

this approach generally include selected complementary health practices in the care they offer patients, and many have established practice settings that include complementary health practitioners. Although this approach appears to be attractive to many patients, the heavy use of dietary supplements and the weaknesses in the evidence base for a number of the interventions offered in integrative practices continue to attract substantial concern and controversy.

Until a decade ago or so, “complementary and alternative medicine” could be defined as practices that are neither taught in medical schools nor reimbursed, but this definition is no longer workable, since medical students increasingly seek and receive some instruction about complementary health practices, and some practices are reimbursed by third-party payers. Another definition, practices that lack an evidence base, is also not useful, since there is a growing body of research on some of these modalities, and some aspects of standard care do not have a strong evidence base.

By its nature, the demarcation between mainstream medicine and complementary health practices is porous, varying from culture to culture and over time. Traditional Chinese medicine and the Indian practice of Ayurvedic medicine were once the dominant health teachings in those cultures. Certain health practices that arose as challenges to the mainstream have been integrated gradually into conventional care. Examples include the teachings of Fernand Lamaze that led to the widespread use of relaxation techniques during childbirth, the promotion of lactation counseling by the La Leche League, and the teaching of Cicely Saunders and Elizabeth Kübler-Ross that established the hospice movement.

The late nineteenth century saw the development of a number of healing philosophies by care providers who were critical of the medicine of the time. Of these, naturopathy and homeopathy, which arose in Germany, and chiropractic and osteopathy, which developed in the United States, have continued to endure. Osteopathic medicine is currently thoroughly integrated into conventional medicine, although the American Medical Association (AMA) labeled it a cult as late as 1960. The other three traditions have remained resolutely separate from mainstream medicine, although chiropractic care is available in some conventional care settings.

PATTERNS OF USE

The first large survey of use of these practices was performed by David Eisenberg and associates in 1993. It surprised the medical community by showing that more than 30% of Americans use complementary or alternative health approaches. Many studies since that time have extended those conclusions. Subsequently, the National Health Interview Survey (NHIS), a large, national survey conducted by the National Center for Health Statistics, a component of the Centers for Disease Control and Prevention, has addressed the use of complementary health practices and largely confirmed those results. The NHIS is a household survey of many kinds of health practices in the civilian population; it uses methods that create a nationally representative sample and has a sample size large enough to permit valid estimates about some subgroups. In 2002, 2007, and 2012, the survey included a set of questions that addressed complementary and alternative health approaches. Information was obtained from 31,000 adults in 2002 and 23,300 adults and 9400 children in 2007. Only preliminary data are available from the 2012 survey. In all three surveys, approximately 40% of adults report using some form of complementary therapy or health practice. In the 2007 study, 38% of adults and 12% of children had used one or more modalities. These surveys yield the estimate that nonvitamin, nonmineral dietary supplements are used by approximately 18% of the population. The most prevalent mind-body practices are relaxation techniques and meditation, chiropractic, and therapeutic massage. Americans are willing to pay for these services; the estimated out-of-pocket expenditure for complementary health practices in 2007 was \$34 billion, representing 1.5% of total health expenditures and 11% of out-of-pocket costs.

The appeal of unproven complementary health approaches continues to perplex many physicians. Many factors contribute to these choices. Some patients seek out complementary health practitioners

because they offer optimism or greater personal attention. For others, alternative approaches reflect a “self-help” approach to health and wellness or satisfy a search for “natural” or less invasive alternatives, since dietary supplements and other natural products are believed, correctly or not, to be inherently healthier and safer than standard pharmaceuticals. In NHIS surveys, the most common health conditions cited by patients for use of complementary health practices involve management of symptoms often poorly controlled by conventional care, particularly back pain and other painful musculoskeletal complaints, anxiety, and insomnia.

PRACTITIONER-BASED DISCIPLINES

Licensure and Accreditation At present, six fields of complementary health practice—osteopathic manipulation, chiropractic, acupuncture and traditional Chinese medicine, therapeutic massage, naturopathy, and homeopathy—are subject to some form of educational accreditation and state licensure. Accreditation of educational programs is the responsibility of professional organizations or commissions under federal oversight by the Department of Education. Licensure, in contrast, is strictly a state matter, generally determined by state legislatures. Legal recognition establishes public access to therapies even when there is no scientific consensus about their clinical value.

Osteopathic Manipulative Therapy Founded in 1892 by the physician Andrew Taylor Still, osteopathic medicine was originally based on the belief that manipulation of soft tissue and bone can correct a wide range of diseases of the musculoskeletal and other organ systems. Over the ensuing century, the osteopathic profession has welcomed increasing integration with conventional medicine. Today, the postgraduate training, practice, credentialing, and licensure of osteopathic physicians are virtually indistinguishable from those of allopathic physicians. Osteopathic medical schools, however, include training in manual therapies, particularly spinal manipulation. Approximately 70% of family practice osteopathic physicians perform manipulative therapies on some of their patients.

Chiropractic The practice of chiropractic care, founded by David Palmer in 1895, is the most widespread practitioner-based complementary health practice in the United States. Chiropractic practice emphasizes manual therapies for treatment of musculoskeletal complaints, although the scope of practice varies widely, and in some rural areas, chiropractors may serve a primary care role, due in part to the lack of other providers. According to the NHIS, approximately 8% of Americans receive chiropractic manipulation in a given year.

Since the mid-1970s, chiropractors have been licensed in all 50 states and reimbursed by Medicare. Chiropractic educational standards mandate 2 years of undergraduate training, 4 years of training at an accredited school of chiropractic, and in most states, successful completion of a standardized board examination. Postgraduate training is not required. The U.S. Department of Labor estimates that there are 52,000 licensed chiropractors (2010 figure). There is substantial geographic variation, with greater numbers of practitioners and greater use in the midwest, particularly in rural areas, and lower use in the southeast.

Historically, the relationship between the medical and chiropractic professions has been strained. Extending through the 1970s, the AMA set forth standards prohibiting physicians consulting or entering into professional relationships with chiropractors, but in 1987, after a decade of complex litigation, the U.S. District Court found the AMA in violation of antitrust laws. An uneasy truce has followed, with continued physician skepticism, but also evidence for robust patient demand and satisfaction.

The role of both osteopathic and chiropractic spinal manipulative therapies (SMTs) in back pain management has been the subject of a number of carefully performed trials and many systematic reviews. Conclusions are not consistent, but the most recent guidelines from the American College of Physicians and the American Pain Society conclude that SMT is associated with small to moderate benefit for low-back pain of less than 4 weeks in duration (evidence level B/C) and moderate benefit (evidence level B) for subacute or chronic low-