Finding a Place For Complementary and Alternative Medicine

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Complementary and alternative medicine (CAM) is a growing field of health care. Studies show that nearly fifty percent of North Americans are using CAMs for various medical conditions, as alternatives to, as well as in conjunction with, conventional treatments. Many alternative therapies have, at least, anecdotal benefits, however there are also risks associated with their use. Physicians have a responsibility both to promote health as well as to protect their patients from any known risks. Unfortunately, currently very few medical physicians are properly trained to recommend CAMs or even to refer to CAM practitioners. Medical schools have begun to integrate some CAM education into their undergraduate programs, but much more needs to be done if we wish to properly regulate our practices and responsibly manage our patients.

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Complementary and Alternative Medicine (CAM) is an evolving field in health care; hence the term CAM has carried various connotations over time and among groups of people. In 1997, the American National Institute of Health (NIH) Panel on Definition and Description developed the following working definition: "CAM is a broad domain of healing that encompasses all health systems, modalities, and practices and their accompanying theories and beliefs, other than those intrinsic to the politically dominant health system of a particular society or culture in a given historical period. CAM includes all such practices and ideas self-defined by their users as preventing illness or promoting health and well-being. Boundaries within CAM and between the CAM domain and the dominant system are not always sharp or fixed."[1]

CAM therapies vary greatly in their level of professional structure and it is important to note that not all the therapies carry the same degree of uncertainty or "non-acceptance" in orthodox medicine. For instance, chiropractors are officially regulated and third-party payers in most provinces cover a small portion of their fees.[3] On the other hand, some forms of CAM can be learned and practiced after a weekend seminar and these practitioners are neither controlled nor licensed by a governing body.[4] Therefore, when discussing and evaluating CAM we must be aware of this variety and avoid sweeping generalizations.

Therapies and CAM Users in Canada

Unfortunately, few studies have been conducted on the use of CAM by Canadians. Statistics from our closest neighbor, the United States, suggest that the prevalence of annual CAM use increased dramatically from 3.8% to 42.1% between 1990 and 1997. The total number of visits to CAM providers rose from 427 million in 1990 to 629 million in 1997. Expenditure estimates for CAM services increased 45% in this 7-year period and reached $34.2 billion (Cdn) in 1997.[5]

Research conducted in other countries demonstrates a global trend towards increased use of CAM. Australians spend over $1 billion (Cdn) per annum, which is twice as much as out-of pocket costs spent on orthodox treatments, and in Britain the National Health Service (NHS) has recorded expenditure of 2 billion dollars (Cdn) per annum.[6]

Based on studies that have been conducted in Canada the trends appear to be no different.[7] Although we differ from the US in that much of our orthodox medical costs are covered by Medicare, we appear to be motivated enough by CAM to spend billions of dollars out of our own pockets. A survey conducted by the Fraser Institute revealed that an estimated fifty-percent of Canadians had used at least one form of CAM in the previous 12 months.[7] Unfortunately, only 44% of these people had told their physician that they had done so. Reasons stated for this lack of communication with their doctors were: they did not think it was important for their doctor to know (53%), that it was none of their physicians business (39%), fear that their doctor would not approve (22%), and belief that their physician would discourage them from seeking further CAMs (18%). In sum, Canadians spend an estimated $3.8 billion per annum on CAM, which accounted for 16% of all private health care costs in 1995.[7]

Risks Associated with CAM and Physician Responsibility

Unfortunately, the word "natural", which is often used to describe the non-synthetic nature of alternative and complementary therapies, has led some people to believe that CAMs are safe. The phrase "it comes from nature, so it couldn't possibly hurt me," frequently rings out during conversations about CAM. Unfortunately, this inaccurate conception has the potential to lead to overconfidence and dangerously relaxed treatment practices.

Although limited evidence does suggest that CAM therapies harbour a lower risk than conventional medicines[8], documentation of the specific risks of CAM therapies has been difficult due to a lack of adverse drug reaction (ADR) reporting with respect to alternative medicines. Under-reporting is assumed to be the result of the following: ADR committees that do not encourage the reporting of adverse effects by practitioners and consumers of alternative medicine; CAM use being often overlooked in patients' drug histories; and the public perception that "natural" products are safe, which biases individuals against making the connection between CAM use and adverse effects.[8]

Other than detrimental reactions, which are present in orthodox medicine as well, CAMs carry other unique risks. There is a lack of standardization amongst herbal remedies. At present products do not undergo the same stringent quality control and labeling procedures required of conventional drugs. This leaves open opportunities of contamination, misrepresentation, or misidentification. Many herbal remedies require some form of preparation by the patient (e.g. crude herbs for making tea) and this can lead to overdosing due to misinterpretation of the instructions. As well, there is insufficient licensing of practitioners, limited satisfactory research, as well as a general insufficiency in knowledge surrounding CAM by many patients, pharmacists, and orthodox physicians alike. These deficiencies, in combination with the lack of communication among patients, their physicians, and the CAM practitioners, have created a realm of undetermined risk and vulnerability, which we desperately need to address.

Physicians have a duty to protect their patients as well as to provide for them the best possible care. Thus they have a responsibility to address the issue of CAM with their patients as well as within their profession. First, in their role as protectors, they should recognize that CAM is associated with a degree of risk, and they should be prepared to discuss these risks knowledgeably with their patients. In order to do so they must properly educate themselves (through taking courses, reading articles and collaborating with the CAM practitioners in their area), as well as learn to ask patients, in a non-judgmental manner, about their CAM use during history taking.

Secondly, in their role to provide the best care, physicians should acknowledge that accumulating evidence is demonstrating that some CAM practices may be valuable in the treatment of disease. Equally as important, many CAM products are less expensive than conventional medications. If CAM products are proven safe and efficient their use could lessen the financial burden of the patients. Therefore, physicians again have the responsibility to educate themselves about CAM.

Finally, studies show that more than 80% of those who use CAM also seek help from conventional practitioners.[9] In order to efficiently and safely treat patients, physicians must begin to think about co-management with CAM practitioners, and to seek out effective relations among the disciplines.

Current Physician Knowledge of CAM

Considering the potential risks associated with some CAMs and the physicians' responsibility to provide their patients with the best possible care, knowledge of CAM would seem to be an essential characteristic of a good physician. Unfortunately, as it stands today, doctors know an unacceptably small amount about alternative therapies, which a portion of their patients are inevitably using.

A study conducted in the UK[10] examined the knowledge of medical students, hospital doctors and GPs regarding five major alternative therapies: acupuncture, chiropractic, homeopathy, naturopathy, and osteopathy. Nearly all participants, including students and physicians, had heard of and knew the principles of acupuncture (between 92 and 100%). However, only 24% of GPs, 5% of hospital doctors, and 11% of students knew the qualifications of an acupuncturist. These figures varied amongst the fields of CAM and were lowest with respect to naturopathy, in which only approximately 50% of physicians and 20% of students had even heard of the modality. Overall GPs were the most knowledgeable, followed by hospital doctors, and finally students. However, the most disturbing result of this study is the fact that despite not knowing the professional qualifications, or in some cases the principles of these therapies, many physicians reported having suggested referrals to their patients (66% to acupuncture, 54% to chiropractic, 49% to homeopathy, and 78% to osteopathy).

A study of U.S. physicians mirrored the results in the UK.[11] In a survey drawn from the American Medical Association membership of family practice, general practice, internal medicine, and pediatric physicians, participants were asked to rate their training and usage of CAM. Less than 9% had any formal technical training or education in traditional Oriental medicine, electromagnetic applications and Native American medicine. Overall, family and general practitioners had the most training, whereas pediatricians reported the least. Again similar to the UK study, CAM use and referrals were high and in some cases outweighed training.

It is obvious from these studies that knowledge of CAM by conventional practitioners is lacking. There are many forums in which to teach CAM, and numerous resources to which physicians can turn in search of information. Education on CAM is necessary at all levels throughout a physician's career. Only the education of medical students will be addressed here, but post-graduate and Continuing Medical Education programs should also be looking to incorporate CAM into their curricula.

The Current State of CAM in Undergraduate Medical Education

Medical schools around the world have been working to include some form of CAM education into their curricula.[12,13] It has become apparent to medical educators as well as professional governing bodies that today's doctors are going to face the issue of CAM in their practices, and that they require training in the proper skills in order to deal with this.

The most comprehensive study of American medical schools surveyed 117 of the 125 schools in the US. Seventy-five of these schools reported offering at least one course in CAM. Sixty-three percent of these offered only one course, whereas 37% reported offering multiple classes. All of the freestanding CAM courses were presented only as electives. Forty-one percent of the schools offering CAM courses presented CAM as part of other required courses in the curriculum, such as introduction to clinical medicine and patient-doctor communication. In addition to lectures, discussions, and case studies, other frequently cited

educational features included visits to centers offering CAM therapies and observational or preceptorial experiences with providers of these therapies. Course requirements varied greatly among schools, some schools assigned readings while others required papers or projects due at the end of session.

Very little research has been conducted in Canada as to the CAM programs offered as part of the undergraduate curriculum. One survey published in 1999 [13] indicated that 13 of the 16 medical schools were offering some form of education on CAM as part of their curriculum. The other three schools reported that they planned to incorporate CAM in the future. Of the schools that were providing courses at the time of the study, nine did so as part of a separate course, six as part of an elective, and seven reported that they also supported student-developed lectures and presentations on CAM. Most of the information was presented in lecture format, although three schools indicated that they also had structured clinical experiences involving CAM. Acupuncture and homeopathic medicine were the two most frequently covered topics although herbal medicine, chiropractic medicine, naturopathic medicine, traditional Chinese medicine and biofeedback, osteopathy, shamanism, massage therapy, yoga, aromatherapy, reflexology, native traditional healing, and bioeletromagnetic therapy, spiritual healing and a holistic approach were addressed at some institutions.

Integrating CAM Education into Undergraduate Medical Education

As outlined, some medical schools in North America and elsewhere are currently offering some education to their students about CAM, and others are working to include it in the future. However, there appears to be a general sentiment that more work must be done on existing and future programs to ensure students are getting the quality and quantity of education they will require as physicians. A workable educational model needs to be developed to help guide individual schools in fulfilling this goal.

In the U.S. a panel of medical and nursing education experts were brought together in 1996 to assess the status of CAM education.[12] The panel consisted of deans, associate deans and representatives from the American Medical Association, American Academy of Family Practice, Association of American Medical Colleges, Federation of State Medical Boards, Pew Health Professions Commission, American Medical Student Association, and various other organizations. Specific recommendations that were put forth to be considered when developing a course in CAM were:

1. To focus on critical thinking and critical reading of the literature. It will be impossible and inefficient to try to teach orthodox medical students all there is to be known about CAM. The field of CAM is evolving and as such it is more important that students are armed with the skills to learn about CAM in the future than to know the details as they stand today.
2. Identify thematic content and express the chosen topics in clear, concise learning objectives. Developing an introductory course including chiropractic, acupuncture, massage, herbal medicine, homeopathy, mind-body therapies, and placebo related phenomenology would allow a good overview of CAM practices. Other topics could be explored from there based on interest.
3. Include an experiential component. Experiencing the various techniques adds a quality to the learning experience that can not be matched by a lecture or demonstration. The students would gain a better understanding of what their patients are experiencing by experiencing the treatment themselves.
4. Promote a willingness to communicate professionally with alternative health care providers. Many patients will require co-management, and a good working relationship between practitioners is important to maximize patient welfare.
5. Teach students to talk to patients about CAM. They must learn to ask questions in a non-judgmental and clear manner in order to foster communication with their patients and ensure that they know the "whole picture".

These suggestions offer only guidelines. Each medical school has its own unique academic philosophy and curriculum, thus any programs developed must be specific to each institution. However, as outlined above, the incorporation of CAM into every school's program would be beneficial.

CAM Education can Create Better Doctors

Although adding CAM components into the curriculum seems to create more work for educators and students alike, it will have multifold benefits, not only for patient safety, but also by demonstrating to conventional medicine where it is lacking. There is much to learn from CAM therapies and practitioners. Patients are choosing to seek out alternatives to conventional medicine, and are willing to pay out of their own pockets in order to receive this care, rather than to turn to orthodox medicine for help. What can we learn from this? A recent survey exploring the differences between allopathic and CAM practitioners and therapies from the patient's point of view offers us some of the answers to this question.[14]

The respondents noted that the main differences between mainstream medicine and CAM included style, cost, training, institutional structure, philosophy, orientation and world-view. CAM practices were thought to stress the importance of the "whole" person including emotional, physical, psychological and social factors, and to empower the patients to direct their own health and healing process. However, conventional medicine was recognized as being more widely accessible and highly legitimized.[14]

Overall, participants in this study believed that conventional medicine has strength in both diagnosis and treatment, but falls short when it comes to understanding the complexity of a whole person. Respondents noted that conventional medicine is effective in eliminating disease, but often uses more power than is necessary. An analogy put forth by one of the respondents was that "Chinese medicine has a top speed of 30 miles an hour, and if your

disease is going 45 to 50, you need to go to an allopathic physician because they can go 120". Conventional medicine was seen as being akin to "using a boulder to kill an ant."[14]

Another study examining the reasons for which individuals are drawn to CAM revealed that patients are not necessarily "disgruntled" or frustrated with conventional health care, nor are they simply people that cannot be helped by orthodox medicine.[15] This study suggests that it is not the "medicine" per se that has failed them, rather it is their physicians.

As described in a commentary on the state of medicine today: [16]

> The modern model of medical intervention may pay lip service to the integration of mind and body, but in fact, in Western medicine we are the closest Cartesians. We emphasize intervention with a curative intent, and talking with, comforting, guiding, and educating patients is of lesser importance, something to do until the injection is ready. An illness can be a lonely journey and patients crave contact with people who understand what the journey is like and who can stay with them during it's course. Thus the appetite for complementary medicine is stimulated by a need for attention and compassion that many patients are not getting in modern biotechnological medical care.

It is not that orthodox medicine does not respect that comforting is an important part of a doctor's role. The Canadian Medical Association Code of Ethics even states in its tenets that one of a physician's general responsibilities is to "provide for appropriate care for his/her patient, including physical comfort and spiritual and psychosocial support, even when cure is no longer possible."[17] The medical profession was built on the old adage "cure rarely, relieve suffering often, and comfort always."[16]

Unfortunately, today this appears to have been rewritten to read "cure always, relieve suffering if one has time, and leave the comforting to someone else." Perhaps conventional doctors are too busy; or time and money are too short. Regardless, society is calling out that it is time to change, and orthodox medicine needs to start listening.

References

1. www.nih.gov
2. Achilles, R. Defining complementary and alternative medicine. *Perspectives on Complementary and Alternative Health Care* 2001; I 1-I.15.
3. Fries, C.J., Menzies, K.S. Gullible fools or desperate pragmatists? A profile of people who use rejected alternative health care providers. *Canadian journal of public health* 2000; 91 (3): 217-219.
4. Pietroni, P.C. Beyond the boundaries: relationship between general practice and complementary medicine. *British Medical Journal* 1992; 305: 564-566.
5. Meeker, W.C. Public demand and the integration of complementary and alternative medicine in the US health care system. *Journal of Manipulative and Physiological Therapeutics* 2000; 23 (2): 123-126.
6. Coates, J.R., and Jobst, K.A. Integrated healthcare: a way forward for the next five years?. *The journal of alternative and complementary medicine* 1998; 4 (2): 209-247.
7. Buske, L. Looking for an alternative. *Canadian Medical Association Journal* 1999;_161 (4): 363.
8. Drew, A.K., and Myers, S.P. Safety issues in herbal medicine: implications for the health professions. *MJA* 1997; 166:538-541.
9. Eisenberg, D.M.. The invisible mainstream. *Harvard Medical Alumni Bulletin* 1996; 20-25.
10. Perkin, M.R., Pearcy, R., Fraser, J.S. A comparison of the attitudes shown by general practitioners, hospital doctors, and medical students towards alternative medicine. *Journal of the Royal Society of Medicine* 1994; 87: 523-525.
11. Berman, B., Singh, B., Hartnoll, S., Singh, B., and Reilly, D. Primary care physicians and complementary-alternative medicine: training, attitudes, and practice patterns. *Journal of the American Board of Family Practice* 1998; 11 (4): 272-281.
12. Wetzel, M.S., Eisenberg, D.M., Kaptchuk, T.J. Courses involving complementary and alternative medicine at US medical schools. *Journal of the American Medical Association* 1998; 280 (9): 784-785.
13. Ruedy, J., Kaufman, D.M., MacLeod, H. Alternative and complementary medicine in Canadian medical schools: a survey. *Canadian Medical Association Journal* 1999; 160 (6): 816.
14. Barrett, B. Marchand, L., Scheider, J., et.al. Bridging the gap between conventional and alternative medicine. *Journal of Family Practice* 2000; 49 (3): 234-239.
15. Druss, B.G. and Rosenbeck, R.A. Association between use of unconventional therapies and conventional medical services. *Journal of the American Medical Association* 1999; 282 (7); 651-656.
16. Spiegel, D. Stroud, P. Fyfe, A. Complementary medicine. *Western Journal of Medicine* 1998; 168: 241-247.
17. www.cma.ca

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