primary care services" (that is, "basic health care") and "manages routine health care needs," including "referral to a specialist for consultation or continued care" (13). The American Chiropractic Association defines chiropractors as "a first-contact gatekeeper" for patients with neuromusculoskeletal conditions in the primary health care system (14), and, in smaller communities with fewer physicians, chiropractors frequently serve as providers of first contact (7). In Illinois, chiropractors who meet rigorous standards, including review by a credentialing committee composed of conventional physicians, can receive re-

<sup>†</sup> Other practitioners, such as naturopathic doctors, may be trained in and include homeopathy in their legislative scope of practice; however, only MDs are currently eligible for licensure.

#### Table 1—Continued

Examination		Continuing Education Units
Written	Practical	
All states and District of Columbia accept or require the National Board of Chiropractic Examiners (NBCE) examination	40 states accept or require the NBCE Part IV examination (Practical Examination of Clinical Skills)	48 states and District of Columbia require some CEUs; average is 12 hours per year
National Certification Commission for Acupuncture and Oriental Medicine (NCCAOM) or state examination required in all states except Louisiana	Some states require the Practical Examination of Point Location Skills (PEPLS) or state examination	16 states require at least some CEUs; average is 15 hours per year
Only Hawaii requires MD acupuncturists to pass the same examination as non-MD acupuncturists; other states require only documentation of training	Only Hawaii has the same requirements for MD and non-MD acupuncturists	None
Naturopathic Physicians Licensing Examination (NPLEX) includes a basic sciences examination (not required by 2 states) and clinical examinations in clinical, physical, and laboratory diagnosis; diagnostic imaging; botanical medicine; pharmacology; nutrition; physical medicine; homeopathy; minor surgery; psychology; lifestyle counseling; and emergency medicine	None	4 states have laws requiring CE, but only 2 have specific requirements
16 states require passage of the National Certification Examination for Therapeutic Massage and Bodywork (NCETMB); 7 states have their own examination	2 states	State requirements range from 3 to 12 hours per year
Each state administers its own oral or written examination		Only Nevada requires CEUs (20 hours/year)

imbursement under a Blue Cross/Blue Shield plan as PCPs (15). The "PCP" status of chiropractors thus remains controversial.

### Acupuncture and Traditional Oriental Medicine

Acupuncture, first licensed by Nevada, Oregon, and Maryland in 1973, currently is licensed in 42 states and the District of Columbia (16). More than 14 000 practitioners are licensed in the United States (17), and an additional estimated 3000 medical doctors have studied formally and incorporate acupuncture into their practices (18). Of the more than 70 schools of acupuncture in the United States, 37 are accredited by and 9 are in candidacy status with the U.S. DOE-recognized Accreditation Commission for Acupuncture and Oriental Medicine (ACAOM) (Figure 2 and Appendix Table 4, available at www.annals.org).

About one third of the states that license nonphysician acupuncturists require graduation from an ACAOM school or one with an equivalent curriculum (17). In addition, approximately one third of licensing states require the study of biomedical sciences, including anatomy, physiology, and pathology (Table 1). The National Certification Commission for Acupuncture and Oriental Medicine (NCCAOM) offers separate certification programs in Acupuncture, Chinese Herbology, and Oriental Bodywork Therapy (19). As with chiropractic, almost all states licensing acupuncturists require passage of a national written examination offered by NCCAOM (17). Twelve states also require passage of the NCCAOM practical examination (9, 17).

Credentialing problems persist. First, state requirements to practice acupuncture vary (Table 1 and Appendix Table 5, available at www.annals.org). In many states, acupuncture training requirements for medical doctors, dentists, and other allopathic providers are minimal or nonexistent (Table 1) (17, 20). Some states permit licensed CAM providers, such as chiropractors, to practice acupuncture (with varying levels of training) whereas other states prohibit it (17).

<sup>3 000 000</sup> 72 5<u>58 8</u>74 684 605 700 000 600 000 500 000 400 000 300 000 250 000 185 000 200 000 100 000 70 000 14 000 3000 1400

Figure 1. Complementary and alternative medical and conventional practitioners.

Second, states vary in their defined scope of practice for acupuncture and Oriental medicine. Definitions may include, in addition to needling, the following: magnets, laser biostimulation, cupping, Oriental bodywork (such as Shiatsu or acupressure), dietary counseling, reflexology, and other treatments (17). Some states specifically permit use of Chinese herbal medicine or western dietary advice and nutritional supplements; at least one state (Illinois) specifically prohibits use of herbal preparations (17). Colorado specifically prohibits use of western medical diagnostic tests and procedures; New Mexico's Board of Oriental Medicine authorizes doctors of Oriental medicine to order computed tomography, magnetic resonance imaging, and radiographs (17). Four states (Arkansas, Illinois, Utah, and Virginia) expressly prohibit spinal manipulation or chiropractic techniques (17).

Third, only 14 states have an independent board of acupuncture or Oriental medicine; in other states, acupuncturists are under the board of medical examiners or regulated by the departments of commerce or health (17, 21). Fourth, only two states (Florida and New Mexico) specify that acupuncturists provide primary care (22, 23). Approximately one quarter of the states licensing acupuncturists require prior referral from, diagnosis by, or collaboration with a licensed medical doctor (Appendix Table 5, available at www.annals.org) (17, 21).

Finally, ongoing intraprofessional disputes include educational prerequisites for licensure; use of the title "doctor" (of acupuncture or Oriental medicine); supervision, referral, and prior diagnosis requirements; and educational requirements for inclusion of Chinese herbology within scope of practice (21).

### Naturopathy

Naturopathy, although practiced in the United States for more than a century, is licensed by only 11 states (Table 1). The 1400 licensed naturopaths in the United States (8) have trained at one of four naturopathic colleges accredited by the Council on Naturopathic Medical Education of the American Association of Naturopathic Physicians (AANP) (Figure 2). Although the AANP has developed a national certification examination, the Naturopathic Physicians Licensing Examination (NPLEX), passing is not required for licensure in all states. (Table 1) (9, 24-27).

As with chiropractic and acupuncture, the scope of practice for naturopathy varies widely by state. For example, naturopaths with appropriate specialty training can assist in childbirth in Montana, New Hampshire, Oregon, and Utah (28-31); in some states, they can practice acupuncture (17).

Intraprofessional disputes include objections to licensure requirements by individuals who use the title of naturopath but who have little (or no) training, particularly in states lacking naturopathic licensure, and whether to actively recommend standard immunization procedures (32). Although naturopaths are not required to obtain postgraduate (that is, residency) training or supervision, they are described as primary caregivers in some of their licensing statutes (6) and are seen as health care providers of first contact by many patients.

### Massage Therapy

The number of massage therapists has increased from approximately 75 000 in 1995 to more than 250 000 in 2002 (33). The American Massage Therapy Association

(AMTA), a nonprofit professional organization, founded two regulatory boards: the Commission on Massage Therapy Accreditation (COMTA), which accredits massage therapy schools, and the National Certification Board for Therapeutic Massage and Bodywork (NCBTMB), which certifies practitioners on successful completion of a national examination. Increasingly, states are requiring as a basis for licensure that massage therapists 1) have a minimum of 500 hours of in-class, supervised training at an accredited institution; 2) have passed the NCBTMB national certification examination, 3) maintain specified continuing education requirements, and 4) carry minimum malpractice insurance (Table 1).

Numerous other professional organizations in addition to the AMTA represent providers; these include the Association of Bodywork and Massage Professionals (ABMP) and smaller, more specialized organizations, such as the American Organization for Bodywork Therapies of Asia (AOBTA) and Feldenkrais Guild of North America (FGNA). Approximately half of massage therapy practitioners do not belong to any professional organization (34). Although numerous accrediting organizations exist, only COMTA's accrediting process includes programmatic evaluation, and COMTA has accredited only 42 of approximately 1000 massage therapy schools in the United States (Figure 2).

Many states (for example, California and Massachusetts) do not license massage therapists. Debate also arises as to whether licensing should be mandatory, required to

claim a title such as "massage therapist," or whether therapists should only be required to register with a state agency. In Maryland, for example, practitioners are distinguished as registered massage practitioners or certified massage therapists on the basis of education (Appendix Table 6, available at www.annals.org); in other states, regulation is by town ordinance.

Scope-of-practice conflicts can also arise between massage therapists and other practitioners, such as physical therapists and chiropractors (for example, conflict over the exclusivity of hydrotherapy, recommendations for exercise, and certain kinds of tissue manipulation). Finally, although many massage therapists use western medical systems of anatomy and pathology, others rely primarily on eastern medical traditions (such as Shiatsu, which is based on acupuncture meridians).

### Homeopathy

Homeopathy is widely practiced in the United States by a variety of practitioners (estimated at 6000) (35); however, only three states (Arizona, Connecticut, and Nevada) license homeopaths and then only if practitioners have medical licensure. Arizona and Nevada also license homeopathic assistants who can perform medical services under the supervision of a homeopathic physician (36, 37). Some states expressly include homeopathy within the scope of practice of professions such as chiropractic, naturopathy, physical therapy, and veterinary medicine (6); many nurses

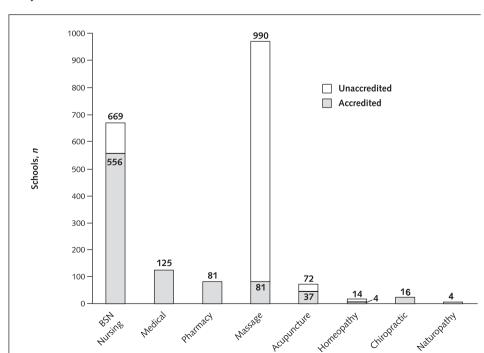


Figure 2. Complementary and alternative medical and conventional schools.

BSN = Bachelor of Science in Nursing.

#### Table 2. Credentialing Framework\*

Minimum Requirements (Source verification for all documents is recommended.)

Copy of current license (including expiration date) from the state or presiding jurisdiction (e.g., municipality) when state licensure is not available

Evidence of satisfactory completion of national certification examination (not required for licensure in all states); in the absence of state regulation, however, this represents a uniform standard for training and for a knowledge base

Copy of diploma from an accredited professional school and evidence of college education if required

Documentation of postgraduate studies (including certificates and diplomates) from an accredited school or program

Evidence of continuing education units may be required for licensure or for membership in a professional organization

Evidence of malpractice insurance in the form of an insurance binder; see Appendix Table 7 (available at www.annals.org) for recommended levels of coverage

Review history of malpractice liability (including claims, judgments, and settlements); charges of misconduct; and disciplinary action by any federal, state, or local regulatory authority; can be obtained from a licensing board, professional organization, or malpractice insurance

### Optional and Additional Requirements

Consider years in practice after establishing a minimum requirement; verification of work history is recommended

Evaluate practice demographic characteristics (including office hours, location, practice type [private, multidisciplinary, or group], and patient volume) as well as office staffing, type of patient and percentage of population (e.g., workers' compensation, managed care, Medicare, Medicaid, third-party liability), and languages spoken by providers and

Determine whether comprehensive general liability insurance is within satisfactory limits

Review letters of recommendation from MDs, DOs, or peers with whom provider has comanaged patients

Evaluate the provider's self-reported scope of practice; this should be compared with 1) level of training (to confirm training or certification for specific techniques or therapy) and 2) legislated or a specific scope of practice, such as the one developed for a clinical trial

Conduct site visits that include evaluation of 1) location (handicap accessibility, parking, and public transportation) and 2) office environment, with categories and criteria clearly defined-office hours and availability, practice coverage, income from sales of products (e.g., dietary supplements) or services (e.g., radiography and blood tests)

Reviews charts to document that specific elements consistently appear in patient/client records. These include history, examination, diagnosis, and a treatment plan

Identify whether provider has full or limited/partial hospital privileges or other clinical affiliations

and dentists also incorporate homeopathy (38). Moreover, because most homeopathic remedies are classified as overthe-counter drugs (39), they are widely available.

The American Board of Homeotherapeutics provides board certification for licensed medical and osteopathic doctors after a written and oral examination, including presentation of clinical cases. Several boards offer certification for various nonlicensed and licensed health professionals, although these organizations lack recognition by the U.S. DOE. Major issues include the requisite level of training for competence in homeopathy, the different standards for training and certifying various providers (40), and legal status of lay practice of homeopathy (6, 38).

#### Other Complementary Care Providers

Licensed medical doctors generally have statutory authority to diagnose and treat disease. Thus, subject to medical board discipline for "unprofessional conduct" (6, 41, 42) or potential malpractice liability (43), medical doctors may incorporate CAM therapies. The more limited scope of practice allowed conventional nonphysician providers and licensed CAM practitioners; however, either permits or prohibits them from using specific CAM treatments (for example, nutritional counseling, herbal medicine, biofeedback, or hypnotherapy) or, more typically, fails to provide guidance (6, 44). Because scope of practice is complex and varies by state, guidance from legal counsel or relevant professional organizations may be helpful (43).

Providers who lack licensure share a complex and uncertain legal status. These providers include herbalists, lay homeopaths, unlicensed naturopaths, hypnotherapists, energy healers, mind-body practitioners, and others without any other health care licensure (44). Many of these providers have historically been prosecuted and convicted for the unlicensed practice of medicine (6, 45-51) or risk prosecution for unlicensed practice of another profession, such as massage therapy or psychology (6). Recently, Minnesota (52), California, and Rhode Island enacted legislation protecting such providers as long as they meet specific regulatory requirements, but physician referrals to both licensed and unlicensed CAM providers could, under some circumstances, increase potential malpractice liability (43).

### A Proposed Framework for Credentialing CAM PROVIDERS

As we suggested earlier, the framework for physicians and other conventional health care providers offers a starting point for credentialing CAM providers. The following proposed framework draws on National Institutes of Health (NIH)-funded projects involving the identification of qualified CAM practitioners in the provision of chiropractic, acupuncture, and massage therapy for patients with acute or chronic low back pain. The minimum requirements include licensure; evidence of satisfactory completion of an appropriate national certification examination; documentation of completion of required studies and continuing education; and signed statements pertaining to malpractice insurance, history of malpractice, and disciplinary action (Table 2 and Appendix Table 7, available at www.annals.org, for sample minimum standards for malpractice liability insurance). Credentials help assess competence but do not guarantee competence or that the therapist is using treatments proven to be safe or effective.

The optional requirements may help physicians or institutions seeking a higher level of quality assurance in selecting individual practitioners. These include minimum number of years in practice, demographic characteristics of the practice, and information about office staffing (Table 2). Furthermore, letters of recommendation from medical

doctors, doctors of osteopathy, other conventional practitioners, and peers are useful to evaluate patient comanagement. Similarly, site visits can help evaluate the following: patient accessibility (for example, handicap access); office environment or written materials being distributed; the sale of products; the use of diagnostic or laboratory equipment (for example, radiography and blood tests); and appropriate medical record keeping (through random chart reviews). Inquiry into the provider's professional history may further help assess competence.

Finally, it is useful to identify therapeutic and diagnostic procedures most commonly used for each profession as a guideline to identify practitioners whose standard practice falls within the defined parameter for the clinic or research project. For example, in our ongoing NIH-funded studies, nationally representative groups of CAM professionals compiled broad lists of techniques commonly used by acupuncturists, chiropractors, and massage therapists to treat low back pain (Appendix Table 8, available at www.annals.org). From these lists, we identified therapeutic techniques that most leaders in the profession deemed inappropriate for treatment of participants in these trials. We also identified techniques that, for purposes of our research protocol, we wanted to exclude or limit (for example, acupressure, which is based on meridian theory, was an excluded technique for massage therapists). These lists were then compared with practitioners' self-reported practice patterns to help identify practitioners for our trials. This approach can be individualized to address local needs of medical groups or institutions.

Although many insurance networks use the minimum (and some of the optional) requirements, ideally, academic health centers should seek input from appropriate professional organizations (Appendix Table 9, available at www.annals.org), pharmacy and therapeutics committees, and legal counsel to refine their requirements and create reproducible quality-assurance standards across affiliated hospitals.

### DISCUSSION

Most CAM professions lack the consistency and uniformity of licensing and credentialing processes of other health care professions. If insurers increasingly reimburse for CAM therapies, patient utilization is likely to increase (53). It is also likely that with increased legislative and judicial acceptance of CAM therapies, reimbursement for these therapies will increase (44). Yet, social forces create an uneven map of licensure and legally authorized scope of practice across both CAM professions and states (9). This in turn creates a complex, uncertain terrain for many clinicians for whom homogeneity of education and training is the sine qua non for referring or comanaging patients. Furthermore, physicians face ethical dilemmas in providing referral advice or CAM services in the absence of definitive data regarding documented risks and benefits (54).

More uniform, nationwide standards for licensing and credentialing of CAM providers could help facilitate responsible physician collaboration and referral; offer more authoritative, consistent, and generalizable clinical and financial research; minimize access to unqualified CAM providers; and help translate CAM therapies into standardized diagnostic and therapeutic codes for billing purposes. With greater standardization, clearer practice standards could be established and hospital credentialing and regulation be made more responsive to consumer needs. Both observational monitoring and controlled scientific investigation that is capable of delivering authoritative (and generalizable) results could also be facilitated.

Such changes would help increase public trust, practitioner rigor, legislative integrity, research capabilities, and patient access to a range of "credentialed" CAM providers and therapies. Indeed, the Select Committee on Science and Technology of the United Kingdom House of Lords recommended that CAM training "become more standardized and be accredited and validated by the appropriate professional bodies" (55-57).

Clearer credentialing of CAM providers would also facilitate risk management by health care institutions dedicated to responsible integration of such therapies. At present, although there are few, if any, reported judicial opinions involving lawsuits against physicians who refer to or comanage patients with licensed CAM providers (43, 58), such lawsuits are likely to occur more often as CAM therapies are increasingly incorporated within conventional medical delivery systems (43, 44).

At the same time, greater homogeneity may undermine the diversity of education, training, and skill, which historically have characterized many CAM professions. The result may be excessive standardization, rigid scope of practice boundaries, excessive utilization standards (number of visits) and fee schedules, increases in patient volume, decreases in individualization of services, a decrease in time spent per patient, and a perceived decrease in satisfaction by both patients and CAM practitioners.

More standardized licensing and credentialing for CAM therapies might also alienate CAM providers. Many CAM providers lack the resources to establish the needed infrastructure to operate in a tightly regulated environment, with constraints by third-party payers and other administrative requirements. Many CAM providers fear that with the development of national standards for quality assurance, credentialing, scope of practice, and reimbursement, they will end up 1) subordinate to medical doctors, as has been the case with some conventional nonphysician providers, such as physical therapists; 2) unsatisfied with their professional practices, as are many health care providers in today's highly regulated and managed environment; 3) reimbursed at a lower rate than if paid by fee-for-service; 4) violating the core philosophy of their practices; and 5) further burdened by administrative work. In summary, many CAM providers question whether more uniform licensing and credentialing standards, even if feasible, would be desirable.

### CONCLUSION

Despite the historical divide between medical doctors and CAM providers, the present legal landscape permits widespread practice of CAM therapies. This observation that legal recognition trumps medical recognition—also suggests other interactions between medical-scientific and legal processes. First, legislative (and judicial) processes may override medical opinions on the relative efficacy and value of CAM therapies. This will occur although even credentialed providers can deliver ineffective therapy. Second, in the eyes of clinicians sworn to do no harm, safety trumps efficacy and must be paramount; yet, in the eyes of many health care consumers and their elected representatives, freedom of choice not uncommonly trumps scientific or medical acceptance or evidence of safety. Third, while evidence-based conclusions guide medical advice and practice, the perspectives and practices of many CAM providers are based on vitalistic, spiritual, and cultural understandings of health and disease (59), which may thereby influence legislative decisions. Fourth, when a physician refers a patient to (or comanages the patient with) a licensed CAM provider, increased communication with both the patient and the CAM provider regarding the CAM provider's qualifications and treatment plan may improve the physician-patient relationship and also decrease the prospect of adverse events and malpractice litigation (6, 43, 44).

Finally, larger social forces temper and mediate the entire debate. Thus, particular issues in credentialing, such as turf battles between professions over scope of practice, reflect larger cultural and political collisions concerning the evolving definitions of mainstream medical care. Such issues also reflect fundamental philosophic questions as to who determines which providers and therapies will be accepted as safe, effective, appropriate, or reimbursable. Legislative recognition may trump medical recognition; however, scientific evidence ultimately informs both legislative and medical behavior (as well as third-party reimbursement). These "checks and balances" are essential to the ongoing refinement of our medical delivery system.

From Harvard Medical School, Boston, Massachusetts; University of Massachusetts Medical Center, Worcester, Massachusetts; and the Medical College of Wisconsin, Milwaukee, Wisconsin.

Information on the various health professions changes rapidly. The figures in this article represent a snapshot of the profession [as reported by the professions or their representatives] at various dates before acceptance of this article for publication.

Acknowledgments: The authors thank Edward H. Chapman, MD; James Dillard, MD, DC; Janet Kahn, PhD, NCTMB; Barbara Mitchell; Joseph E. Pizzorno Jr., ND; Lou Sportelli, DC; and David Studdert, JD, for their assistance with the preparation of this paper. They also thank John C. Wilson for his research and administrative assistance.

Grant Support: By grants from the National Institutes of Health (U24 AR43441 and AT00144); American Specialty Health, San Diego, California; and Medtronic Foundation, Minneapolis, Minnesota. The funding institutions had no editorial input into the paper, and the views expressed in this article do not necessarily represent those of the funding institutions.

Requests for Single Reprints: David M. Eisenberg, MD, Division for Research and Education in Complementary and Integrative Medical Therapies, Osher Institute, Harvard Medical School, Suite 22A, 401 Park Drive, Boston, MA 02215; e-mail, Osher\_Institute@hms.harvard

Current author addresses are available at www.annals.org.

### References

- 1. Dictionary of Health Care Terms, Organizations, and Acronyms. Joint Commission on Accreditation of Healthcare Organizations; Oakbrook Terrace, IL;
- 2. Dictionary of Health Care Terms, Organizations, and Acronyms. Joint Commission on Accreditation of Healthcare Organizations; Oakbrook Terrace, IL;
- 3. Janoulis BH, Janoulis JF. 1998 Nursing Licensure Guidelines: State Information Manual for Nurses in the United States of America. Provincial and Territorial Information Manual for Nurses in Canada. Atlanta: St. Barthelemy Pr; 1997.
- 4. Cooper RA, Henderson T, Dietrich CL. Roles of nonphysician clinicians as autonomous providers of patient care. JAMA. 1998;280:795-802. [PMID
- 5. Leake R, Broderick JE. Current licensure for acupuncture in the United States. Altern Ther Health Med. 1999;5:94-6. [PMID 10394679]
- 6. Cohen MH. Complementary and Alternative Medicine: Legal Boundaries and Regulatory Perspectives. Baltimore: Johns Hopkins Univ Pr; 1998.
- 7. Cooper RA, McKee HJ. Chiropractic in the United States: Trends and Issues. Millbank Q [In press].
- 8. Cooper RA, Laud P, Dietrich CL. Current and projected workforce of nonphysician clinicians. JAMA. 1998;280:788-94. [PMID 9729990]
- 9. Cooper RA, Stoflet SJ. Trends in the education and practice of alternative medicine clinicians. Health Aff (Millwood). 1996;15:226-38. [PMID 8854529] 10. Official Directory: Chiropractic Licensure and Practice Statistics. Greeley, CO: Federation of Chiropractic Licensing Boards; 1997.
- 11. Goldman P. Herbal medicines today and the roots of modern pharmacology. Ann Intern Med. 2001;135:594-600. [PMID: 11601931]
- 12. Ernst E. The risk-benefit profile of commonly used herbal therapies: Ginkgo, St. John's Wort, Ginseng, Echinacea, Saw Palmetto, and Kava. Ann Intern Med. 2002;136:42-53. [PMID: 11777363]
- 13. Dictionary of Health Care Terms, Organizations, and Acronyms. Joint Commission on Accreditation of Healthcare Organizations; Oakbrook Terrace, IL; 1998:211.
- 14. American Chiropractic Association. Hot Topics. September 28, 2001. Accessed at www.acatoday.com/hot\_topics/092801.shtml on 28 October 2002.
- 15. Robbins DA. Weaving wellness into mainstream medicine. Managed Healthcare. 2000;38-9.
- 16. List of states with statutes, regulations, and bills in progress. Acupuncture and Oriental Medicine Alliance. Accessed at www.acuall.org/current.htm on 28 October 2001.
- 17. Mitchell BB. Acupuncture and Oriental Medicine Laws. 2001 ed. Gig Harbor, WA: National Acupuncture Foundation; 2001.
- 18. Diehl DL, Kaplan G, Coulter I, Glik D, Hurwitz EL. Use of acupuncture by American physicians. J Altern Complement Med. 1997;3:119-26. [PMID: 9395701]
- 19. NCCAOM Certification Programs. National Certification Commission for Acupuncture and Oriental Medicine. Alexandria, VA; 2001. Accessed at www.nccaom.org on 28 October 2002.
- 20. Weeks J. Challenges in credentialing MDs for the practice of alternative

- medicine. St. Anthony's Alternative Medicine Integration & Coverage [Newsletterl. 1998;2.
- 21. Mitchell BB. Legislative Update. The Forum (National Acupuncture and Oriental Medicine Alliance). Winter 1998-99.
- 22. Florida Statutes, section 457.102.
- 23. New Mexico Statutes Annotated, section 61-14A-3.
- 24. Position Papers and Organizational Documents. Seattle, WA: American Association of Naturopathic Physicians; 1997.
- 25. American Association of Naturopathic Physicians. 1997 Membership and Resource Directory. Seattle, WA: American Association of Naturopathic Physicians; 1997.
- 26. Twenty Questions about Naturopathic Medicine. Seattle, WA: American Association of Naturopathic Physicians; 1989.
- 27. Naturopathic Medicine: What It Is. What It Can Do For You! Seattle, WA: American Association of Naturopathic Physicians; 1998.
- 28. Montana Code Annotated, section 37-26-301.
- 29. New Hampshire Revised Statutes Annotated, section 328:E-12.
- 30. Oregon Revised Statutes Annotated, section 685.135.
- 31. Utah Code Annotated, section 58-71-102.
- 32. Lee AC, Kemper KJ. Homeopathy and naturopathy: practice characteristics and pediatric care. Arch Pediatr Adolesc Med. 2000;154:75-80. [PMID: 10632255]
- 33. American Massage Therapy Association. Demand for Massage Therapy. Evanston, IL: American Massage Therapy Association; 2002.
- 34. Associated Bodywork & Massage Professionals. Thinking about Career Options. Evergreen, CO: Associated Bodywork & Massage Professionals; 1999.
- 35. Ullman D. The Consumer's Guide to Homeopathy. New York: GP Putnam; 1995
- 36. Arizona Revised Statutes, section 32-2901.
- 37. Nevada Revised Statutes Annotated, section 630A.035.
- 38. Ullman D. Homeopathy and managed care: manageable or unmanageable. J Altern Complement Med. 1999;5:65-73. [PMID: 10100032]
- 39. Conditions under which homeopathic drugs may be marketed. FDA Compliance Policy Guide section 7132.15 (3/95). Accessed at www.fda.gov/ora /compliance\_ref/cpg/cpgdrg/cpg400-400.html on 28 October 2002.
- 40. Chapman EH. President's message: issues of licensure. J Am Inst Homeopath. 1997;90:5-9.
- 41. New Jersey Administration Code, section 13:35-7.1.
- 42. Model Guidelines for the Use of Complementary and Alternative Therapies in Medical Practice (Approved by the House of Delegates of the Federation of

- State Medical Boards of the United States, Inc., as policy April 2002). Available at www.fmsb.org.
- 43. Cohen MH, Eisenberg DM. Potential physician malpractice liability associated with complementary and integrative medical therapies. Ann Intern Med. 2002;136:596-603. [PMID: 11955028]
- 44. Cohen MH. Beyond Complementary Medicine: Legal and Ethical Perspectives on Health Care and Human Evolution. Ann Arbor, MI: Univ of Michigan Pr: 2000.
- 45. People v. Amber, 349 New York Supplement 2d 604 (Sup. Ct. 1973).
- 46. State v. Mount Joy et al., 891 Pacific 2d 376, 384 (Kan. 1995) (midwives).
- 47. State v. Howard, 337 Southeastern 2d 598 (N.C. Ct. App. 1985) (naturo-
- 48. Sabastier v. State, 504 Southern 2d 45 (Fla. Dist. Ct. App. 1987) (homeopaths).
- 49. People v. Cantor, 18 California Reporter 363 (Col. App. Dept. Super. Ct. 1961).
- 50. Williams v. State of Alabama ex rel. Medical Licensure Commission, 453 Southern 2d 1051, 1053 (Ala. Civ. App. 1984) (colonic irrigation providers).
- 51. State v. Hinze, 441 Northwestern 2d 593, 594 (Neb. 1989).
- 52. Minnesota Statutes, section 146A.
- 53. Eisenberg DM, Davis RB, Ettner SL, Appel S, Wilkey S, Van Rompay M, et al. Trends in alternative medicine use in the United States, 1990-1997: results of a follow-up national survey. JAMA. 1998;280:1569-75. [PMID: 9820257]
- 54. Adams KE, Cohen MH, Eisenberg D, Jonsen AR. Ethical considerations of complementary and alternative medical therapies in conventional medical settings. Ann Intern Med. 2002;137:660-4. [PMID: 12379066]
- 55. United Kingdom Parliament House of Lords. Select Committee on Science and Technology Sixth Report: Complementary and Alternative Medicine. United Kingdom Parliament, House of Lords. 21 November 2000. Accessed at www.parliament.the-stationery-office.co.uk/pa/Id199900/Idselect/Idsctech/123/ 12301/htm on 28 October 2002.
- 56. Roach JO. Lords call for regulation of complementary medicine. BMJ. 2000; 321:1365. [PMID: 11099270]
- 57. Complementary medicine: time for critical engagement [Editorial]. Lancet. 2000;356:2023. [PMID: 11145481]
- 58. Ellison MS. Liability risks in alternative medicine. Physicians Financial News. 1999;17:s30-s31.
- 59. Kaptchuk TJ, Eisenberg DM. The persuasive appeal of alternative medicine. Ann Intern Med. 1998;129:1061-5. [PMID: 9867762]

www.annals.org 17 December 2002 Annals of Internal Medicine Volume 137 • Number 12 973 **Current Author Addresses:** Dr. Eisenberg, Mr. Cohen, Ms. Hrbek, and Ms. Van Rompay: Division for Research and Education in Complementary and Integrative Medical Therapies, Osher Institute, Harvard Medical School, Suite 22A, 401 Park Drive, Boston, MA 02215.

Dr. Grayzel: Department of Emergency Medicine, University of Massachusetts Medical Center, 72 Pointe Rok Drive, Worcester, MA 01604. Dr. Cooper: Health Policy Institute, Medical College of Wisconsin, PO Box 26509, 8701 Watertown Plank Road, Milwaukee, WI 53226-0509.

- 60. Millbank Memorial Fund. Enhancing the Accountability of Alternative Medicine. New York: Millbank Memorial Fund; 1-8877748-18-0.
- 61. Coleman D, ed. Medical School Admission Requirements, United States and Canada, 2000-2002. Washington: Association of American Medical Colleges; 1999
- 62. Certification and Registration as a Massage Practitioner in Maryland. Accessed at www.mdmassage.org/certnreg.htm. on 5 November 2002.
- 63. Studdert DM, Eisenberg DM, Miller FH, Curto DA, Kaptchuk TJ, Brennan TA. Medical malpractice implications of alternative medicine. JAMA. 1998; 280:1610-5. [PMID: 9820265]

# Appendix Table 1. Minimum National Standards for Licensure of Medical Doctors\*

Graduation from a Liaison Committee on Medical Education (LCME)—accredited school or the equivalent

- A passing grade on all three parts of the United States Medical Licensing Examination (USMLE). (The FLEX, a state licensing examination last administered in December 1993, although no longer offered, is still accepted.)
- A minimum of 1 year of postgraduate training in an accredited program Submission of a history of any legal or disciplinary problems State application, fee, and other miscellaneous requirements
- \* Millbank Memorial Fund (60). FLEX = Federation Licensing Examination.

E-974 Annals of Internal Medicine Volume • Number www.annals.org

### Appendix Table 2. Licensure Requirements For Non-MD Conventional Providers\*

Profession	States with Licensure	E	ducation
		Training	Internship
Nursing	50 and District of Columbia		
Licensed Practical (LPN)		<ol> <li>to 2-year practical nursing diploma program</li> </ol>	None
Registered (RN)		2- to 4-year programs	None
Bachelor of Science in Nursing (BSN)		4-year baccalaureate nursing program, which combines liberal arts education with clinical sciences and practical training	None
Nurse practitioner (NP)		Master's level program; advanced education that often includes specialization	None
Physical therapy (PT)	50 and District of Columbia	4 years; may be part of a college program	Basic science and clinical laborator experience
Optometry	50 and District of Columbia	4-year graduate Doctor of Optometry (OD) program; includes both basic medical science education and training in clinical settings	Optional and limited; 200 residency openings are available for 1500 graduates each year
Podiatry	50 and District of Columbia	4-year graduate Doctor of Podiatric Medicine (DPM) program; includes both basic medical science education and training in clinical settings	41 states require at least 1 year of postgraduate residency or preceptorship

<sup>\*</sup> Verified as of March 2001. CE = continuing education; CEU = continuing education unit.

www.annals.org | Annals of Internal Medicine | Volume • Number | E-975

## Appendix Table 2—Continued

Examination		Continuing Education Units	Endorsement
Written	Practical		
All levels of nurses are required to take a version of the National Council Licensure Examination (NCLEX)	None	30 states require some CE; average is 30 hours every 2 years; some states specify topics (e.g., HIV or domestic violence); some states accept hours in practice in lieu of CEUs	50 and District of Columbia
State-administered national examination	None	None	None
State board examination to become licensed to practice in that state	Some states require practical examinations	48 states require some CEUs	33 states offer licensing by endorsement or reciprocity
49 states (Georgia excluded) require passing scores on the two-part national boards; 49 states (New Jersey excluded) require passing scores on a state-administered examination	None	42 states and District of Columbia require some CE; average is about 15 hours each year	37 states offer some kind of exemption from parts of the state examination; New Jersey offers licensing by endorsement

E-976 Annals of Internal Medicine Volume • Number www.annals.org

Appendix Table 3. Statutory Licensure of Complementary and Alternative Medical Providers, Listed by State and Profession\*

Statutory Reference	Chiropractic	Acupuncture†	Massage Therapy	Naturopathy	Homeopathy
Alabama Code	34-24-120(a)	_	34-43-9	_	_
Alaska Statutes	08.20.120	08.06.030	_	08.45.020	_
Arizona Revised Statutes	32-925	32-3921	_	32-1555	32-2915
Arkansas Code Annotated	17-81-301	17-102-201	17-86-301	_	_
California Business and Professional Code	1000	4937	_		
Colorado Revised Statutes	12-33-101(2)	12-29.5-104	_	-	_
Connecticut General Statutes Annotated	20-27	20-206bb	20-206b	20-37	20-8.20-10
Delaware Code Annotated	tit. 24, s. 712	_	tit. 24, s. 5307(a)	_	_
Washington, DC, Code Annotated	2-3301.2(3)(A)	2-3305.1	2-3305.1	-	_
Florida Statutes Annotated	460.411	457.105	480.047	-	_
Georgia Code Annotated	43-9-1(2)	43-34-64	_	-	_
Hawaii Revised Statutes	442-2	436E-3	452-19	455-2	_
Idaho Code	54-705(2)(3)	54-4703	_	_	_
Illinois Compiled Statutes	225 ILCS 60/11(B)	225 ILCS 2/50	_	_	_
Indiana Code Annotated	25-10-1-11	25-2.5-3-3	_	_	_
Iowa Code Annotated	151.8	148E.3	152C.3	_	_
Kansas Statutes Annotated	65-2873	MB‡	_	_	_
Kentucky Revised Statutes Annotated	312.015(3)	_	_	_	_
Louisiana Revised Statutes Annotated	2801(3)	37:1357	37:3556	_	_
Maine Revised Statutes Annotated	tit. 32, s. 551	tit. 32, s. 12511	tit. 32, s. 14306	tit. 32, s. 12521	_
Maryland Code Annotated, Health Occupational	3-101(b)	1A-201	3-5A-04	_	_
Massachusetts General Laws Annotated	ch. 112, s. 91	ch. 112, s. 152	ch. 140, s. 51	_	_
Michigan Compiled Laws Annotated	333.16411	MB‡	_	_	_
Minnesota Statutes Annotated	148.105	147B.02	_	_	_
Mississippi Code Annotated	73-6-1	_	_	_	_
Missouri Annotated Statutes	331.010(1)	324.487	324.240	_	_
Montana Code Annotated	37-12-101(3)	37-13-301	37-13-104	37-26-401	_
Nebraska Revised Statutes	71-179	37 13 301	71-1,280	-	_
Nevada Revised Statutes Annotated	634.090	634A.140	-	_	630A.230
New Hampshire Revised Statutes Annotated	316-A:3	328-G:9	328-B:4	328-E:3	-
New Jersey Statutes Annotated	45:9-14.5	45:2C-7	45:11-60	_	_
New Mexico Statutes Annotated	61-4-2(A)	61-14A-4	61-12C-5	_	_
New York Education Laws	6554	8212	7802	_	_
North Carolina General Statutes	90-143(a)	90-452	90-623	_	_
North Dakota Centennial Code	43-06-11	- -	43-23-03	_	_
Ohio Revised Code Annotated	4734.09	4762.02	503.42		
Oklahoma Statutes Annotated	tit. 59, 161.3	4702.02	303.42	_	_
Oregon Revised Statutes	684.020	- 677.759	687.021	- 685.020	_
Pennsylvania Statutes Annotated	tit. 63, s. 625.102	tit. 63, s. 1803	007.021	000.020	_
Rhode Island General Laws	5-30-3	537.2-12.1	23-20.8-3	_	_
South Carolina Code Annotated	40-9-20	40-47-70	40-30-100	_	_
South Dakota Codified Laws Annotated	36-5-15.2	40-47-70	40-30-100	_	_
Tennessee Code Annotated	63-4-107	- 63-6-1005	- 63-18-205	_	_
				_	_
Texas Occupational Code	201.301	205.201	455.151	- 50.74.400	_
Utah Code Annotated	58-73-301	58-72-301	58-47b-301	58-71-102	_
Vermont Statutes Annotated	tit. 26, s. 521(3)	tit. 26, s. 3405	-	tit. 26, s. 4121	-
Virginia Code Annotated	54.1-2900	54.1-2956.9	54.1-3029	-	_
Washington Revised Code Annotated	12.25.005	18.06.020	18.108.030	18.36A.030	_
West Virginia Code	30-16-2(c)	30-36-1	30-37-1	-	_
Wisconsin Statutes Annotated	446.01(2)	451.04	440.982	-	_
Wyoming Statutes	33-10-101	-	_	-	_
Total, n	51	42	32	11	3

<sup>\*</sup> Verified as of March 2001. "Licensing" references include statutes delegating authority to professional boards to establish standards for authority to practice as well as statutes using licensing, certification, and registration schemes. The information provided here represents a moving target of legislative activity. ch = chapter; ILCS = Illinois Compiled Statutes; MB = Medical Board; s = section; tit = title.

Annals of Internal Medicine | Volume • Number | **E-977** www.annals.org

<sup>†</sup> Acupuncture includes traditional Oriental medicine. ‡ Kansas and Michigan allow the practice of acupuncture by a ruling of the Medical Board of Examiners.

### Appendix Table 4. Information Resource for Figures 1 and 2\*

Profession	Accredited Schools, <i>n</i> Accrediting Agencies (Source)	Licensed Providers, <i>n</i> Source
Medical doctor (MD)	125	684 605
	Association of American Medical Colleges (Coleman C, ed. [61])	Health Resources and Services Administration†
Registered nurses‡		2 558 874 Health Resources and Services Administration†
Masters	254	
Bachelor	556	
Associate	611	
Diploma	76	
Practical	178	
	National League for Nursing Accrediting Commission (www.nlnac.org)	
Pharmacist	81	185 000
	American Council on Pharmaceutical Education (www.acpe-accredit.org)	Health Resources and Services Administration†
Chiropractor	16	70 000
	Council on Chiropractic Education (www.cce-usa.org)	Cooper and McKee (7)
Non-MD acupuncturist	37	14 000
·	Council of Colleges of Acupuncture and Oriental Medicine; National Accreditation Commission for Schools and Colleges of Acupuncture and Oriental Medicine (www.ccaom.org)	Mitchell (17)
MD acupuncturist	NA	3000
	American Academy of Medical Acupuncture (www.medicalacupuncture.org)	Diehl et al. (18)
Massage therapist	81	250 000
	Many (www.abmp.com)	American Massage Therapy Association (33)
Naturopathic doctor	4	1400
	The Council on Naturopathic Education (www.cnme.org)	American Association of Naturopathic Physicians; Cooper RA (8)
Homeopathic physician	4	6000
• • •	Council on Homeopathic Education (www.chedu.org)	Ullman (35), estimated

E-978 Annals of Internal Medicine Volume • Number www.annals.org

<sup>\*</sup> Verified as of July 2002. NA = not available.

† Center for Health Workforce Studies, State University of New York at Albany. State Health Workforce Profiles. Rockville, MD: U.S. Department of Health and Human Services, Health Resources and Services Administration, Bureau of Health Professions, 2000.

‡ 75 doctorate degree programs exist but are not accredited by the National League for Nursing Accrediting Commission.

# Appendix Table 5. Supervision, Referral, and Prior Diagnosis Requirements for Acupuncture\*

State	Requirement
District of Columbia	Written authorization by physician or osteopath
Hawaii	Referral by a medical doctor or dentist for organic disorders
Illinois	Referral by a written order of physician or dentist
Indiana	Referral, written diagnosis, or documentation
Minnesota	Referral for potentially serious disorders
New Jersey	Referral or diagnosis from a physician
Ohio	Supervision and written referral or prescription for acupuncture by a physician
Pennsylvania	Supervision by a medical doctor registered as an acupuncture supervisor
South Carolina	Supervision and referral by a medical doctor or dentist
Texas	Evaluation or referral by a licensed physician or dentist within 6 months or referral by a chiropractor within 30 days prior to treatment
Virginia	Diagnostic examination and referral by a licensed medical doctor or osteopathic doctor
Washington	Consultation or referral for potentially serious disorders (e.g., cardiac conditions and acute abdominal symptoms)

<sup>\*</sup> Data obtained from reference 17.

# Appendix Table 6. Maryland's System of Licensing Massage Therapists

Title	Education and Training	Practice Site*
Registered massage practitioner (RMP)	500 hours of massage training	Spa, health club, or private office
Certified massage therapist (CMT)	500 hours of massage training and 60 hours of college credits	Spa, health club, or private office; clinical settings include physician and chiropractic offices

<sup>\*</sup> The entries in this column are examples.

www.annals.org Annals of Internal Medicine Volume • Number | E-979

# Appendix Table 7. Sample Minimum Standards for Malpractice Liability Insurance Carried by Select Complementary and Alternative Medical Providers

Because of the relatively low number of malpractice claims against complementary and alternative medical (CAM) providers, it is difficult to establish definitive standards for malpractice liability coverage. At present, CAM therapies account for approximately 5% of the total medical malpractice insurance market (63). To date, both the number of claims against CAM providers and the average indemnity paid per claim have been lower than claims against primary care physicians.

	1995 Claims/100 Policyholders	1996 Average Indemnity Paid/Claim, \$	Claims Paid, %*
Massage therapy	0.2	4253	23.8
Chiropractic	2.6	60 985	46.0
Medicine	9.0	202 772	28.6
Primary care	6.2	166 379	29.9

Comprehensive data on claims against acupuncturists are difficult to obtain because the insurance pool is relatively small. With CAM providers, data based on such few claims may lack predictive value. A number of organizations that provide insurance coverage for visits to CAM providers have minimum requirements for malpractice liability insurance to be carried by CAM providers within their networks. One of the largest such organizations, Oxford Health, requires a minimum of \$1 million per incident for each provider. The American Massage Therapy Association provides insurance of \$1 million per incident and \$3 million in the aggregate as a benefit of membership.

Several states mandate specific coverage for professional liability insurance for certain CAM providers. With acupuncture, for example, Colorado requires individual acupuncturists to carry \$50 000 per incident and \$50 000 in the aggregate of professional liability insurance and requires limited-liability companies or corporations to carry \$300 000 per incident and \$300 000 in the aggregate of professional liability insurance. Florida requires acupuncturists to carry at least a \$30 000 bond or a professional liability insurance policy. Georgia requires a minimum of \$100 000 per incident and \$300 000 in the aggregate of professional liability insurance, and West Virginia requires an unspecified amount of professional liability insurance or a surety bond of at least \$10 000 per incident and \$30 000 in the aggregate (17). In the absence of guidance from a state regulatory authority, physicians should check whether providers follow the guidelines set by professional organizations and leading insurers.

Appendix Table 8. Lists Compiled by Nationally Representative Groups of Complementary and Alternative Medical Professionals of Therapeutic Techniques Commonly Used by Acupuncturists, Chiropractors, and Massage Therapists\*

### Acupuncture

Diagnostic methods

Abdominal diagnosis

Auditory diagnosis

Channel/point palpation

Five-element style questioning

Olfactory diagnosis

Orthodox medical examination

Pressure-point palpation

Pulse diagnosis

Standard medical history taking

Traditional Chinese Medicine (TCM) style questioning

Tongue diagnosis

Visual diagnosis

Therapeutic techniques

Bloodletting at jing points

Bloodletting with or without cupping on body areas (e.g., back or neck)

Cupping therapy—fire cups

Cupping therapy—pumped

Gua sha therapy

Heat source (e.g., infrared heat lamp)

Herbal medicine (European or western)

Herbal medicine (traditional Chinese)

Herbal medicine (traditional Japanese)

Homeopathy

Intradermal needling (3- to 6-mm needles placed subcutaneously and retained for up to 1 week)

Intradermal press tack needles (press-tack-shaped tiny needles retained for a few days)

Intramuscular needling with or without *de qi* plus moxa, moxa pole, or moxa pole on handle needle

Intramuscular needling without de qi

Intramuscular needling without de qi plus electrical stimulation

Magnets-bipolar (e.g., Ito or Irie)

Magnets-monopolar

Massage therapy—Chinese styles (e.g., tuina)

Massage therapy—European styles (e.g., Swedish)

Massage therapy—Japanese styles (e.g., Shiatsu)

Microcurrent stimulation of body or auricle points

Microsystem needling of auricles (Nogier/Chinese/Oleson/NADA)

Microsystem needling of hands (Chinese or Tae Woo Yoo)

Microsystem needling of scalp (Chinese or Japanese)

Moxibustion-direct and blistering

Moxibustion—direct nonblistering

Moxibustion—indirect but on body surface (cone, salt, ginger, or garlic)

Moxibustion—indirect, moxa pole

Plum blossom needling

Shallow needling (<5 mm) without de qi

Shallow needling (<5 mm) without de qi plus electrical stimulation

Shallow needling with additional use of ion pumping cords

Standard Chinese (intramuscular) needling with de qi

Standard Chinese (intramuscular) needling with  $de\ qi$  and electrical stimulation

Two metal contact needling—ZN/CU or AU/AG (e.g., Tokito)

VEGA stimulation methods, including homeopathy

Voll stimulation methods, including homeopathy

### Chiropractic

Activator (nonmanual)

Acupressure/meridian therapy

Acupuncture

Applied kinesiology

Atlas orthogonality technique

Atlas specific

Barge

BioEnergetic synchronization (BEST)

Biofeedback

Bracing

Continued

<sup>\*</sup> Data obtained from reference 63.

### Appendix Table 8—Continued

Casting/taping/strapping

Chiroenergetics

Chiropractic spinal biophysics

Contact reflex analysis

Corrective therapies, exercise, and bed rest

Cox/flexion-distraction

Cranial (including sacral-occipital technique)

Diathermy

Directional non-force technique (DNFT)

Diversified technique (including Meric)

Electrical stimulation

Extremity adjustment

Gonstead

Grostic

Homeopathic remedies

Hot pack/moist heat

Ice pack/cryotherapy

Interferential current/direct current

Life upper cervical

Logan basic and postural reflex

Massage therapy

Mawhiney scoliosis technique

Mears technique

Network chiropractic

NIMMO (tonus receptor)

Nutritional counseling

Orman technique

Orthotics/lifts

Palmer upper cervical/HIO

Pettibon

Pierce-Stillwagon

Spondylotherapy

Structural integration

Surrogate testing

Thompson (terminal point)

Tiezen technique

Toftness

Tortipelvis

Touch for health

Traction/intersegmental traction

Ultrasound

Ultraviolet therapy

Ungerrank specific low force chiropractic technique

Variable force technique

Vibratory therapy

Whirlpool/hydrotherapy

### Massage therapy

Active range of motion

Compression

Craniosacral Deep tissue

Energy balancing

Feldenkrais

Friction/crossfiber friction

Gliding

Holding

Hydrotherapy (cold)

Hydrotherapy (hot)

Infant massage

Jostling (a muscle)

Kneading

Lymphatic drainage

Meridian massage

MET (muscle energy techniques)

Movement education

Myofascial broadening

Myofascial release

Myotherapy

Neuromuscular

Oriental bodywork

### Appendix Table 8—Continued

Passive range of motion

Percussion

PNF (proprioceptive neuromuscular facilitation)

Polarity

Pregnancy massage

Pressure point

Reiki

Rocking

Rolfing

Scraping

Shaking (a limb)

Shiatsu/acupressure

Skin rolling

Sports massage

Strain/counter strain

Stretching

Swedish

Traction

Trager

Trigger point

Vibration Zero balancing

\* Institutions may select from these sample lists to develop individualized credentialing procedures.

## Appendix Table 9. Complementary and Alternative Medical Organizations and Information Resources\*

Profession	Professional Organization	Accrediting Organization	Licensing Board or Licensing Information Resources	National Examination Board
Non-MD acupuncture	American Association of Oriental Medicine (AAOM) 5530 Wisconsin Ave., Suite 1210 Chevy Chase, MD 20815 888-500-7999 www.aaom.org Acupuncture and Oriental Medicine Alliance (AOMA) 14637 Starr Rd. SE Olalla, WA 98359 253-851-6896 www.acupuncturealliance.org	Accreditation Commission for Acupuncture and Oriental Medicine (ACAOM) Maryland Trade Center #3 7501 Greenway Center Drive, Suite 820 Greenbelt, MD 20770 301-313-0855 www.acaon.org	National Acupuncture Foundation† (NAF) 14637 Starr Rd. SE Olalla, WA 98359 253-851-6538 www.acupuncturealliance.org	National Certification Commission for Acupuncture and Oriental Medicine (NCCAOM) 11 Canal Center Plaza, Suite 300 Alexandria, VA 22314 703-548-9004 www.nccaom.org
MD acupuncture	American Academy of Medical Acupuncture (AAMA) 4929 Wilshire Blvd., Suite 428 Los Angeles, CA 90010 323-937-5514 www.medicalacupuncture.org	American Board of Medical Acupuncture (ABMA) 4929 Wilshire Blvd., Suite 428 Los Angeles, CA 90010 323-937-5514 www.medicalacupuncture.org	American Board of Medical Acupuncture‡ 4929 Wilshire Blvd., Suite 428 Los Angeles, CA 90010 323-937-5514 www.medicalacupuncture.org	American Board of Medical Acupuncture 4929 Wilshire Blvd., Suite 428 Los Angeles, CA 90010 323-937-5514 www.medicalacupuncture.org
Chiropractic	American Chiropractic Association (ACA) 1701 Clarendon Blvd. Arlington, VA 22209 800-986-4636 www.amerchiro.org	Council on Chiropractic Education (CCE) 8049 North 85th Way Scottsdale, AZ 85258-4321 480-443-8877 www.cce-usa.org	Federation of Chiropractic Licensing Boards (FCLB) 901 54th Ave., Suite 101 Greeley, CO 80634-4400 970-356-3500 www.fclb.org	National Board of Chiropractic Examiners (NBCE) 901 54th Ave. Greeley, CO 80634 970-356-9100 www.nbce.org
	International Chiropractors Association (ICA) 1110 N. Glebe Rd., Suite 1000 Arlington, VA 22201 703-528-5000 800-423-4690 www.chiropractic.org			
	World Chiropractic Alliance 2950 N. Dobson Rd., Suite 1 Chandler, AZ 85224 800-347-1011 www.worldchiropracticalliance.org	:		
Homeopathy	North American Society of Homeopaths (NASH) 1122 East Pike St., Suite 1122 Seattle, WA 98122 206-720-7000 www.homeopathy.org	Council on Homeopathic Education (CHE)§ 801 N Fairfax St., Suite 306 Alexandria, VA 22314 212-560-7136	North American Society of Homeopaths (NASH)   1122 East Pike St., Suite 1122 Seattle, WA 98122 206-720-7000 www.homeopathy.org	Council for Homeopathic Certification (CHC) PO Box 12180 La Crescenta, CA 91224-0880 866-242-3399 www.homeopathicdirectory.com
				American Board of Homeotherapeutics (ABHT) (with the International Center for Homeopathy) 801 N. Fairfax St., Suite 306 Alexandria, VA 22314 703-548-7790

Continued on following page

E-982 Annals of Internal Medicine Volume • Number www.annals.org

### Appendix Table 9—Continued

Profession	Professional Organization	Accrediting Organization	Licensing Board or Licensing Information Resources	National Examination Board
Massage	American Massage Therapy Assoc. (AMTA) 820 Davis St., Suite 100 Evanston, IL 60201-4444 847-864-0123 www.amtamassage.org Associated Bodywork and Massage Professionals (ABMP) 1271 Sugarbush Dr. Evergreen, CO 80439-9766 800-458-2267 www.abmp.com American Organization for Bodywork Therapies of Asia (AOBTA) 1010 Haddonfield–Berlin Rd., Suite 408 Voorhees, NJ 08043 856-782-1616 www.aobta.org	Commission on Massage Therapy Accreditation (COMTA) 820 Davis 5t., Suite 100 Evanston, IL 60201-4444 847-869-5039 www.comta.org Associated Bodywork and Massage Professionals (ABMP) 1271 Sugarbush Dr. Evergreen, CO 80439-9766 800-458-2267 www.abmp.com	American Massage Therapy Assoc. (AMTA) 820 Davis St., Suite 100 Evanston, IL 60201-4444 847-864-0123 www.amtamassage.org Associated Bodywork and Massage Professionals (ABMP)¶ 1271 Sugarbush Dr. Evergreen, CO 80439-9766 800-458-2267 www.abmp.com	National Certification Board for Therapeutic Massage and Bodywork (NCBTMB) 8201 Greensboro Dr., Suite 300 McLean, VA 22102 800-296-0664 www.ncbtmb.com
Naturopathy	American Association of Naturopathic Physicians (AANP) 3201 New Mexico Ave. NW, Suite 350 Washington, DC 20016 866-538-2267 www.naturopathic.org	Council on Naturopathic Medical Education (CNME) PO Box 11426 Eugene, OR 97440-3626 541-484-6028 www.cnme.org	American Association of Naturopathic Physicians (AANP)   3201 New Mexico Avenue NW, Suite 350 Washington, DC 20016 866-538-2267 202-274-1992 www.naturopathic.org	Naturopathic Physicians Licensing Examination Board (NPLEX) PO Box 69657 Portland, OR 97201 www.naturopathic.org /education/licensing

Annals of Internal Medicine | Volume • Number | **E-983** www.annals.org

<sup>\*</sup> Verified as of September 2002.

† The National Acupuncture Foundation publishes a summary of relevant state laws.

‡ The American Board of Medical Acupuncture Web site provides a list of regulations in each state.

§ The Council on Homeopathic Education evaluates homeopathic educational programs.

|| Current information on licensing and regulations in each state can be obtained by contacting this organization.

¶ The Associated Bodywork and Massage Professionals' Web site provides a table of current information on licensing and regulations in each state.