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An approach for integrating complementary–alternative medicine into primary care

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Background. Despite family practitioners frequently being requested to assist their patients with advice on or referrals to complementary–alternative medicine (CAM), there is an absence both of evidence about the efficacy of nearly all specific treatments or modalities and of guidelines to assist with the integration of conventional and CAM therapies.

Objective. The aim of this article is to suggest a comprehensive and rational, best-evidence strategy for integrating CAM by primary care practitioners into primary care, within the context of the limitations of the current knowledge base and the local milieu.

Methods. The suggested approach was developed by a combination of literature review, key informant interviews, focus groups, educational presentations for family practice residents and practitioners, and field testing. An iterative model was utilized whereby more refined drafts of the suggested approach were subjected to later discussants and groups, as well as further field testing. Drafts of the strategy were utilized in consultations of patients requesting advice on alternative medicine in a primary care setting and in a CAM clinic.

Results. Both family physicians and CAM practitioners provided useful comments and recommendations throughout the process. These can be categorized in terms of knowledge, attitudes and skills. Our strategy suggests that patients requesting advice on the use and integration of CAM modalities as part of their health care should be evaluated initially by their primary care physician. The physician's responsibilities are to evaluate the appropriateness of that use, and to maintain contact, monitoring outcomes. Advice on referrals should be based on the safety of the method in question, current knowledge on indications and contraindications of that modality, and familiarity and an open dialogue with the specific therapist.

Conclusions. Given patients' demands and utilization of CAM therapies, despite the lack of evidence, there is an increasing need to address how CAM therapies can be integrated into conventional medical systems. These suggestions should respond to patient's expectations and needs, but at the same time maintain accepted standards of medical and scientific principles of practice.

Keywords. Alternative medicine, clinical guidelines, complementary medicine, family practice, integrative medicine.

Introduction

Complementary–alternative medicine (CAM) is becoming increasingly popular worldwide. In Western Europe and Australia, 20–70% of the population regularly use complementary and alternative medicine.[1,2] In the USA, it was estimated in 1992 that at least one in three Americans utilized one of those methods, and the number of annual visits to providers of alternative medicine exceeds the number of visits to all primary care physicians.[3] These therapies include acupuncture, chiropractic, herbal medicine and dietary supplements, nutriceuticals, homeopathy, mind–body techniques, spirituality and faith healing, massage, therapeutic touch and a number of others. In a 1998 follow-up study, the percentage of CAM patients had increased to 42% of the US population.[4] Subsequent analyses showed that 67.6% of respondents had used at least one CAM therapy in their lifetime. This trend suggests a continuing demand for CAM therapies that will affect health care delivery for the foreseeable future.[5]

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Paralleling and even exceeding the growth in utilization of CAM is the surge in information available to the public in the media, health food stores and the Internet. Faced with this cacophony, patients are often left with a desire for guidance and direction. Family physicians may be a source of such knowledge and are turned to frequently by some of their patients seeking advice. Others are more wary of reactions by their physicians and may avoid disclosure of the CAM methods that they incorporate into their health care.[4,6–8] In a study of patients with recently diagnosed breast cancer who had combined CAM in their health care, subjects tended to anticipate negative responses from the physician or detected an impression of disinterest.[6] The patients in this study made it clear, however, that they value their physician's understanding regarding treatment choices even in the absence of agreement. They appreciate physicians who were respectful, willing to listen and open minded. Medical educators also increasingly realize that there is a need to respond to this challenge.[9–14] Medical schools as well as family practice residency programmes have started to add courses involving complementary and alternative medicine.[15–17] A survey among US medical schools found that 64% of the schools offered at least an elective course in CAM or included these topics in required courses.[15] About one-third of these courses were offered by departments of family practice.[17]

Despite all the demand and interest in CAM, there remains a distinct lack of evidence regarding efficacy. Even though there exists more CAM research than is commonly recognized, until recently, most of the research has been of poor quality, and the majority was conducted in Europe and published in non-English language journals. Nonetheless, in the past few years, there has been an increase in quality and quantity of research in this area. The Cochrane Library lists >5300 reports of randomized trials and >60 systematic reviews on CAM. A Medline search using the terms 'alternative medicine' or 'complementary medicine' reveals >80 000 citations. The NIH Center of Complementary and Alternative Medicine has collected a database of nearly 100 000 citations from conventional databases. Although much of the research has failed to show effects, there are an increasing number of studies that support the use of some CAM modalities for particular indications. Examples include the use of acupuncture for primary dysmenorrhea[18] or homeopathic treatment for chemotherapy-induced stomatitis,[19] allergies[20] or migraine headaches,[21,22] and other studies that highlight the potential dangers in utilizing certain CAM treatments.[23–27]

Developing a proper dialogue between the CAM practitioner and the physician is a neglected topic in the medical literature, even though it is essential to the process of integration. Communication between the CAM practitioner and the physician requires a combined effort on the part of both parties to develop a common language.[28,29] A report of a successful model of complementary practitioners as part of the primary health care team was published recently.[30,31] This model encourages communication and collaboration between team members, conventional and complementary practitioners, and was successful in preventing conflict over main issues of power, control and decision making.

Despite a few attempts, it has yet to be established how to integrate CAM therapies into the conventional medical system in a systematic way. A logical first step in this direction of integration is to establish guidelines for the proper integration of CAM into primary care, supported by appropriate research and clinical experience. Unfortunately, the research data on this issue are quite limited. Recently, in the USA, the Federation of State Medical Boards developed and adopted new model guidelines for the use of complementary and alternative therapies in medical practice.[32] This document provides recommended guidelines for State Medical Boards to use in educating and regulating physicians who use CAM in their practices or co-manage patients with State-regulated CAM providers. These guidelines also suggest an organizational structure for the integration of accepted standards of care with legitimate medical uses of CAM. In Great Britain, trials of integration of CAM were mentioned in BMA guidance for GPs on referrals to CAM practitioners, which provide an important source of reference relating to referral patterns.[33] However, this document relates primarily to the British system of health care and is narrow in scope. It does not touch important issues related to the integration of the proper evidence on CAM efficacy and safety, appropriate patient triage, selection of CAM providers, communication issues with patients and CAM providers, and other issues involved in the integration process.

Methods

The suggested strategy for integrating CAM into clinical practice (see below) was developed by a combination of literature reviews, key informant interviews, focus groups, educational presentations for family practice residents and practitioners, and field testing. Except for some of the educational presentations, all work was conducted in Israel.

The initial draft of suggested strategy was developed in the authors' clinical practices and arose out of the necessity to provide rational guidance to patients on referral and utilization of CAM services. The clinical settings included two types of clinical practices. The first was a practice composed of 10 small rural family practice clinics where the authors (JB and MF) were the sole family practitioners. Patients in these practices frequently utilized CAM therapies in addition to their conventional treatments, and many patients felt sufficiently comfortable both to discuss their use and to request non-judgemental advice. The second clinical setting was an

urban multispecialty CAM clinic in which one of the authors (MF) served both as a triage physician and as a director. In these capacities, he had two major tasks:

(i) To verify that there was no contraindications to the use of CAM therapies, or need for further evaluation or treatment by conventional methods.
(ii) To help patients choose the treatment modality that best suits their condition, and to provide follow-up to monitor both treatment side effects and outcomes.

The development process started with a review of both the conventional and CAM literature[34–41] followed by discussions with 'key informants' and clinical observations. Input came from staff meetings in the CAM clinic (staff of 18 providers), observations of experiences and outcomes among CAM users, and discussions with other physicians and CAM providers on their experience with CAM use among their patients. An interactive, iterative feedback and development loop was established whereby drafts of the suggestions were implemented and continually tested in the authors' practices—both in family practice settings and in a referral CAM clinic—as well as presented and discussed with individuals and groups. Eight educational forum focus groups were conducted among family practice trainees and specialists in Israel (six groups) and the USA (two groups) After presentation of the background on CAM, the suggestions and clinical examples, the participants were asked for oral and/or written comments about the suggestions. Sessions lasted between 1 and 2 h, and nearly 90 specialists and trainees took part in these activities. Field notes of the groups' comments were kept for analysis. Additional key informants, authorities in either CAM or primary care, were also interviewed at length in order to increase the accuracy, usefulness and content validity of this approach. Their comments were incorporated into later versions of the suggestions.

Clinical field testing occurred throughout the course of suggestions development. This testing involved patients both in primary care at sites in northern and southern Israel, and at a CAM clinic. Given the range of medical problems and the continued process of changes, no outcome data were collected. In this case, the template was the draft of the suggestions as they stood at the time. Thus, each group worked later and more refined iteration.

Data analysis

The analytic core of this study is a qualitative iterative cycle of data collection, analysis, refinement of the research questions and clinical strategy, leading to further data collection. This cycle was repeated by the authors until interpretations were formulated and verified. 'Immersion/crystallization' was the major data analysis method. This involves, "the analyst's prolonged immersion into and experience of the text and then emerging, after concerned reflection, with an intuitive crystallization of the text".[42] Over the 5 years of development, the approach strategy was utilized as the central working document. Searches for alternative interpretations and negative cases were also stressed as part of the analytic process.

Findings

A full presentation of the findings from the range of literature reviews, key informant interviews, focus groups, educational presentations and field testing is beyond the scope of this article. Table 1 provides a snapshot of types of information and reactions received from both family physicians and CAM providers, categorized by its relationship to 'knowledge, attitudes and skills'. The chief product of the research effort and the central working document, the suggested approach for integrating CAM into primary care, is presented below. These suggestions are only an initial step in approaching this issue in a balanced, logical and educated approach. The approach relates to the three parts of this new therapeutic triangle:

(i) The patient
(ii) The CAM provider
(iii) The physician.

Suggested strategy for integrating CAM into primary care

The patient

Patients tend to avoid disclosing CAM use in the medical encounter. They tend to anticipate a negative response from the physician or give an impression of disinterest that is being reflected from the physician. Others believe that physicians are unable or unwilling to contribute useful information or have a perception that disclosure of CAM use is not relevant to the conventional treatment that they receive at the same time. On the other hand, patients value their physician's respect and understanding regarding treatment choices even, at times, in the absence of agreement. They appreciate physicians who are respectful, willing to listen and open minded.[6,8]

One can conclude that the first step in considering integration between CAM and conventional medicine is fostering open communication and creating a non-threatening environment in which patients can feel comfortable about disclosing CAM use and seeing the physician as an ally in their treatment choice. Such an approach may avoid the reticence patients often have in disclosing CAM use to their physicians during medical encounters.[4,6–8] Discussing patients' preferences and expectations will clarify the reasons patients seek CAM, and provide clues for improving the integration of CAM into their conventional health care. Just asking about CAM has been shown to be instrumental in discussing such issues.[43,44]

Helping patients select a CAM modality requires a subtle balance between patient preferences, characteristics

Table 1 *Example of responses to the integration of CAM into primary care*

Family physicians
1. Knowledge
   a. Need to have more information on indications and contraindications of each CAM therapy
   b. There is a need for clear referral guides
   c. There is a need for reliable CAM information sources
   d. Physicians should be aware of the local CAM services available in their locality and develop familiarity with the quality of the local CAM providers
2. Attitudes
   a. In order to have a proper integration, physicians need the experiential exposure to CAM
   b. Concern about lack of evidence that supports the use of CAM
   c. Combined interest groups of CAM practitioners and physicians could improve guideline application
   d. In the process of integrating CAM, safety and efficacy are the main issues to be addressed
3. Skills
   a. Would like to have practical 'hands on' CAM instruction, so can use it as another tool in providing health care
   b. There is a need for physician instruction on proper EBM information retrieval related to CAM

CAM providers
1. Knowledge
   a. Physicians need to have courses in CAM prior to proper integration
   b. CAM practitioners need to continue to expand their knowledge in conventional care
2. Attitudes
   a. Fear of physician response prevents CAM therapist from proper integration
   b. Lack of communication between physician and CAM therapist is an obstacle for proper CAM integration
   c. CAM therapists need to be more exposed to conventional physicians' practices
   d. Physicians need to be open to different types of CAM treatment modalities
   e. CAM providers at times should be independent and at times need the advice of the physician
   f. There is a need for combined workshops and conferences that will address the issue of integrating CAM into conventional care
   g. CAM should complement conventional care, and at times conventional care can support CAM by adding conventional tests
   h. CAM providers need to be high quality practitioners prior to the integration in the conventional system
3. Skills
   a. Conventional diagnosis is usually the first step prior to the integration

of the disease or entity to be treated, and the available evidence about the efficacy and safety of the CAM modality. Patients who feel comfortable discussing CAM use with their physicians tend to bring the physician multiple information sources. These may include something they read in the newspaper, heard from a friend, relative or from the local health food store, searched on the Internet or explored through other means. Others come to the physician with the expectation of receiving general advice about CAM use for their specific condition, without any knowledge about a specific CAM modality. The majority of those who use CAM do so because they find these health care alternatives to be more congruent with their own values, beliefs and philosophical orientations toward health and life.[45] They may expect their family physician to be their informed consultant who can provide them with a balanced approach: an approach that utilizes knowledge of a safe and effective treatment that relates to their medical history, medical condition and the medications that they use, but at the same time sensitive to their values and beliefs. To come to a successful integration of CAM, there is a need to empower the patient and involve him or her in the decision process. The patient expects the physician to share his findings with him, discuss the advantages and disadvantages of using the specific CAM modality in question, and come to a mutual decision about the safe integration of CAM in his health care.

The CAM provider

Once a treatment modality has been chosen by the patient and his or her physician, the next step is finding the right provider. Patients need to consider accessibility, length of an average treatment session, cost and the expected number of treatment sessions. However, an important part of this selection process is the verification of the professional background of the CAM provider. In the USA, increasing numbers of states are beginning licensure for CAM providers. In the recent guidelines released by the Federation of State Medical Boards of the USA, the suggestions are that referral should be made to a licensed or otherwise state-regulated health care practitioner with the requisite training and skills to utilize the CAM therapy being recommended.[32] In those regions where licensure is not required, one can consider school attended, duration of study, certification and membership of a professional society. Recommendations from patients and professional colleagues are time honoured if imperfect.

For the physician, it is essential to work with providers who are amenable to open communication and perhaps even consider co-operative care of patients. Qualified therapists should be able to identify the conditions they feel that would respond well to their treatment modality, as well as those that will not. At the same time, they should be able to discuss their limitations with the patients' medical problems and situations they would feel

uncomfortable treating or would refuse to treat. It seems important that each physician should develop his own list of trusted CAM providers in his community. This list should include providers that the physician feels comfortable co-operating with, and this usually can be accomplished after meeting and screening these therapists in their office. Communicating and collaborating with complementary practitioners is an essential part of the process of integration of CAM into the primary care setting. Working as a team in which both primary care practitioner and CAM practitioner work together, consulting with each other openly, and maintaining a high degree of professionalism, will be in the patient's best interests. By putting some effort into improved dialogue and communication, one can overcome the Tower of Babel effect,[29] a common situation in which the two schools of thought, conventional medicine and CAM, are talking two separate languages, and one cannot understand the other. Overcoming this communication gap can lead to learning a common language that can produce a true collaboration.

The physician

Patients requesting advice on the use and integration of CAM modalities as part of their health care should be evaluated initially by their family physician. This initial evaluation should clarify that the patient does not fall into any of the following three categories:

(i) the patient is facing a life-threatening illness (e.g. meningitis, pneumonia, appendicitis, trauma, fractures, etc.);
(ii) a situation that requires further evaluation that has the potential to uncover diagnosis of a life-threatening illness (e.g. bloody stools, haemoptysis, weight loss, etc.); or
(iii) an illness for which conventional medicine has a clear and effective therapy (e.g. treatment of certain cardiac conditions, hypothyroidism, diabetes, parasitic infections, iron deficiency, anaemia, etc.).

Such monitoring requires a detailed history, physical exam and appropriate lab work if needed. After this initial and crucial task, the physician's responsibility is to evaluate the appropriateness of CAM use. Advice on referrals should be based on the safety of the method in question, current knowledge on indications and contraindications of that modality, and familiarity with the specific therapist.

The first principle, as in all of medicine, is *primum non nocere*—first do no harm, and applies here as in any other field of medicine. Any treatment modalities should be, first of all, safe to use and carry minimal risk for adverse effects. Some therapies, such as certain herbs, can be potentially dangerous,[23,24] or might be dangerous when combined with the conventional treatment that the patient is already using.[25,26] One has to be aware that adding another therapeutic element requires us to have knowledge of possible interactions between conventional drugs that the patient is already taking and the CAM treatment.[46] A common example is the use of the herb Ginkgo Biloba, commonly used for dementia. This herb can interact with warfarin. This combination can increase bleeding tendency, and requires extreme caution.[26]

As with any field in medicine, physicians have to educate themselves regarding the new treatment modality prior to utilizing it. CAM therapies are no exception. The consultation process is quite complex. Physicians need to consider their patient's medical condition and history, the medications that they use and any sensitivities in this selection process. The estimated number of CAM modalities exceeds 100, as well as thousands of nutritional supplements and herbs available in natural pharmacies and health food stores. One has the task of sorting out the safe and effective therapies from the myriad of those available. This process makes both the patient and the physician confused as to which treatment to choose. In addition, there is the need to base the recommendation on evidence from the medical literature, applying the same principles of evaluation of any therapy that one may want to incorporate into their practice. Unfortunately, few CAM modalities have the level of evidence that would be required routinely for many conventional treatments.

Nonetheless, more and more literature of sufficient quality is appearing weekly. Searching Medline is the first source for obtaining clues on the specific modality, herb or supplement in relation to the condition needed to be treated. Secondary sites that contain meta-analyses can be found at the Cochrane Collaboration and other sites[47] (Table 2). When these are not present or are insufficient, one can go on to cross-referencing, utilizing some of the references mentioned in the bibliography,[46–59] as well as other on-line sources (Table 2).

With this information in hand, the physician can suggest a CAM method that is safe and has the best chance, according to the literature, of improving the health of the patient. However, if the CAM therapy carries risk or possible adverse interactions, the physician has the responsibility to persuade the patient that this specific CAM method should not be used in the specific situation due to known side effects, drug interactions or other causes.[9] Similarly, if the modality has been clearly shown to be ineffective, the physician may be compelled to caution the patient.

Having the proper information is only part of the process. To achieve a successful integration of CAM, there is a need to empower the patient and involve him or her in the decision process. The physician should share his findings with the patient, discuss the advantages and disadvantages of using the specific CAM modality in question, and come to a mutual decision about the safe integration of CAM in the patient's health care.

It is also important to verify patients' expectations from the therapy. Some expect miracles in one visit, which rarely

TABLE 2 *Reliable on-line sources for CAM*

National Institute of Health/National Center for Complementary and Alternative Medicine (NCCAM)

http://nccam.nih.gov/

US government site that provides thorough descriptions of complementary and alternative therapies and description of the research sites on CAM that it sponsors.

A good first place to start !!!

National Institutes of Health/Office of Dietary Supplements/IBIDS

http://dietary-supplements.info.nih.gov/databases/ibids.html

The International Bibliographic Information on Dietary Supplements (IBIDS) is a database of published, international, scientific literature on dietary supplements, including vitamins, minerals and botanicals. IBIDS is produced by the Office of Dietary Supplements (ODS) at the National Institutes of Health to assist the public, health care providers, educators and researchers in locating credible, scientific information on dietary supplements. It contains >419 000 scientific citations and abstracts.

Cochrane Library

<http://www.cochranelibrary.com/clibhome/clib.htm>

Published quarterly on CD-ROM and the Internet. There is fee for access, but some abstracts are available without the access fee. Contains >5000 reports of randomized controlled trials, and >60 systematic reviews in CAM.

Bandolier

http://www.jr2.ox.ac.uk/bandolier/booth/booths/altmed.html

Bandolier is a print and Internet journal about health care, using evidence-based medicine techniques to provide advice about particular treatments or diseases for health care professionals and consumers. Contains >75 summaries on the effectiveness of complementary therapies.

The Natural Pharmacist

http://www.tnp.com

A site that carries scientific information on herbs and nutritional supplements. It also has information that can be researched on drug–herb–supplement interactions.

University of Texas Medical Branch—Alternative and Integrative Health Care Program

http://atc.utmb.edu/altmed/

The goal of this site is to provide health care professionals, students and the public with reliable and authoritative information on a wide variety of alternative therapy topics, in a user-friendly Internet format. It has extensive on-line links to multiple reliable sites related to CAM.

Rosenthal Center for CAM—Columbia University

http://c.p.m.cnet.columbia.edu/dept/rosenthal

This site includes information regarding research and practice of complementary and alternative medicine in women's health and geriatrics. Focuses on the development and support of research and training sites. Well designed site. Easy to navigate. Provides links to organizations. Identifies training programmes. Includes clinical studies, prospective outcome research and field investigations. Few reports on research outcomes at this time.

M.D. Anderson Cancer Center's Complementary/Integrative Medicine Education Resources (CIMER) website

http://www.mdanderson.org/departments/cimer/

This is a revised and updated site that contains evidence-based reviews of complementary or alternative cancer therapies as well as links to other authoritative resources. Detailed scientific reviews are provided to assist health care professionals in guiding patients who would like to integrate these therapies with conventional treatments.

happens. Most of these treatment modalities require 6–12 visits, or 2–3 months of treatment; it could be shorter or longer depending on the severity and the duration of the discomfort. None of the CAM therapies is a perfect system; every method has its advantages and disadvantages. In the treatment plan, the physician should continue to play an active role and be in direct communication with the CAM provider. Also, as mentioned in the previous section, communicating and collaborating with complementary practitioners is an essential part of

TABLE 3 *Points in selecting CAM method*

1. Safety—a method that carries minimal risk for adverse effects
2. Effectiveness—some body of research available to support the use of that method
3. Patient acceptance—willingness of the patient to use the method in question
4. Availability—the method is easily accessible to the patient
5. Cost

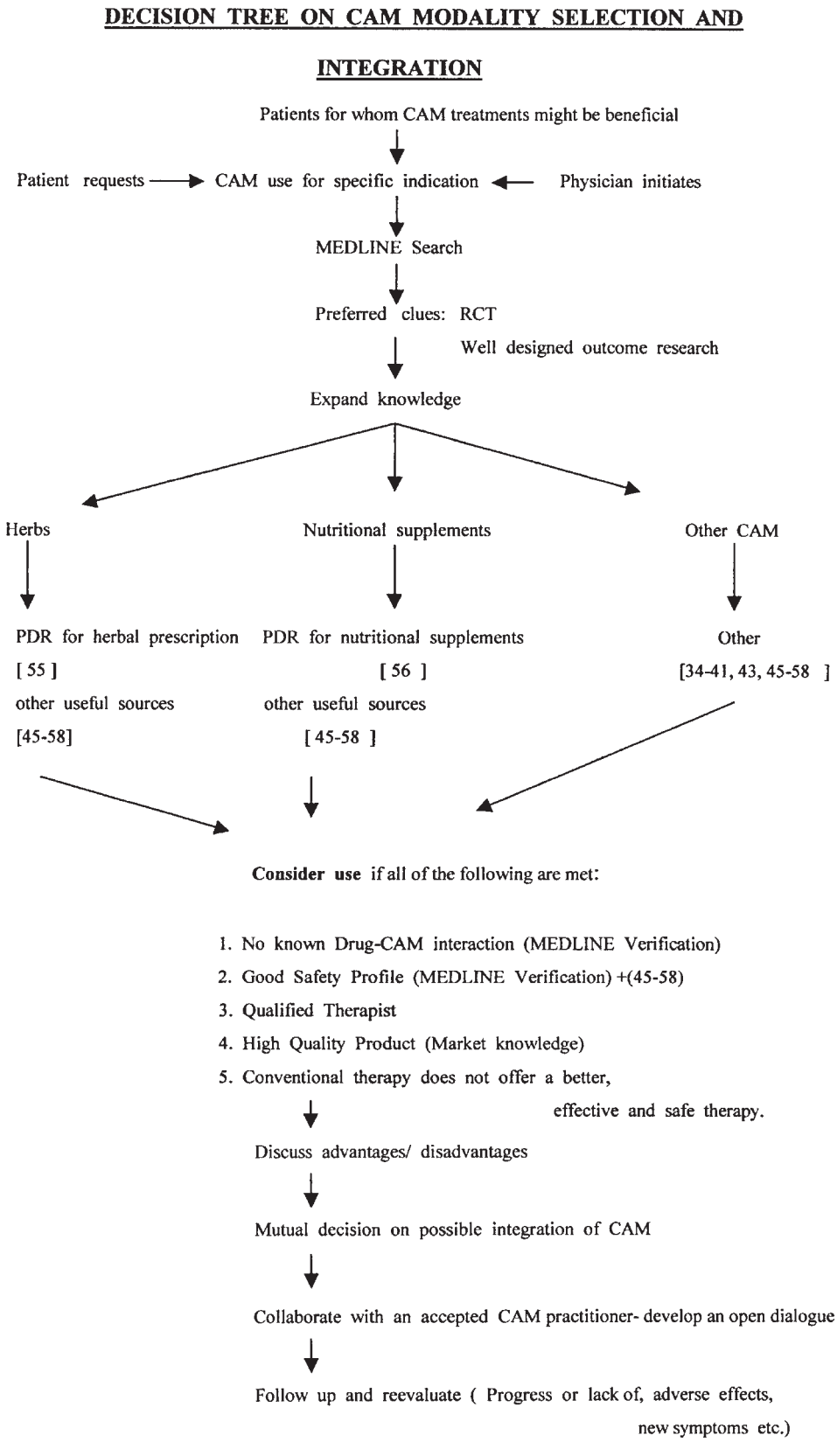

FIGURE 1 *Decision tree on CAM modality selection and integration*

the process of integration of CAM into the primary care setting. The physician has the responsibility of the continual follow-up and assessment of progress at regular intervals.

In the case of undesired side effects, appearance of new symptoms and lack of progress or improvement, the physician has the responsibility to re-evaluate the patient and make a decision about the need to perform additional work-up, or to change the treatment modality. The process of integration is summarized in Figure 1.

Conclusion

With the increased popularity of CAM, family physicians are faced with demands and questions related to the integration of CAM in their patient management. This article has attempted to take an initial step—providing a logical and comprehensive approach for the integration of conventional and CAM therapies in the primary care setting. This approach is patient centred, responding to patient's expectations and needs, but at the same time designed to maintain accepted standards of medical and scientific principles of practice.

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