

## SPECIAL ARTICLE

# Integrative Medicine: A Paradigm Shift in Medical Education and Practice

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The use of alternative/complementary medicine has been increasing considerably. Conventional medicine must begin to address issues related to the use, safety, regulation, research and education of alternative/complementary medicine. Integrative medicine combines conventional medicine and alternative complementary practices. Integrative medicine is an innovative approach to medicine and medical education. It involves the understanding of the interaction of the mind, body and spirit and how to interpret this relationship in the dynamics of health

and disease. Integrative medicine shifts the orientation of the medical practice from disease based approach to a healing based approach. It does not reject conventional medicine nor uncritically accepts unconventional practices. Integrative medicine is an effective, more fulfilling human approach to medicine based on the benefit of the patient by following good medicine practices in a scientific manner.

*Keys word: Integrative medicine, Medical education, Complementary and Alternative medicine*

The purpose of this manuscript is to present a position of a diverse group of health professionals on Integrative Medicine as a new paradigm in medical education and practice.

The use of alternative/complementary medicine has been increasing during the last 15 years. This increase was first account by Cassileth in 1990 (1). Another study showed that approximately one third of american adults used unconventional medical treatments. Interestingly

the most frequent users of this approach were educated, upper income white americans in the 25 to 49 year age group (2). It has also been reported that 72% of the people using both conventional and unconventional (alternative/complementary) medicine did not inform their conventional physician of their use of unconventional therapies unortodox, non-mainstream, non-traditional, holistic, wholistic (2).

In addition, an increased use of unconventional therapies has been accounted for cancer patients (1). The study by Cassileth concluded that conventional and unconventional treatments for cancer produced similar results in life expectancy. In terms of this significant trend, unconventional therapy use has reached the legislative, educational and corporate areas. The Office of Alternative Medicine (OAM) at the National Institutes of Health was mandated by congress in 1991 and launched in 1992 with an annual budget of \$2 million. This has subsequently evolved to the Center of Complementary and Alternative Medicine with a budget of \$50 million (3,4) and may reach 100 million the next year.

In 1995 the National Library of Medicine (NLM) expanded both its key words and journal listings to include alternative medicine are appearing in the mainstream, peer

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review medical literature. In a survey in Journal of the American Medical Association (JAMA) alternative medicine was ranked the seventh most important topic out of 73 for publication in the journal by physician readers (5). The demand for alternative/complementary medicine is also affecting the business of healthcare. Changes have begun in reimbursement policies by managed-care organizations, insurance carriers and hospital providers such as visits to chiropractors. New companies are being formed to address the market's formidable demand (3).

Conventional (allopathic, modern, western, orthodox, mainstream, contemporary) medicine is realizing that it must begin to address issues related to the use of alternative/complementary medicine by their patients, issues or research, safety, regulation and education. Also a study in JAMA revealed that the majority of patients choosing alternative medicine do so mainly because they perceive that these approaches are more aligned with their own values, beliefs and philosophical orientations toward health and life (5).

A challenge lies to create a new approach to medicine, one based on a model of health rather than disease, one that trains practitioners to take time to listen, to value lifestyle and nutritional influences on health and illness, to be able to offer other treatments in addition to drugs and surgery, to understand the innate potential of human organism for self-repair and healing. This approach operates from the premise that prevention is a primary responsibility of practitioners and that whenever possible, simple, safe, cost-effective treatments should be offered before invasive, expensive ones. This principle is in accordance with current models of healthcare addressing cost-effectiveness without sacrificing the patient (6).

### **Integrative Medicine: The Melting Pot for a Preventive Healing-based Healthcare**

There are very important differences related to the terms Alternative, Complementary and Integrative when referring to unconventional medical practices.

The term *Alternative Medicine* has been used to define as those that are not widely practiced in hospitals or taught in conventional US medical school curriculums (2), in other words it is a name to cover the whole array of existing non-conventional healing practices and therapies. Nevertheless, the term Alternative has an inherent segregative nature. If something is alternative you are forced to choose between one or another. Most of the time, optimal care requires more than one approach and a combination of approaches often produce better results.

The term *Complementary Medicine* is of a more

conciliatory nature. Although it suggests that complementary medicine has only a mere supportive (accessory) role to conventional medicine. However, it must be realized that in treating certain conditions, as for example, arthritis and mild depression, unconventional (alternative/complementary) medicine may have a primary role. A broader term that combines the best available approaches was still needed.

The term *Holistic (wholistic) Medicine* entered the health scene, where it seemed comfortable and inclusive enough to describe this revival in medicine. Holistic medicine brought into perspective that health was not only physical well being but also mental, spiritual and social. Although the term Holistic did not catch well among the conservative and science based physicians because of its religious, esoteric and spiritual connotation. It was perceived as a bit unscientific and too new age (hippie medicine).

The term integrative medicine fulfills the need of a more accurate descriptive term of the new medicine approach. It involves the understanding of the interaction of the mind, body and spirit and how to interpret this relationship in the dynamics of health and disease. It distinguishes healing from curing, understanding that healing is always possible even when curing is not. The term cure from the latin "curare", means to take care. The term emphasizes what can be done to help the patient from the outside to eliminate disease. When trying to cure, the health practitioner has the active role, whereas the patient has a passive role. In comparison, the term healing, from the old English *haelan* and old German *heilen*, means to make whole and restore health. In Spanish, the word for heal is "sanar" that comes from the latin "sanare" which means to find or restore health. The term healing emphasizes what the patient can do to restore his inner balance in order to improve his quality of life and well being. When trying to heal, the patient has an active and protagonic role, while the health practitioner has a supportive and guidance role. This client centered relationship, where emphasis is placed on the patient responsibility in the healing process; enhances the benefits of therapy. It could be argued that the term disease is a technical concept, developed in biomedicine to refer to a limited, well defined condition and that what is really relevant is to bring all aspects of the person into balance instead of just focusing on curing a given disease.

Integrative medicine shifts the orientation of the medical practice from a disease-based approach to a healing-based approach. The disease based approach tries to antagonize the manifestations of the disease process in an attempt to cure. This approach, while effective in acute diseases and trauma, has been of limited benefit in treating

chronic degenerative diseases. In contrast, the healing-based approach tries to understand the disease state from a broader, holistic perspective. The integrative approach does not necessarily antagonize the manifestations of diseases, but rather aspires to direct the healing forces (energies) within and surrounding the body to restore health. This comprehensive approach involves the whole human being, (mind, body and spirit), his environment and community in the health restoring process (the healing process) (3).

The integrative approach is based on a partnership between the patient and the health practitioner within which the best therapies available for his condition will be used to stimulate the body's intrinsic healing capabilities. The Integrative Medicine approach is committed to the practice of good medicine irrespective of its origin, either conventional or unconventional, it is based on good science and open to new paradigms. Integrative medicine does not reject conventional medicine nor uncritically accepts unconventional practices. There is a deep need of quality education for health professionals in this important area.

**Re-steering Medical Education for the Next Millenium.** The study of dead bodies, dead tissue cells, its chemical components to understand life processes related to health is incomplete. In addition the quest for magic bullets to combat diseases, are concepts based upon a reductionist, materialist and narrow view of health and healing (7). Nevertheless have made tremendous advances over the past one hundred years by applying these limited concepts to medicine. However, the resulting biomedical system is not always able to account for and use many observations in the realms of clinical and personal experience, natural law and human spirituality. Conventional medicine is a scientific paradigm with a particular history, as much influenced by social history, as it is by scientific law.

Conventional medicine conceptually uses Newtonian physics and pre-Darwinian biology in its therapeutic philosophy. Newtonian physics explains and can reproduce many observations on the mechanisms of every day experience. Contemporary quantum physics (quantum mechanisms) recognizes aspects of reality beyond Newtonian mechanisms, such as matter-energy duality, verified fields of energy and matter and wave functions (7). Quantum physics and contemporary biology-ecology principles may be needed to understand medical alternatives. Nuclear medicine uses the technology of modern physics into its fundamental approach to patient health. Conventional medicine does measure the body's energy using electrocardiography, electroencephalography and electromyography for diagnostic purposes,

but does not use the body's energy for the purpose of healing. The biological science of conventional medicine is essentially pre-Darwinian in that it emphasizes topology rather than individuality and variation. Modern biology-ecology explores the phenomenon of how living systems interact at the level of the whole.

One way of studying and understanding alternative/complementary medicine is to view it in light of contemporary physics and biology-ecology and to focus on the physiologic responses of the body. When homeopathy or acupuncture is observed to result in a physiologic or clinical response that cannot be explained by the biomedical model, it is not the role of the scientist or physician to deny this reality, but rather to modify the explanatory model(s) that accounts for it. Science must account for all that is observed, not just part of it. This is why physics has proven beyond Newtonian mechanics and biology beyond topology. In this way is that science itself progresses.

While conventional medicine utilizes new technologies in the service of relatively old ideas about health and healing, alternative methods employ old technologies whose fundamental character reflects new scientific ideas on physical and biological nature (7).

A large percentage of our population is utilizing alternative/complementary modalities in which their physicians are not educated. Moreover, the majority of these patients are not informing their physicians about their choices (2). Given that the practice of good medicine is based on the physician's working knowledge of the treatments in which patients are engaged and their potential side effects, this might turn out to be a dangerous circumstance (3). Physicians need to have a working knowledge of the treatments commonly used in alternative/complementary medicine. They need to know which practices are potentially harmful or are unlikely to be of benefit in order to avoid risks to the patient from unsafe modalities, dangerous interactions or by delay of effective treatment. The knowledge is also necessary to help patients avoid spending financial resources on ineffective treatments. Physicians also need to know what practices are complementary to the conventional approach and which alternative/complementary practice can be of value in addition to or instead of what is currently available. Physicians need to know what alternative/complementary modality they can provide or to what professional they may refer their patients in the continuous search of the practice of good medicine in benefit of their patients.

Having the goal of practicing the best medicine possible, physicians should be aware of which alternative/complementary methods, when critically and intelligently

integrated into health care, could be of benefit to patients. Despite this need, there is no formalized academic training nor certification process covering these areas (3). Here lies a challenge and at the same time an opportunity to create a richer, more fulfilling, more effective and more human approach to medicine based on the benefit of the patient following good medicine practices in a scientific manner, the integrative medicine approach.

### Resumen

El uso de la medicina alternativa y complementaria ha ido aumentando considerablemente. La medicina convencional debe comenzar a lidiar con asuntos relacionados al uso, seguridad, regulación, investigación y educación de la medicina alternativa y complementaria. La Medicina Integrativa es un enfoque innovador a la medicina y educación médica. Envuelve el entendimiento de la interacción de mente, cuerpo y espíritu y como interpretar esta relación en la dinámica de salud y enfermedad. La Medicina Integrativa cambia la orientación de la práctica médica de una basada en la enfermedad a una basada en la sanación. Esta concepción

no rechaza la medicina convencional ni acepta prácticas "alternas" sin evidencia. La Medicina Integrativa es una forma efectiva de medicina que promueve una mayor realización del espíritu humano. Esta medicina esta basada en el mayor beneficio al paciente siguiendo buenas prácticas médicas de manera científica.

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