

Developing Curricula on Complementary Practices and Products for Integration into Canadian Undergraduate Medical Education:

*Report of the Second National Invitational Workshop held
March 11-12, 2005 in Toronto, Ontario, Canada*



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EXECUTIVE SUMMARY

The Canadian Complementary and Alternative Medicine in Undergraduate Medical Education project (CAM in UME project) is a nationally based initiative to develop a curriculum addressing CAM and Natural Health Products (NHPs), for introduction into Canadian undergraduate medical education programs. The goal of the project is to assist curriculum developers at Canadian medical schools with the task of providing medical students with the attitudes, knowledge, and skills necessary to discuss CAM/NHPs with patients in an informed and non-judgmental manner. The project is directed by a National Working Group and a National Advisory Group. The National Working Group is Chaired by Dr. Marja Verhoef, Professor of Community Health Sciences, University of Calgary, and Canada Research Chair in Complementary Medicine. The project is currently organized into curriculum development working groups, which have been established in four areas: (1) Foundations for CAM, (2) CAM Basics, (3) Natural Health Products, and (4) CAM in Clinical Practice.

Following the first Invitational Workshop in September 2003, the National Working Group and the curriculum development working groups developed a framework for the proposed CAM/NHP curriculum. The framework is intended to help balance the need for a nationally defined CAM/NHP curriculum on the one hand, with site-specific curricula requirements within individual medical schools on the other. The framework involves two major components: (1) a series of consensus-based CAM/NHP topic outlines (ROSTRs) that define key points from which instructors can adapt their own teaching materials; (2) a repository of diverse teaching and learning resources (TLRs) developed at Canadian medical schools and elsewhere. The consensus-based topic outlines are organized into the following major sections: (1) Foundations for CAM; (2) CAM Basics, comprising two sections: CAM in General, and CAM Products and Practices (of which Natural Health Products constitutes a major sub-group); and (3) CAM in Clinical Practice.

The objectives of the second national invitational workshop on the CAM in UME project were:

1. To solicit feed-back from delegates on the utility of the CAM/NHP curriculum as it currently stands.
2. To identify and develop ways that members of the National Working Group and Advisory Group can continue to develop the National CAM/NHP curriculum and to integrate specific CAM/NHP-related curriculum content into the individual medical schools.

Objective 1: Feedback regarding utility.

With regards to this first objective, the principal advice of participants regarding the continued development of the project was:

1. To develop terminal objectives and enabling objectives for the consensus-based topic outlines (ROSTRs), based on the CanMEDS competencies initially developed by the Royal College of Physicians and Surgeons and now increasingly utilized in UME.
2. To develop an evaluation component for the curriculum, including materials that could be used to evaluate the competencies of students in relation to the curriculum.
3. To develop a template for the consensus-based topic outlines (ROSTRs) that will assist developers in writing these outlines.
4. To develop a guide for curriculum developers to use when incorporating components of the national CAM/NHP curriculum into UME programs at Canadian medical schools.
5. To identify and utilize existing materials, including systematic reviews, textbooks, and refereed publications, on CAM/NHPs when developing consensus-based topic outlines. To this end, the project will develop a process for identifying and validating existing sources of information. An outline for such a process was developed during the workshop.
6. To expand the list of topics in the section addressing CAM in Clinical Practice. Priority will be given to medical conditions, symptom-patterns, and/or populations that are characterized by:
 - prevalence within Canada;
 - frequent use of CAM and/or NHPs;
 - significant limitations of conventional treatment options;
 - significant human and/or economic burden;
 - potential for significant health and/or economic benefits through use of CAM/NHPs.

A preliminary list of topics was developed during the workshop.

7. To develop a position paper that clarifies the role of “bridging topics” within UME curricula. (These are topics that are highly relevant to both conventional and complementary medicine. Examples include: nutrition, spirituality, Aboriginal healing, disease prevention, health promotion, and behavioural medicine.)
8. To continue development of the web-based platform for the project, with a view to providing web-based access to curriculum materials in both official languages.

Objective 2: Continued development and implementation.

With regard to this second objective, participants generated a list of suggestions to help encourage and facilitate the implementation of CAM/NHP curriculum content into UME programs. These suggestions were organized under the following headings: credibility, relevance, modeling, presentation, flexibility, curricular structures, and examinations. Participants also identified next steps in the development of the CAM in UME project, and volunteered to undertake specific activities. These included the following:

1. Finalize the Concept Map for CAM in Clinical Practice.
2. Develop and refine a template for consensus-based topic outlines (ROSTRs).
3. Develop individual ROSTRs for topics specifically identified as high priority.
4. Submit or review teaching or learning materials (TLRs) for inclusion in the project website.
5. Develop competencies for the project (enabling objectives and terminal objectives).
6. Develop a guide for curriculum developers to assist faculty within individual Canadian medical schools.
7. Write formal copyright and disclaimer statements for materials posted on the project website.
8. Participate in a working group to develop a process to identify sources of accessible and reliable information pertaining to selected CAM/NHP-related topics. (Information Sources Advisory Group)
9. Participate in a working group on the development of the project website. (Website Development Advisory Group)
10. Assist in raising funds for the project.

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BACKGROUND

The Canadian Complementary and Alternative Medicine in Undergraduate Medical Education project, otherwise known as the CAM in UME project, is a nationally based project to develop a CAM and Natural Health Product (NHP) curriculum for introduction into Canadian undergraduate medical education programs. The goal of the project is to assist curriculum developers at Canadian medical schools with the task of providing medical students with the attitudes, knowledge, and skills necessary to discuss CAM/NHPs with patients in an informed and non-judgmental manner.

The CAM in UME project has been funded primarily by Health Canada (Health Human Resources Strategies Division and National Health Products Directorate), with additional support from the Sociobehavioural Cancer Research Network.¹ The development process, which began in 2001, has included several components, and has involved input and feedback from many stakeholder groups. The first invitational workshop, held in Saskatoon in September 2003, was an important turning point in making the CAM in UME project a national collaborative effort.

The project structure includes a National Working Group and an Advisory Group. Working groups have been established in four areas: (1) Foundations for CAM, (2) CAM Basics, (3) Natural Health Products (NHPs), and (4) CAM in Clinical Practice. The National Working Group, consisting of a three person steering committee² and selected individuals from each of the curriculum working groups, oversees the development of the project, including priorities, planning, communication, funding, and publications. The Advisory Group includes representation from the sixteen Canadian medical schools, the Association of Faculties of Medicine of Canada (AFMC), the Canadian Federation of Medical Students (CFMS), la Fédération médicale étudiante du Québec (FMEQ), Health Canada, and CAM practitioners. All members of the Advisory Group have thus far participated in at least one phase of the project and will be called upon in the future to provide feedback and specific expertise as needed.

Following the first invitational workshop, the National Working Group and the curriculum working groups developed a framework for the proposed national CAM/NHP curriculum. The CAM in UME project is unique by comparison to other large-scale efforts to develop CAM/NHP curriculum, because it aims to balance a nationally defined CAM/NHP curriculum with site-

¹ The Sociobehavioural Cancer Research Network is part of Centre for Behavioural Research and Program Evaluation which is supported by funds from the National Cancer Institute of Canada with funds from the Canadian Cancer Society.

² The steering committee consists of Dr. Marja Verhoef (Chair), Rebecca Brundin-Mather (Project Manager), and Dr. Michael Epstein (Curriculum Consultant)

specific curricula within individual medical schools. To this end, the curriculum has a two-part structure: (1) a series of consensus-based CAM/NHP topic outlines that define key points from which instructors can adapt their own teaching materials; (2) a repository of diverse teaching and learning resources developed at Canadian institutions and elsewhere. The two parts of the curriculum will be linked to a web-based catalogue that will be accessible to instructors and curriculum developers within Canadian medical schools.

WORKSHOP OBJECTIVES

The objectives of the second national invitational workshop on the CAM in UME project were:

1. To solicit feed-back from delegates on the utility of the CAM/NHP curriculum as it currently stands.
2. To identify and develop ways that members of the National Working Group and Advisory Group can continue to develop the CAM/NHP curriculum and to implement CAM/NHP-related curriculum content at the individual medical schools.

For the agenda of the workshop, see Appendix A. For a list of participants in the workshop, see Appendix B.

OVERVIEW OF THE CAM IN UME PROJECT

An overview of the CAM in UME project was provided in the first session of the workshop. The purpose of the overview was to familiarize participants with the current state of development of the curriculum and to solicit comments from participants regarding the utility of the curriculum and the needs that remain to be addressed by the curriculum.

Introduction to the Curriculum Framework

The objectives of the Curriculum Framework are:

- to provide legitimacy and credibility to the subject of CAM/NHPs within UME programs in Canadian medical schools;
- to provide a “starter set” of topics and their associated outlines (called ROSTRs; see below) to enable curriculum developers to “quick start” the process of curriculum development;
- to function as a platform for innovation by providing shared terminology and standards for curriculum development on CAM/NHPs;
- to provide an impartial review of the current state of evidence for selected CAM/NHP therapies.

The Curriculum framework is specifically NOT intended:

- to be imposed or mandated upon any Canadian medical schools; or
- to teach medical students how to practice any specific CAM/NHP therapies; or

- to be a wholesale endorsement of CAM/NHPs in general or of any specific products or practices;

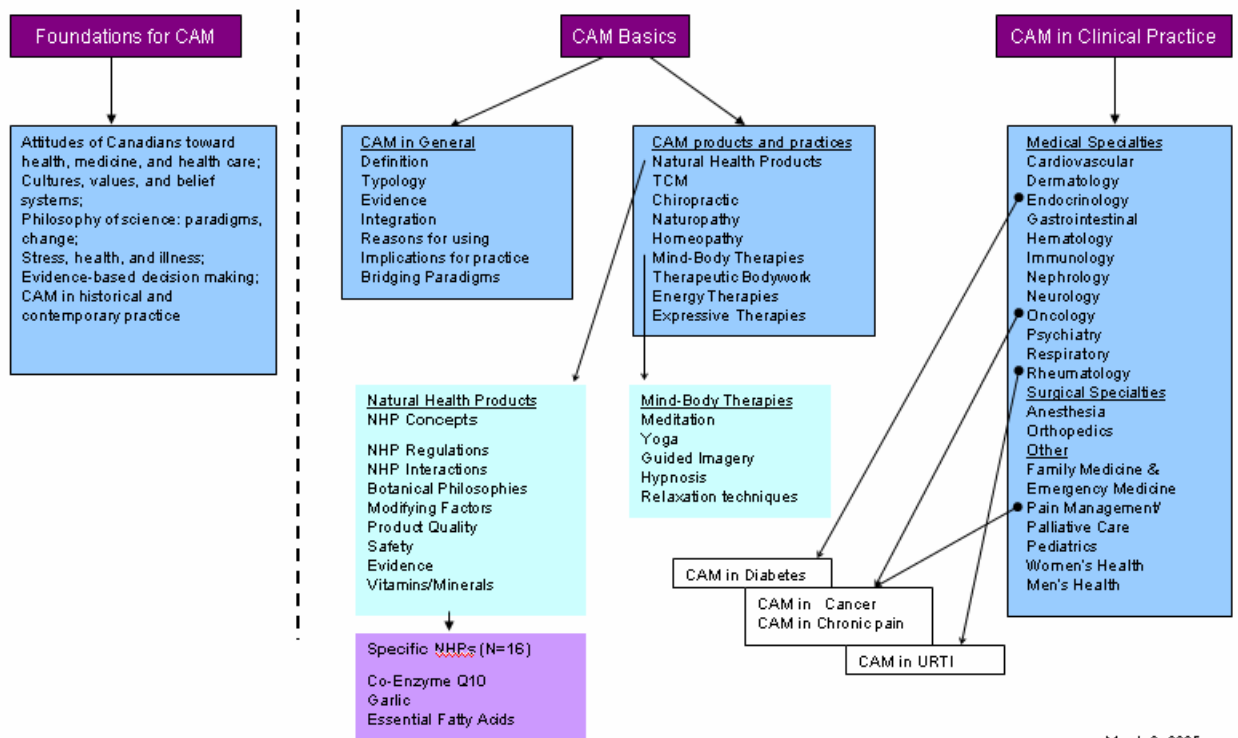
The Curriculum Framework has four components:

1. Learning Objectives

Competency-based student learning objectives provide a clear and succinct statement of the desired outcomes of the CAM curriculum. Objectives fall into one of three categories; those relating to knowledge, those relating to skills, and those relating to attitude.

2. Concept map: a consensus-based structure for the curriculum

The concept map consists of headings and sub-headings for the subjects included in the Curriculum Framework. It is organized into four major sections: Foundations for CAM; CAM Basics, comprising two sections: CAM in General, and CAM Products and Practices (of which Natural Health Products constitutes a major sub-group); and CAM in Clinical Practice.



March 8, 2005

3. Consensus-based materials (ROSTRs):

Consensus-based content will be provided for each subject included in the Concept Map. This content, referred to as a ROSTR for the subject, comprises a Rationale, a list of

competency-based learning Objectives, a list of Sub-Topics, and a list of annotated Readings.

4. Teaching/Learning Resources (TLRs): individualized, site-specific teaching and learning resources

The TLRs will consist of sharable resources that are specific to individual medical schools and their curricula. TLRs could include lecture notes, annotated readings, exam questions, instructor notes, powerpoint documents, case presentations, web sites, etc. The website will include (1) resources already existing in Canadian medical schools that developers are willing and able to share, and (2) resources developed by project members.

Discussion:

The primary audience for the national CAM curriculum and teaching materials consists of instructors and curriculum developers within Canadian medical schools, although students also may have access to some of the materials. The Curriculum Framework may thus include information and materials above and beyond that which are required by the students.

The Curriculum Framework will include an evaluation component: materials to be used by instructors in evaluating students, such as Objective Structured Clinical Examinations (OSCEs). Access to evaluation materials will normally be limited to instructors and curriculum developers.

The Curriculum Framework will need to be updated regularly. The project will be responsible primarily for ensuring that the consensus-based materials (Concept Map, ROSTRs) are up to date. Because these materials have gone through a peer-review system to establish consensus on the content, they will presumably not need to be updated as frequently as materials for which no consensus exists. ROSTRs currently indicate the date of creation and the dates of subsequent revisions. While the authors of TLRs will be responsible for updating their own individual materials, the project will be responsible for the process of including such materials in the project's database.

The Curriculum Framework will be available in both official languages. The question was raised as to whether TLRs, as well as consensus-based materials (e.g. ROSTRs) would be translated. Given limitations on resources available for translation, it is likely that most of the TLRs will not be made available in both languages. It is expected, however, that the ROSTRs will be available in French and English.

Foundations for CAM

The purpose of this section of the curriculum is to provide students with a basis for understanding and assimilating CAM/NHP-related knowledge, for acquiring and developing CAM/NHP-related skills, and for shaping CAM/NHP-related attitudes. The section will provide the foundational content for subsequent CAM/NHP-specific material. For example, foundational knowledge regarding stress, somatization, and psychoneuroimmunology will help prepare

students for learning about mind-body practices, such as meditation, visualization, and relaxation techniques. Foundational material may be taught in parts of UME curricula that are not explicitly designated as CAM/NHP.

The working group on Foundations for CAM has prepared an outline of topics to be included in this section and intend to draft ROSTRs for some of these topics. The group has discussed a possible organizing theme that would link the topics in this section. The theme of validation – public acceptance of practices and products not necessarily accepted by the medical profession – has been proposed.

The group also emphasized the importance of demonstrating the clinical relevance of these foundational topics, noting that this will be central to maintaining the interest of both students and curriculum developers. It was suggested that teaching materials for these foundational topics provide sufficient detail to make students aware of the clinical relevance of these topics, and of the significance for CAM and NHPs.

Discussion:

This section is perhaps the most difficult to develop, but will also have great value in preparing students for other CAM/NHP topics in the UME curriculum. Although this section is not intended to be specific to CAM/NHPs, the relevance to CAM and NHPs must be clearly established.

One way to link the foundational topics both to medical practice in general, and to CAM/NHPs in particular, would be to focus on core competencies such as patient-centre care, informed choice, and communication with patients. Another way to highlight the relevance of this section is to relate the topics to the practice of medicine in a Canadian context, particularly the competencies that physicians require to practice in a multicultural population.

When high-quality, accessible resources for a given topic have already been developed elsewhere (e.g. in medical textbooks), it may be sufficient for the purposes of the CAM in UME project to simply provide annotated bibliographies for these materials, as part of the ROSTRs. Topics that have not been effectively developed elsewhere, however, will likely require more attention from the CAM in UME project.

CAM Basics

This section of the curriculum will provide a consensus-based overview of fundamental concepts and terms pertaining specifically to CAM/NHPs. It will include topics on (1) CAM in General, and (2) specific CAM practices and products. Topics relating to CAM in General include: definition, typology, utilization, reasons for using, evidence, clinical implications, and bridging paradigms. Specific CAM products or practices include: NHPs, Traditional Chinese Medicine, Chiropractic, Homeopathy, Therapeutic Bodywork, Mind-body practices, Expressive Therapies, and Energy Therapies. Sub-topic relating to specific CAM products or practices include: definitions, classification, prevalence, current research, education, policy, and professionalization.

Discussion:

There was considerable discussion as to whether or how certain “bridging” topics would be included in this section. Bridging topics may include nutrition, spirituality, Aboriginal healing, disease prevention and health promotion, and behavioural medicine. These topics can function as an important link for students, between the general practice of medicine and the topic of CAM/NHPs. These bridging topics encompass a spectrum of practices, ranging from those that are widely practiced or recognized to those that are less widely practiced or recognized.

Inclusion of these “bridging” topics in UME curricula will likely vary among medical schools. One medical school, for example, discusses the role of spirituality in health on the basis of the US National Center for Complementary and Alternative Medicine (NCCAM) definition of CAM.³ This definition was used in order to reduce the polarization around CAM and to increase the legitimacy of the CAM curriculum.

It was suggested that the project develop a position paper on these “bridging” topics. The paper could discuss what aspects of the topic could be considered under Foundations for CAM, whether the topic is best presented as a pre-requisite or a co-requisite for CAM Basics, what the minimum requirements for the topic should be in UME (regardless of where it is presented in the curriculum), how the topic might be integrated into UME curricula, and what aspects of the topic relate specifically to CAM/NHPs.

Natural Health Products

This section includes three levels of topics:

1. NHP Overview
2. NHP Concepts:
 - a. NHP Regulations
 - b. NHP Interactions
 - c. Botanical Philosophies
 - d. Modifying Factors
 - e. Product Quality
 - f. Safety
 - g. Evidence
 - h. Vitamins/Minerals
3. Specific NHPs or groups of NHPs (15 selected as priority for curriculum development)

Discussion:

There was some discussion about what would be included at level 1. Level 1 was understood to refer to the basic knowledge a student should have about NHPs.

It will be important that ROSTRs on NHPs deal with the questions that patients are likely to ask their physicians. These questions may be discussed more in ROSTRs on specific NHPs under

³ See the NCCAM website at <http://nccam.nih.gov/health/whatiscam/>.

CAM in Clinical Practice. Nevertheless, there should perhaps be some overlap between ROSTRs for NHPs and ROSTRs for CAM in Clinical Practice.

It was suggested that the term “Modifying Factors”, which refers to the use of NHPs by children, older adults, or pregnant women, might better be replaced with the term “Specific Populations”.

It was suggested that the Interactions ROSTR should include discussion of laboratory tests in relation to product interactions.

It was noted that there already exist well-developed and well-validated resources on NHPs. These resources could be used or referenced, thus lessening the need to develop new resources for this topic.

CAM in Clinical Practice

This section of the curriculum is in the early stages of development. The working group is currently developing a comprehensive list of sub-topics to be included in this section. Subtopics (i.e. diseases or conditions) will be selected on the basis of criteria such as: prevalence of disease or condition among the Canadian population; economic burden of disease or condition; prevalence of CAM/NHP use for disease or condition.

Discussion:

The challenge in this section is to determine what should be included or given priority, since there are countless applications of CAM/NHPs in clinical practice.

One medical school found that students were receptive to clinical application of CAM/NHPs in situations where conventional medicine is not effective and in situations where CAM/NHPs can potentially help in dealing with severe side effects of conventional treatments. Another approach would be to develop curriculum content addressing specific clinical settings in which CAM/NHPs might be used, such as those involving integrative health care. It is likely that medical schools will have differing approaches to curriculum content involving CAM in clinical practice.

The validity of a specific application of CAM/NHPs in clinical practice is an important consideration. Given the time and effort required to complete a comprehensive evidence-based review of specific CAM/NHP applications, it will thus be important to take advantage of those reviews that have already been conducted. Current textbooks on integrative health care may also help inform the process of curriculum development (especially development of ROSTRs) for this section.

CAM in UME Catalogue

The curriculum materials, including both the ROSTRs and the TLRs, will be made available through a web-accessible catalogue, conditional upon approval and release by authors. The steering committee has hired a librarian to develop a prototype of a catalogue in order to explore

the potential capabilities of a web-accessible database. The prototype would allow resources to be retrieved from the database either by browsing via the Concept Map or by searching using various parameters. Searches could be conducted according to the following parameters:

- query terms or query phrases (can also include wildcard characters) ;
- field qualification (e.g., Concept Map headings, unique descriptors, and MeSH fields);
- Boolean operators (AND, OR, and NOT);
- limiting options (e.g., resource type [ROSTR or TLR], resource location [catalogue or Web site], and resource language [English or French]).

Discussion:

Participants were impressed with the potential capabilities of the catalogue and made a number of suggestions regarding its development:

1. It would be helpful if authors could be permitted to update their resources (ROSTRs or TLRs) on their own (using, for example, a digital drop box) without having to work through a data administrator.
2. Consideration will have to be given to potential liability for information in the catalogue, to appropriate disclaimers, and/or to restricted access to the catalogue.
3. The project could legitimately charge users (medical schools, curriculum developers) a fee for access to the catalogue. The fee could contribute to the costs of maintaining the catalogue.
4. Regular analyses of contents of the catalogue should be undertaken to track the development of the catalogue.
5. The catalogue should include functions to enable users to provide feedback about the catalogue and about the resources they have downloaded.
6. The catalogue should track statistics on the users of the site (number of hits, pages accessed, resources downloaded, etc.)

CANMEDS FRAMEWORK: AN OVERVIEW OF ROLES AND COMPETENCIES FOR PHYSICIANS

Alan Neville, Associate Dean of Undergraduate Medical Education at McMaster University, provided an overview of the past history and current status of the CanMEDs Roles Framework in medical education. The CanMEDs Roles Framework identifies seven core areas/roles and key competencies required in a physician: medical expert, professional, communicator, collaborator, manager, health advocate, and scholar. While the competencies were developed by the Royal College of Physicians and Surgeons to evaluate residents in medical specialties, they are increasingly being used in UME as well. The CanMEDs framework may inform the curriculum development process, and may also help facilitate integration of CAM/NHP content into UME programs.

Since curriculum time in UME programs is currently at a premium, any proposal to change the curriculum must have a strong rationale. Curriculum developers must therefore explain (1) why students need to have a certain body of knowledge, and (2) what the students are going to do with this body of knowledge.

It may be useful to develop the CAM in UME curriculum in terms of roles and competencies - what competencies do curriculum developers want students to have (terminal objectives of the curriculum), and what do students need to learn in order to achieve those competencies (enabling objectives)? Although the CanMEDs framework presents all seven roles or competencies as necessary for all physicians, it is recognized that there will be variation in the degree of expertise within the competencies between specialists. It may appear that key competencies for CAM will all fall within the role of medical expert, but the CAM in UME project committees need to assess in greater detail how the other roles can be emphasized in the curriculum.

This competency-based approach to curriculum design provides a natural basis for evaluation of students, since it identifies both terminal and enabling objectives for each of the seven competencies or roles. This approach can also help to determine what competencies are absolutely necessary in UME, and what competencies can be deferred until later stages of medical education (i.e., post-graduate and continuing medical education).

ROUND 1: SMALL GROUP DELIBERATIONS ON ASPECTS OF THE PROJECT

After the overview on the CAM in UME project, four critical issues were selected for more detailed consideration in small groups:

1. CAM and integrative medicine: implications for UME curriculum.
2. Foundations for CAM: what foundational topics should be included and how should they be integrated into the Curriculum Framework?
3. CAM in Clinical Practice: what should it focus on, and how?
4. Guidelines for finding and using existing materials.

The small groups were asked to develop terms of reference for a document (e.g., guidelines, position paper, annotated bibliography, ROSTR, etc.) that would provide direction on the issues under consideration. Wherever possible, groups were asked to examine the issue with specific reference to implications for NHPs.

CAM and Integrative Medicine

The small group defined integrative medicine as follows: “Integrative Medicine is healing-oriented medicine that takes account of the whole person (mind, body, and spirit), including all aspects of lifestyle. It emphasizes the therapeutic relationship and makes use of all appropriate therapies, both conventional and complementary.”⁴ The group proposed that a ROSTR on integrative medicine include:

- different definitions of integrative medicine;
- physician self-care;

⁴ This definition is used by, among others, the University of Arizona Program in Integrative Medicine (<http://integrativemedicine.arizona.edu/about.html>), the University of New Mexico Health Sciences Center (http://hsc.unm.edu/medicine/Integrative_Med/cam_and_medical_education.shtml), and, in slightly different wording, the Consortium of Academic Health Centers for Integrative Medicine (<http://www.imconsortium.org/html/about.php>).

- the cultural and philosophical context of integrative medicine, including consideration of belief systems regarding such concepts as “vital life force” or “energy”;
- the role of spirituality, nutrition, and disease prevention and health promotion in health care;
- the role of exercise in health care, and negotiation between physician and patient on a program of exercise as part of the therapy.

Discussion:

There are different understandings of what constitutes “integrative medicine.” A consensus-based ROSTR on integrative medicine should identify these differences.

This curriculum module should help students appreciate that integrative medicine can be viewed as more than merely a combination of conventional and complementary treatment modalities. If a ROSTR is prepared on integrative medicine, it is important that the rationale is well conceived and well communicated. Concepts such as disease prevention and health promotion, with which students may already be familiar, may be more effective and palatable as “bridging” concepts than more controversial concepts such as “Qi” or “vital life force.”

Foundations for CAM

The small group noted that since ROSTRs are succinct, consensus-based and thus amenable to collective input, they would be a useful vehicle for developing the section on Foundations for CAM, and in so doing to determine the extent to which consensus can be achieved. The group agreed to develop three ROSTRs initially: Stress, health, and illness (M. Epstein); Cultural attitudes to herbs (J. Crellin); Placebo and CAM (J. Sawynok). Subjects for future ROSTRs include: Healing; Evidence; Culture. The Concept Map for the section on Foundations for CAM would provide guidance on these future subjects.

Discussion:

Some careful thought needs to be given to the role of the foundations section and how it fits into the overall UME curriculum and to the CAM/NHP curriculum in particular. Is the foundations section meant to prepare students for CAM/NHP concepts, but not to refer specifically to CAM/NHPs? Should it be taught by instructors with a particular interest in CAM/NHPs? If so, should ROSTRs in this section already make some links with ROSTRs in CAM Basics, or should ROSTRs in CAM Basics refer back to and make links to ROSTRs in this section? It will be important to resolve these questions in order to proceed with the effective development of this section.

ROSTRs in this section are likely to be broader and more detailed than conventional treatments of the same subjects in existing UME curricula. Still, it may not be appropriate to include CAM/NHP-specific concepts in the titles of the ROSTRs (e.g., “herbs” or “CAM”). The delivery of these subjects in UME will vary from school to school. Some have found it useful to have these subjects taught by faculty that are not particularly interested in CAM/NHPs. Because the students are introduced to the foundational concepts without any mention of

CAM/NHPs, this approach lends credibility to the concepts, when they are discussed in connection with CAM/NHPs at a later time.

CAM in Clinical Practice

The small group proposed that this section be organized according to conditions or symptoms, and provided a table of subjects (see below).⁵ Priority would be given to ROSTRs addressing symptoms or conditions:

- that are prevalent within Canada;
- where CAM/NHP use is prevalent;
- where the approach of conventional medicine has limited treatment options;
- where the burden of the condition or the treatment is high;
- where a CAM/NHP approach is feasible.

It is recommended that subjects in this section be taught through clinical cases and be oriented to family physicians. The emphasis should be on providing integrative care, not merely on providing alternatives to conventional treatments. There may be some legal issues to address in presenting these subjects, as well as certain practical limitations (such as the availability of good and qualified instructors). It will be important to “train the trainers” and to pay the trainers well (inadequate compensation leads to rapid attrition among instructors).

Curriculum content in this section should be:

- patient-centred;
- oriented to family physicians, not to medical specialties;
- mandatory, not optional;
- capable of being examined and evaluated.

Discussion:

There was general support for this approach to CAM in Clinical Practice. Several suggestions for additional topics were offered.

Guidelines for Finding and Using Existing Materials

The small group noted that the purpose of a ROSTR is to provide a succinct synthesis of what a physician needs to know regarding a specific CAM-related topic. This information may or may not already be available from existing information sources in the public or private domain. The project would therefore benefit from a method for locating and evaluating sources of CAM-related information. It is costly in terms of both time and resources to conduct a systematic review of a particular practice or product. The project must therefore build on existing systematic reviews where these are available. The function of the ROSTRs would then be to provide a brief overview and then identify and refer to these primary sources.

⁵ The group continued to develop the table of subjects in the second day of the workshop. The final product is presented below at page 16.

The group proposed that the project produce a list of textbooks, web sites, and other sources of CAM-related information. This list should include sources in the public domain (e.g. MedLine, CINAHL, PsychInfo) and sources available through subscription (e.g., Natural Standard,⁶ Natural Medicines Comprehensive Database⁷). A two-stage process could be employed for producing this list: (1) identify potential sources by consulting members of the CAM in UME project, affiliated experts, and medical school librarians; (2) identify the most valid and useful sources through a consensus process using email and personal conversations.

Discussion:

The Concept Map could be used as the point of departure for the process of identifying and validating sources of information. Participants in the project could identify sources of information on particular topics from the concept map.

It will not be possible to prepare ROSTRs on every possible topic (e.g., every NHP or every application of an NHP). Students could be referred to valid sources of information on these topics. It is important to consider the types of studies and the levels of evidence in support of findings for a specific topic, particularly with regard to safety concerns, such as interactions between products (NHP-drug, NHP-NHP). Very few textbooks provide this information.

Professional regulatory boards for CAM practitioners could provide information that describes the profession in an unbiased manner.

ROUND 2: SMALL GROUP DEVELOPMENT OF ELEMENTS OF THE PROJECT

The second round of small group discussion was devoted to the development of three elements of the project:

1. A concept map for CAM in Clinical Practice
2. Guidelines for the development of ROSTRs
3. A process for identifying and validating sources of information

Concept Map for CAM in Clinical Practice

The small group proposed that education about CAM in Clinical Practice be delivered in three areas: major systems; common symptoms; and history taking and diagnosis.

Major systems. Education about CAM in clinical practice should be incorporated into curriculum components addressing the major body systems, since this is how students are typically introduced to subjects in existing curricula. The approach to instruction on CAM/NHPs should be practical and the emphasis should be on the student's ability to integrate knowledge of CAM/NHPs into clinical practice. A list of the major body systems, along with common

⁶ For information, see <http://www.naturalstandard.com/>.

⁷ For information, see <http://www.naturaldatabase.com/>.

conditions that are frequently addressed with CAM practices and/or NHPs is provided in the table below.

MAJOR SYSTEMS AND COMMON CONDITIONS

Anaesthesia and Pain

- related to many of the systems listed here

Cardiovascular

- hypertension
- high cholesterol
- coronary artery disease
- congestive heart failure
- stroke

Dermatology

- eczema
- psoriasis

Endocrinology

- diabetes
- insulin resistance
- thyroid disease
- obesity

Gastroenterology

- irritable bowel syndrome
- reflux
- chronic abdominal pain
- inflammatory bowel disease
- Chroner's disease / colitis
- constipation
- gall stones

Haematology

- anemia

Immunology

- allergies
- vaccines
- boosts

Infectious Disease

- HIV/AIDS (treatments; side effects)
- hepatitis
- herpes simplex virus
- common cold / viral infections

Men's Health

- erectile dysfunction
- benign prostatic hyperplasia

Nephrology

- urinary tract infections
- kidney stones

Neurology

- headache
- migraine
- Alzheimer's disease
- multiple sclerosis

Obstetrics / Gynaecology

- dysmenorrheal
- premenstrual syndrome
- polycystic ovarian disease
- infertility
- breach presentation
- menopause
- vaginitis
- sexual dysfunction

Oncology

- side effects
- prevention
- breast cancer
- colon cancer
- prostate cancer

Orthopaedics

- carpel tunnel
- musculoskeletal pain
- fracture

Psychiatry

- anxiety
- depression
- bipolar disorder
- schizophrenia
- Attention Deficit Hyperactivity Disorder
- stress
- insomnia

Respiratory/Ears Nose Throat

- asthma
- otitis media
- upper respiratory tract infection
- rhinitis
- sinusitis

Rheumatology

- gout
- tendonitis
- rheumatoid arthritis
- osteoporosis
- osteoarthritis
- fibromyalgia

Common symptoms. Education about CAM in clinical practice should relate to the symptoms that people often present to family physicians (see list below). Priority should be given to symptoms that are relatively more prevalent and for which CAM/NHP use is common and/or efficacious. The ROSTRs should discuss use, safety, and efficacy of CAM/NHPs in relation to the symptoms presented.

COMMON SYMPTOMS

- | | | | |
|------------------|--------------------|----------------------------|------------------------------|
| • allergies | • depression | • insomnia | • menopause |
| • anxiety/stress | • fatigue | • irritable bowel syndrome | • obesity/insulin resistance |
| • chronic pain | • headache | • low back pain | • osteoarthritis |
| • colds | • high cholesterol | | |

History taking and diagnosis. Education about CAM in Clinical Practice should be incorporated into curriculum components addressing history taking and diagnosis. These are typically included as part of courses on clinical/professional skills in UME programs.

Discussion:

It will be essential to have consensus on the ROSTRs to be included in this section. There may be some overlap with ROSTRs in level 3 of the section on NHPs, which discuss 15 groups of NHPs.

Guidelines for the Development of ROSTRs

The small group noted that the primary audience for materials prepared by the CAM in UME project is instructors of CAM-related components of undergraduate medical courses. Although the materials may be used by other stakeholders (e.g., curriculum committees and curriculum developers), the materials should be designed to serve the needs of course instructors as they will be the primary end-users. Accordingly, in the ROSTRs:

- The rationale should provide justification for including the topic in the curriculum and for its particular location in the curriculum. It should discuss the prevalence of use of a given CAM practice or product, the connection between the topic and other parts of the curriculum, the pre-requisites for the topic, and other curriculum topics for which this topic is itself a pre-requisite.
- Student learning objectives should be competency-based.
- The sub-topics may be described in a brief way, perhaps simply identified in a list.
- The annotated readings need not be exhaustive; one or two may suffice.

Discussion:

The small group had proposed that the ROSTRs present a summary of the evidence for the practice or product as part of the rationale. This proposal was the subject of considerable discussion. It was eventually agreed that the rationale of the ROSTRs would not discuss evidence for the product or practice, but that instructors would be referred to information about evidence in the annotated readings. This would allow for multiple sources of information about evidence, if required and/or available. It would also mean that the ROSTR for a given topic would not require modification as the evidence-base continues to grow.

Since most of the members of the CAM in UME project are not professional curriculum developers, it would be useful to have a guide on how to develop not only ROSTRs, but also other teaching materials, such as cases, competencies, examination questions, etc.

While these materials are under development, it will be necessary to have a protected, limited-access website. Materials should be available on the public website only after they have been reviewed and approved.

A Process for Identifying and Validating Sources of Information

The small group proposed that the goal of this component of the CAM in UME project would be to develop:

- annotated web links to be used on the website of the project; and
- a list of validated sources for CAM/NHP-related information.

The first step in the process to develop this component will be to ask people involved in systematic reviews of CAM/NHPs⁸ to identify sources (including reference books and websites containing systematic reviews) they would recommend, and to rate those sources based upon:

- accuracy;
- completeness
- scope;
- ease of use;
- language (French, English, other);
- subscription fee (yes / no);
- organizational structure (by product, by therapy, by condition); and
- references.

The second step will be to circulate a draft list of information resources to members of the CAM in UME project and related academic consortia for review. The reviewed list could be submitted for publication in a medical education journal, and annotated links could be posted on the website for the CAM in UME project.

The web page that lists the annotated links would have to include a disclaimer and should list the date on which the link was posted. The page should be reviewed every two to three years to ensure that all links are still functioning. Members of the project could be requested to identify any problems with the links or to notify the project about new sites, on a regular basis.

Discussion:

It may be preferable to have a shorter questionnaire when asking key informants about sources of information. A working group could then evaluate the recommended sources, using a detailed check list of criteria. The Family Physician's Unit at Université Laval has developed a template for assessing the quality of a website, including criteria such as conflict of interest.

FACILITATING THE IMPLEMENTATION OF CAM/NHP CURRICULA IN UME

The final plenary session of the workshop was devoted to a discussion of ways to facilitate the implementation of CAM/NHP content in undergraduate medical curricula. Participants were invited to make observations and suggestions based upon their experience to date in providing

⁸ Eg., Tannis Jurgens, Sunita Vohra, Heather Boon, Gideon Koren, Ed Mills, Edzard Ernst, David Moher Pierre Haddad, Christian Lamontagne, the New Zealand Group, and individuals from other specialties, such as Traditional Chinese Medicine or Homeopathy.

education about CAM/NHPs in their institutions. Key points from this session have been organized into seven themes - credibility, relevance, modeling, presentation, flexibility, curricular structures, and examinations - which are outlined below:

Credibility

- Avoid polarizing or contentious issues.
- Use reputable sources of information and establish working definitions of specific CAM/NHP-related topics and concepts.
- Focus on products and practices for which there is a substantial evidence base
- Identify physicians who currently incorporate CAM/NHPs into their clinical practice, and engage them as instructors or presenters.

Relevance

- Establish the relevance of CAM-related topics for clinical practice.
- Focus on specific products and practices in relation to specific conditions or symptoms.
- Provide clinical practice cases involving CAM/NHPs and provide students with the opportunity to interact with family physicians knowledgeable about CAM/NHPs.
- Introduce CAM/NHP topics when students are in contact with patients.
- Use an integrative model and engage integrative practitioners: students respond well to seeing how CAM/NHPs can be part of a comprehensive family practice.

Modeling

- Simulate collaborative or integrative health care by running an inter-professional education workshop: different practitioners assess a patient and present their treatment plans; students then discuss how these treatment plans can be integrated.
- Simulate listening and communication in clinical practice: have students draw on various information sources, including interviews with various practitioners, to prepare a two-page information sheet for patients about a given condition.

Presentation

- Use professional graphic artists to improve visual communication (e.g., in powerpoint presentations).
- Bring in competent professionals to discuss subjects for which you do not have requisite expertise.
- Create a structured process for patients to discuss their use of CAM/NHPs.

Flexibility

- Offer students the option of a practicum with physicians who incorporate CAM/NHPs into their clinical practice.
- Offer an optional block on CAM/NHPs in fourth year for interested students.
- Supplement ROSTRs with optional information or resources for independent study.
- Provide web-based learning modules (e.g., TLRs) for reference or for independent study.
- Provide informal occasions to introduce students to CAM/NHPs (e.g., optional session on herbs and stress during examination periods).

- Encourage students to try CAM/NHPs with selected recommended practitioners.
- Invite students to conduct or participate in research projects on CAM/NHPs in clinical practice.

Curricular Structures

- Identify and work with faculty who have expertise in curriculum development.
- Present CAM/NHP-related teaching materials to curriculum development working groups in your medical school, while the materials are still at an early stage of development.
- Work with the course scheduling committee in your medical school to ensure optimum timing for CAM/NHP-related classes or units.

Examinations

- Introduce CAM/NHP content into examinations within your medical education program.
- Canvas members of the CAM in UME project for examination questions on CAM/NHPs.
- Offer medical school examination questions on CAM/NHPs as a resource to the Medical College of Canada.

NEXT STEPS

The workshop concluded by identifying the actions that should be taken in the next year and establishing an immediate time-line for the work to be completed in the next six months. Members of the CAM in UME project volunteered their services for specific activities and actions to be taken, as outlined below.

<u>Actions to be Taken</u>	<u>Timeline</u>
1. Develop a copyright policy for materials posted to the project website. <ul style="list-style-type: none"> • Draft copyright and disclaimer statements for ROSTR and TRL submissions. 	May 30, 2005 April 30, 2005
2. Develop and refine a template for creation of ROSTRs.	May 30, 2005
3. Project website development <ul style="list-style-type: none"> a. Create a Website Development Working Group b. Plan for revision of current web site 	June 15, 2005 September 30, 2005
4. Finalize the Concept Map for CAM in Clinical Practice	June 30, 2005
5. Guidelines for identifying and validating external sources of information	To start July 2005
6. Develop curriculum competencies (enabling and terminal objectives)	To start July 2005
7. Develop a guide for curriculum developers	To start July 2005
8. Submission of Teaching / Learning Resources (TLRs)	Ongoing

<p>9. Continued development and review of ROSTRs. Current commitments by project members include:</p> <ul style="list-style-type: none"> • Foundations <ul style="list-style-type: none"> ○ Evidence ○ Placebo ○ Integrative medicine • CAM Basics <ul style="list-style-type: none"> ○ Naturopathy ○ Traditional Chinese Medicine ○ NHPs: safety; specific populations ○ Reasons for using CAM • CAM in Clinical Practice <ul style="list-style-type: none"> ○ Acupuncture ○ Fatigue ○ Fibromyalgia ○ Gastro-intestinal conditions ○ Irritable Bowel Syndrome ○ Depression ○ Menopause ○ Pediatric conditions (asthma, colic, eczema, Otitis Media, URTI, etc.) ○ Chronic pain ○ Headache 	<p>Ongoing</p>
<p>10. Position paper to clarify the role of “bridging” topics within UME curriculum (e.g., Nutrition, Spirituality, Aboriginal Health, etc).</p>	<p>Begin after finalizing list of CAM curriculum topics.</p>
<p>11. Revision of the web-based catalogue</p> <ul style="list-style-type: none"> • Start after the essential components of the project have been completed, such as the Concept Map, the ROSTR template, basic ROSTRs, collection of TLRs, etc. 	<p>Conditional upon funding</p>
<p>12. Raise funds for the CAM in UME project.</p>	<p>Ongoing</p>

**Developing Curricula on Complementary Practices and Products for Integration into
Canadian Undergraduate Medical Education:
A Second National Invitational Workshop
March 11-12, 2005
Toronto, Ontario, Canada**

AGENDA

FRIDAY, MARCH 11

8:30 Continental Breakfast

9:00 Welcome and Introductions (Marja Verhoef and Participants)

9:30 General Overview of the CAM in UME curriculum project (Marja Verhoef)

[There will be presentations on each of the major project components. Participants will have an opportunity to obtain further clarification on each component, to comment on the utility of each component, and to identify needs not addressed by each component.]

✚ Overview of Curriculum Framework (Michael Epstein)

✚ Concept map (Marja Verhoef)

✚ Common Framework Sections (Introduction: Michael Epstein)

• Foundations (John Crellin)

• Basics (Marja Verhoef)

• Natural Health Products (Ed Lui)

• Clinical Practice (Esther Koningsberg)

✚ Teaching/Learning Resources (Michael Epstein)

✚ Web accessible curriculum database (Rebecca Brundin-Mather)

10:40 Break

11:00 Continued discussion on the overview of the CAM/NHPs in UME curriculum project

12:00 Lunch

1:00 Small group discussion on aspects of the project

[Participants will meet in small groups to discuss the development of the project, in order to address some of the needs or observations noted during the morning. In addition to their primary topic, each group will be asked to focus a portion of their time on Natural Health Products]

✚ CAM and integrative medicine: implications for UME curriculum.

✚ Foundations for CAM: what should include and how should it be integrated into the Curriculum Framework?

✚ CAM in Clinical Practice: what should it focus on, and how?

✚ Guidelines for finding and using existing materials.

APPENDIX A

- 2:45 Break
- 3:00 Reports from small groups in plenary and discussion
- 4:15 Evaluation

SATURDAY, MARCH 12

- 8:30 Continental Breakfast
- 9:00 Overview of competency-based learning objectives and CanMED competencies (Alan Neville)
- 9:30 Small group development of elements of the project
[There will be presentations on issues of greatest importance at this stage in the project. Participants will have an opportunity to obtain further clarification and to provide recommendations]
 - 🚧 A concept map for CAM in Clinical Practice
 - 🚧 Guidelines for the development of ROSTRs and for consideration of copyright
 - 🚧 A process for submitting and validating sources of information
- 10:00 Plenary discussion of factors that facilitate the implementation of curriculum on CAM/NHPs in UME
- 10:45 Break
- 11:00 Reports from small groups in plenary and discussion
- 12:00 Lunch
- 1:00 Next steps in developing and implementing the project
 - 🚧 Commitment by members to assist in selected steps
- 1:30 Plenary discussion to identify what more can be done collectively or nationally to facilitate implementation of curriculum on CAM/NHPs in UME.
- 2:30 Timeline for next steps
- 2:50 Evaluation and concluding remarks
- 3:00 Adjournment

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INVITED PARTICIPANTS

	NAME	ACADEMIC AFFILIATION
STEERING COMMITTEE	Marja Verhoef	University of Calgary
	Michael Epstein	University of Saskatchewan
	Rebecca Brundin-Mather	University of Calgary
FACILIATOR	Theodore de Bruyn	Theodore de Bruyn Consultant Inc.
	Pat Allen	Health Canada: Natural Health Products Directorate
	Pierre Arsenault*	Université de Sherbrooke
	Vishal Avinashi	Canadian Federation of Medical Students; University of Saskatchewan
	Heather Boon	University of Toronto
	Greg Chernish	University of Manitoba
	John Crellin	Memorial University of Newfoundland
	Sylvie Dodin	Université Laval
	Trish Dryden	Centennial College CAM Practitioner: massage therapy
	Paule Giguère	Health Canada: Health Human Resources Strategies Division
	Vivian Huang	Queens University
	Janette Hurley	University of Calgary
	Esther Koningsberg	McMaster University
	Jill Konkin	Northern Ontario Medical School
	Patricia Larouche	la Fédération médicale étudiante du Québec; Université de Montréal
	Ed Lui	University of Western Ontario
	Alan Neville	McMaster University
	Dennis O'Hara	University of Toronto CAM practitioner: naturopathy; chiropractic
	Derek Puddester*	University of Ottawa
	Sanjeet Singh Saliya*	McGill University
Jana Sawynok	Dalhousie University	
Sunita Vohra	University of Alberta	
Janice Wright	University of British Columbia	
Marianne Xhignesse	Université de Sherbrooke	

* Unable to attend.