

## **Implementing an Integrative Medicine Program in Academic Medical Centers: A leadership opportunity**

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**Word Count:** 2153

**Tables:** 3

**Funding:** Funding for this study was obtained from Sunnybrook Women's College Health Sciences Center, Toronto, Canada. SV and HB receive salary support from the Canadian Institutes of Health Research. BCJ receives financial support from Sick Kids Foundation (Toronto, Canada), Canadian Interdisciplinary Network for Complementary and Alternative Medicine Research and the Evidence-Based Practice Centre, University of Alberta.

**Acknowledgements:** The authors gratefully acknowledge the generosity of the participating sites, including Harvard Medical School Osher Institute and Dr. Adam Perlman, Siegler Center for Integrative Medicine for sharing their time and experiences for educational purposes.

**Abstract**

**Background:** Patients are using Complementary and Alternative Medicine (CAM) with increasing frequency. Given that people are “integrating” CAM as part of the management of many different health conditions, it is important for academic health sciences centers to investigate how they can help patients make informed choices about using CAM. **Methods:** We made a series of nine visits to leading integrative medicine centers in academic settings across North America to seek their counsel on the tools needed to create a similar program in a novel site. **Results:** The centers visited suggested that the initiation of an integrative medicine program requires a significant initial outlay of funding and a motivated “champion” of the cause. Centers worked towards achieving a tripartite approach, comprised of a strong clinical program, significant research efforts, and flexible educational opportunities. **Conclusion:** An integrative medicine program fits with the core values and beliefs of many academic medical centers. Important lessons can be learned from programs already in existence. At this time, a unique opportunity exists for other institutions to become forerunners in the increasingly significant field of integrative medicine.

## **INTRODUCTION**

Complementary and alternative medicine (CAM) has enjoyed exponential growth in recent years <sup>1</sup>. A commonly accepted definition of CAM is a “broad domain of healing resources that encompass 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.” <sup>2</sup>

Utilization data demonstrate the rapid growth of CAM use in Canada, the United States, Europe, and beyond <sup>3-5</sup>. Until recently, the “typical” user was described as an educated female of upper socioeconomic status. More recent studies suggest CAM use is now common among the majority of health care users, and appears to be greater among those with serious, chronic, or recurrent illness <sup>4,6</sup>. The WHO estimates that CAM is used as first-line therapy by a majority of the world’s population <sup>7</sup>. Given the multicultural society and large number of first generation immigrants that many academic medical centers serve, it is likely that many of these patients have explored CAM.

At the present time, there is a lack of information regarding how CAM is being integrated into academic medical institutions, if it is being integrated at all. While there are many definitions of “integration”, for our purposes, it is defined as a collaborative, team care approach that includes a variety of western medical, and CAM health care providers. It implies comprehensive access to a full range of health care systems based on patient need <sup>8</sup>.

The authors of this study sought to answer the questions: how would one go about setting up a new integrative medicine program at an academic health sciences centre? What would be the important tools one would need? Who would be the key individuals involved? As an approach to answer these questions, the authors of this study set out to learn about the integrative medicine programs currently in place at leading academic health science centers in North America.

## **METHODS**

Sites were chosen on the basis of their reputation for excellence in a minimum of two of three areas of interest: research, clinical care, and education. Visits took place between 2002-2003 and involved a total of nine sites. Interviewees were chosen on the basis of their role at the participating center, and represented leadership from all facets of the program (research, clinical care, education, and administration). A minimum of two investigators attended each site visit (and in three instances, three investigators attended). One investigator attended all site visits (SV). At each centre, questions were asked about the clinical, research and educational aspects of the integrative medicine program. As well, the participants were interviewed with regards to critical factors for success regarding the team, its resources (including information), structure and process. A summary of the site visit interview guide is provided in Table 2 one and a complete version can be obtained by contacting one of the authors (SV).

## **RESULTS**

Site visits provided a snapshot of the top “integrative” academic health science centers in North America. The authors learned how each started their program, how it evolved, what worked and what did not. The earliest integrative medicine program visited opened in 1991, while the rest launched in the intervening decade. A common reason for the initiation of the CAM programs visited was an underlying interest in the center, catalyzed by a directed donation or endowment fund (usually \$1-10 M USD). Each program stressed the importance of having a well-respected person (usually an MD) among the CAM program leadership who could “champion” the initiative.

### **Clinical Programs**

The programs visited varied from the largest provider of integrative care in the US to programs with accessory virtual clinics or programs with clinics that were planned, but did not yet exist. On-site CAM services included Traditional Chinese Medicine (TCM) as a whole system, acupuncture, TCM supplements, chiropractic, massage, aromatherapy, homeopathy, herbal medicine, mind-body and biofeedback. Conventional care was offered at the same facility, and in the sites visited, included physiotherapy, nutrition, psychiatry, internal medicine, family medicine, as well as conventional medical trainees.

Patients attending all the clinics presented with similar complaints: menopausal symptom management, chronic fatigue, fibromyalgia, depression, irritable bowel syndrome, chronic pain, emotional/mental health, infertility, asthma, and symptoms related to cancer/cancer therapy. Providers at the sites agreed that patients come to the clinic

because the program assesses the “whole person”, rather than for a second opinion on their diagnosis. While all programs insisted patients’ see a team physician as part of their assessment (if they were not already under the care of a family physician), the physician was not necessarily the gatekeeper (i.e., did not have to see the patient before the other providers, nor was physician approval to see a particular CAM provider necessary in most centers). Experience has taught the practitioners that “less is more”, e.g., having more CAM providers involved in each patients’ care is expensive and can leave a patient feeling confused. Instead, the goal is to have a clear and simple care plan, and an opportunity to develop a meaningful relationship with one care provider. Outcomes are reviewed approximately every three months and if the patient is not making progress or achieving their goals, the treatment plan is reviewed.

The different programs visited appeared to interpret the concept of practicing “evidence-based medicine” differently. Given the frequent gaps in the evidence with respect to CAM, a common approach was that if there is evidence that a product or therapy does not work or is harmful, then it will not be used. However, if there is simply inadequate evidence to prove efficacy, many programs were willing to offer it, if only so that it could be studied.

Program choices regarding which CAM services to provide at each center were in part based on regulatory status, partly on patient demand, and also on the ability to find the right fit of individuals to become part of the team. The goal was not to train the MD in all modalities of CAM, but to work with CAM experts so that all team members could

learn when and how to refer appropriately. When choosing CAM practitioners for the clinic, the sites emphasized the importance of carefully assessing the individuals applying. It is critical to involve CAM providers who are certified in their own field and who stay within their scope of practice in order to minimize liability concerns. In most clinics, all care providers carry liability insurance that they pay for themselves (up to \$3 M USD). Program directors emphasized that CAM providers who had more cross-training (with conventional medical professions and occupations) were preferred. The CAM practitioner must be advised that for the clinic's purpose, scope of practice may be limited compared to what they can do outside of the program.

As CAM is not covered by many private or public insurers, the programs have had to create strategies to overcome potential inequities based on a fee-for-service system. Some programs bill every patient, irrespective of insurance status leaving it up to the individual to see if their costs will be reimbursed. Others have subsidy programs or reduced fees for patients who cannot afford care. Very few programs are profitable, yet they agree "no margin, no mission" suggesting that it is above all necessary to stay in business if one wishes to help patients.

In almost all circumstances the clinics hold a multidisciplinary case conference about patients, the content of which has evolved over time. In most instances, less time is spent on this activity in more established programs, and in some it has been eliminated because it was too expensive.

## **Research Programs**

Programs have generally discovered that a critical element to success is research. With evidence, they are more able to convince skeptical colleagues about their value. Some sites grew around a foundation of research; others are adding it as time goes on. One program advised choosing research areas based on where team members have passion, interest and expertise. Another team acknowledged that most of their research actually happens off-site, e.g., with collaborators in nursing, pharmacy, internal medicine, psychiatry, etc.

## **Educational Programs**

The scope of the educational programs varies from site to site. Most established centers have an education director, and have set up a variety of educational opportunities. These include lectures to and electives for medical students, rotations for internal medicine residents and a survey course where students learn about and experience CAM therapies. The students are required to do research during rotations, usually a literature search and presentation at rounds. At one site, twenty-five community-based CAM providers donate their time to run workshops. Another center started a fellowship program in 1999, and now have an NIH training grant for 6 fellows. They also hold an annual CME event and prepare online cases for CME credit. A different center has an exchange elective whereby medical students meet with students from the American College of Traditional Chinese Medicine to teach each other about physical examination and diagnosis, and “share the process of becoming a healer” in both systems (students teaching students).

## **DISCUSSION**

Integration of CAM research, education, and clinical care delivery in academic health science centers is occurring in many US institutions. Canadian initiatives are few in number, and limited in scope. Given the increasing demand for CAM services, this is an important area for future growth in all North American medical centers. The existing programs have important information to share regarding credentialing, medico legal issues, and quality assurance. A summary of key themes critical to a successful integrative program are presented in Table 3. Still, it is important to note that most of the centers visited do not yet have all three “pillars” of research, education, and clinical care up and fully functional, with various reasons for this. Some started with clinical care, others will add that last. Most have learned that research and education are important components and are working to expand these areas within their programs.

There are several options by which academic medical centers could explore integrative medicine without implementing a full program. Suggestions which did not appear to fit into the three pronged approach (clinical, research and education) identified above include the idea of simply establishing links with CAM knowledgeable/interested conventional healthcare providers in the community and assessing openness to accepting referrals or providing advice within their current setting. Alternatively, a center could identify specific credentialed CAM providers in the community who are interested in holding virtual clinics, referring and communicating with off-site physicians. On a research level, any institution could introduce CAM-based research in clinical areas of high usage (e.g. environmental health clinics) or on subjects of interest to existing

researchers. Table 1 provides a list of potential integrative medicine program models for academic medical centers.

Our study has three major limitations. First, while every attempt was made to engage the centers visited to allow us to sit in on a case conference, unfortunately this was not possible. Therefore, we were not able to directly observe the functioning of the multi-disciplinary teams. Second, all of the leading integrative programs in North America were not assessed due to time constraints or illness. This may have led to the omission of further potentially useful information. Finally, the majority of sites visited were American. Given the differences in the health care systems, some findings may not generalize to all Canadian or European centers.

An integrative medicine program fits with the core values and beliefs of many academic medical centers. The use of CAM is increasing and thus responding to patient needs in this area would be supporting a patient-centered approach to care. Within any medical community, a new initiative in integrative medicine could help healthcare providers and patients meet their information needs, it could enable more evidence-based decision making, it may facilitate the development of new knowledge and could possibly enhance health outcomes in the most cost-effective manner.

## References

1. Fraser Institute. <http://www.fraserinstitute.ca/publications/forum/1997/march/FF-03-97.html>
2. NCCAM Clearinghouse. Retrieved from:  
<http://nccam.nih.gov/nccam/an/general/index.html>
3. Berger E. Berger Health Monitor: Survey #21; 2000 May.
4. Eisenberg DM, Davis RB, Ettner SL, et al. Trends in alternative medicine use in the United States, 1990-1997: Results of a follow-up national survey. JAMA 1998;280(18):1569-1575.
5. Zollman C, Vickers A. ABC of complementary medicine. Complementary medicine and the patient. BMJ 1999;319(7223):1486-9.
6. Boon H, K Westlake, M Stewart, R Gray, N Fleshner, A Gavin, JB Brown, V Goel. "Use of Complementary/Alternative Health Care by Ontario Men Diagnosed with Prostate Cancer: Prevalence and Characteristics" Urology, In press.
7. World Health Organization (WHO) Traditional Medicine Strategy 2002-2005.
8. <http://nmlm.gov/healthinfoquest/pathfinders/termsCAM.html>. Terminology. National Network of Libraries of Medicine; June 7, 2002:June 28, 2002.)

**Table 1: Potential Models for Academic Integrative Medicine Initiatives**

<p><b>Model I: the Information Database/Phone line</b> - A comprehensive information resource that could be used in answering provider and patient questions</p>
<p><b>Model II: Multidisciplinary Hospital-based Clinic</b> - A separate multi-disciplinary hospital based clinic that would provide combined CAM and primary medical care providing broad patient care or a narrow, highly-specialized patient care approach (i.e. children with gastrointestinal conditions)</p> <p><i>Model IIa: Consultative program</i> - A referral-based clinic team to assess patients and identify evidence regarding CAM interventions to be presented back to the patient</p> <p><i>Model IIb: Primary care model</i> - CAM providers along with primary care physicians and/or a multi-disciplinary team (dietician, social work, psychology, physiotherapy, nurse) provide integrated care</p>
<p><b>Model III: Hybrid model</b> - Integration into existing clinics as deemed necessary</p> <p><i>Model IIIa</i> - A central clinical site that offers its expertise to the various hospital programs</p> <p><i>Model IIIb</i> - Integration of CAM into all interested existing clinical programs</p>
<p><b>Model IV: Research Based model</b> - A hospital based CAM research office involving a team of individuals with a menu of clinical trials focusing on patient recruitment and follow-up</p>

**Table 2: Summary of Site Visit Interview Guide**

***Previsit:***

Request intake forms

List of personnel – name and role

List of resources they utilize/recommend

***Visit:***

1) Background

History/evolution of clinic

Who are components of team

2) Clinical

What range of conditions do you treat?

Is it a centralized service (or local, housed in various divisions)?

Is your clientele of a predominant ethnicity?

How do patients access the clinic?

What intake forms do you use?

Do you provide a consult service only, or continuing care?

Do you recommend specific treatments? On what level of evidence? How is this decided? Do you sell anything (e.g. supplements) on site? Why or why not?

How do you come to decide which products/practices/practitioners to recommend?

Do all team members see all patients or is there a “team leader” who makes those decisions?

How long are initial appointments, follow-ups, and appointments with each team member?

How do team meetings/Rounds work?

3) Research

What research is underway at present? What projects are completed? What did you start with?

4) Education

Are all team members involved in the provision of education, i.e. rounds, clinical activities?

Who comes to your center as a trainee?

Do you provide community education i.e. to the rest of hospital/health center, consumers, etc.?

5) Operations

How much space do you have?

How are you funded?

Is it fee-for-service or salaries for your clinical staff?

Is it covered by insurance, or pay-out-of-pocket?

Has it been a hindrance to have patients pay?

How do you handle legal issues?

6) Advice

What were your critical factors for success/failure?

**Table 3: Key Themes for a Successful Integration Program**

- (1) Start small, stay flexible, make as few financial commitments as possible.
- (2) Involve the best (clinical) team members possible (don't compromise, listen to instinct).
- (3) Involve the best researchers possible with varied expertise. May improve chances of a grant, which builds focus and identity.
- (4) Keep research focused, but clinic broad.
- (5) Recruit from within where possible (\$\$ to bring people in).
- (6) Develop benchmarks to evaluate progress.
- (7) Track utilization.
- (8) Be patient. May take time to establish patients and community trust.
- (9) Plan before you act. Hire the team before opening clinic doors. Ensure mutual comfort with internal referrals.
- (10) Streamline administration.
- (11) Electronic medical records.
- (12) Maximize revenue generating space.
- (13) Recommend good technology/infrastructure that is scalable, with ideally the same firewall as the university or hospital (same IS support, maintenance, etc.)
- (14) Be aware of variance in regulatory status-- impact on credentialing, risk management. Insist providers carry medico legal insurance.