



CURRENT PRACTICES in INTEGRATIVE MEDICINE

*University of Maryland
Center for Integrative Medicine:
A Clinical Center Model Study*

Integrative medicine is changing the way medicine is practiced in America. However, no two integrative medicine clinics or programs are identical. While many share patient populations, philosophies of care and treatment protocols, clinics and programs across the US utilize different approaches and economics, and often offer different services aimed at market segments unique to their locale and mission.

The Bravewell Current Practices in Integrative Medicine project documents and disseminates the many ways that integrative medicine is emerging within our health care system. All Current Practices presented are evidenced-based and have been vetted by a committee of experts.

Released in 2007, *Best Practices in Integrative Medicine: A Report from the Bravewell Clinical Network* outlined the current practices of seven leading integrative medicine clinics in the US. From core business models to strategies for growth to key services provided and effective marketing programs, *Best Practices in Integrative Medicine* presented how each of these clinics have achieved growing success within their own unique marketplace and corporate structure.

In this special Current Practices in Integrative Medicine Report, Bravewell presents a portion of the *Best Practices in Integrative Medicine: A Report from the Bravewell Clinical Network* for a focused examination of each of the highlighted clinical centers. All seven clinical center model studies can be downloaded at www.bravewell.org.

Starting in 2010, Bravewell began updating the Best Practices report. Current information can be found at www.bravewell.org.

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The University of Maryland Center for Integrative Medicine was founded in 1991 by Brian Berman, MD, Professor of Family and Community Medicine, as an interdepartmental center within the University of Maryland (UM) School of Medicine.

The Center for Integrative Medicine partners with Kernan Hospital, which is located in downtown Baltimore. Owned by the University of Maryland Medical System since 1986, Kernan Hospital specializes in orthopedic surgery and is the largest provider of rehabilitation services in the state of Maryland. The Center for Integrative Medicine's clinic is located on the second floor of the hospital.

A leading international center for research, patient care, education and training in integrative medicine, the Center for Integrative Medicine is a National Institutes of Health (NIH) Center of Excellence for research in complementary medicine and an NIH International Center for Traditional Chinese Medicine research.

The aim of the work of the Center for Integrative Medicine is to enrich current medical practice through:

- Evaluation of the scientific foundation of complementary medicine;
- Integration of evidence-based complementary medical therapies and approaches into patient care (integrative medicine); and
- Emphasis on a humanistic approach to healing that values mind, body and spirit and partners with patients in healing.

BUSINESS MODEL

The University of Maryland Center for Integrative Medicine has two distinct business units with their own revenues streams — the clinic and the research program.

Research

One of the leading research facilities for integrative medicine, the Center for Integrative Medicine has received over 23 federal grants totaling more than \$30 million and has published over 300 peer-reviewed articles since its inception. As a National Institutes of Health (NIH)

Center of Excellence since 1995, the Center is evaluating the safety, efficacy and mechanism of action of acupuncture and Traditional Chinese Medicine (TCM) herbs for chronic pain, inflammation and arthritis. A large clinical trial of acupuncture for osteoarthritis of the knee was published as the lead article in the *Annals of Internal Medicine* in December 2004. The focus of the Center's NIH International Center is a collaboration with colleagues in Hong Kong evaluating acupuncture and traditional Chinese herbs for functional bowel disorders. Other studies in TCM are focused on cancer pain, infertility, addiction and trauma, and include a work-site evaluation of acupuncture for low back pain at a Ford Motor Company plant. In addition, Center investigators are evaluating mind-body approaches for conditions such as depression, rheumatoid arthritis and post-traumatic stress disorder.

The research department also manages and maintains The Complementary Medicine Field for the Cochrane Collaboration. Founded in 1993, The Cochrane Collaboration is an international not-for-profit organization dedicated to making accurate information about the effects of healthcare readily available worldwide. It produces and disseminates systematic reviews of healthcare interventions and promotes the search for evidence in the form of clinical trials and other studies of interventions. The Cochrane Database of Systematic Reviews is published quarterly as part of The Cochrane Library. The Complementary Medicine Field facilitates the production of systematic reviews of randomized clinical trials in topic areas such as acupuncture, massage, chiropractic, herbal medicine, homeopathy and mind-body therapy. The Center for Integrative Medicine is funded by a grant from the NIH National Center for Complementary and Alternative Medicine (NCCAM) to perform the work of the Complementary Medicine Field.

The Clinic

The clinic, which was established at the same time as and works closely with the research program, operates on a consultative model, providing adjunctive and specialty care. The University of Maryland Center for Integrative Medicine offers a spectrum of diagnostic and treatment options that can be used as a complement to the conventional services received from other healthcare providers or as a complete alternative to mainstream practices. The work is grounded in the principle that the patient and practitioner are partners in the healing process. Each person is seen as unique, requiring an individualized treatment program that honors the relationship between mind, body, spirit and community in health and healing.

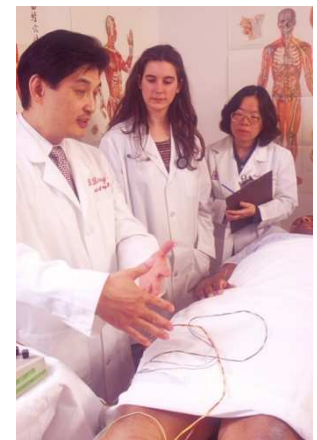
The two physicians and two licensed acupuncturists are University of Maryland faculty members and, as such, are salaried. The yoga instructor is also employed by the Center but the other practitioners — the massage therapist, tai chi instructor, craniosacral therapist, nutritionists, reflexologist, MBSR teacher and shiatsu practitioner — are contracted by the Center and work as affiliates. They rent space from the Center and handle their own billing. Under this arrangement, required by the University for legal reasons, the Center receives rental income from the complementary practitioners but does not directly benefit from the revenue generated from their practices.

The Center for Integrative Medicine accepts most insurance and Medicare for physician and acupuncture services. However, most of the contracted practitioners operate on a fee-for-service basis. The Center generates additional revenues through the sale of thoughtfully chosen supplements and homeopathic remedies. The most financially successful service offered is acupuncture.

CLINICAL MODEL

The University of Maryland Center for Integrative Medicine provides adjunctive and specialty care for all people challenged by a variety of conventional diagnoses including arthritis, cancer, cardiovascular disease, fatigue, chronic pain, diabetes, hypertension, bowel disorders and menopause-related symptoms. As is the case in primary care, a significant percentage of people with these challenges also have associated mood disorders — including depression and anxiety — that are managed in conjunction with mental health professionals. People seeking to optimize their health who have no conventional diagnoses and those seeking to use integrative therapies to prevent illness are also cared for by the Center.

Patient care is delivered under the direction of a physician, except when patients are referred or self-refer for a specific therapy or therapist. In the initial interview, the physician listens to the life story of the individual, to best understand the context of who the person is, before directing treatment at resolving a symptom. Individual goals, socioeconomic status and the acuity of issues confronting the patient's care are also considered. Comprehensive individualized assessments such as these optimally allow the practitioner to determine the original source of the problem. Addressing the deep root of a problem, although often complex, lends itself to an integrative approach that is, like the condition, often multi-factorial. An individualized plan of optimal care is then created and offered to the patient. This may include teaching of coping skills, practices the individual can do such as journaling or mind-body practices, nutritional advice, supplement additions or simplifications, conventional diagnostic interventions or referral to another professional for additional therapeutic interventions.



Dr. Lao, a physician at the Center for Integrative Medicine, teaching University of Maryland medical students.

A model program for the integrative management of people who suffer from musculoskeletal conditions, including victims of trauma referred from the University of Maryland's Shock Trauma Center, is an initiative currently in development. Kernan, the state's largest rehabilitation hospital and the management, orthopedics, neurology and rheumatology. This musculoskeletal program represents a grand opportunity for true integration of therapies and approaches that can greatly benefit this particular population. At the same time, it offers a chance for the conventional practitioners to learn about the array of services that can benefit their patients.

The Center's long-standing research collaborations have had a substantial positive effect on its ability to bring clinical initiatives into other departments in the University of Maryland medical system. The Center for Integrative Medicine introduced acupuncture into the Veterans Administration Hospital's pain clinic, which has since gone on to hire its own acupuncturist. The Center for Integrative Medicine provides acupuncture services in the University of Maryland Family Medicine clinic. It also offers yoga instruction to department employees and patients and in the School of Nursing.



Most recently, the Center for Integrative Medicine in collaboration with the University of Maryland Shock Trauma Center, has started to offer integrative services. The University of Maryland is a pioneer in trauma medicine internationally and is known for the concept of the Golden Hour, the critical first hour after trauma in which patients lives can be saved if they are treated and stabilized. This resulted in the now common practice of helicopter transportation from accident sites in

even the most rural areas of the country. The UM Shock Trauma Center is the nation's only hospital devoted to trauma. At its request, the Center for Integrative Medicine has begun to offer services to optimize pain control in the acute setting. Efforts to teach patients self-care using energy medicine techniques and mind-body skills are also underway. Demand for such services, by the patients and staff, is already beyond the Center's current ability to provide acupuncture and self-care services.

Private philanthropy has provided pilot funding for a research study on acupuncture for pain among trauma victims. The Center for Integrative Medicine's yoga teacher, who is also trained in Reiki, has organized training for several nurses and other healthcare professionals who may take an active role in the provision of integrative services at Shock Trauma.

Table 1 (next page) outlines what services are available on-site and what types of practitioners deliver that care.

TABLE 1*Services and provider types at University of Maryland Center for Integrative Medicine*

SERVICE	PROVIDER
Acupuncture	Acupuncturist (LAc)
Arthritis	Physician (MD)
Botanical/Herbal Medicine	Physician (MD)
Cancer Care	Physician (MD)
Cardiac Care	Physician (MD)
Chronic Fatigue	Physician (MD)
Chronic Pain	Physician (MD)
Craniosacral Therapy	Craniosacral Therapist
Diabetes Care	Physician (MD)
Fibromyalgia Care	Physician (MD)
Healthy Aging Consultations	Physician (MD)
Homeopathy	Physician (MD)
Hypertension Management	Physician (MD)
IM Consultations	Physician (MD)
Irritable & Inflammatory Bowel Disorders	Physician (MD)

Massage	Licensed Massage Therapists
Mind-Body Therapies	Physician (MD)
Mindfulness-Based Stress Reduction (MBSR)	MBSR Instructor
Nutrition	Registered Dietitian
Preventive Healthcare	Physician (MD)
Qi Gong	Qi Gong Teacher
Reflexology	Reflexologist
Stress Management	Physician (MD)
Tai Chi	Tai Chi Instructor
Wellness Consultations	Physician (MD)
Women's Health	Physician (MD)
Yoga	Certified Yoga Instructor

PATIENT VOLUME

The Center for Integrative Medicine practitioners average 4,000 patient-visits per year collectively, which represents about 50% utilization. The complementary providers average an additional 2,000 patient-visits a year.

Patients are referred from faculty practices in the community and within the Kernan Hospital system. Many patients self-refer. Even though the Center for Integrative Medicine is not officially a Kernan Hospital clinic, in many ways, it functions as a part of the clinical whole at the site. Staff and administration of the hospital support the Center through provision of space,

referral of patients and by using the services themselves. The community at Kernan Hospital, the research staff and contracted practitioners, as well as colleagues in Shock Trauma and the Department of Family Medicine, provide “word-of-mouth” public relations. On occasion, the Center uses print and radio advertising, works with the university media specialists, and offers expertise when media or community leaders request its participation.

LEADERSHIP AND STAFFING

The University of Maryland Center for Integrative Medicine was founded and continues to be led by Brian Berman, MD. Berman, a highly respected researcher and clinician, provides the vision and strategic thinking for both the clinic and the research arm of the Center. He also interfaces with both the philanthropic and academic communities. The founding chair of the Consortium of Academic Health Centers for Integrative Medicine and a member of the National Academies of Science, Institute of Medicine’s panel and report on complementary and alternative medicine, Berman was awarded the Bravewell Leadership Award for Integrative Medicine in 2005.

The medical director, Monica Myklebust, MD, leads the clinical effort under Dr. Berman’s direction and collaborates with him on the vision and strategic plan for the clinical program. The administrative director, who also reports to Dr. Berman, oversees support staff and financial functions.

The University of Maryland Center for Integrative Medicine is advised by a formal Board of Advisors that meets once a year.

LOCATION AND PREMISES

The Center for Integrative Medicine’s clinical practice is housed in a wing on the second floor of Kernan Hospital. The wing offers the Center 4,000 square feet of usable space. Physician offices and exam rooms are on one side of the hall, contracted practitioners’ professional space is on the other. The Center’s wing has been renovated to exemplify a healing environment using live plants and flowers, soft lighting, soothing colors, art, and the comforting sounds of water and flute music.

PHILANTHROPY

The Center for Integrative Medicine was started by a large philanthropic grant that was matched by the University of Maryland School of Medicine. Annual philanthropic support is part of the overall business plan. Brian Berman, MD, personally handles the relationships with the philanthropists.

GROWTH STRATEGIES

Several strategies to facilitate patient use of services have been tried. Fee-for-service had its

advantages including excellent collection of fees. However, services were restricted to those who could pay. An attempt to become an official Kernan clinic in 2005 was thwarted by Maryland hospital regulations. Becoming part of Kernan resulted in acupuncture patients, for instance, being billed for charges from both the hospital's mandated fee schedules and the clinic's fees. This had a substantial negative impact on the Center's patients who were used to a fee-for-service model. Many patients were unable to use insurance to cover the additional costs and unable to afford the increased costs. As a result, the Center for Integrative Medicine reverted to its previous independent status, charging fees once again in line with community-based clinics.

The current practice is to accept insurance, opening its services up to a broad patient base but revisiting poor reimbursement challenges inherent in all of healthcare.

Today, both Kernan Hospital and the University of Maryland School of Medicine are very supportive of the Center's clinical and research endeavors. Growth strategies involve taking advantage of the existing relationships between the Center for Integrative Medicine and Kernan as well as relationships with the greater university health system. The following tactics are being pursued:

- Building collaborative service lines with Kernan Hospital and the University of Maryland Medical System;
- Driving growth by focusing on specific disease states for which there are large patient populations;
- Creating collaborative relationships and specific efforts within the health system and throughout the University of Maryland School of Medicine;
- Using excess capacity of the acupuncturists by utilizing them in alternative outpatient sites;
- Investing in marketing programs; and
- Establishing additional premises on the main downtown medical campus.

MOST SUCCESSFUL ACTIONS

By far, the University of Maryland Center for Integrative Medicine's most successful action has been to leverage the initial philanthropic support for research into an internationally-acclaimed, full-scale research program that generates ten times that initial amount through grants from the National Institutes of Health and other granting organizations.

Other successful actions include:

- Maintaining good relationships with the Kernan Hospital staff and practitioners;
- Promoting joint programs with the University of Maryland Medical System and School of Medicine, as well as with the other professional schools including Dentistry, Pharmacy, Nursing and Social Work; and
- Maintaining a strong focus area in Traditional Chinese Medicine and mind-body approaches for pain control.