

The Future of Integrative Medicine

A landmark study by Eisenberg et al¹ of the extent of alternative or unconventional therapies, defined as therapies “neither taught widely in US medical schools nor generally available in US hospitals,” was published in 1993. It was reported that 33% of Americans were using alternative therapies, such as relaxation techniques, chiropractic, massage, and dietary supplements. Use of these therapies was highest among the most educated. These therapies were rarely prescribed by physicians, and most patients did not tell their physician that they were using these alternative therapies.

WHY DO PATIENTS SEEK UNCONVENTIONAL THERAPIES?

In the past several decades we have seen a sea change in the medical landscape from the solo practice, primary care country doctor to large urbanized health care systems, from high-touch, low-cost care to high-tech, specialized, expensive, sometimes impersonal health care. Some patients feel lost in our current health care system. They see specialist after specialist and receive prescription after prescription and test after test. They wonder whether their specialists speak to each other.

In the context of these historical and social changes, a field of unconventional medicine has evolved that has been known by a progression of names: holistic medicine, complementary and alternative medicine, and now integrative medicine. It is hoped that the perspectives offered by integrative medicine will eventually transform mainstream medicine by improving patient outcomes, reducing costs, improving safety, and increasing patient satisfaction.

Integrative medicine has been defined as “the practice of medicine that reaffirms the importance of the relationship between practitioner and patient, focuses on the whole person, is informed by evidence, and makes use of all appropriate therapeutic approaches, healthcare professionals and disciplines to achieve optimal health and healing.”²

The most obvious differences between integrative and conventional medicine are its practitioners, who offer

longer consultations and emphasize minimally invasive therapies, such as mind-body approaches, nutrition, prevention, and lifestyle changes, and focus on healing and wellness. In addition to conventional therapies, they may recommend alternatives, such as acupuncture, dietary supplements, and botanicals. The doctor-patient relationship emphasizes joint decision-making by the patient and the physician.

More and more patients seek integrative medicine practitioners. By 2007, approximately 40% of adult Americans and 12% of children were using some form of alternative therapies compared with 33% in 1991.³

The number of US hospitals offering integrative therapies, such as acupuncture, massage therapy, therapeutic touch, and guided imagery, has increased from 8% in 1998 to 42% in 2010.⁴ Many academic cancer centers offer these integrative practices as part of a full spectrum of care. Other hospitals offer programs in integrative women’s health, cardiology, and pain management.

A SHIFT OF ALTERNATIVE THERAPIES INTO MAINSTREAM MEDICINE

Despite the increasing number of patients seeking alternative therapies, until recently, many of these skills were not routinely offered in medical schools or graduate medical education. Yet they are critical competencies and essential to stemming the tide of chronic diseases threatening to overwhelm both our health care and our financial systems. Further, conventional medical journals rarely contained articles about alternative therapies until 1998 when the *Journal of the American Medical Association* and its affiliated journals published more than 60 articles on the theme of complementary and alternative medicine.⁵

The National Institutes of Health established an office in 1994 and a National Center for Complementary and Alternative Medicine in 1998. Because many alternative therapies date back thousands of years, their efficacy has not been tested in randomized clinical trials. The National Center for Complementary and Alternative Medicine provides the funds to conduct appropriate trials of these therapies. They also have funded education research and programs in both conventional medical nursing schools and complementary and alternative medicine professional schools. Outcomes of these studies are being published in the conventional medical literature.

Funding: None.

Conflict of Interest: VSS has no conflicts of interest associated with the work presented in this manuscript. JED is Executive Director of the Weil Foundation, a nonprofit organization that supports integrative medicine.

Authorship: All authors had access to the data and played a role in writing this manuscript.

Integrative medicine began to have an impact on medical education when 8 medical school deans met in 1999 to discuss complementary and alternative medicine. This meeting led to the establishment of the Consortium of Academic Health Centers for Integrative Medicine, composed initially of 11 academic centers. By 2012, this group had grown to 54 medical and health profession schools in the United States, Canada, and Mexico that have established integrative medicine programs. The consortium's first international research conference on integrative medicine was held in 2006, with subsequent research conferences being held in 2009 and 2012.⁶

Multiple academic integrative medicine programs across the country have been supported by National Institutes of Health funding and private contributions, including the Bravewell Collaborative that was founded in 2002 by a group of philanthropists. The goal of the Bravewell Collaborative is "to transform the culture of healthcare by advancing the adoption of Integrative Medicine." A high water mark also occurred in 2009 when the Institute of Medicine held a Summit on Integrative Medicine led by Dr Ralph Snyderman.⁷

WHERE DOES INTEGRATIVE MEDICINE STAND IN 2013?

There is clear evidence that integrative medicine is becoming part of current mainstream medicine. Increasing numbers of fellowships in integrative medicine are being offered in our academic health centers. In 2013, there are fellowships in integrative medicine in 13 medical schools. In 2000, the University of Arizona established a 1000-hour online fellowship that has been completed by more than 1000 physicians, nurse practitioners, and physician assistants. This online fellowship makes it possible for fellows to continue their clinical practice during their fellowship.

A 200-hour curriculum for Integrative Medicine in Residency has been developed and is now in place in 30 family practice and 2 internal medicine residencies. The curriculum includes many of the topics that are not covered in the medical school curriculum, such as nutrition, mind-body therapies, nutritional and botanical supplements, alternative therapies (eg, acupuncture, massage, and chiropractic), and lifestyle medicine. A similar curriculum for pediatric

residencies is being developed. The eventual goal is to include integrative medicine skills and competencies in all residency programs.

CONCLUSIONS

Integrative medicine now has a broad presence in medical education, having evolved because of public demand, student and resident interest, increased research, institutional support, and novel educational programs. Now on the horizon is a more pluralistic, pragmatic approach to medicine that is patient-centered, that offers the broadest range of potential therapies, and that advocates not only the holistic treatment of disease but also prevention, health, and wellness.

Victor S. Sierpina, MD, ABFM, ABIHM^a
James E. Dalen, MD, MPH^b

^aUniversity of Texas Medical Branch
Galveston

^bWeil Foundation
University of Arizona
Tucson

References

1. Eisenberg D, Kessler R, Foster C, Norlock F, Calkins D, Delbanco T. Unconventional medicine in the United States—prevalence, costs, and patterns of use. *N Engl J Med*. 1993;328:246-252.
2. Consortium of Academic Health Centers for Integrative Medicine. Home page. Available at: <http://www.imconsortium.org/home.html>. Accessed February 17, 2013.
3. Barnes PM, Bloom B, Nahin RL. Complementary and alternative medicine use among adults and children: United States, 2007. National health statistics report; no. 12. Hyattsville MD: National Center for Health Statistics, 2008. Available at: <http://www.cdc.gov/nchs/data/nhsr/nhsr012.pdf>. Accessed February 17, 2013.
4. Ananth S. Health Forum 2005 complementary and alternative medicine survey of hospitals. *American Hospital Association*. July 19, 2006.
5. Fontanarosa P, Lundberg G. Theme: alternative medicine. *JAMA*. 1998;280(18).
6. Consortium of Academic Health Centers for Integrative Medicine. Past Research Events. Available at: <http://www.imconsortium.org/pastresearchevents/index.htm>. Accessed February 17, 2013.
7. Snyderman R. Integrative medicine and the health of the public: a summary of the February 2009 summit. Available at: <http://www.iom.edu/Reports/2009/Integrative-Medicine-Health-Public.aspx>. Accessed February 17, 2013.