



CENTENNIAL COLLEGE

Research Requirement: Literacy Amongst Complementary and Alternative Health Care (CAHC) Practitioners

Natural Health Products Directorate, Health Canada

Phase I Report

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Executive Summary:

As Canadians continue to demonstrate a strong interest in integrating complementary and alternative health care (CAHC) with conventional Western medicine¹, there is an increasing need for evidence on the safety, efficacy and cost-effectiveness of complementary and alternative therapies and natural health products. A key barrier to CAHC and natural health product (NHP) research is a lack of research literacy (“understanding research language and its application to practice”²) and research capacity (“the ability to design and conduct research studies”³).

Communication with CAHC schools about this issue has been another significant challenge. To date, there has been no comprehensive list generated of the CAHC schools and programs in Canada or of the leadership in this field of education. Little information about the existence and/or quality of the research curricula being taught has been available. There has been no focused dialogue with and between the schools and educators about what support they may need to improve research literacy and capacity.

The goal of this project was to develop a strategic plan towards increasing research literacy and capacity in the NHP/CAHC sector. This was accomplished by:

- Identifying and describing the key educational CAHC institutions, continuing education opportunities and teachers of CAHC research education in Canada;
- Comparing research curricula across CAHC institutions;
- Identifying the priorities, challenges and strategies amongst this group; and
- Facilitating a meeting of key CAHC and conventional educators and stakeholders to propose a strategic plan based on strengthening identified opportunities and overcoming identified challenges

The research team for this project was an innovative consortium of prominent Canadian CAHC researchers from diverse stakeholder groups from community college, university, private vocational school, and independent researcher domains. A multidisciplinary Advisory Committee was created to give direction to the project by providing input at various critical points including review of the final report.

Phase I

Phase I of this project was a descriptive study that took place between January and the end of April 2004. Targeted participants were teachers/administrators from Canadian institutions and programs (n=137) whose focus is the professional education of chiropractors, massage therapists, naturopaths, homeopaths, traditional Chinese medicine and acupuncture practitioners, herbal medicine practitioners and holistic practitioners. Those that indicated interest during initial telephone contact (n=90) were asked to complete a short written survey. Thirty-nine

¹ Health Canada. (2001). Perspectives in complementary and alternative health care. Ottawa: Health Canada.

² Williams, J., Mulkins, A., Verhoef, M.J., Monkman D., & Findlay, B. (2002). *Needs assessment: Research literacy and capacity amongst complementary and alternative health care providers*. Perspectives on Natural Health Products – Natural Health Products Directorate, Health Canada, 14.

³ Ibid., 15.

participants completed the survey and just over 60% (n=25) also participated in a 30-45 minute semi-structured interview designed to clarify and elicit greater detail about survey responses.

Results of Surveys

Two chiropractic, one herbal medicine, four homeopathic, twenty-one massage therapy, three naturopathic and six traditional Chinese medicine schools completed surveys. The geographic representation of respondents closely mirrored the distribution of Canada's population by province. Length of programs varied greatly both within and across disciplines. Two-thirds of the participants indicated that their school offered research curricula within the academic program, although no common definition emerged for 'research course', 'research literacy' and 'research capacity'. Many participants mistakenly indicated that their disciplines were provincially regulated. This suggests that they did not understand the differences between professional recognition and regulation, or that recognition and regulation were seen as synonymous. The diversity of teacher experience in research education tended to extend to curriculum development in general, and is likely a strong influence on a school's ability to address research literacy. The majority of participants indicated that their students have access to library resources and the Internet, although interpretation of 'library' varied greatly.

Results of Interviews

Twenty-five interviews were conducted and semi-structured around a defined set of questions. The concept of 'readiness' emerged as a means of predicting the existence of research curriculum and/or research program within a particular school and in some cases, across a whole discipline and provided a useful framework for organizing and discussing the themes that emerged. Identifying 'degrees of readiness' also allowed for a primary comparison of research literacy development between schools across a hypothetical continuum.

The three major themes that emerged were *institutional readiness* in CAHC schools to develop and deliver research curricula and support a program of applied research, *societal readiness* by province/territory to recognize and regulate CAHC professions and academic institutions, and the degree of *professional readiness* within each of the disciplines studied.

Interview participants identified the following key opportunities and challenges related to developing and delivering research literacy curricula:

Institutional Readiness

- Perceived differences in public vs. private institutions
- Evaluation and research values embedded in the culture of the school
- Financial stability
- Salaried teachers and teacher training
- Research literacy/capacity resources (libraries, designated research librarians, computers, Internet and database access)

Societal Readiness

- Provincial/territorial regulation or recognition
- Accreditation and availability of student bursaries
- Primacy of the Western, evidence-based approach to health practice
- Market driven trends – public utilization and graduate employment, business profitability and competitiveness between schools
- Student preferences – shorter and more affordable programs, closer to home

Professional Readiness

- Standards of practice
- Competency-based guidelines
- Pre-requisite educational level for entry to programs
- Diversity of instructional design and delivery
- Innovative learning models

Phase II

The next phase of this project is to facilitate an invitational meeting of key CAHC and conventional educators and stakeholders, at Centennial College on June 4-5, 2004, entitled: *Building Opportunities, Overcoming Challenges: Increasing Research Literacy and Capacity in CAHC Education in Canada*. The objectives of the conference will be to:

- Confirm and expand upon findings from Phase I of the study – themes, opportunities and challenges;
- Provide networking and learning opportunities for conference participants related to research literacy and capacity building;
- Explore issues related to research curriculum development: core competencies for research literacy, readiness factors and potential for interdisciplinary collaboration;
- Propose a strategic plan that will strengthen opportunities and overcome challenges related to developing research literacy/capacity in the NHP/CAHC sector.

Sommaire Exécutif:

Bien que les Canadiens démontrent un vif intérêt envers l'intégration des soins de santé complémentaires et alternatifs à la médecine traditionnelle⁴, il reste à combler le besoin croissant de données empiriques et de recherches sur la sûreté, l'efficacité et la rentabilité des thérapies complémentaires et alternatives et des produits de santé naturels. Des lacunes au niveau de la compréhension des méthodes recherche (la compréhension des termes utilisés dans le domaine de la recherche et de leurs applications pratiques⁵) et des capacités de recherche (la capacité à concevoir et à entreprendre des projets de recherche⁶) ont été identifiées comme barrières principales aux soins de santé alternatifs et complémentaires et des produits de santé naturels.

Un autre défi significatif a été de communiquer avec différentes écoles des soins de santé alternatifs et complémentaires à ce sujet. Nous avons dû palier au fait qu'il n'y avait aucune liste complète des écoles et des programmes de soins de santé alternatifs et complémentaires au Canada ou des personnes significatives dans ce domaine d'éducation. De plus, peu d'information sur l'existence et/ou la qualité des programmes d'enseignement des méthodes de recherche ont été mis à notre disposition. Nous avons constaté qu'aucun dialogue concernant la nature de l'appui nécessaire à l'amélioration de la compréhension et de la capacité de recherche n'avait été entrepris entre les écoles et les éducateurs de ce domaine.

Le but de ce projet était de développer un plan stratégique pour augmenter la compréhension et la capacité de recherche dans le secteur des produits de santé naturels et des soins de santé alternatifs et complémentaires. Nous sommes parvenus à ce but en:

- Identifiant et en décrivant les principaux établissements offrant des programmes d'enseignement des soins de santé alternatifs et complémentaires, les opportunités de formations continues et les professeurs de recherches dans ce domaine.
- Comparant les curriculums d'enseignement des méthodes de recherches de ces différents établissements dans le domaine des soins de santé alternatifs et complémentaires et des produits de santé naturels.
- Identifiant les priorités, les défis et les stratégies dans ce groupe collectif.
- Facilitant la rencontre entre les personnes significatives de ce domaine et les éducateurs du milieu de la santé traditionnelle pour proposer un plan stratégique basé sur les forces déjà en place et pour relever les défis existants.

L'équipe de recherche de ce projet était un consortium innovateur de chercheurs Canadiens dans le domaine des soins de santé alternatifs et complémentaires en provenance de la communauté collégiale et universitaire, des écoles professionnelles privées et des chercheurs indépendants. Un comité consultatif multidisciplinaire a été créé pour diriger le projet. Son rôle était de fournir des suggestions aux moments critiques et de la vérifier le rapport final.

⁴ Health Canada. (2001). Perspectives in complementary and alternative health care. Ottawa: Health Canada.

⁵ Williams, J., Mulkins, A., Verhoef, M.J., Monkman D., & Findlay, B. (2002). *Needs assessment: Research literacy and capacity amongst complementary and alternative health care providers*. Perspectives on Natural Health Products – Natural Health Products Directorate, Health Canada, 14.

⁶ Ibid., 15.

Première étape

La première phase de ce projet a été de procéder à une étude descriptive qui a eu lieu entre janvier et fin avril 2004. Les participants étaient des professeurs et administrateurs des établissements et des programmes canadiens d'éducation professionnelle (n=137) en acupuncture, en chiropractie, en massothérapie, en naturopathie, en homéopathie, en médecine chinoise traditionnelle, en herboristerie et en médecine holistique. Ceux qui ont démontré un intérêt lors du contact téléphonique initial (n=90) ont été invités à compléter un questionnaire papier auto-administré. Trente-neuf participants ont complété le questionnaire et plus de 60% (n=25) ont également participé à une entrevue téléphonique semi-structurée de 30 à 45 minutes, conçue pour obtenir et clarifier plus de détails au sujet de leurs réponses fournies dans le questionnaire.

Résultat du questionnaire

Deux écoles de chiropractie, une d'herboristerie, quatre d'homéopathie, vingt et une de massothérapie, trois de naturopathie et six de médecine chinoise traditionnelle ont complété le questionnaire. La représentation géographique des répondants est directement proportionnelle à la population respective des provinces canadiennes. La longueur des programmes offerts varie considérablement dans et à travers certaines disciplines. Deux tiers des participants ont indiqué que leur école offre des programmes d'étude en recherche scientifique sans toutefois s'entendre sur une définition commune pour « les cours de recherche », « la compréhension de recherche » et « la capacité d'élaborer des recherches scientifiques ». Beaucoup de participants ont de manière erronée indiqué que leur discipline était régie par la province suggérant qu'ils n'aient pas compris les différences entre la reconnaissance et la réglementation professionnelle ou que ces deux concepts aient été perçus comme étant des synonymes. La diversité de l'expérience des professeurs dans l'enseignement des méthodes de recherches scientifiques se base principalement sur le développement du curriculum d'étude et a probablement une forte influence sur la capacité d'une école à dispenser des cours de méthode de recherche. La majorité des participants ont indiqué que leurs étudiants ont accès aux ressources d'une bibliothèque et à Internet, bien que l'interprétation de « bibliothèque » varie considérablement.

Résultat des entrevues

Vingt-cinq entrevues semi-structurées ont été conduites autour d'un set de questions définies. Le concept de *promptitude* a émergé comme étant un moyen de prédiction de l'existence d'un curriculum de recherches scientifiques et/ou d'un programme de recherche dans une école particulière et/ou dans une discipline entière. Ainsi nous avons un cadre utile pour organiser et discuter des différents thèmes reliés à ce sujet. L'identification des degrés de *promptitude* nous a également permis de procéder à une comparaison préliminaire du développement de la compréhension de la recherche entre les écoles et de les placer sur un continuum hypothétique.

Trois thèmes principaux ont émergés de notre étude. La *promptitude institutionnelle* dans les écoles de soins de santé alternatifs et complémentaires permettrait de développer et de fournir des curriculums d'enseignements des méthodes de recherches scientifiques et pour soutenir un programme de recherches appliquées. La *promptitude sociale* par province/territoire rendrait possible la reconnaissance et la réglementation des professions des soins de santé alternatifs et complémentaires et des établissements académiques. Le dernier thème qui est émergé est le degré de *promptitude professionnelle* dans chacune des disciplines étudiées.

Les participants à l'entrevue ont identifié les opportunités et défis principaux suivants. Ils se relient au développement et à l'administration d'un curriculum de recherche.

Promptitude institutionnelle

- Perception de différences entre les institutions publiques et privées
- La culture de l'école et les valeurs qu'elle défend; quelle valeur est accordée à la recherche, quel processus est utilisé pour évaluer et critiquer leur curriculum
- Stabilité financière
- Rémunération et formation des professeurs
- Les ressources qui supportent la compréhension et la capacité d'élaborer des recherches (ex : l'accès à une bibliothécaire de recherche, ordinateurs, Internet, base de données)

Promptitude sociale

- Reconnaissance ou réglementation provinciale/ territoriale
- Accreditation des écoles et disponibilité bourses étudiantes.
- Prédominance de l'approche de recherche occidentale basée sur des preuves scientifiques
- Lois du marché/ demandes et besoins du public, employabilité des gradués, rentabilité d'affaire et compétition entre les écoles
- Préférences des étudiants (programme plus court et accessible, programme plus abordable, plus près de la maison)

Promptitude professionnelle

- Les standards de la profession
- Les lignes directrices basées sur certaines compétences
- Les pré-requis d'admission au programme
- Diversité de conception d'enseignement
- Modèles d'apprentissages innovateurs

Deuxième étape

La phase suivante de ce projet est de permettre la tenue d'une réunion entre les personnes significatives du domaine des soins de santé alternatifs et complémentaires et des professeurs du milieu de la médecine traditionnelle, à Centennial College le 4 et 5 juin 2004. Cette réunion a comme titre: *Building Opportunities, Overcoming Challenges: Increasing Research Literacy and Capacity in CAHC Education in Canada*. Les objectifs de la conférence seront de:

- Discuter des résultats de la première étape du projet– thèmes, possibilités et défis;
- Créer un réseau entre les participants à la conférence et offrir des possibilités d'apprentissage pour permettre l'augmentation de la compréhension et de la capacité de recherche;
- Explorer les sujets liés au développement du curriculum d'enseignement de recherche: les compétences clés menant à la compréhension de recherche, les facteurs de promptitude et les possibilités découlant d'une collaboration interdisciplinaire;
- Proposer un plan stratégique qui renforcerait les possibilités et aiderait à surmonter les difficultés dans le développement de la compréhension et la capacité de recherche dans le secteur des produits de santé naturels et des soins de santé alternatifs et complémentaires.

Research Requirement: Literacy Amongst Complementary and Alternative Health Care (CAHC) Practitioners

Introduction

As Canadians continue to demonstrate a strong interest in integrating complementary and alternative health care (CAHC) with conventional Western medicine¹, there is an increasing need for evidence on the safety, efficacy and cost-effectiveness of complementary and alternative therapies and natural health products. While there is an understandable expectation that this evidence will be largely generated within the CAHC sector, progress in this area has been hindered by an overall lack of research literacy and capacity.

Research literacy, which has been defined as “understanding research language and its application to practice”², is a foundational building block of research capacity, which is “the ability to design and conduct research studies”³. A lack of research literacy (resulting in decreased research capacity) has been identified as a key barrier to CAHC and natural health product (NHP) research.

Communication with CAHC schools about this issue has been another significant challenge. To date, there has been no comprehensive list generated of the CAHC schools and programs in Canada or of the leadership in this field of education. Little information about the existence and/or quality of the research curricula being taught has been available and there has been no focused dialogue with and between the schools and educators about what support they may need to improve research literacy and capacity.

In August 2001, Health Canada sponsored an invitational roundtable meeting to assess research literacy in CAHC in Canada and identify key research needs. Four strategies were subsequently identified as being high priority in addressing these needs:

1. the completion of a CAHC and NHP research needs assessment
2. support for a network of CAHC and NHP researchers and clinician investigators
3. the development of CAHC and NHP research learning modules
4. the development of CAHC and NHP research training support programs for faculty

This project was designed to address strategies #3 and #4 above, as well as build upon previous initiatives to enhance research capacity in CAHC that have focused on addressing strategies #1 and #2⁴.

¹ Health Canada. (2001). Perspectives in complementary and alternative health care. Ottawa: Health Canada.

² Williams, J., Mulkins, A., Verhoef, M.J., Monkman D., & Findlay, B. (2002). *Needs assessment: Research literacy and capacity amongst complementary and alternative health care providers*. Perspectives on Natural Health Products – Natural Health Products Directorate, Health Canada, 14.

³ Ibid., 15.

⁴ Note: Several initiatives have been created to network CAHC and NHP researchers and clinician investigators including: In-Cam (www.incamresearch.ca), CAM-era (www.cameraresearchnetwork.ab.ca) and the Natural Health Products Research Society (www.nhpresearch.bc.ca).

Goal of This Project

The goal of this project was to develop a strategic plan towards increasing research literacy and capacity in the CAHC/NHP sector. This was accomplished by:

- Identifying and describing the key educational CAHC institutions, continuing education opportunities and teachers of CAHC research education in Canada;
- Comparing research curricula across CAHC institutions;
- Identifying the priorities, challenges and strategies amongst this group;
- Facilitating a meeting of key CAHC and conventional educators and stakeholders to propose a strategic plan based on strengthening identified opportunities and overcoming identified challenges.

Research Team

The research team for this project was an innovative consortium of prominent Canadian complementary and alternative health care researchers from diverse stakeholder groups at the community college, university, private vocational school, and independent researcher levels who have worked together on previous NHP/CAHC initiatives.

The Principal Investigator for this initiative was Trish Dryden, Coordinator, Massage Therapy Research and Development, Massage Therapy Program, Centennial College, Scarborough, Ontario. The funds were administered by Centennial College.

Co-investigators for the project were Dr. Marja Verhoef (Faculty of Medicine, University of Calgary and Canadian Research Chair for Complementary Medicine), Dr. Heather Boon (Leslie Dan Faculty of Pharmacy, University of Toronto), and Silvano Mior (Dean of Graduate Studies and Research, Canadian Memorial Chiropractic College).

Barbara Findlay (integrative health care consultant and former Executive Director, Tzu Chi Institute, Vancouver) was contracted by Centennial College to act as the Project Coordinator. Her role included working with the Principal Investigator, Trish Dryden, the Advisory Committee and Research Assistant, Amanda Baskwill, to design the survey and interview tool(s) and methods, carry out the research, write the report, and help organize and facilitate the first ever meeting of research literacy educators and leaders in CAHC.

An Advisory Committee was created to give direction to the project by providing input at various critical points including review of the final report. This committee consisted of the Principal Investigator, Co-investigators, Project Coordinator, and four representatives of the major CAHC professions and educational institutions and two representatives from Health Canada, NHPD (*Appendix A: Advisory Committee Contact List and Terms of Reference*).

Study Design

Phase I of this project was a descriptive study that took place between January and the end of April 2004. The study proposal was reviewed and approved by the Research Ethics Committee of Centennial College (*Appendix B: Ethics Review Approval*). Targeted participants were from Canadian institutions and programs whose focus is the professional education of chiropractors,

massage therapists, naturopaths, homeopaths, traditional Chinese medicine and acupuncture practitioners, herbal medicine practitioners and holistic practitioners. At the start of the study, the number of potential participants was unknown, as no current 'list' existed that identified all CAHC educational institutions and programs in Canada. Gathering this data was an integral part of the study and provided important demographic context.

Telephone calls were made to all identified CAHC educational institutions and specifically to key contacts when they were known. This allowed recruiting a convenience sample consisting of those who responded to telephone contact and indicated interest in participating. A letter of *Information for Study Participants or Information pour les participants* (Appendix C), *Consent Form or Formulaire de consentement* (Appendix D) and *Survey or Questionnaire* (Appendix E) were sent by email, mail or fax to interested parties.

Participants were asked to return the signed consent form and completed survey within two weeks of receiving them. In order to analyze the information provided by respondents, data was collected in an MS Excel spreadsheet and then transferred into an MS Access database. The purpose of data analysis was to establish characteristics of respondents, and to determine whether the study group could be considered to be representative by profession and geographical area, for each of the 6 groups within the study population (see **Results of Surveys**).

Just over 60% of participants who returned their surveys were selected to participate in a semi-structured, 30-45 minute telephone interview (*Appendix F: Interview Tool*). The interview sample was selected based upon expressed enthusiasm towards increasing research literacy within a discipline (by survey response and preliminary telephone contact); evidence of existing research curriculum or expressed plans to develop research curriculum (by survey response); and evidence of an existing 'sustainable research program' within the school (by survey response). Every effort was made to choose a sample that was representative of both the range of CAHC disciplines included in this study and the number of schools within each CAHC discipline targeted. Geographic representation was also considered. Interviews were taped, summarized in writing and analyzed for themes and discussion threads (see **Results of Qualitative Interviews**).

Phase II of this project will involve facilitating an invitational meeting for up to 20 participants from Phase I who expressed interest, during the interview, in forming a 'network' of CAHC research educators. The 1.5-day meeting will be planned by Trish Dryden, PI, and Advisory Committee, and facilitated by Barbara Findlay, Project Coordinator. All participant expenses will be covered by the grant and they will be provided with a copy of the full report and a copy of the Discussion Document one month in advance of the meeting. It will take place in Toronto during the first week of June, 2004. The purpose of the meeting is to review, confirm and expand upon the findings from Phase I of this study, and to develop a long-term strategic plan for capacity building in the field of NHP/CAHC research.

Activities to Date

Date	Activity
January 2004	<ul style="list-style-type: none"> • Developed Terms of Reference for Advisory Committee and confirmed membership on committee • Collected contact information for CAHC schools and programs (167) from variety of sources • Developed draft of Information for Participants letter; Survey; Consent Form; Interview Tool(s) • Convened first Advisory Committee conference call – approved Terms of Reference; recruitment process; Survey and Interview Tool(s) and project timelines
February 2004	<ul style="list-style-type: none"> • Compiled list of potential survey participants post telephone contact • Sent out Information for Participants letter; Survey; Consent Form; Interview Tool(s) • Collected completed surveys and entered information into database • Collected samples of research curriculum outlines or course materials from participants
March 2004	<ul style="list-style-type: none"> • Identified low response rate from Quebec schools and decision made to translate survey into French and conduct some interviews in French • Conducted 25 telephone interviews and prepared written summaries for each • Analyzed and synthesized data from completed surveys • Analyzed and synthesized data from telephone interviews
April 2004	<ul style="list-style-type: none"> • Wrote first draft of report and circulated to Advisory Committee for feedback • Convened second meeting of Advisory Committee by conference call – incorporated feedback into report and planning process for Phase II of the study • Completed and submitted final report (Phase I) to Health Canada/ NHPD

Methods

The survey questions were developed by the research team to gather demographic and descriptive information about the schools including contact information, profession-specific focus of school, type and length of program (including part-time, full time and continuing education), credentialing and regulation, research curricula, identification of research faculty and their educational qualifications, access to resources such as a library, the Internet and research databases, and interest in developing greater research literacy/capacity. Quantitative analysis of the survey was in part, limited by the number of open-ended questions and the overall low statistical power of the sample size. The interview questions were developed by the research

team as a more open-ended follow-up to the survey questions and were intended for qualitative analysis.

In order to ensure representation of the Canadian CAHC sector, a list of schools and programs across seven disciplines was assembled – traditional Chinese medicine and acupuncture, chiropractic, naturopathy, massage therapy, homeopathy, herbal medicine and holistic practitioner.

The initial list of potential study participants was generated by members of the Research Team and Advisory Committee and based on schools of which they were aware. The professional breadth of the Advisory Committee provided a degree of familiarity with schools and programs that exist within each of the disciplines targeted.

Once this initial list was compiled, an Internet search was conducted to find other schools that had not been identified. The Advisory Committee approved a list of 167 schools and programs for this study. Those schools that were unreachable (did not have a working phone number, fax, or email) or duplicated were removed from the list and schools with multiple campuses and multiple programs were amalgamated and listed as the one parent school. A working list of 137 schools was created from the initial list, after an attempt had been made to contact all 167 schools.

All chiropractic schools were included and the majority of naturopathic and massage therapy programs were also accounted for. It became apparent using our search strategy that schools from the CAHC disciplines that are commonly provincially/territorially regulated (massage therapy, chiropractic, naturopathy) were easier to locate than schools and programs from less regulated disciplines (traditional Chinese medicine and acupuncture, homeopathy, herbal medicine, holistic practitioners). For this reason, some schools/programs may not be accounted for in this study, although it is difficult, if not impossible, to know this number. There is confidence that the list of English language schools/programs is as comprehensive as the methodology allowed. There was, however, less confidence in the list of French language schools/programs. For this reason, a Francophone research assistant was hired after the start of the study, to translate study documents into French and assist with recruitment of Francophone study participants. With this amendment to the study plan, the Advisory Committee approved the final list as being ‘exhaustive within reason’.

The six disciplines recruited for this study are the same as those included in a 2002 Complementary and Alternative Health Care Professions (CAHCP) Sector Situational Analysis, submitted to Human Resources Development Canada (HRDC)⁵, with the exception of holistic practitioner. This proved to be a useful alignment for analysis purposes in this study. As there has been no previous initiative to identify the actual schools or programs that prepare practitioners in this sector, the Sector Situational Analysis provided a rudimentary baseline for comparing this study data against national demographics organized by discipline and geographic region.

⁵ (2002). Complementary and Alternative Health Care Professions Sector Situational Analysis proposal. Submitted to Human Resources Development Canada: unpublished.

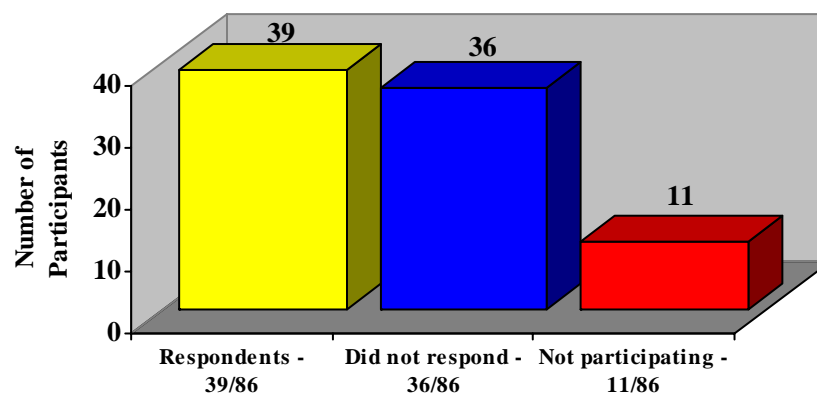
Results of Surveys

By the end of Phase I, 90 of 137 schools and/or programs had been successfully contacted. This number reflects the schools/programs where a contact person was reached and dialogue was conducted either via telephone or email. This total only counts the parent institution/organization. Schools with multiple campuses and/or programs for different disciplines are counted as a single participant for the purposes of this study. Examples include CDI College, which has five campuses or the International Academy of Natural Health Sciences, which offers education to three different disciplines.

Eighty-six of the 90 potential schools/programs requested an information package on initial telephone contact. The information package consisted of the Information for Participants letter outlining the purpose and scope of the study, a Consent Form to be signed and returned, and the Survey to be completed and returned. Four of the ninety schools/programs indicated during telephone contact that they did not want to participate – two traditional Chinese medicine schools, one massage therapy school and one program for holistic practitioners. Despite the fact that participation in the study was encouraged whether the school currently offered research education or not, three out of the four schools who declined to participate cited “not offering research at their schools” as the reason. The other school was in “the process of change” and did not have time to complete the survey. Information packages were sent, in the respondents preferred language (English or French), by email, fax or mail to the remaining 86 schools.

In total, 39 out of 86 schools/programs completed and returned a survey and consent form, 11 out of 86 indicated they did not want to participate, and 36 out of 86 did not respond within the timeframe allowed for Phase I (see Figure 1). Both the eleven schools who declined to participate and the thirty-six schools that did not respond in the time frame spanned disciplines and geographic regions and there was no discernible trend. Of the schools that declined to participate, reasons given included that they were “not teaching research at this time” and they were “too busy to complete the survey”. In addition, there did not seem to be any correlation between levels of initial enthusiasm for the project and eventual participation by completing the survey. The time frame for this study was short and may have had an impact on response rates.

Figure 1 - Distribution of Participation

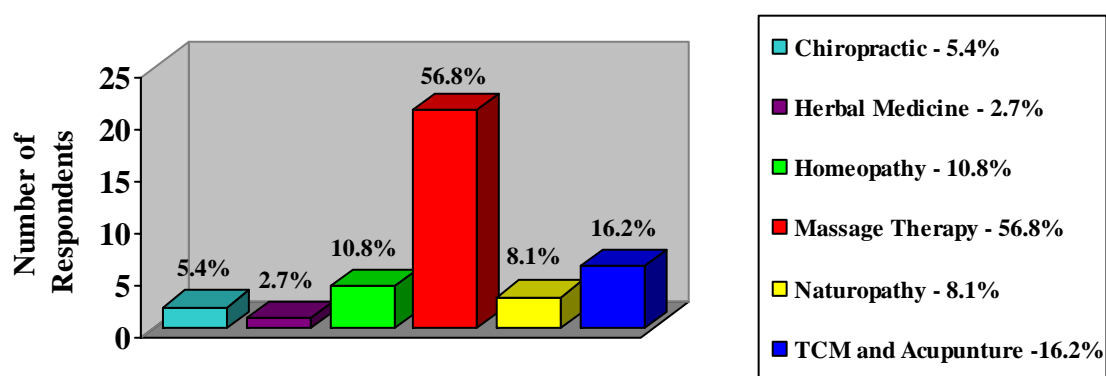


Professional and Geographic Representation

Breakdown of Responses by Discipline

Schools/programs that responded to this study can be broken down as follows: 2 chiropractic, 1 herbal medicine, 4 homeopathy, 21 massage therapy, 3 naturopathy, and 6 traditional Chinese medicine (TCM) and acupuncture (see Figure 2). In reviewing the survey responses, a decision was made not to include the data from surveys completed by the two participating schools that prepare holistic practitioners. Both of the schools that responded in this category offered an extremely wide variety of educational programs/courses and included academic content from several of the other disciplines included in this study such as herbal medicine, traditional Chinese medicine, massage therapy, homeopathy and naturopathy. While important to capture the fact that schools such as this exist in Canada, there were too few commonalities between them to make any generalizations for the purpose of this study. Therefore, the total number of completed surveys returned was 39, but only 37 have been included in the analysis for this report.

Figure 2 - Respondents by Discipline



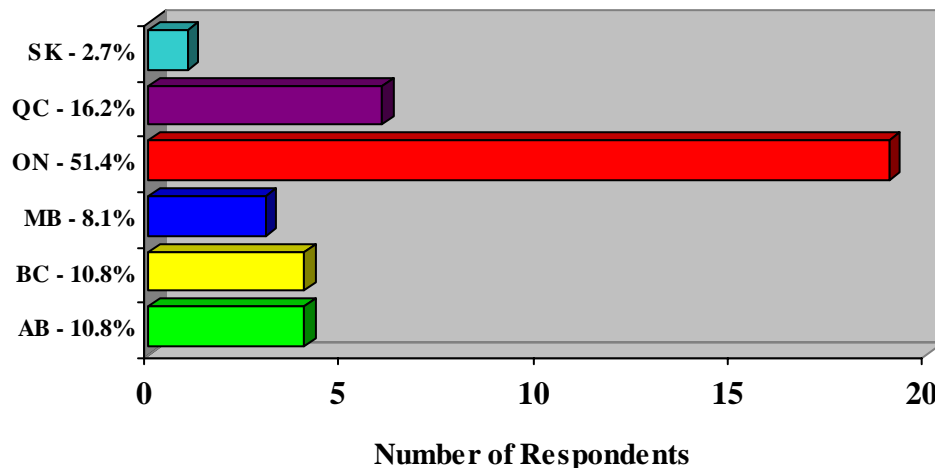
To get a clearer picture of the distribution by discipline within the NHP/CAHC sector, it would have been useful to compare these figures to the overall numbers and distribution of practitioners in Canada. However, the only existing information that we could find on the number of CAHC practitioners by discipline in Canada comes from an unpublished CAHCP Sector Situational Analysis, submitted to HRDC on March 28, 2002⁶. The proposal indicated that at that time in Canada there were 5900 chiropractors (28.4 % of total), 1000 herbal medicine practitioners (4.8%), 1600 homeopaths (7.7%), 10,000 massage therapists (48.1%), 650 naturopaths (3.1%), and 1656 traditional Chinese medicine practitioners and acupuncturists (7.9%). However, the data is incomplete. In some disciplines, only registered practitioners were counted in the total number. For example, in traditional Chinese medicine it is likely that there are thousands of TCM practitioners across Canada, not the 1656 included in the proposal. Accurate data on numbers of practitioners is only available from those professions that are regulated in all provinces and territories such as chiropractic.

⁶ (2002). Complementary and Alternative Health Care Professions Sector Situational Analysis proposal. Submitted to Human Resources Development Canada: unpublished.

Breakdown of Responses by Geographic Region

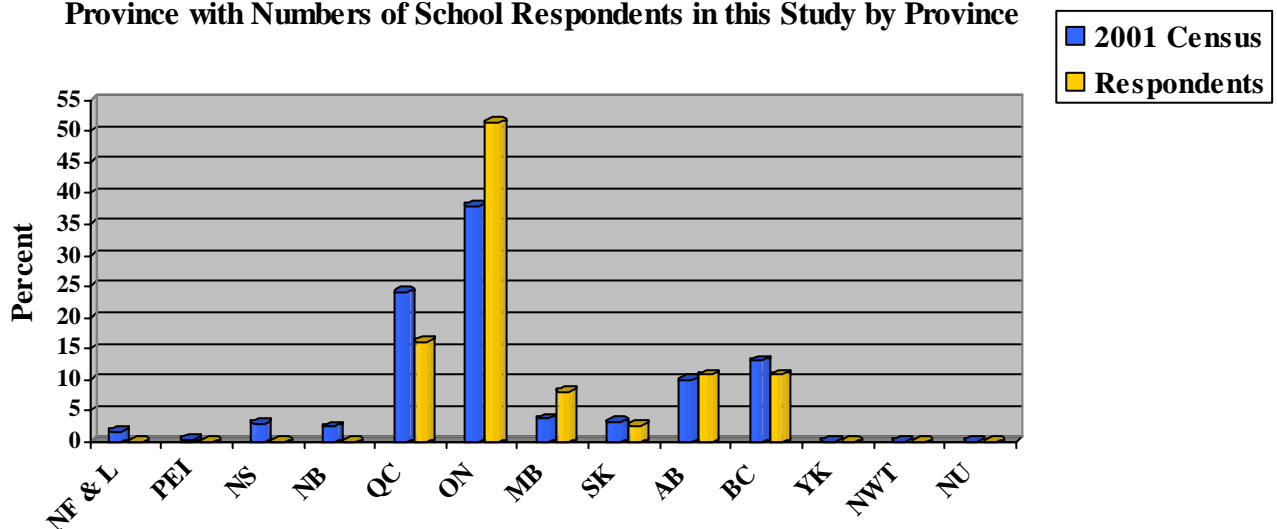
Survey responses were broken down by province/territory. The distribution was as follows: 4 from Alberta, 4 from British Columbia, 3 from Manitoba, 19 from Ontario, 6 from Quebec and 1 from Saskatchewan (see Figure 3). It is important to note, however, that the figure below, which shows that there are no schools or programs in the Eastern provinces or the territories identified during this study, is misleading. At least two of the schools that responded have multiple campuses across several provinces – including the Maritime Provinces. For example, one massage therapy program has campuses in Ontario, Quebec, and New Brunswick. As the same curriculum is provided across all campuses, we have listed only the province where the educator responsible for curriculum development resides.

Figure 3 - Respondents by Province or Territory



The distribution of schools by region is largely consistent with the overall distribution of Canada's population⁷, as shown below (see Figure 4), which accounts for the large number of CAHC schools in Ontario, for example.

Figure 4 - Comparison of National Data on Distribution of Population in Canada by Province with Numbers of School Respondents in this Study by Province



⁷ Bennett, M.D. (2004). Teaching and learning about Canada: Population by province/territory and capital city [WWW Document]. URL <http://www.canadainfolink.ca/charttwo.htm>.

Influences and Limitations

The recruitment of respondents was clearly influenced by the school or educator's desire to implement or expand existing research curriculum. Individual members of the Research Team and/or Advisory Committee were also a positive influence on recruitment. Recognition of the Principal Investigator, Co-investigators and Project Coordinator as leaders in the Canadian CAHC field may also have had an influence on recruitment. In addition, the number of massage therapy schools that participated, particularly from Ontario, was disproportionately high suggesting that the Principal Investigator and Research Assistant's strong professional affiliation with massage therapists in Canada may have also had an influence on this response rate.

Academic and Regulatory Diversity

Length of Program

Reported length of programs across CAHC disciplines varied greatly. Chiropractic programs are between 4-5 years long and the trend is towards achieving degree-granting status. Similarly, the naturopathic programs are 4 years long and moving towards degree granting status. The herbal medicine school that responded indicated their program was 2.5 years if taken full time but 4.5 years when taken part time. Homeopathy schools ranged from 6 months to 4 years. Both massage therapy and TCM varied greatly. The 'unofficial' gold standard for massage therapy education is 2200 hours usually completed in 18 months up to 3 years. The majority of respondents were somewhere between 2200 to 2400 hours but some programs have as few as 400 hours and as many as 3000. Traditional Chinese medicine ranged from 2000 hours to 5 years. This variety in program length was clarified and discussed further in the interviews that were conducted. The results of the survey appear to indicate that the more highly regulated the discipline, the fewer number of schools there are.

Inclusion of Research Curricula

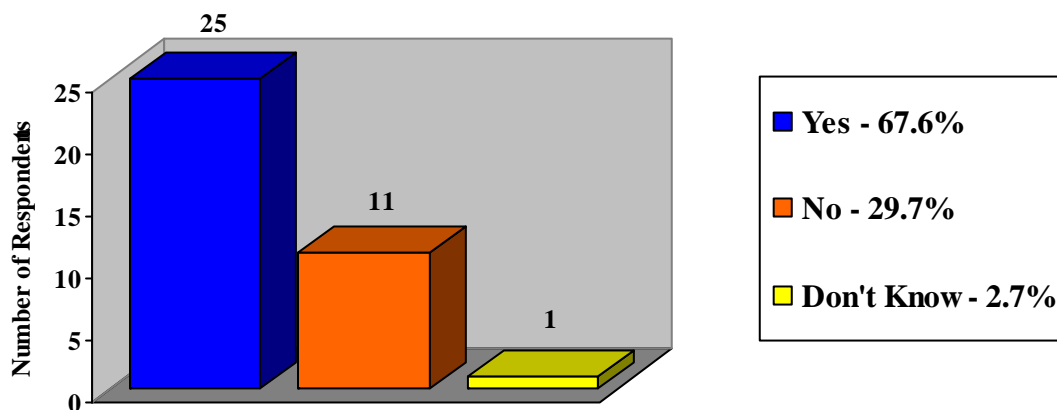
Twenty-six respondents indicated they included research curricula within their academic programs. Eleven indicated they had no research curriculum in place and one indicated he did not know (see Figure 5). Of the 26 with research curricula, 18 indicated that it was 'threaded' through other courses. There were 19 schools/programs that identified that they had a "stand-alone" research course of some kind. In addition, 8 schools/programs indicated they offered research as part of continuing education. When some of these programs were interviewed it became apparent that the definitions of research course, research literacy and research capacity were varied. The responses on the survey only provide limited information. More detail is provided through analysis of the interview data.

Registration, Regulation and Recognition

The survey asked respondents "Do graduates from your program(s) qualify for professional registration?" and "Is this designation/title protected by provincial or territorial legislation?" An overwhelming number of respondents answered yes to both questions despite the fact that the government in their province/territory does not regulate their professional discipline. It was interesting to compare responses with the provincial/ territorial legislation of the respondent. Homeopathy and herbal medicine are not regulated nor do they have professional registration in any province or territory in Canada. In addition, traditional Chinese medicine is

only regulated in BC but acupuncture is regulated in both BC⁸ and Alberta⁹. Naturopathy is regulated in five provinces: Alberta¹⁰, British Columbia, Saskatchewan, Manitoba and Ontario¹¹. Massage therapy is regulated in British Columbia¹², Newfoundland¹³, and Ontario¹⁴. Chiropractic is the most regulated with government legislation in every province and the Yukon territory¹⁵. Why does this discrepancy exist between existing legislation and public/ societal/ institutional perception? This observation was brought forward for discussion at the second meeting with the Advisory Committee. It was suggested that while there is a legal difference between regulation and registration with a professional regulatory body (government rules and policies), and recognition (acceptance of a discipline by society), respondents might feel that their profession is well recognized within the province (as indicated by prevalence of public use or current popularity) and that understanding and awareness of regulation is a low priority for them. Similar themes emerged during the interviews, with interviewees suggesting that absence of regulation may not influence opportunities for clinical practice, but did hinder the potential of a sustainable research program.

Figure 5 - Indication of Research Curriculum in CAHC Programs



Educator Qualifications

The qualifications and experience educators had developing and delivering research curricula was diverse. Teachers were reported to have credentials ranging from undergraduate

⁸ Government of British Columbia. (2004). Legislation and professional regulation: Traditional Chinese medicine and acupuncture [WWW Document]. URL www.hlth.gov.bc.ca/leg/notice/acupuncture.html.

⁹ Government of Alberta. (2003). Health professions act [WWW Document]. URL www.qp.gov.ab.ca/documents/Acts/H07.cfm?frm_isbn=0779725336.

¹⁰ Government of Alberta. (2003). Health professions act [WWW Document]. URL www.qp.gov.ab.ca/documents/Acts/H07.cfm?frm_isbn=0779725336.

¹¹ Canadian Naturopathic Association. (2004). Naturopathic doctors [WWW Document]. URL www.naturopathicassoc.ca/dr.html.

¹² Government of British Columbia. (2004). Health professions act [WWW Document]. URL www.qp.gov.bc.ca/statreg/stat/H/96183_01.htm.

¹³ Government of Newfoundland. (2003). Massage therapy act [WWW Document]. URL www.gov.nf.ca/hoa/statutes/m01-1.htm.

¹⁴ Government of Ontario. (1991). Regulated health professions act [WWW Document]. URL http://192.75.156.68/DBLaws/Statutes/English/91r18_e.htm.

¹⁵ The Canadian Chiropractic Association. (2004). The chiropractic act: Province by province [WWW Document]. URL www.ccachiro.org/client/cca/cca.nsf/web/The+Chiropractic+Act:+Province+by+Province!OpenDocument.

science degrees to Ph.D. Some schools believed that experience conducting research was not necessary in order to be able to teach about it, while others had a mandatory requirement of their teachers to participate in research. Teachers were often cross-credentialed, holding multiple degrees or accreditation, although rarely in education. This diversity in teacher experience in research education tended to extend to curriculum development in general, and is likely a strong influence on a schools ability to address research literacy.

Access to Information

The survey asked about student access to library and other informational resources including the Internet. This is a complicated issue and directly affects the potential for schools to implement a research curriculum successfully. The majority of respondents indicated that students have access to library resources. Similarly, the majority of programs or schools indicated students had access to the Internet. The survey did not include other questions about student access to specific alternative medicine or conventional medical/social science databases. This issue was explored more thoroughly through the interview process (see Table 1).

Table 1: CAHC Student Access to Internet

Percent of Internet Access	70 up to 80	80 up to 90	90 up to 100	100	Not Answered
Number of Respondents	3	3	3	23	5

Results of Qualitative Interviews

Background

Between February 26 and April 14, 2003, 25 telephone interviews were conducted with a select sample of survey respondents. Barbara Findlay, Project Coordinator conducted all but two of the interviews. A francophone research assistant, under the direction of the Project Coordinator conducted two interviews in French using the same tools. Criteria for selecting potential interviewees included one or more of the following: expressed enthusiasm towards increasing research literacy within a discipline (by survey response and preliminary telephone contact); evidence of existing research curriculum or expressed plans to develop (by survey response); and evidence of an existing ‘sustainable research program’ within the school (by survey response). Every effort was made to interview the individuals from participating schools who were responsible for developing and/or teaching research content. The purpose of the interviews was to gain depth of understanding about the evolution of the school’s research curriculum, about the facilitators and barriers experienced as part of that process and about the reasons many schools do not offer research literacy skill development as part of their core curriculum or continuing education programs.

The Interview Tools

The interviews were conducted in a semi-structured format. The researcher used a defined set of questions (that largely mirrored the Survey Tool) to provide a consistent framework for the interviews, but referred to the participant’s preliminary written survey to prompt expanded explanations or clarification of information provided (*Appendix F: Interview Tool*). Questions were organized under six basic headings according to ‘schools with research curricula’ and ‘schools without research curricula’ as follows:

I. About You – If the person interviewed was different than the person who filled out the survey, demographic information was collected from the interviewee.

II. About Your School – Participants were asked if they would like to clarify or add to the information they provided on the survey. They were prompted to elaborate on things like length and scheduling of the programs offered, pre-requisites for entry, continuing education curricula and student access to resources such as library and Internet.

III. Research Curriculum – Participants from schools with research curricula were asked if they would like to clarify or add to the information they provided on the survey. With prompting, they reported details of research-related instruction and types of resources used to support the programs. The researcher also confirmed whether they were willing/ able to share copies of their research curriculum, course outlines and/or teaching aids. Participants from schools without research curricula were asked to elaborate on their interest (or lack of interest) in developing one in the future.

IV. About Your Research Teachers – Participants were asked if they would like to clarify or add to the information they provided on the survey. With prompting, they would describe the experience and academic preparation of the research teachers, their involvement in applied research and other issues related to faculty recruitment and ongoing professional development.

V. Research Competencies – Using the *Research Literacy Competency Assessment Tool* (Appendix G), participants were guided through a self-assessment of their schools to determine if their students receive instruction in any of 10 identified core research literacy competencies, the expected student target level for each competency, the instructional method used and method(s) of evaluating mastery of each competency. Participants were coached to use a five-level scale for identifying the target level of competency (*Appendix H: Criteria for Assessing Level of Competency*) and when possible, were sent a copy of the scale electronically ahead of time so they could refer to it during the interview. The criteria was adapted from the College of Massage Therapists of Ontario (CMTO) Self Assessment Tool¹⁶ and provided a baseline for comparing research curricula across schools and disciplines. The competencies for research literacy were designed by Trish Dryden, PI, Rona Achilles and a consortium of CAHC educators, researchers, regulators and associations for a Human Resources Development Canada funded pilot research project entitled - Research Literacy for Complementary and Alternative Health Care Practitioners: An Online Course and conducted at Centennial College¹⁷.

VI. Strengths, Challenges and Next Steps- All participants were asked about the strengths and challenges they experienced related to the development of research education. Schools with research curricula were prompted to discuss any successful strategies they had used involving academic partnerships, collaborations or infrastructure-building initiatives, and to discuss specific challenges such as resource shortfalls and faculty education. They were also asked whether or

¹⁶ College of Massage Therapists of Ontario. (2004). *Self assessment tool* [WWW Document]. URL www.cmto.com/about/down.htm.

¹⁷ Dryden, T. & Achilles, R. (2003). Continuing education THER705: Research literacy for CAHC practitioners: An online course. Scarborough, ON: Centennial College.

not research courses offered at their school had led to a sustainable research program and what would be useful next steps to help develop increased research literacy and capacity. Along with the challenges they had experienced, participants from schools without research curricula were asked what would be a useful next step in helping to develop increased research literacy and capacity.

Identifying Themes Using ‘Readiness’ as a Framework

While there was tremendous diversity among the interviewee responses, both between schools and across disciplines, the concept of ‘readiness’ emerged as a means of predicting the existence of research curriculum and/or research program within a particular school and in some cases, across a whole discipline. ‘Readiness’ is a concept that is increasingly used in the literature on change theory^{18, 19} and, in this context, provided a useful framework for organizing and discussing the themes that emerged from the interviews. Identifying ‘degrees of readiness’ also allowed for a primary comparison of research literacy development between schools across a hypothetical continuum. It allowed us to begin to compare ‘apples with apples’ and ‘oranges with oranges’ in terms of research literacy initiatives.

The three major themes that emerged were *institutional readiness* in CAHC schools to develop and deliver research curricula and support a program of applied research, *societal readiness* by province/territory to recognize and regulate CAHC professions and academic institutions, and the degree of *professional readiness* within each of the disciplines studied. Using these major themes as the framework, this report identifies recurrent discussion threads that emerged from the interviews. These threads were recurrent across disciplines and regions and generally involved a description of issues and/or individual experiences that reflected institutional, societal and professional perspectives on research literacy.

In addition to the discussion threads that emerged specifically around research literacy and professional readiness, several other key findings emerged that were related to the development and delivery of curriculum in general among the study population of schools. These findings have been incorporated into the report under the theme of *professional readiness*, as the research team felt that they provided valuable context for interpreting results.

Institutional Readiness

Institutional readiness refers to the basic infrastructure requirements and sometimes more subtle characteristics of an organization’s culture that respondents believe influence their school’s ability to teach research literacy skills. As part of the interview process, all respondents were asked to elaborate on the information they provided generally ‘about their school’. Five of the respondents’ schools/programs were located within a publicly funded community college or university-college. The others were all private vocational schools. Respondents raised pros and cons for each, and comments were not always in support of the system they were in. College infrastructure was generally seen to support earlier adoption of research curriculum because of accessibility to faculty with research expertise to either teach courses or mentor other faculty within the program budget. Private vocational schools tend to contract research teachers on an

¹⁸ Dalton, C.C. & Gottlieb, L.N. (2003). The concept of readiness to change. *J Advanced Nurs*, 42(2), 108-17.

¹⁹ Findlay, B. & Verhoef, M.J. (2003). Operationalizing the concept of optimal healing environment in clinical settings: The importance of ‘readiness’. In press.

hourly or sessional basis and cost recover this expense directly from student fees. Several perceived this as a significant barrier to implementing research curriculum where it did not already exist. Some respondents also indicated that colleges were more likely to have research as an embedded organizational value, and therefore provide faculty with release time to engage in research themselves or mentor students in an applied research program. Private vocational school faculty tended to volunteer their time for applied research activities.

Respondents from private vocational schools also cited ‘nimbleness’ as a benefit and felt that they could ‘change their curriculum on a dime’ if required for fiscal or educational reasons. Because colleges had greater bureaucracy to navigate, curriculum change was perceived as occurring at a much slower rate and requiring significantly more preparation and defence in some cases.

Another cited benefit of a college infrastructure was libraries, resource centers and Internet access for all students. Assistance from professional librarians and library technicians is more available to students and faculty in college environments, as is the ability to conduct thorough literature searches and document retrieval at a reasonable cost. With the exception of two or three of the larger, more established institutions, libraries and resource centers in private vocational schools were described by respondents as being less than adequate; made up largely of donated books; unable to sustain the annual expense of journal subscriptions or professional (librarian) support. One research teacher noted that the teacher’s home library far surpassed anything that students had access to.

Two significant discussion threads emerged among schools that offered research curriculum and had a research program they believed to be sustainable. The first was a tendency to describe their school as having an ‘evaluation culture’ or a school that ‘values research’ as evidenced by active participation in applied research activities internally and/or seeking external research partnerships and joint projects with mainstream academia. Internal applied research activities most often included generating and collecting health history information and outcomes data through the school’s clinic. The second was the influence of strong, ‘hands on’ research leadership over time. One respondent noted how critical it was to employ research teachers who had the skill, knowledge and experience to ‘walk the talk’ - which was defined as ‘a demonstrated ability to propose, design, conduct and write up a study from start to finish.’

Among those schools with research curricula, faculty skills and ability varied widely by respondent description. They ranged from Ph.D.s with extensive applied research and teaching experience in conventional medical settings, to a business professional (MBA) with a background in statistics, to one administrator/teacher who stated, “I have never taken a research course in my life”.

Financial stability as a pre-requisite for implementing research curriculum and a research program was a common discussion thread across all disciplines and was often linked to a discussion about values. Respondents indicated that if they worked in schools where research and evaluation were identified as organizational values and embedded in the mission statement and/or promotional literature – the cost of teaching research was not separated out, but rather integrated with the whole curriculum. In schools where research was not outwardly valued, research courses were viewed as ‘icing on the cake’ and in some cases, an unnecessary expense

to the school and the students. In several cases, research literacy was seen as ‘nice to know’ content compared with the ‘need to know’ clinical content and finding room for it in the core curriculum proved to be challenging for some. In smaller private vocational schools where the owner was also likely to be the teacher, clinician and administrator – contracting a research instructor to address the gaps was often outside of the owner/administrator’s fiscal reality. At least three of the respondents pointed out the professional and often moral dilemma that owner/teachers faced when having to choose between operating a profitable school and meeting professional standards for (research) education. They described this as the conflict between ‘educational ethics and reality’.

Table 2: Institutional Readiness in Publicly Funded Programs versus Private Vocational Schools: A Summary of Advantages and Disadvantages

	Advantages	Disadvantages
Publicly Funded CAHC Programs in (Community) Colleges	<p>Accessibility of faculty with research expertise and availability to mentor/teach within the program budget</p> <p>Research usually imbedded as an organizational value</p> <p>Access to libraries, specialized resource centers and Internet for all students; document retrieval at reasonable cost; infrastructure more likely to support journal and electronic data base subscriptions</p>	<p>Greater bureaucracy to navigate – curriculum change slower</p>
Private Vocational CAHC Schools	<p>Ability to ‘change curriculum on a dime’ – less bureaucracy to navigate</p>	<p>Generally contract research teachers on an hourly basis and recover cost directly from student fees</p> <p>Faculty’s involvement in applied research activities tends to be on volunteer basis – can be inconsistent</p> <p>Challenge to build sustainable libraries due to cost</p>

Societal Readiness

Just under half of the interview respondents live in provinces where they are not members of a regulated health profession. Because professional regulation is provincially/territorially mandated and varies greatly from province/territory to province/territory, study respondents across disciplines expressed frustration at the relationship between regulation and research literacy. Many of them asked the question, “Which comes first, professional regulation or research literacy?” Anecdotally, respondents shared stories of academic and professional discrimination they had experienced first hand. For example, students in most provinces who are enrolled in a four-year doctor of traditional Chinese medicine program are ineligible for

government sponsored tuition support (bursaries) or student loan programs because their studies are in an unregulated field. There is a perception that students will migrate to provinces where the profession is regulated to benefit from this type of financial support during their education. It is difficult to ascertain the accuracy of this perception, as there are no statistics available to support or refute it. This situation is viewed as a serious detractor for research literacy, as society in general does not equally value research findings from unregulated professions or those who practice outside of the dominant Western medical system. There is little academic motivation and even less financial motivation to include research instruction and experience as part of a core curriculum, when there is little opportunity to pursue it beyond the doors of the school following graduation.

Market trends and student preferences emerged as strong influences on the modification of program length and subsequently core curriculum. Competing societal values of evidence-based practice and professionalism with entrepreneurship and business profitability are leading to a concept of 'levelling' among professional disciplines. Respondents were able to describe examples of this phenomenon, several with personal experience in their own schools. As baby boomers spend more on lifestyle-oriented recreation and relaxation becomes a commodity more people are willing to pay for – 'spa massage' or 'relaxation massage' is developing as a non-professional branch of massage therapy. The programs are significantly shorter (400 hours as opposed to 3000) and expectations for research literacy and an evidence-based approach by providers are dramatically decreased. Interview respondents noted that discussion with professional associations has yet to address the modification of competency documents and expectations of graduates from these emerging, shorter programs.

Competition for students among CAHC schools is another example of how student preferences and market trends have the potential to affect research literacy. Respondents note that cost and location, rather than quality of education is often the motivation for students to choose one program over another. Students are challenged to compare quality across schools when it is not clearly defined and there is little consistency among curricula. It is much easier for them to compare cost and length of program, and they often opt for the shortest, least expensive program. Some respondents who were owners/administrators/teachers of small, private vocational schools worried that by adding research curricula to a program (length and cost), they were increasing the risk that students would go elsewhere to study.

Pre-requisites for acceptance into a program also varied widely both within and across disciplines, and ranged from requiring completion of grade 12 to requiring an undergraduate science degree. During the section of each interview where respondents were asked to compare their research curricula with a set list of core competencies for research literacy, the issue of pre-requisite knowledge and skills came up frequently. Some schools do not offer research instruction within the curriculum, as there is an assumption (based on pre-requisite requirements) that their students are 'research literate' when they entered the program. Other schools expect that students who were not research literate would take a course on their own time, outside of the school, to meet the expectations. Still others worked from a more limited definition of 'research' that meant "looking up information using a variety of resources", and expected that their students would learn to review the literature through a hands-on approach (trial and error) or under the tutelage of school librarians or resource center staff when they were accessible.

Professional Readiness

Cohesiveness of the separate disciplines around professional standards of practice, education and research came through as a significant discussion thread in at least half of the interviews. Teachers of traditional Chinese medicine and acupuncture, naturopathic medicine, homeopathy and other holistic modalities such as aromatherapy and Reiki were among those respondents who described a ‘split’ in the value system of their discipline. Often this split was seen as originating around the research literacy issue and served to propel the discipline further towards, or further away from the standards for research set by conventional Western medicine. It was of interest to note that all the respondents who raised this point identified with the segment of their professional peers who were moving towards research standards set by Western medicine.

The existence of provincial or national competency guidelines (such as the research literacy competencies being developed by a national consortium of CAHC educators, researchers, regulators and associations principally for massage therapy schools) tended to positively influence the respondents understanding of research literacy and competency based learning in general, and was also a predictor, by discipline, of implementation of research curriculum. When comparing across the disciplines included in this study, massage therapy and chiropractic school(s) were most likely to use a competency-based approach to instruction delivery and curriculum development. Whether their school had implemented a research curriculum or not, every massage therapy teacher interviewed was aware of the professional standards being set for research education.

An additional theme that emerged was the relationship between faculty education and experience related to curriculum development and delivery in general (e.g. knowledge of competency-based approach) and the development of research curricula. The interviews revealed considerable diversity of instructional methods and teacher “readiness” to develop research curricula. The emergence of innovative learning models amongst some schools will be further explored in the second phase of this research. One respondent discussed self-evaluation of overall research literacy within a particular professional discipline as an indicator of success and professional maturity. This person suggests that a profession will only be willing to rigorously measure the existence of research literacy knowledge and skills among graduates once it has fully committed to developing research literacy as a core competency. The respondent goes on to suggest that one of the real barriers to research literacy is a fear of exposing the ‘status quo’ of the school and/or the profession and admitting what initiatives and strategies haven’t worked in the past. True evidence-based research education would be the outcome of ‘instruction delivery trials’ versus the more common ‘expert consensus model’ of planning and evaluating research curriculum and instructional methods.

A large amount of descriptive data was collected from the schools that participated in this study about the length of research education offered, timing/location of the instruction within the overall program, teaching methods, learning activities and evaluation strategies. Analysis of that data reveals that there are no common practices within or across disciplines when it comes to offering research education and that decisions made about when, how and where to teach about research are varied and may be influenced by any number of the ‘readiness’ factors identified in this report.

Another issue that was raised by five of the respondents pertains to the ‘articulation skills’ of program graduates and sustainability of a discipline-wide research agenda. One respondent struggled to characterize the issue without resorting to unnecessary stereotyping. The respondent described at length the diversity of qualified applicants to a massage therapy program and their career aspirations. A 50-year-old laborer with a grade 12 education, who is seeking a second career that is more ‘lifestyle-oriented’, may not have the motivation, skills or academic ability to publish research papers, present at conferences and provide leadership for advancing research in massage therapy. They pointed out that attracting young academics into the CAHC healing professions in order to build research capacity is not a simple matter.

Conclusions: Building on Opportunities, Overcoming Challenges

Qualifications and competence, both pre-certification and once in practice, is one of the most important characteristics of a self-regulating profession²⁰. Within a given discipline, this is usually achieved by establishing standards for education and/or core curricula based on required competencies for that profession.

Previous studies and other initiatives funded by the NHPD/Health Canada to inform and strengthen the NHPRP and increase research capacity have recommended a collaborative approach to research curricula development and continuing education for faculty who design and teach research courses across CAHC disciplines. Suggested approaches have included identification of core research competencies for CAHC practitioners and a process for developing common research literacy curricula that might be accessed by a variety of CAHC schools/programs towards the goal of increasing research capacity in this field.^{21,22}

Phase I of this study was originally conceived as a means of identifying core competencies for research literacy and Phase II as a venue for gathering consensus among CAHC research teachers and promoting collaboration towards a common, core curriculum as well as supporting the continuing education of these teachers. It became apparent as the study progressed, however, that identifying the core competencies for research literacy through the comparison of curricula across schools and disciplines was not only difficult due to the diversity, but also secondary to understanding the context (opportunities and challenges) and issues surrounding development and delivery of research curricula amongst a cross-section of CAHC.

By using a ‘readiness’ framework to assess the institutional, societal and professional readiness of a school and/or discipline to offer research education, many common gaps and needs were identified. In addition to creating a comprehensive list of CAHC schools and teacher/leaders in research education, identification of these opportunities and challenges was the main outcome of this study. Adopting strategies to support and strengthen schools/disciplines and overcome challenges in order to achieve the educational maturity of self-regulating

²⁰ BC College of Teachers. (2004). Understanding professional self-regulation in British Columbia [WWW Document]. URL http://bcct.ca/documents/underst_self_regulation.pdf.

²¹ Williams, J., Mulkins, A., Verhoef, M.J., Monkman D., & Findlay, B. (2002). *Needs assessment: Research literacy and capacity amongst complementary and alternative health care providers*. Perspectives on Natural Health Products – Natural Health Products Directorate, Health Canada, 14-5.

²² Achilles, R., & Dryden, T. (Summer, 2002). Research literacy: results of a national needs assessment survey. *Hand in Hand*. The Newsletter of the Canadian Massage Therapists Alliance, 4-13.

professions appears to be a necessary precursor to developing and implementing curricula in research literacy.

The following is a summary of the key opportunities and challenges that emerged during the study and which have the potential to inform future initiatives towards increasing research literacy and capacity within the NHP/CAHC sector:

Institutional Readiness

- Perceived differences in public vs. private institutions
- Evaluation and research values embedded in the culture of the school
- Financial stability
- Salaried teachers and teacher training
- Research literacy/capacity resources (libraries, designated research librarians, computers, Internet and database access)

Societal Readiness

- Provincial/territorial regulation or recognition
- Accreditation and availability of student bursaries
- Primacy of the Western, evidence-based approach to health practice
- Market driven trends – public utilization and graduate employment, business profitability and competitiveness between schools
- Student preferences – shorter and more affordable programs, closer to home

Professional Readiness

- Standards of practice
- Competency-based guidelines
- Pre-requisite educational level for entry to programs
- Diversity of instructional design and delivery
- Innovative learning models

In this phase of the study we have chosen not to attempt to identify the status of research literacy and capacity by discipline or to identify discipline-specific solutions to observable gaps in research literacy and capacity. We are aware that each of the six disciplines in this study may appear, at first glance, to be at different places along the whole readiness continuum; from disciplines that have very little formal research curricula to disciplines that have well-developed applied research departments. Nor is it our intent to create a false benchmark for change and growth by reporting our findings collectively amongst the disciplines. We are aware that ‘one size does not fit all’ in terms of the next steps that will need to be taken to increase research literacy and capacity by individual disciplines. However, identifying which disciplines appear on the surface to be ‘farther ahead’ in readiness, we believe, is both potentially divisive, as it unintentionally sets up a false hierarchy amongst the disciplines, and untrue, at a deeper level of analysis. Disciplines which appear to be the most developed in terms of research literacy may also be less developed in competency-based curricula and innovative educational methods. No individual discipline has it all together. We wish to go forward to Phase II of this study, the invitational conference, in the spirit in which this report was written – to build opportunities and overcome challenges, wherever possible, in a collaborative and multidisciplinary fashion.

Phase II: The Conference

The next phase of this project is to facilitate an invitational meeting of key CAHC and conventional educators and stakeholders, at Centennial College on June 4-5, 2004, entitled: *Building Opportunities, Overcoming Challenges: Increasing Research Literacy and Capacity in CAHC Education in Canada*. The objectives of the conference are to:

- Confirm and expand upon findings from Phase I of the study – themes, opportunities and challenges;
- Provide networking and learning opportunities for conference participants related to research literacy and capacity building;
- Explore issues related to research curriculum development: core competencies for research literacy, readiness factors and potential for interdisciplinary collaboration;
- Propose a strategic plan that will strengthen opportunities and overcome challenges related to developing research literacy/capacity in the NHP/CAHC sector. (*Appendix I: The Conference Invitation, Appendix J: Proposed Agenda for Conference*).

Appendix A: Advisory Committee Contact List and Terms of Reference

Member Name	Title	Contact Number	Contact Email
Amanda Baskwill, RMT	Registered Massage Therapist and Independent Research Assistant	416.692.4768	amanda.baskwill@sympatico.ca
Heather Boon, B.Sc.PhM, PhD	Assistant Professor in the Leslie Dan Faculty of Pharmacy, Departments of Family and Community Medicine and Health Policy Management and Evaluation, Faculty of Medicine, University of Toronto	416.946.5859	heather.boon@utoronto.ca
Stacey Croft	Policy Analyst, Natural Health Products Directorate, Health Canada	613.941.5858 FAX 613.946.1615	Stacey_Croft@hc-sc.gc.ca
Trish Dryden, RMT, M.Ed.	Coordinator of Massage Therapy Research and Development, School of Applied Arts and Health Sciences, Centennial College	416.289.5000 (ext: 8056) FAX 416.289.5169	tdryden@centennialcollege.ca
Barbara Findlay, RN, BSN	Consultant Integrative Health Care	604.271.1767	barbarafindlay@shaw.ca
Gillian Leverkus, PhD	Herbal Medicine Practitioner and Consultant	250.743.6627	healer@islandnet.com
Edward Mills, DPH (cc)	Director, Research, The Canadian College of Naturopathic Medicine	416.498.1255 (ext. 324)	emills@ccnm.edu
Silvano Mior, DC, FCCS (C)	Dean of Research and Graduate Studies, Canadian Memorial Chiropractic College	416.482.2340 (ext. 132)	sil.mior@moh.gov.on.ca
Joan Simpson	Senior Policy Analyst, Natural Health Products Directorate, Health Canada	613.952.6670 FAX 613.946.1615	Joan_Simpson@hc-sc.gc.ca
Marja Verhoef, PhD	Professor, Department of Community Health Sciences, University of Calgary	403.220.7813 FAX 403.270.7307	mverhoef@ucalgary.ca
Rudi Verspoor, FHCH, R.Hom., HD	Director, Hahnemann College of Heikunst	613.692.6950	rudiverspoor@rogers.com
Mary Wu, MD (China, TCM), M.Sc., Dipl. Acu, & C.H. (NCCAOM)	President, Toronto School of Traditional Chinese Medicine	416.782.9682 FAX 416.782.9681	maryxwu@tstcm.com

Terms of Reference for the Advisory Committee

Responsibilities

The Advisory Committee will:

1. Provide feedback and advice on the Survey/Interview Tool and methodology to be used in the study
2. Help the Project Coordinator to identify CAHC educational institutions and their educators who are involved in developing and delivering research curricula
3. Assist in planning Phase II of the project (a meeting of 20 Phase I study participants to develop a strategic plan towards increasing research capacity among CACH providers).
4. Respond to analysis of study data (Phase I)

5. Provide feedback on Discussion Paper (a meeting facilitation tool for Phase II) and the Final Report to the Funder

Membership

The Advisory Committee will consist of Trish Dryden, Principal Investigator, Marja Verhoef, Heather Boon and Silvano Mior, Co-Investigators, Barb Findlay, Project Coordinator and one representative with experience teaching/developing research curricula or studying research literacy from each of the following disciplines: naturopathy (Ed Mills), homeopathy (tba), traditional Chinese medicine/acupuncture (Mary Wu) and herbology (Gillian Leverkus).

Chair

The Principal Investigator and Project Coordinator will co-chair the Advisory Committee meetings

Meetings

There will be three meetings of the Advisory Committee as follows:

1. Early February 2004 – to confirm terms of reference, review/add to potential list of survey participants, give feedback on survey/interview tool, approve recruitment process and study methods
2. Early April 2004 – to provide feedback on 2nd draft of report for Funder and confirm recommendations made in the report
3. Late April/early May – to review and revise the agenda for Phase II meeting of educators and leaders.

Additional feedback/input may be solicited by email between meetings by Trish Dryden, PI, or Barbara Findlay, Project Coordinator.

Appointment Duration

Advisory Committee appointments will be for the duration of the study, which is January 1/04 - July 15/04.

Confidentiality

Committee members will respect the confidentiality of matters raised during meetings, phone calls and email, and will refrain from discussing/sharing study results without permission from Trish Dryden, PI, and/or Centennial College.

Appendix B: Ethics Review Approval

Trish Dryden
Massage Therapy
School of Applied Arts and Health Sciences
Centennial College
651 Warden Avenue
Scarborough, ON
M1K 5E9

January 29th, 2004

Dear Trish,

The Research Ethics Committee has reviewed your request to conduct a research project titled *“Research Requirement: Literacy Amongst Complementary and Alternative Health Care Practitioners”* which has received funding from the Natural Health Products Directorate of Health Canada. The project duration is from January 1, 2004 to July 15, 2004. The Committee feels that this project will be beneficial to both the college and the community and will advance knowledge and practice in the area of Complementary and Alternative Health Care. The committee has no ethical concerns with this study and is happy to give you permission to proceed with your project.

At the end of the project, please submit a copy of your report to the Research Ethics Committee.

If you have any questions regarding this letter of approval, please give me a call at 416-438-2216 ext. 6892.

Sincerely,

Eva Aboagye (PhD.)
Research Officer



CENTENNIAL COLLEGE

INFORMATION FOR STUDY PARTICIPANTS

**Research Requirement: Literacy Amongst
Complementary and Alternative Health Care (CAHC) Practitioners**

**A study to identify, describe and compare research curricula across CAHC educational
institutions/programs in Canada**

Principal Investigator: Trish Dryden, M.Ed., RMT.

Co-Investigators: Heather Boon, Ph.D., Marja Verhoef, Ph.D., Silvano Mior, DC

Project Coordinator: Barbara Findlay, RN, BSN

Dear Colleague:

Introduction

Thank you for considering taking part in Phase I of our project, *Research Requirement: Literacy Amongst Complementary and Alternative Health Care (CAHC) Practitioners*, a study to identify, describe and compare research curricula across CAHC educational institutions/programs in Canada. This study is the first phase of a two-phase project whose purpose is to develop a strategic plan to increase research literacy and capacity in the NHP/CAHC sector. The project is funded by the NHPD and sponsored by Centennial College, School of Applied Arts and Health Sciences. Other partners in this project include researchers from the University of Toronto, Faculty of Pharmacy, the Canadian Memorial Chiropractic College, and the University of Calgary, Department of Community Health Sciences.

We would like you to take a few minutes to read over the following information about the purpose and methods of research for this study and how it will involve you. Then, if you consent to participate in the study, please sign and return the attached consent form by fax (our preference) or mail to Amanda Baskwill, Research Assistant:

Fax: 416.694.5589 (**Attention:** Trish Dryden)

Mail: 3-1254 Davenport Rd
Toronto, ON
M6H 2G9

Purpose of the Study

Research literacy is defined in this study as 'understanding research language and its application to practice' and refers to the clinician's ability to locate, understand, critically evaluate and apply research evidence to practice. Research capacity refers to an individual or group's ability to identify gaps in knowledge, develop research proposals, secure funding and conduct research and communicate/publish results. A lack of research literacy (resulting in decreased research capacity) has been identified as a key barrier to CAHC practice and NHP research.

In order to continue to build research capacity in CAHC; support the conduct of research; develop partnerships and community infrastructure; and enhance information and retrieval and knowledge transfer, the Natural Health Products Directorate has funded us to conduct research:

- To compare research curricula amongst key CAHC disciplines;
- To develop a discussion document identifying priorities challenges and strategies amongst key CAHC groups.

Phase II of the project will build on Phase I study results and consist of a meeting between key CAHC and conventional educators and stakeholders to seek agreement on the core competencies of research literacy and to develop a long-term strategic plan for increasing research literacy/capacity in the NHP/CAHC sector.

You are being invited to participate in Phase I of this project only at this time.

Research Methods in the Study

20-30 participants will be asked to take part in a 1:1 semi-structured telephone interview that will last approximately 45 minutes. If you find it is not convenient to participate in a telephone interview, or if we have more willing study participants than we are able to interview, you may be asked to complete and submit a written survey made up of the same interview questions

As someone who is directly involved in the professional education of CAHC practitioners or conventional health care practitioners that are interested in CAHC, we will ask you a series of questions about research education at your educational institution/program. A copy of the questions will be sent to you in advance of the interview and will include the following:

- Does your institution/program offer stand-alone research courses? How long are the courses?
- Does your institution/program integrate research curricula in other courses or in clinical settings?
- Who develops research curricula at your institution? Who teaches it? What research content is being taught?
- Is the curriculum standardized around core competencies for research literacy?
- Have the courses contributed to a sustainable research program?
- Has your institution or its research educators been successful in building strategic relationships to strengthen research education?

You will be asked about the research-related learning needs and resource issues of the students and educators at your institution, as well as specific challenges or success strategies you have encountered.

We will also ask about your interest in participating in a network of CAHC research leaders and educators, and may request that you send us examples of research curricula or training materials you refer to in your interview or survey.

Finally, we will ask you for permission to contact you at the conclusion of the study if you meet the criteria for inclusion in Phase II of this project.

Confidentiality

None of the information collected will be used for any other purpose than this study. Although your name and the name of your school will accompany your completed survey and/or interview, you will remain anonymous and your name and your school's identity will not be linked without your permission to any of the research findings. In addition, your identity will only be known to the Principal Investigator, Trish Dryden, Project Manager, Barbara Findlay and Research Assistant, Amanda Baskwill. Only they will have access to the raw data. Your name will not be revealed to other participants in the study. Institutional policies regarding the sharing of intellectual property or copyright materials will be fully respected. All data, including audiotapes will be securely stored in both electronic and hard copy files and destroyed no later than seven years from the date of collection.

Withdrawal from the Study

Participants are free to withdraw from the study at any point.

Results of the Study

Interested participants may have access to the study results as they become available by contacting the Principal Investigator by email or telephone or by noting their preference in the appropriate place on the Consent Form.

Questions or Concerns about the Study

If you have any questions or concerns about the study please contact the Principal Investigator:

Trish Dryden, M.Ed., RMT
Email: tdryden@centennialcollege.ca
Phone: (416) 289-5000 ext.3636



CENTENNIAL COLLEGE

INFORMATION POUR LES PARTICIPANTS

Research Requirement: Literacy Amongst Complementary and Alternative Health Care (CAHC) Practitioners

Une étude qui a pour but d'identifier, de décrire et de comparer le curriculum d'enseignement des méthodes de recherches scientifiques dispensé par les écoles et/ou les programmes de santé alternative et complémentaire au Canada.

Principale instigatrice: Trish Dryden, M.Ed., RMT.

Co- instigatrices: Heather Boon, Ph.D., Marja Verhoef, Ph.D., Silvano Mior, DC

Project Coordonatrice: Barbara Findlay, RN, BSN

Cher(e) collègue:

Merci d'avoir accepté de faire partie de la première étape de notre projet, « Research Requirement: Literacy Amongst Complementary and Alternative Health Care (CAHC) Practitioners » une étude qui a pour but d'identifier, de décrire et de comparer le curriculum d'enseignement des méthodes de recherches scientifiques dispensé par les écoles et/ou les programmes de santé alternative et complémentaire au Canada. Le but de ce projet qui comporte deux étapes est d'aider la Direction des produits de santé naturels de Santé Canada à développer un plan stratégique pour augmenter la compréhension des méthodes de recherches scientifiques et ainsi permettre l'innovation dans ce domaine. Ce Project est subventionné par la Direction des produits de santé naturels de Santé Canada et parrainé par Centennial College, School of Applied Arts and Health Science. Nos autres partenaires sont des chercheurs de l'Université de Toronto, le département de pharmacologie, le Canadian Memorial Chiropractic College, et le département de Community Health Sciences de l'Université de Calgary.

Nous aimerions que vous preniez quelques minutes pour lire l'information qui suit concernant le but, les méthodes et le protocole de recherche de cette étude ainsi que l'implication liée à votre participation. Si vous acceptez de participer à l'étude, veuillez signer et retourner le formulaire de consentement par fax. Si vous êtes dans l'impossibilité de nous faxer le document, vous pouvez en dernier recours, nous l'envoyer par courriel au soin de Amanda Baskwill (assistante de recherche) :

Fax: 416.694.5589 (**Attention:** Trish Dryden)

Par la poste: 3-1254 Davenport Rd
Toronto, ON
M6H 2G9

Le but de cette étude

La compréhension des méthodes de recherches scientifiques (research literacy) est définie dans notre projet par la compréhension du langage utilisé dans les recherches scientifiques ainsi que

l'habilité à utiliser ce langage en pratique. Elle réfère donc à l'habilité du clinicien de trouver, comprendre, d'avoir l'esprit critique et d'appliquer des méthodes basées sur des données appuyées scientifiquement. D'autre part, l'innovation dans notre discipline passe par la création de nouvelles recherches scientifiques. Être capable de produire une recherche scientifique (research capacity) est définie par l'habilité d'un individu ou d'un groupe d'identifier les domaines qui peuvent bénéficier de plus de recherches, de développer une demande de recherche (research proposal), d'obtenir des subventions, de mener la recherche et de communiquer ou publier les résultats. Des lacunes dans la compréhension des recherches scientifiques (qui mène à la diminution de l'innovation en recherche) ont été identifiées comme étant la barrière clé dans le domaine des soins de santé alternatifs et complémentaires au Canada.

La Direction des produits de santé naturels de Santé Canada nous a donné une subvention pour nous permettre de continuer à augmenter la capacité de produire des recherches ; de supporter la mise en place des recherches ; de développer des partenariats et l'infrastructure et de mettre sur pied un réseau d'information dans le domaine des soins de santé alternatifs et complémentaires au Canada.

Les buts de notre étude sont :

- Comparer le curriculum d'enseignement des méthodes de recherches scientifiques (capacity, literacy) entre les principales disciplines du domaine des soins de santé alternatifs et complémentaires au Canada.
- Développer un document qui identifie les défis prioritaires et les stratégies à mettre de l'avant dans le domaine des soins de santé alternatifs et complémentaires au Canada. Ce document sera le point de départ d'une discussion entre les différents groupes oeuvrant dans ce même domaine.

La deuxième partie de notre projet consiste à réunir des professionnels du domaine des soins de santé alternatifs et complémentaires au Canada et des professeurs des soins de santé conventionnel, pour obtenir un accord commun sur des compétences à acquérir dans la compréhension des méthodes de recherche scientifiques et de développer un plan stratégique à long terme pour la direction des produits de santé naturels de santé Canada.

Pour l'instant, vous êtes invité à participer à la première étape de notre étude.

Protocole de recherche de cette étude

20-30 participants seront sollicités pour prendre part à une entrevue téléphonique semi-structurée d'une durée approximative de 45 minutes. Si une entrevue téléphonique ne vous convient pas ou si nous avons plus de participant intéressés à faire l'entrevue téléphonique que ce que nous sommes capable d'interviewer, nous vous demanderons de faire l'entrevue dans sa version papier.

Puisque vous êtes directement impliqué dans l'enseignement de votre profession, nous vous poserons une série de questions concernant l'enseignement des méthodes de recherches scientifiques à votre école. Vous recevrez à l'avance une copie des questions incluant celles-ci:

- Est-ce que votre programme offre un ou des cours de méthodes de recherches scientifiques ? Quelle est la durée des cours ?
- Est-ce qu'à l'intérieur des différents cours, le thème des méthodes de recherches scientifiques est abordé ?
- Qui est responsable de développer le curriculum d'enseignement des méthodes de recherches scientifiques à votre école ? Qui l'enseigne ? Quel est le contenu de ce ou ces cours ?
- Est-ce que le curriculum que vous offrez développe les compétences standards du domaine de la compréhension des méthodes de recherches scientifiques (research literacy) ?
- Est-ce que vos cours de méthodes de recherches scientifiques mènent à un programme spécifique en recherche ?
- Est-ce que votre institution ou les professeurs de méthodes de recherches scientifiques ont établi des liens stratégiques renforçant ce domaine ?

Nous allons vous poser des questions concernant vos besoins reliés à la recherche, les ressources disponibles pour vos étudiants et vos professeurs dans votre école, les défis particuliers que vous avez à surmonter ainsi que sur les stratégies que vous employées.

Nous vous demanderons également si vous êtes intéressé à vous impliquer dans un réseau composé de chercheurs et professeurs dans le domaine des soins de santé alternatifs et complémentaires au Canada. Il est possible que nous vous demandions de nous envoyer des exemples de curriculums de méthodes de recherches scientifiques ou du matériel didactique duquel vous nous avez parlé dans le sondage.

Finalement, nous vous demanderons votre permission de vous contacter à la fin de l'étude si vous correspondez aux critères pour participer à deuxième étape du projet.

Confidentialité

Aucun renseignement recueilli ne sera utilisé à d'autres fins que celles de la recherche. Même si votre nom et/ou le nom de votre école accompagne votre sondage complété et/ou l'entrevue téléphonique, vous resterez anonyme. Ainsi votre nom et le nom de votre école ne seront pas liés sans votre consentement aux résultats de la recherche. En plus, votre identité sera connue uniquement de l'instigatrice principale, Trish Dryden, coordonnatrice du projet, Barbara Finlay et l'assistante de recherche, Amanda Baskwill. Elles auront uniquement accès aux données brutes. Votre nom ne sera pas révélé à aucun autre participant de l'étude. Les lois sur la propriété intellectuelle seront pleinement respectées. Ainsi, toute l'information recueillie, incluant les cassettes audio sera entreposée de façon sécuritaire. Elle sera détruite à l'intérieur de 7 jours suivant la collecte des données.

Se retirer de l'étude

Les participants sont libres de se retirer de l'étude à tous moments.

Résultats de l'étude

Les participants intéressés pourront avoir accès aux résultats de la recherche dès qu'ils seront disponibles. Pour ce faire vous pourrez contacter Mme Trish Dryden par courriel ou par téléphone. Vous avez aussi la possibilité de noter votre intérêt pour les résultats dans la case prévue à cet effet sur le formulaire de consentement.

Questions à propos de l'étude

Si vous avez des questions ou des inquiétudes concernant l'étude, vous pouvez contacter l'instigatrice principale :

Trish Dryden, M.Ed., RMT

Courriel: tdryden@centennialcollege.ca

Téléphone: (416) 289-5000 ext.3636



CONSENT FORM

**Research Requirement: Literacy Amongst
Complementary and Alternative Health Care (CAHC) Practitioners**
**A study to identify, describe and compare research curricula across CAHC educational
institutions/programs in Canada**

I have read the attached information sheet on the study called “Research Requirement: Literacy Amongst Complementary and Alternative Health Care (CAHC) Practitioners”, funded by the Natural Health Products Directorate, Health Canada and sponsored by Centennial College, School of Applied Arts and Health Sciences, and **I agree to participate.**

None of the information collected will be used for any other purpose than this study. Although my name and the name of my school will accompany my completed survey and/or interview, I will remain anonymous and my name and my school’s identity will not be linked without my permission to any of the research findings. In addition, my identity will only be known to the Principal Investigator, Trish Dryden, Project Manager, Barbara Findlay and Research Assistant, Amanda Baskwill. Only they will have access to the raw data. My name will not be revealed to other participants in the study. Institutional policies regarding the sharing of intellectual property or copyright materials will be fully respected. All data, including audiotapes will be securely stored in both electronic and hard copy files and destroyed no later than seven years from the date of collection.

I understand that I may withdraw my consent to participate at any time without consequence.

I am also aware that I will be asked to participate in either a telephone interview or written survey and invited to share hard copy or electronic examples of research curricula or training materials I refer to in my interview/survey.

I understand that as a result of my participation in this study, I may be invited to participate in a second (non-research) phase of this project at a later date.

Please check off the following box if you would like a summary of the final report. ☐

Signed: _____ Date: _____

Name (please print): _____ Professional title: _____

Witness (signature): _____ Witness name (please print): _____

Participants contact information:

Address with postal code: _____

Phone _____ FAX _____ Email _____

PLEASE FAX or MAIL COMPLETED CONSENT TO Amanda Baskwill, Research Assistant:

Fax: 416.694.5589 (**Attention:** Trish Dryden)

Phone: 416.658-7471

Mail: 3-1254 Davenport Rd, Toronto, Ontario, M6H 2G9



Formulaire de consentement

Research Requirement: Literacy Amongst Complementary and Alternative Health Care (CAHC) Practitioners

Une étude de recherche qui a pour but d'identifier, de décrire et de comparer le curriculum d'enseignement des méthodes de recherches scientifiques dispensé par les écoles et/ou les programmes de soins de santé alternative et complémentaire au Canada.

J'ai bien lu l'information sur la recherche "Research Requirement: Literacy Amongst Complementary and Alternative Health Care (CAHC) Practitioners", subventionnée par la Direction Des Produits de Santé Naturels de Santé Canada et parrainée par Centennial College, School of Applied Arts and Health Sciences, et j'accepte de collaborer.

Tous les renseignements que je divulgue seront utilisés pour les fins de la recherche uniquement. Même si mon nom et le nom de l'école accompagnent mon questionnaire et la conversation téléphonique, mes informations personnelles demeureront strictement confidentielles. Les données obtenues seront traitées de façon globale ainsi, mon nom et le nom de mon école ne seront pas associés, sans ma permission, aux résultats dans le rapport de recherche.

Les seules personnes qui auront accès à mon identité sont les principales instigatrices du projet. Il s'agit de Mme Trish Dryden, Directrice du projet, Barbara Findlay et Amanda Baskwill/ Geneviève Nolet, assistantes de recherche. Les lois sur la propriété intellectuelle seront pleinement respectées. Ainsi, toute l'information recueillie, incluant les cassettes audio sera entreposée de façon sécuritaire. Elle sera détruite à l'intérieur de 7 jours suivant la collecte des données.

Je comprends que je peux me retirer du projet à tout moment et ce sans aucune conséquence. Aussi, je sais qu'on me demandera de participer à une entrevue téléphonique ou de remplir un questionnaire papier, et de partager une copie (papier ou électronique) de notre curriculum de méthodes de recherches scientifiques et des outils didactiques que je décris dans le questionnaire.

Je comprend qu'il y a une deuxième phase à ce projet à laquelle je serai peut-être invité à participer.

Veuillez cocher si vous désirez recevoir une copie de notre rapport final de recherche. ☐

Signature: _____ Date: _____

Nom (lettres détachées S.V.P.): _____ Titre professionnel: _____

Témoin (signature): _____

Nom du témoin (lettres détachées S.V.P.): _____

Mes coordonnées

Adresse avec code postal: _____

Tel: _____ FAX _____ Email _____

PLEASE FAX or MAIL COMPLETED CONSENT TO Amanda Baskwill, Research Assistant:

Fax: 416.694.5589 (**Attention:** Trish Dryden)

Phone: 416.658-7471

Mail: 3-1254 Davenport Rd, Toronto, Ontario, M6H 2G9

Research Requirement: Literacy Amongst Complementary and Alternative Health Care (CAHC) Practitioners

SURVEY

We know how busy administrators/educators are - so thank you very much, for taking the time to fill this survey out. You are taking an important step in helping to further CAHC research in Canada.

When you are finished please email, mail or fax it to our Research Assistant, Amanda Baskwill at:

Email: amanda.baskwill@sympatico.ca

Fax: 416.694.5589 (**Attention:** Trish Dryden)

Mail: 3 – 1254 Davenport Road, Toronto, Ontario, M6H 2G9

PART I: About You

1. Date: _____
2. Your name: _____
3. Your title at work: _____
4. Your professional affiliation/ discipline: _____
5. Your role (administrator, teacher, researcher, practitioner): _____
6. Length of time in present position/role: _____

Contact Information:

7. Address (with postal code): _____
Telephone: _____ FAX: _____
Email(s): _____
8. Preferred method of contact: _____

PART II: About Your School

9. Name of your school/institution/program: _____

10. Address (including postal code): _____

Telephone: _____ FAX: _____

Website and/ or email: _____

11. Established in what year? : _____

12. Students who graduate from your school receive a (check one):

a. Diploma ☐

b. Certificate ☐

c. Degree ☐

d. Other (please describe) _____ in _____

13. If you offer more than one kind of program in CAHC therapies in your school please list:

14. What is the length of your professional training program(s)? _____

15. Is your program(s) part time? Yes ☐ No ☐ AND/OR Full time? Yes ☐ No ☐

16. If your program(s) is part time, please describe how the program(s) is delivered.

Some examples of how to answer this question are: "one three hour class per week in the classroom and 4 hours per week home study" or "instruction is online only, 4 hours per week, for 10 weeks"

17. Is it your student's choice to attend part time OR full time? Yes ☐ No ☐

18. Do you have a continuing education program(s)? Yes ☐ No ☐

19. Do graduates from your program(s) qualify for professional registration? Yes ☐ No ☐

20. With which professional body(ies) would they be registered? _____

21. What designation(s) or title can they use following registration? _____

22. Is this designation/title protected by provincial or territorial legislation? Yes ☐ No ☐
23. Do your students have access to a library at your school? Yes ☐ No ☐
24. Do your students have access to the Internet at your school? Yes ☐ No ☐
25. What percentage of the students at your school has access to the Internet (either through school or their own)? _____

PART III: About Research Curriculum

26. Does your school offer any courses/instruction in research in your professional training program(s)? Yes ☐ No ☐ If yes, please describe: _____

If your answer is **Yes**, please answer *questions 27-32* and skip question 33. When you have completed these questions, please answer Part IV & V.

If your answer is **No**, please skip questions 27-32 and answer *question 33*. Please skip Part IV and answer Part V.

27. If your school does offer courses/instruction in research in your professional training program, at what point in your curriculum is this research education offered? _____

28. Does your school offer research-related instruction/content in other parts of the curriculum (e.g. as part of other courses, such as anatomy or theory classes, or in clinical settings, etc)? Yes ☐ No ☐ If yes, please describe: _____

29. At what point in your curriculum are research instruction/courses offered? Please describe:

30. Are research courses offered as part of a continuing education program? Yes ☐ No ☐ If yes, please describe: _____

31. What resources do you use (texts, visual aids, etc.)? _____

32. Would you be willing to provide us with copies of your:

a. Research curriculum Yes ☐ No ☐

b. Course outlines Yes ☐ No ☐

c. Teaching aids Yes ☐ No ☐

33. If your school does not offer courses/instruction in research in your professional training program, can you describe why (e.g. time, resources, interest, not applicable to your professional training program etc.)? Please be frank. _____

PART IV: About Your Research Teachers

In this next section of the survey we are trying to identify key teachers and leaders in research education in the CAM professions across Canada.

34. Who teaches your research courses? (Provide names, titles, and professional designation/affiliation if known)

35. What is their area of educational expertise and research focus (e.g. clinical research, bench research, health services research ...)?

36. Does your school offer its faculty any professional development in research literacy?

Yes ☐ No ☐ If yes, please describe: _____

PART V: Next Steps

A. If you answered questions 27-32 in Part III:

37. Would you be interested in being contacted by us by phone, to discuss more details about your research curriculum? Yes ☐ No ☐

38. Generally, when is a good time to contact you by phone during the week? _____

Or

B. If you answered question 33 in Part III:

39. Would you be interested in being contacted by us by phone to discuss your interest in developing research curriculum? Yes ☐ No ☐

40. Generally, when is a good time to contact you by phone during the week? _____

THANK YOU AGAIN FOR YOUR TIME!

If you agreed to a phone conversation, we will be contacting you before March 15, 2004.

Research Requirement: Literacy Amongst Complementary and Alternative Health Care (CAHC) Practitioners

Questionnaire

Nous savons combien les professeurs et administrateurs sont occupés alors nous tenons à vous remercier de prendre le temps de répondre à ce questionnaire. En collaborant à notre recherche, vous choisissez de faire parti d'un projet qui aidera le développement des soins de santé alternatifs et complémentaires (CAHC) au Canada.

Une fois complété, le questionnaire peut être acheminé par courriel, par fax ou par la poste à notre assistante de recherche Amanda Baskwill.

Email: amanda.baskwill@sympatico.ca

Fax: 416.694.5589 (**Attention:** Trish Dryden)

Adresse: 3 – 1254 Davenport Road, Toronto, Ontario, M6H 2G9

Section 1: Renseignements généraux

1. Date: _____
2. Votre nom: _____
3. Votre poste (titre professionnel): _____
4. Votre affiliation professionnelle/discipline: _____
5. Votre fonction (administration, professeur, chercheur, etc.): _____
6. Depuis combien de temps occupez-vous ce poste/fonction?: _____

Vos coordonnées

7. Adresse (avec code postal): _____
Téléphone: _____ FAX: _____
Courriel(s): _____
8. Par quel moyen préférez-vous être contacté? : _____

Section II: Votre École/Programme

9. Nom de votre école/institution/programme: _____

10. Adresse (avec code postal): _____

Téléphone: _____ FAX: _____

Site Internet et/ou courriel: _____

11. Votre école a été fondée en qu'elle année? : _____

12. Une fois le programme complété, vos finissants reçoivent quel type de diplôme ?
(Ex : DEC en acuponcture)

13. Si vous offrez plus d'un programme dans le domaine des soins de santé alternatifs et complémentaires, décrivez-les brièvement:

14. Qu'elle est la durée de votre programme(s) d'études professionnelles? _____

15. Est-ce qu'il peut être suivi à temps partiel?

Oui ☐ Non ☐ ET/OU temps plein? Oui ☐ Non ☐

16. Si votre Programme peut être suivi à temps partiel, décrivez comment les cours se donnent. (Exemples : 3 heures de classe 1 fois par semaine et 4 heures de travail personnel, cours sur Internet sur 10 semaines, etc.) _____

17. Vos élèves ont-t-ils le choix de suivre leurs cours à temps plein ou à temps partiel ?

Oui ☐ Non ☐

18. Offrez-vous un programme de formation continue ? Oui ☐ Non ☐

19. Est-ce que vos finissants sont admissibles aux ordres professionnels ? Oui ☐ Non ☐

20. À quel(s) ordre(s) peuvent-ils se joindre ? _____

21. Quel sera leur titre une fois enregistré dans un ordre professionnel ? _____

22. Est-ce que ce titre est protégé par la loi provinciale ou territoriale? Oui ☐ Non ☐

23. Est-ce que vos élèves ont accès à une bibliothèque à l'école ? Oui ☐ Non ☐

24. Est-ce que vos élèves ont accès à Internet à l'école ? Oui ☐ Non ☐

25. Selon vous, quel pourcentage de vos élèves ont accès à l'Internet (à l'école, à la maison ou autre)? _____

Section III: À propos de votre curriculum

26. Est-ce que votre école, dans le programme d'études professionnelles, offre un/des cours de méthodes de recherches scientifiques? Oui ☐ Non ☐ Si oui, décrivez: _____

Si vous avez répondu **Oui**, répondez aux **questions 27-32** et ne répondez pas à la question 33. Lorsque vous avez fini, répondez aux sections IV & V.

Si vous avez répondu **Non**, ne répondez **pas** aux questions 27-32 et répondez à la **question 33**. ne répondez **pas a la section IV** mais répondez à la section V.

27. Si votre école offre un/des cours de méthodes de recherches scientifiques, à quel moment dans le curriculum est-il donné? _____

28. Est-ce qu'à l'intérieur des différents cours, le thème des méthodes de recherches scientifiques est abordé ? (Exemple: dans le cours d'anatomie) Oui ☐ Non ☐ Si Oui, décrivez: _____

29. : Si votre école offre un/des cours de méthodes de recherches scientifiques, à quel moment dans le curriculum est-il donné? _____

30. Est-ce que le cours de méthodes de recherches scientifiques est offert dans votre programme de formation continue? Oui ☐ Non ☐

Si oui, décrivez: _____

31. Quelles ressources didactiques sont utilisées? (textes, appuis visuels, etc.)?

32. Accepteriez-vous de nous donner une copie de votre:

a. Curriculum de recherche Oui ☐ Non ☐

b. Plans de cours Oui ☐ Non ☐

c. Ressources didactiques Oui ☐ Non ☐

33. Si votre école, dans le programme d'études professionnelles, n'offre pas de cours de méthodes de recherches scientifiques, décrivez pourquoi (exemples: manque de temps, de ressources, intérêt, ne s'applique pas dans notre curriculum etc.) Soyez franc. _____

SECTION IV: Vos Professeurs de recherche

Dans cette section nous essayons d'identifier qui sont les professeurs clés dans le milieu de l'enseignement des méthodes de recherches scientifiques dans le domaine des soins de santé alternatifs et complémentaires au Canada.

34. Qui enseigne le cours de méthodes de recherches scientifiques (Nom, poste, fonction, affiliation professionnelle)

35. Dans le cadre du cours des méthodes de recherches scientifiques l'accent est sur quel(s) type(s) de recherche(s) (exemples : recherches cliniques, recherches théoriques, etc.)?

36. Est-ce que votre école offre à vos professeurs de la formation continue en méthodes de recherches scientifiques ? Oui ☐ Non ☐ Si Oui, décrivez: _____

SECTION V: Prochaines étapes

A. Si vous avez répondu aux questions 27-32:

37. Êtes-vous intéressé à ce qu'on vous téléphone, pour discuter plus en profondeur de votre curriculum de recherche? Oui ☐ Non ☐

38. Quel est le meilleur moment pour vous rejoindre durant la semaine? _____

Ou

B. Si vous avez répondu à la question 33 dans la Section III:

39. Êtes-vous intéressé qu'on vous téléphone, pour discuter de votre intérêt à développer un curriculum d'enseignement des méthodes de recherches scientifiques? Oui ☐ Non ☐

40. Quel est le meilleur moment pour vous rejoindre durant la semaine? _____

MERCI DE VOTRE PRÉCIEUSE COLLABORATION

Si vous avez accepté que l'on communique avec vous par téléphone, nous vous contacterons avant le 15 mars 2004.

Research Requirement: Literacy Amongst Complementary and Alternative Health Care Practitioners

INTERVIEW TOOL

Date of interview:

Name of interviewer:

Time of interview:

Length of interview:

PART I: About You

To be filled out if the person being interviewed is not the same as the person who filled out the survey

1. Your name: _____
2. Your title at work: _____
3. Your professional affiliation/ discipline: _____
4. Your role (administrator, teacher, researcher, practitioner): _____
5. Length of time in present position/role: _____

Contact Information:

6. Address (with postal code): _____
Telephone: _____ FAX: _____
Email(s): _____
7. Preferred method of contact: _____

PART II: About Your School

8. Is there any information you would like to clarify or add to from the information on the survey?

PART III: Research Curriculum

A. Schools With Research Courses/Instruction:

9. Is there any information you would like to clarify or add to from the research courses/instruction information on the survey?
10. On the survey you received, you generously agree to share resources or materials. How will you send these? Email ☐ Canada Post ☐ FAX ☐ other _____

B. Schools Without Research Courses/Instruction who are interested in developing research courses/information:

11. Is there any information you would like to clarify or add to about your schools interest in developing research courses/instruction?

Or

C. Schools Without Research Courses/Instruction who are not interested in developing any:

12. Is there any information you would like to clarify or add to about why your school does not wish to develop research courses/instruction?

PART IV: About your Research Teachers?

A. Schools With Research Courses/Instruction:

13. Is there any information you would like to clarify or add to about your research teachers?

PART V: Research Competencies

(See attached documents - Assessment of Research Competencies and Criteria for Assessing Level of Competency: Research Literacy)

A. Schools With Research Courses/Instruction:

B. Schools Without Research Courses/Instruction who are interested in developing research courses/information:

PART VI: Strengths, Challenges and Next Steps

A. Schools With Research Courses/Instruction:

14. Describe your school's strengths in research education? (Include previous strategies involving academic partnerships, collaborations or infrastructure-building initiatives that have been especially successful)

15. What challenges has your school experienced related to research education? (Include resource issues, learning needs etc.)

16. Would you say that research courses offered at your school have led to a sustainable research program? Yes ☐ No ☐ Please elaborate.

Or

How successful have your research courses/initiatives been in creating a sustainable research program at your school?

17. What would be a useful next step for your school in helping to develop increased research literacy and capacity?

B. Schools Without Research Courses/Instruction who are interested in developing research courses/information:

18. Describe your school's strengths and capacity to develop research education?

19. What challenges has your school experienced related to trying to develop research education? (Include resource issues, learning needs etc.)

20. What would be a useful next step for your school in helping to develop increased research literacy and capacity?

Research Requirement: Literacy Amongst Complementary and Alternative Health Care Practitioners

INTERVIEW TOOL

Date of interview:

Name of interviewer:

Time of interview:

Length of interview:

Section I: Renseignement généraux

To be filled out if the person being interviewed is not the same as the person who filled out the survey

Section 1: Renseignements généraux

1. Votre nom: _____
2. Votre poste (titre professionnel): _____
3. Votre affiliation professionnelle/discipline: _____
4. Votre fonction (administration, professeur, chercheur, etc.): _____
5. Depuis combien de temps occupez-vous ce poste/fonction?: _____

Vos coordonnées

6. Adresse (avec code postal): _____
Téléphone: _____ FAX: _____
Courriel(s): _____
7. Par quel moyen préférez-vous être contacté? : _____

Section II: À propos de votre école

8. Est-ce que vous voulez ajouter ou clarifier les renseignements concernant votre que vous nous avez donnés dans le questionnaire ? (peut-être pouvez-vous me parler des cours à temps plein ou temps partiel, vos élèves doivent assister à combien d'heures de cour par semaine ?)

Section III: Curriculum d'enseignement de recherche

A. Schools With Research Courses/Instruction:

9. Suite aux renseignements que vous nous avez fournis dans le questionnaire, dites-moi un peu plus comment sont donnés les cours de méthode de recherche? (à quel moment dans le curriculum est-il donné, est-ce ce thème est abordé seulement à l'intérieur d'un autre cours, parlez moi du matériel didactique utilisé)
10. Dans le questionnaire vous avez accepté de nous donner une copie de : curriculum de recherche, plans de cours et ressources didactiques. Comment voulez-vous nous les envoyer ? Email ☐ Canada Post ☐ FAX ☐ other _____

B. Schools Without Research Courses/Instruction who are interested in developing research courses/information:

11. Dans le questionnaire, vous avez mentionné que votre école n'offre pas de cours de méthodes de recherches scientifiques. Voulez-vous ajouter des détails ? (pourquoi)

Or

C. Schools Without Research Courses/Instruction who are not interested in developing any:

12. Dans le questionnaire, vous avez mentionné que votre école n'est pas intéressée à développer un curriculum d'enseignement des méthodes de recherches scientifiques. Voulez-vous ajouter des détails ? (est-ce un manque d'intérêt, un manque d'argent ou de temps ?)

Section IV: À propos de vos professeurs?

A. Schools With Research Courses/Instruction:

13. Dans le questionnaire, vous nous avez donné des renseignements sur vos professeurs titulaires des cours de méthodes de recherches scientifiques. Voulez-vous ajouter des détails ? (Quel est leur parcours scolaire et professionnel, qu'est-ce qui les a amené à enseigner cette matière ?)

Section V : Les compétences de recherche

(See attached documents - Assessment of Research Competencies and Criteria for Assessing Level of Competency: Research Literacy)

A. Schools With Research Courses/Instruction:

B. Schools Without Research Courses/Instruction who are interested in developing research courses/information:

Section VI: Forces, embûches et prochaines étapes

A. Schools With Research Courses/Instruction:

14. Avez-vous accès à des ressources externes qui facilitent l'enseignement des méthodes de recherches scientifiques à votre école (membre d'association, subvention, présence de prof qui font de la recherche et en font la promotion à l'école)
15. Quels sont les embûches que vous devez surmonter dans l'enseignement des méthodes de recherches scientifiques? (Manque de temps, curriculum déjà trop chargé, les élèves n'ont pas besoins de cours de recherche, ils ne sont pas intéressés, etc.)
16. Diriez-vous que les cours de méthodes de recherche peuvent mener à des études ou des projets plus approfondis dans le domaine de la recherche scientifique. Oui ☐ Non ☐
(Développer une demande de recherche, obtenir des subventions, mener une recherche du début à la fin.)

17. Quel serait le prochain pas à faire pour que votre institution forme des élèves qui ont une compréhension du langage utilisé dans les recherches scientifiques ainsi que l'habilité à utiliser ce langage en pratique, qui ont l'habilité à trouver, comprendre, avoir l'esprit critique et à appliquer des méthodes basées sur des données appuyées scientifiquement ? Finalement que devrez-vous faire pour former des élèves qui auront la capacité d'innover en mettant sur pied des nouvelles recherches scientifiques ?

B. Schools Without Research Courses/Instruction who are interested in developing research courses/information:

18. Dans l'optique de développer des cours de méthodes de recherches scientifiques, parlez moi des ressources dont dispose votre école ? Avez-vous accès à des ressources externes qui faciliteraient l'enseignement des méthodes de recherches scientifiques à votre école ? (membre d'association, subvention, présence de prof qui font de la recherche et en font la promotion à l'école)
19. Parlez moi des limites, des embûches qui vous nuiraient dans le développement de tels cours.
20. Quel serait le prochain pas à faire pour que votre institution forme des élèves qui ont une compréhension du langage utilisé dans les recherches scientifiques ainsi que l'habilité à utiliser ce langage en pratique, qui ont l'habilité à trouver, comprendre, avoir l'esprit critique et à appliquer des méthodes basées sur des données appuyées scientifiquement ? Finalement que devrez-vous faire pour former des élèves qui auront la capacité d'innover en mettant sur pied des nouvelles recherches scientifiques ?

Assessment of Research Competencies

The following are a list of specific competencies. Please review each competency as they relate to your school. For competencies that you have answered Yes in column A, please proceed to answering the questions in columns B, C and D.

Competency: Research Literacy				
A	B	C	D	
Do your students receive instruction in the following competencies: (Yes or No)	What is the expected student <u>target level</u> for this competency (see level criteria attached)	Describe the method of instructional delivery for the competency (eg. classroom, online, self-study, other) and approximate number of hours	How do you evaluate mastery of this competency? (eg. test, essay, practical exam, etc.)	
ABILITY TO FIND THE EVIDENCE FOR PRACTICE				
1. Distinguish between refereed journals and other published sources of information.				
2. Demonstrate the ability to conduct a literature search.				
ABILITY TO UNDERSTAND RESEARCH EVIDENCE				
3. Describe the nature, variety and value of different kinds of inquiry and evidence.				
4. Distinguish between kinds of methodological designs in research (descriptive and explanatory studies).				
5. Identify and understand basic statistical concepts such as mean, mode, average, percent, and deviation from the mean and statistical significance.				

Competency: Research Literacy				
A Do your students receive instruction in the following competencies: (Yes or No)	B What is the expected student <u>target level</u> for this competency (see level criteria attached)	C Describe the method of instructional delivery for the competency (eg. classroom, online, self-study, other) and approximate number of hours	D How do you evaluate mastery of this competency? (eg. test, essay, practical exam, etc.)	
ABILITY TO CRITICALLY EVALUATE RESEARCH EVIDENCE				
6. Identify and understand underlying assumptions, limitations and biases in varying forms of inquiry and evidence.				
7. Identify and understand underlying assumptions, limitations and biases in varying forms of statistical methods.				
ABILITY TO APPLY RESEARCH EVIDENCE IN CLINICAL PRACTICE				
8. Create researchable questions to apply to practice.				
9. Confirm, modify, or alter practice based on best evidence.				
10. Disseminate information, research findings to clients and others in various forms to increase shared knowledge and informed choice.				

Appendix H: Criteria for Assessing Level of Competency



Criteria for Assessing Level of Competency: Research Literacy

(Adapted from the College of Massage Therapists of Ontario (CMTO) Self Assessment Tool)

Instructions: This scale is to be used in assessing target level of competency in Part V: Research Competencies of the interview tool. The scale is used to assign a rating to an individual's level of research literacy knowledge and skill (actual or expected).

To use, read the definitions (title, knowledge and skill) and choose the level that best corresponds to the level of functioning.

LEVEL	TITLE	KNOWLEDGE	SKILL
1	AWARENESS/ENTRY	Fundamental awareness and knowledge of essential concepts and processes in the competency area;	Able to recognize concepts or processes and refer to others for assistance. Ability to apply minimal/limited skills within competency area (Dependent).
2	BASIC	Basic knowledge and understanding of general concepts and processes in the competency area;	Able to work without assistance in many skill areas of the competency. Still needs assistance with the application of some skills (Partially independent).
3	OPERATIONAL	Practical working knowledge and understanding of standard, everyday concepts and processes;	Able to apply skills in routine, stable situations without assistance (Independent)
4	EXTENSIVE	Comprehensive knowledge and understanding of standard and non-standard concepts and processes;	Able to apply skills in complex, diverse, unstable and shifting situations. Uses knowledge and skills to interact with other disciplines to advance organizational effectiveness. (Organizational interdependence)
5	EXPERT	Vast, widespread, expert knowledge and understanding of the competency area;	Able to contribute to and advance global thinking in area of competence. Recognized as a leader/expert by peers (Global Interdependence).

Appendix I: The Conference Invitation



CENTENNIAL COLLEGE

April 5, 2004

Dear [Participant],

In March of this year, you generously agreed to participate in the *Research Literacy: Literacy Among Complementary and Alternative Health Care (CAHC) Practitioners* study and completed a survey and a follow-up interview for us. You also indicated your interest at that time in participating in Phase II of this study, and we are writing today to extend that invitation.

Phase II of the study will take place in Toronto at the Centennial College Progress Campus and consist of meetings on the evening of June 4th from 5:00 p.m. until 8:00 p.m., and Saturday June 5th from 9:00 a.m. until 3:00 p.m. There will be approximately 25 invited participants representing the different geographic regions of Canada and a wide range of CAM disciplines – massage therapy, homeopathy, chiropractic, traditional Chinese medicine/acupuncture, herbal medicine, naturopathy and holistic practitioners. All travel and accommodation expenses will be covered by the study.

The purpose of the meetings will be to review the Phase I findings as a group, and identify any relevant issues that were not captured by the survey/interview process. There will be a facilitated discussion of the key themes identified in the report – especially as they relate to the successes and challenges participants have experienced in developing and delivering CAHC research curricula. The anticipated outcome of the meeting is to generate and recommend a list of ‘next-step strategies’ towards strengthening research literacy and increasing research capacity in the NHP/CAHC sector. The meeting will also offer unique learning and networking opportunities for those individuals who are considering adding research courses to their curricula.

Please let us know by April 19th, 2004 whether you will be able to participate in this event. To confirm and/or ask questions, contact Amanda Baskwill at 416-658-7471 or email to amanda.baskwill@sympatico.ca. As soon as we finalize our list of participants, we will send you a complete information package and instructions on booking travel etc.

We very much look forward to meeting you in person at this event and continuing the dialogue!

Sincerely,

Amanda Baskwill, RMT
(On behalf of Trish Dryden, Principal Investigator and Barbara Findlay, Project Coordinator)

Appendix J: Proposed Agenda for Conference



CENTENNIAL COLLEGE

Date: June 4-5, 2004
Location: Centennial College, Progress Campus
Toronto, Ontario

Building Opportunities, Overcoming Challenges: Increasing Research Literacy and Capacity in CAHC Education in Canada

Friday June 4th, 2004

Day One

5:00 pm until 8:00 pm
Light Buffet Supper:
<ul style="list-style-type: none">• Welcome• Introductions• Present: Background, Objectives and Methods of Phase I Key Findings• Group Discussion (Confirm or Modify Key Findings)<ul style="list-style-type: none">○ What did we get right? What did we get wrong? What did we miss?○ What surprised you?• Reach consensus on the Key Themes (e.g. resources, innovative delivery methods, competencies and curricula, regulation/ recognition) for discussion in Day Two
Informal Networking

Saturday June 5, 2004

Day Two

8:00 am – 8:30 am
Breakfast
8:30 am – 3:00 pm
Morning Session:
<ul style="list-style-type: none">• The National Vision for Research Literacy/ Capacity for CAHC professions in Canada Joan Simpson, Stacey Croft, Michael Smith (NHPD)• Facilitated Discussion on Key Themes
Networking Barbeque Lunch
Afternoon Session:
<ul style="list-style-type: none">• Resources and Networks in Research Literacy and Capacity in Canada Dr. Marja Verhoef, Dr. Heather Boon and Trish Dryden• Strategy Building: What do we recommend to strengthen literacy/ capacity building in the NHP/CAHC sector in Canada?• Next Steps: Form a working group

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CENTENNIAL COLLEGE

Research Requirement: Literacy Amongst Complementary and Alternative Health Care (CAHC) Practitioners

Natural Health Products Directorate, Health Canada

Phase II: Building on Opportunities and Overcoming Obstacles - An Invitational Conference

Centennial College, Toronto, June 4-5 2004

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Executive Summary:

Background

A lack of research literacy (“understanding research language and its application to practice”¹) and research capacity (“the ability to design and conduct research studies”²) has been identified as a barrier to research in Natural Health Products (NHPs) and Complementary and Alternative Health Care (CAHC). The Natural Health Product Research Program of the Natural Health Products Directorate (NHPD), Health Canada funded a two-phase project to:

Phase I

- Identify and describe the key educational CAHC institutions, continuing education opportunities and teachers of CAHC research education in Canada
- Compare research curricula across CAHC institutions
- Identify the priorities, challenges and strategies amongst this group and

Phase II

- Facilitate a meeting of key CAHC and conventional educators and stakeholders to propose a strategic plan for strengthening opportunities and overcoming identified challenges

Phase II Conference Objectives

An invitational conference comprised of CAHC educators and stakeholders was held on June 4-5 2004 at Centennial College in Toronto to:

- Confirm and expand upon findings from Phase I of the study – themes, opportunities and challenges
- Provide networking and learning opportunities for conference participants related to research literacy and capacity building
- Explore issues related to research curriculum development: core competencies for research literacy, readiness factors and potential for interdisciplinary collaboration
- Propose a strategic plan that will strengthen opportunities and overcome challenges related to developing research literacy/capacity in the NHP/CAHC sector.

Participants

The 21 conference participants included 14 educators/ practitioners/ administrators of CAHC schools in Canada and represented schools from 5 disciplines (naturopathy, chiropractic, massage therapy, herbal medicine and traditional Chinese Medicine). Eleven of 14 had been interviewed during Phase I of the project and the other three were invited to ensure representation across disciplines and geographic regions of the country. In addition, 4 advisory committee members for the project, including a representative from NHPD, were included. The meeting was co-facilitated by Trish Dryden, Principal Investigator and Barbara Findlay, Project Coordinator.

¹ Williams, J., Mulkins, A., Verhoef, M.J., Monkman D., & Findlay, B. (2002). *Needs assessment: Research literacy and capacity amongst complementary and alternative health care providers*. Perspectives on Natural Health Products – Natural Health Products Directorate, Health Canada, 14.

² Ibid., 15.

Challenges, Priorities and Strategies

There was clear confirmation by the conference participants for the conclusions of the Phase I Final Report. Participants displayed a high level of energy and enthusiasm to work together to find common ground, to avoid duplication of effort, and to use available resources, both human and fiscal, to increase research literacy and capacity in the NHP/CAHC sector.

Shared challenges in institutional, professional and societal readiness across disciplines, lead to discussion on priorities and the formulation of specific strategies. Challenges and opportunities were seen as highly interdependent and best addressed synergistically and collaboratively on a number of fronts. Individuals within the group each took on specific interest areas to continue the work beyond the conference and in preparation for a proposed second networking meeting at the first annual IN-CAM Symposium in December 2004*. Each of the smaller ongoing groups will continue to be guided by three fundamental principles established during the conference: national in scope, collaborative in approach and feasible.

1. The Culture of Professionalism and Inquiry in CAHC

The culture of CAHC educational institutions and core values of professionalism and inquiry inclusive of reflection, critical thinking, and evaluation, must be sensitively shaped and nurtured before research literacy and capacity becomes embedded in curricula. National CAHC strategies to promote standards in professionalism, education and accreditation, and ethics in research, should accompany the drive towards provincial legislation and/or recognition.

Group #1 will draft a paper on this subject for publication

2. Research Language and Terminology & National Standards/Competencies in NHP/CAHC Research Literacy/Capacity

The group identified the need to define terms such as *research*, *evidence-based practice*, *best practices*, and *best evidence*; and to look at the use of terms such as *life-long learning*, *process of inquiry*, and *critical thinking* to inform the development of research literacy/capacity curricula.

Group #2 will continue to dialogue on finding common ground amongst all CAHC disciplines and propose common language and terminology for discussing NHP/CAHC research. It is hoped that this will lead towards the development of research literacy and capacity competencies, standards and guidelines.

3. Teacher Education

Nurturing the culture of NHP/CAHC research literacy and capacity, professionalism and inquiry includes valuing and implementing teacher education.

* Note: Canadian Interdisciplinary Network for Complementary and Alternative Medicine Research (IN-CAM) is an interdisciplinary research network, created to foster excellence in complementary and alternative medicine (CAM) research in Canada. (www.incamresearch.ca)

Group #3 will continue discussing teacher education and refining strategies to enhance the CAHC teacher's ability to promote a 'culture of inquiry' amongst their students, with a focus on the development of research literacy skills.

4. Instructional Methods and Delivery Models

Creating multi-layered and diverse educational opportunities for students and faculty for the consumption, distribution, and creation of knowledge in all its forms, involves the creation, sharing and use of diverse curricula, methods of inquiry, and curriculum delivery.

Group # 4 will identify and disseminate information on diverse delivery models, including an existing online course in research literacy³.

An individual in the group will draft a paper on innovative instructional methods for CAHC research literacy and capacity curricula.

5. Building Partnerships, Sharing Resources

Developing partnerships across and within disciplines and with conventional researchers and institutions was another clear theme. Bridges and partnerships need to be built for students, faculty, administrators and graduates to articulate and work with each other and with other educational institutions. Sharing resources and finding realistic approaches lead the group to identify existing networks with which to work to develop ongoing opportunities for collaboration.

Group # 5 will form a steering committee and explore partnering with IN-CAM in the following ways:

- Create an IN-CAM sub-committee or special interest group on research literacy,
- Provide space on the IN-CAM website to post the report from this meeting,
- Provide mentorship re: developing of white papers
- Draft an abstract proposing a networking workshop for CAHC educators at an upcoming IN-CAM symposium forum December 4-5, 2004.

In summary, Phase I of this study identified considerable diversity in the ways that CAHC schools across the country support faculty, develop curricula, and prepare students to access, understand, apply and participate in NHP/CAHC research. The identification of common challenges amongst the stakeholders in Phase II of the project led to a willingness to improve research literacy/capacity within this sector through national, collaborative and innovative approaches. Additional resources and committed leadership will be required to fully operationalize the strategies put forward by the participants in this initiative.

³ Dryden, T. & Achilles, R. (2003). Continuing education THER705: Research literacy for CAHC practitioners: An online course. Scarborough, ON: Centennial College.

Sommaire Exécutif:

Problématique

Des lacunes au niveau de la compréhension des méthodes recherche (la compréhension des termes utilisés dans le domaine de la recherche et de leurs applications pratiques¹) et des capacités de recherche (la capacité à concevoir et à entreprendre des projets de recherche²) ont été identifiées comme barrières principales aux soins de santé alternatifs et complémentaires et des produits de santé naturels. La Direction Des Produits De Santé Naturels De Santé Canada a subventionné un projet à deux étapes:

Première Étape

- Identifier et décrire les principales institutions offrant des programmes d'enseignement des soins de santé alternatifs et complémentaires, les possibilités de formations continues ainsi que les professeurs de recherches dans ce domaine
- Comparer les curriculums d'enseignement des méthodes de recherches de ces différentes institutions du domaine des soins de santé alternatifs et complémentaires et des produits de santé naturels
- Identifier les priorités, les défis et les stratégies de ce groupe

Deuxième Étape

- Faciliter la rencontre entre les personnes significatives de ce domaine et les éducateurs du milieu de la santé traditionnelle pour proposer un plan stratégique basé sur les forces déjà en place et pour relever les défis existants

Deuxième Étape: Objectifs de la conférence

Une conférence a eu lieu les 4 et 5 juin au Centennial College à Toronto. Ont été invités à cette conférence des personnes significatives du domaine des soins de santé alternatifs et complémentaires et des produits de santé naturels ainsi que des éducateurs du milieu de la santé traditionnelle pour:

- Discuter des résultats de la première étape du projet– thèmes, possibilités et défis
- Créer un réseau entre les participants à la conférence et offrir des possibilités d'apprentissage pour permettre l'augmentation de la compréhension et de la capacité de recherche
- Explorer les sujets liés au développement du curriculum d'enseignement de recherche: les compétences clés menant à la compréhension de recherche, les facteurs de promptitude et les possibilités découlant d'une collaboration interdisciplinaire
- Proposer un plan stratégique qui renforcerait les possibilités et aiderait à surmonter les difficultés dans le développement de la compréhension et la capacité de recherche dans le secteur des produits de santé naturels et des soins de santé alternatifs et complémentaires.

¹Williams, J., Mulkins, A., Verhoef, M.J., Monkman, D., & Findlay, B. (2002). *Needs assessment: Research literacy and capacity amongst complementary and alternative health care providers*. Perspectives on Natural Health Products – Natural Health Products Directorate, Health Canada, 14.

² Ibid., 15.

Participants

Des 21 participants à cette conférence, 14 étaient des administrateurs/ éducateurs/ praticiens issus des écoles des soins de santé alternatifs et complémentaires au Canada. Ils ont représenté des écoles offrant des programmes dans 5 disciplines (naturopathie, chiropractie, massothérapie, herboristerie et médecine chinoise traditionnelle). Onze des 14 avaient été interviewés lors de la première étape du projet. Les trois autres ont été invités pour s'assurer la représentation des diverses disciplines et régions géographiques du pays. Quatre membres du comité consultatif du projet, y compris un représentant de La Direction Des Produits De Santé Naturels De Santé Canada, ont également assisté à la conférence. L'instigatrice principale, Trish Dryden, et la coordinatrice du projet, Barbara Findlay, ont menés la conférence.

Défis, priorités et stratégies

Les participants à cette conférence ont confirmé les conclusions émises dans le rapport final de la première étape du projet. Un niveau élevé d'énergie et d'enthousiasme a été manifesté en ce qui concerne le travail d'équipe menant à l'élaboration de bases communes afin d'éviter la duplication des efforts, pour employer les ressources humaines et financières disponibles et en fin, pour augmenter la compréhension et la capacité des méthodes de recherche dans le secteur des soins de santé alternatifs et complémentaires et des produits de santé naturels.

La prise de conscience de difficultés liées à la promptitude institutionnelle, professionnelle et sociale dans les diverses disciplines a été le point de départ d'une discussion sur les priorités et la formulation de stratégies spécifiques. Ainsi, les défis et les possibilités ont été perçus comme étant interdépendantes et à mener en front commun.

Les individus du groupe ont décidé de prendre en main leur secteur d'intérêt spécifique pour poursuivre le travail au-delà de la conférence et en vue d'une deuxième réunion du réseau proposée à la conférence « IN-CAM Symposium » en Décembre 2004*. Chacun des sous-groupes de travail fondera ses actions sur trois principes fondamentaux qui ont été établis à la conférence. Ainsi, les stratégies devraient avoir une portée nationale, une approche basée sur la collaboration et être réalisable.

1. La culture du professionnalisme et de recherche au niveau des soins de santé alternatifs et complémentaires et des produits de santé naturels

Pour que la compréhension des méthodes de recherche et que la capacité à concevoir et entreprendre des études soient incorporés dans les programmes d'étude et les curriculums d'enseignement dans le secteur des soins de santé alternatifs et complémentaires et des produits de santé naturels, il faut que la culture des institutions scolaires mette l'accent sur les valeurs primordiales de professionnalisme et d'esprit scientifique qui incluent la réflexion, la pensée critique et l'évaluation. Les stratégies nationales dans le secteur des soins de santé alternatifs et complémentaires et des produits de santé naturels doivent promouvoir des normes et des standards en ce qui concerne le professionnalisme,

* Note: Canadian Interdisciplinary Network for Complementary and Alternative Medicine Research (IN-CAM) is an interdisciplinary research network, created to foster excellence in complementary and alternative medicine (CAM) research in Canada. (www.incamresearch.ca)

l'enseignement, l'accréditation, l'éthique dans la recherche et devraient être étroitement liés à la demande de législation et/ou de reconnaissance provinciale.

Le mandat de la première équipe de travail est de rédiger un rapport pouvant mener à une publication

2. Langage et terminologie, standards nationaux/compétences dans la compréhension et la capacité des méthodes recherche dans le secteur des soins de santé alternatifs et complémentaires et des produits de santé naturels.

Le groupe a identifié le besoin de définir des termes tel que recherche, pratique basée sur des données empiriques, pratique déontique et fiabilité des données. De plus, il a trouvé important de définir l'utilisation des concepts comme l'apprentissage étalé sur une vie, processus d'enquête et d'esprit scientifique et la pensée critique pour les intégrer dans le développement du curriculum de compréhension et capacité de recherche.

L'équipe #2 continuera à dialoguer pour trouver les liens qui unissent toutes les disciplines du domaine des soins de santé alternatifs et complémentaires. Ainsi, ils pourront proposer un langage commun et une terminologie à utiliser à des fins de discussion sur la recherche dans ce secteur. Nous espérons que ceci mènera au développement des compétences, des normes et des standards pour la compréhension et la capacité de recherche.

3. Formation des professeurs

Pour consolider la culture de la compréhension et de la capacité de recherche dans le domaine des soins de santé alternatifs et complémentaires et des produits de santé naturels, le professionnalisme et l'esprit scientifique incluent aussi d'accorder de l'importance à la formation des professeurs.

L'équipe #3 poursuivra la discussion au sujet de la « formation des professeurs ». Elle raffinerait les stratégies pour augmenter la capacité des professeurs du domaine des soins de santé alternatifs et complémentaires et des produits de santé naturels à promouvoir une culture d'enquête et d'esprit scientifique. Elle mettra l'accent sur le développement des aptitudes liées à la compréhension des recherches.

4. Pratiques éducatives et outils didactiques

Pour que les professeurs arrivent à transmettre cette connaissance sous toutes ses formes et à vivre avec leurs étudiants une multitude d'expériences éducatives, il faut d'abord mettre de l'énergie à créer, partager et utiliser divers curriculums, méthodes d'enquête et d'esprit scientifique et outils didactiques.

L'équipe # 4 identifiera et diffusera l'information sur les outils didactiques, y compris un cours de compréhension de recherche sur l'Internet déjà existant³.

³ Dryden, T. & Achilles, R. (2003). Continuing education THER705: Research literacy for CAHC practitioners: An online course. Scarborough, ON: Centennial College.

Un membre de cette équipe rédigera un rapport sur les pratiques éducatives innovatrices dans les curriculums d'enseignement de compréhension et de capacité de recherches dans le secteur des soins de santé alternatifs et complémentaires et des produits de santé naturels.

5. Créer des liens, partager des ressources

Développer des liens au sein et entre les disciplines, avec les chercheurs et les institutions conventionnelles était un autre thème clé abordé à la conférence. Des liens et des partenariats doivent être établis pour que les étudiants, les enseignants, les administrateurs et les gradués puissent communiquer et travailler ensemble et avec d'autres institutions scolaires. En ayant partagé des ressources et en ayant trouvé des approches réalistes le groupe a pu identifier les réseaux existants avec lesquels ils peuvent travailler pour développer des possibilités de collaboration durable.

L'équipe # 5 formera le comité de coordination et explorera la possibilité d'une collaboration avec IN-CAM en :

- Créant un sous-comité d'IN-CAM ou un groupe ayant comme intérêt spécifique la compréhension de recherche,
- Trouver de la place sur le site Internet d'IN-CAM pour y placer le rapport sommaire de cette réunion,
- Offrir de l'aide au sujet de : rédiger un rapport conceptuel
- Rédigez un résumé proposant un atelier de gestion de réseau pour les éducateurs des soins de santé alternatifs et complémentaires et des produits de santé naturels, lors du forum de recherches « IN-CAM Symposium » qui aura lieu les 4 et 5 décembre, 2004.

Finalement, la phase I de cette étude a identifié la diversité considérable dans les façons dont les écoles des soins de santé alternatifs et complémentaires et des produits de santé naturels à travers le pays, supportent les facultés, le développent des curriculum des programmes d'études et la préparation des étudiants à accéder, à comprendre, à appliquer et à participer à la recherche dans le secteur des produits de santé naturels et des soins de santé alternatifs et complémentaires. L'identification des défis partagés par les dépositaires de la phase II du projet a mené à une motivation à améliorer la compréhension et la capacité de recherche dans ce secteur en utilisant des approches nationales, basées sur la collaboration et l'innovation. Des ressources additionnelles et un leadership engagé seront nécessaire pour rendre complètement opérationnelles les stratégies proposées par les participants à cette initiative.

Research Requirement: Literacy Amongst Complementary and Alternative Health Care (CAHC) Practitioners

Phase II: Building on Opportunities and Overcoming Obstacles - An Invitational Conference

Centennial College*, Toronto, Ontario, June 4-5 2004

Background and Goals

Since its creation, part of the Natural Health Products Directorate's (NHPD) budget has been allocated to supporting natural health products research. As NHPD's primary role is product regulation, NHPD has sought collaboration and partnership when addressing complementary and alternative health care (CAHC) research issues. This project was a partnership between NHPD and Centennial College with the goal of developing a strategic plan to guide the development of research literacy/ capacity amongst CAHC practitioners in Canada. A research team comprised of prominent Canadian CAHC researchers from diverse stakeholder groups that included community colleges, universities, private vocational schools, and independent researcher domains supported the project.

A lack of research literacy ("understanding research language and its application to practice"⁷) and research capacity ("the ability to design and conduct research studies"⁸) has been identified as a barrier to research in NHPs/CAHC. Identifying all of the CAHC schools in Canada and communicating with them about this issue has been a significant challenge. To date, little information about the existence and/or quality of the research curricula being taught has been available, and there has been no focused dialogue with and between the schools and educators about what support they may need to improve research literacy and capacity. The combined objectives for Phase I and II of this project were to:

- Identify and describe the key educational CAHC institutions, continuing education opportunities and teachers of NHP/CAHC research education in Canada
- Compare research curricula across CAHC institutions
- Identify the priorities, challenges, and strategies amongst this group related to developing and offering research curricula and/or program
- Facilitate an invitational meeting of key CAHC and conventional educators and stakeholders to propose a strategic plan that will strengthen opportunities and overcome challenges related to developing research literacy/capacity in the NHP/CAHC sector.

* Note: Centennial College is Ontario's first community college, established in 1966, primarily serving the eastern portion of the Greater Toronto Area through four campuses and six satellite locations. It has a record of exemplary teaching, innovative programming and extensive partnership building. Centennial is recognized as one of the most culturally diverse post-secondary institutions in Canada. (www.centennialcollege.ca).

⁷ Williams, J., Mulkins, A., Verhoef, M.J., Monkman D., & Findlay, B. (2002). *Needs assessment: Research literacy and capacity amongst complementary and alternative health care providers*. Perspectives on Natural Health Products – Natural Health Products Directorate, Health Canada, 14.

⁸ Ibid., 15.

Phase I: Research Literacy in CAHC: Institutional, Societal and Professional Readiness

Phase I of this project⁹ was a descriptive study that took place between January and the end of April 2004. Targeted participants were teachers/administrators from Canadian institutions and programs (n=137) whose focus is the professional education of chiropractors, massage therapists, naturopaths, homeopaths, traditional Chinese medicine and acupuncture practitioners, herbal medicine practitioners and holistic practitioners. Successful telephone contact was made with 90 of these individuals, and 86 of them agreed to receive a survey by mail or email, which was intended to capture data about their schools, teachers and research curricula/programs where they existed. Thirty-nine of the participants returned completed surveys and the majority consented to further participation in a semi-structured telephone interview. Twenty-five interviews were conducted with the goal of deepening the researchers' understanding of the opportunities and barriers these educators/ administrators were experiencing related to the development and delivery of research curricula in their institutions.

The three major themes which emerged during the analysis of the Phase I data were: *institutional readiness* of CAHC schools to develop and deliver research curricula and support a program of applied research, *societal readiness* by province/territory to recognize and regulate CAHC professions and academic institutions, and *professional readiness* within each of the disciplines studied.

Interview participants identified the following key opportunities and challenges related to developing and delivering research literacy curricula:

Institutional Readiness

- Perceived differences in public vs. private institutions
- Evaluation and research values embedded in the culture of the school
- Financial stability
- Salaried teachers and teacher training
- Research literacy/capacity resources (libraries, designated research librarians, computers, Internet and database access)

Societal Readiness

- Provincial/territorial regulation or recognition
- Accreditation and availability of student bursaries
- Primacy of the Western, evidence-based approach to health practice
- Market driven trends – public utilization and graduate employment, business profitability and competitiveness between schools
- Student preferences – shorter and more affordable programs, closer to home

Professional Readiness

- Standards of practice
- Competency-based guidelines

⁹(April 2004). Research Requirement: Literacy Amongst Complementary and Alternative Health Care (CAHC) Practitioners, a report on Phase I of this project prepared for the Natural Health Products Directorate.

- Pre-requisite educational level for entry to programs
- Diversity of instructional design and delivery
- Innovative learning models.

Phase II: Building on Opportunities, Overcoming Challenges

The objectives of the Phase II invitational conference (*Appendix I: Conference Agenda; Appendix II: Conference Objectives*) were to:

- Confirm and expand upon findings from Phase I of the study – themes, opportunities and challenges
- Provide networking and learning opportunities for conference participants related to research literacy and capacity building
- Explore issues related to research curriculum development: core competencies for research literacy, readiness factors and potential for interdisciplinary collaboration
- Build resourcefulness and research literacy amongst CAHC schools by strengthening opportunities and overcoming the challenges experienced by CAHC educational institutions related to developing and delivering research curricula/ developing a research program.

Conference Participants

The 21 conference participants (*Appendix III: List of Conference Participants*) for Phase II included 14 educators/practitioners/ administrators of CAHC schools in Canada. Eleven of these participants had been interviewed during Phase I of the project and the other four were invited to ensure representation across disciplines and geographic regions of the country. During Phase I, a cohort from the interviewees (n=24) was identified who were particularly enthusiastic about the project. These individuals had thought deeply about many of the issues related to research capacity building within their own disciplines and articulated their ideas clearly and often passionately. They also indicated that they would be available to attend a two-day meeting in late May or early June in Toronto. In addition, four advisory committee members for the project, including a representative from the funder, NHPD, participated. The meeting was co-facilitated by Trish Dryden, Principal Investigator and Barbara Findlay, Project Coordinator. The project Research Assistant, Amanda Baskwill, provided technical support for the meeting, coordinated logistics and took notes throughout the two days. The meeting was structured to allow for large group discussions, small group work and generous networking opportunities for the participants.

Day One: Confirming the Phase I Final Report and Finding Key Themes for Discussion

Following round-table introductions and an overview of the meeting agenda, the facilitator asked participants to note one or two key issues, related to increasing research literacy, that they wanted to be sure were discussed during the course of the two days. These issues/topics were gathered on post-it notes and sorted by theme as an informal means of establishing participants' pre-conference expectations and comparing them with final conference outcomes (*Appendix IV: Post-it Note Diagram of Key Issues*).

After the introductory activities, the Principal Investigator gave a presentation on the background, objectives, methods, and key findings of the Phase I Final report. Conference participants communicated broad acceptance of the themes from the report – institutional readiness, professional readiness and societal readiness (*Appendix V: Research Requirement: Literacy Amongst Complementary and Alternative Health Care (CAHC) Practitioners*).

There was a significant amount of discussion, across disciplines, concerning the issue of “perceived differences” between public and private institutions. It was noted by participants that incorrect assumptions are often made about the profit motive of private vocational schools or the abundance of financial and human resources available to public institutions. There was general agreement, however, that the differences between private and public institutions related to developing research literacy and capacity are less significant than mutual opportunities and challenges. For example, there was widespread acknowledgement of the shared impact of market driven trends, fiscal pressures and interschool competitiveness on developing new or expanding upon existing curricula.

Consensus was reached very early during the first day of the conference that participants had an important role to play in nurturing the CAHC sector to a new level of professional readiness. The following are some of the key discussion threads that provided an overarching context and focus for developing specific strategies during the second day of the conference.

1. ***Shared Willingness*** – to collaborate to increase research literacy and capacity by developing shared educational models, delivery strategies and resources
2. ***Define Terms*** – such as *research, evidence-based practice, best practices, best evidence, life-long learning, process of inquiry, and critical thinking* to inform the development of research literacy curricula
3. ***Internalize Values*** – of inquiry and evaluation at all levels within an educational institution and nurturing a culture of professionalism
4. ***Develop Achievable and Measurable Standards and Competencies*** –to produce research literate students that can critically appraise and apply research to practice
5. ***Create Diverse Learning Strategies (Literacy to Capacity)*** –for students and faculty to use and create research knowledge in all its forms
6. ***Find and Nurture the Champions*** – by supporting students, faculty, staff and graduates and creating more opportunities for teacher education in research literacy and capacity
7. ***Acknowledge the Interdependence of Institutional, Societal and Professional Readiness*** – by developing strategies simultaneously in all three areas to nurture the development of research literacy and capacity and a culture of professionalism in CAHC
8. ***Develop National, Collaborative and Feasible Strategies*** –to increase research literacy and capacity

Day Two: Information Sharing and Developing the Strategies

In day two of the conference, several individuals were invited to present information on existing strategies and networks for research literacy and capacity development in NHP/CAHC in Canada and stimulate creative thinking. In the morning, Joan Simpson, Senior Policy Analyst, NHPD, Health Canada, outlined a national vision for the contribution of CAHC educational bodies and professions toward increasing research literacy and capacity in the NHP/CAHC field from the NHPD perspective (*Appendix VI: The National Vision for Research Literacy/Capacity for CAHC Professions in Canada*).

In the afternoon, Marja Verhoef, PhD, presented on CAMera, an Alberta network for complementary and alternative medicine (CAM) researchers and practitioners to develop research literacy and capacity. She discussed other parallel initiatives in conventional health care, such as the development of CAM curricula in undergraduate medical education (UME) (*Appendix VII: CAMera – Complementary and Alternative Medicine Education & Research Network of Alberta*). Heather Boon, B. Sc. Phm, PhD, presented information on the formation of IN-CAM, a national network of CAM academic researchers and staff, clinicians, educators, policy makers/analysts and students (*Appendix VIII: Creating a Canadian CAM Research Network*). Trish Dryden, RMT, MEd, presented information about a national online course in research literacy for CAHC practitioners developed as a pilot research project for Human Resources Development Canada, Office of Learning Technologies in the Workplace called Research Literacy for CAHC Practitioners: An Online Course and a research curriculum kit for teachers in the classroom (*Appendix IX: Nurturing Literacy – The Journey Towards Research Capacity*).

After the morning keynote presentation, participants organized themselves into one of three small working groups to develop specific strategies for strengthening opportunities and/or overcoming challenges related to increasing research literacy amongst their organizations and within their disciplines. Each group used one of the themes (institutional, societal or professional readiness) and corresponding issues reported in Phase I to frame their discussion. They were encouraged to consider strategies that were: national in scope, collaborative in approach and feasible. They were also asked to make note if they developed a strategy that was either provincial in scope or discipline-specific in approach.

After an hour, participants were asked to present the strategies to the larger group for vetting. All participants were given the opportunity to critique or expand upon suggested strategies. Through this exercise, high-level strategies or directional statements were produced and organized into several broad categories as follows:

Group I - Institutional Readiness:

- School Culture
 - Define research language
 - Nurture the culture of NHP/CAHC research and evaluation
 - Value and initiate teacher education
 - Integrate client/ patient care values with research values throughout curricula
 - Include research/ life-long learning in mission statement of school

- Nurture a culture of connectedness between NHP/CAHC educators and professionals in the field
- Partnerships and Building Bridges
 - Partner with other CAHC schools and/or conventional schools with applied research programs
 - Partner with institutions with resource centers, computers, Internet access to research databases
 - Search for funding to promote higher education for graduates and faculty (baccalaureate, masters and doctoral levels)
 - Build articulation and bridging agreements for graduates
- Methods/Delivery
 - Initiate inquiry based learning at all levels of curricula. Some examples given included:
 - Socratic dialogue
 - Problem –based learning
 - Student- centred, interactive learning
 - Small group learning
 - Thread research and critical thinking skills through all curriculum
 - Demystify the term ‘research’
 - Clinical decision making as research
 - Case study methodology
 - Project approach
 - Emphasize writing and critical thinking skill development throughout curricula
- Information Sharing/Dissemination
 - Encourage graduates as professionals to continue to find, evaluate, apply and disseminate research
 - Hold an annual meeting for sharing research curricula amongst educators
 - Create a council of NHP/CAHC research educators
 - Take advantage of existing forums (IN-CAM, CAMera, CAM in UME)
 - Apply to present at research forums
- National Guidelines and Resources
 - Support research programs/ projects in the schools, applied research in individual programs
 - Create national guidelines for conducting ethical research in CAHC schools
 - Set national standards for practice and core competencies in NHP/CAHC research literacy and capacity
 - Support and/or create a national accreditation body for CAHC schools
 - Develop resource centers and increase student access to computers, Internet access and databases

Group II - Professional Readiness:

- Pre-requisite Educational Level for Entry to CAHC Programs
 - Increase equitable access to CAHC professional programs by creating and/or finding existing competency based assessment tools and bridging programs to educate candidates to pre-requisite level for entry to programs
 - Facilitate interprofessional dialogue (academic/ professional)
 - Develop funding and policy to support
- Develop Standards/ Competencies
 - Develop common language for research literacy and capacity
 - Invite key individuals (associations, regulatory bodies, researchers, educators) to participate
 - Disseminate recommendations (benchmark)
 - Encourage research literacy as component of accreditation
- Build Partnerships
 - Develop mentor relationships with experienced researchers
 - Develop interdisciplinary partnerships with conventional and CAHC institutions
- Influence Public Perception
 - Promote development of a professional image in NHP/CAHC
 - Promote critical thinking at all levels

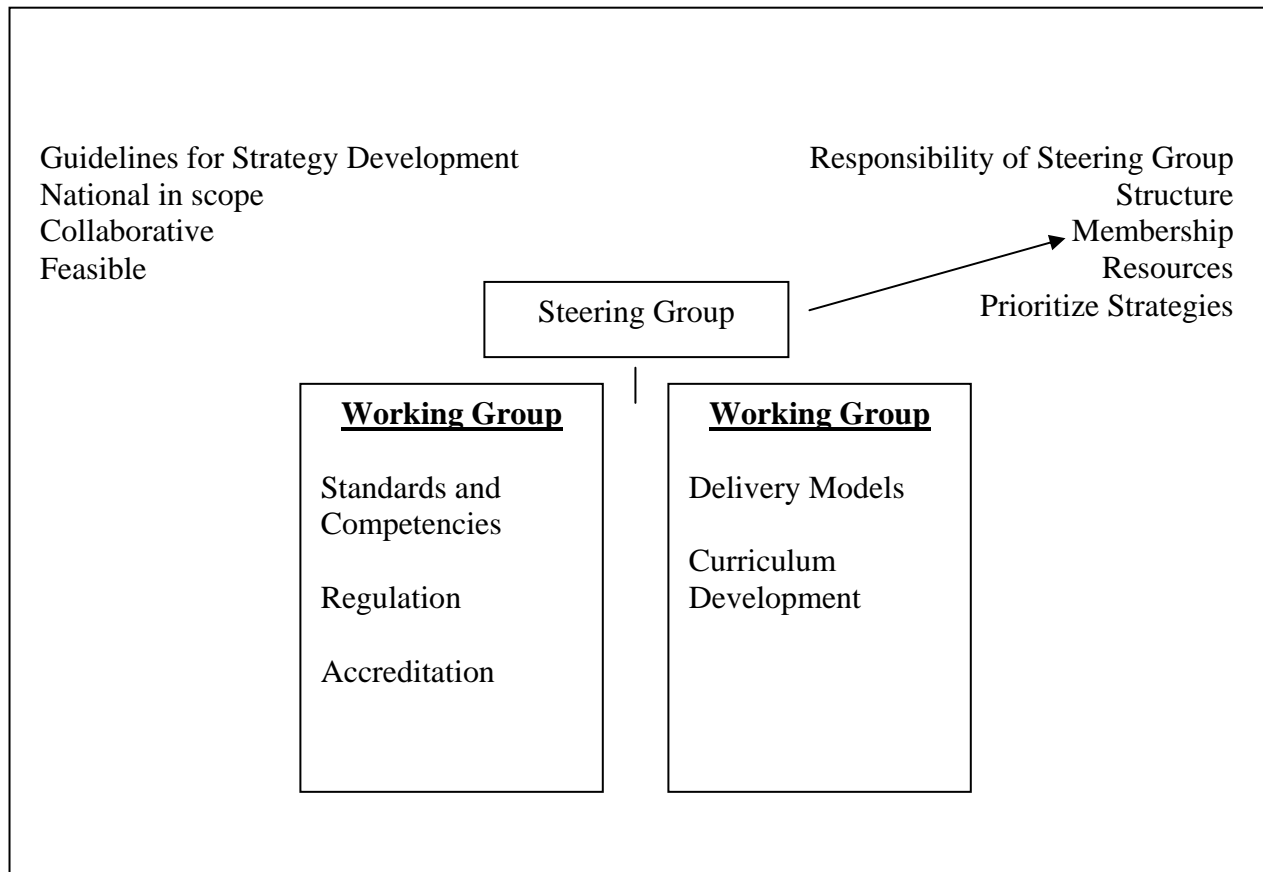
Group III - Societal Readiness:

- Develop a national working group to identify the needs and issues related to regulation and accreditation
 - Insure transferability across CAHC disciplines
- Use IN-CAM as an infrastructure/ resource
 - Submit a proposed networking workshop for the IN-CAM symposium in December 2004
 - Put together a workshop planning team to ensure representation at all levels and across disciplines

Next Steps

Following the afternoon presentations on existing networks and opportunities in NHP/CAHC research literacy and capacity building, participants were asked to consider and propose a method and an organizational structure for continuing the work they had begun. This would include refining, prioritizing, and beginning to implement some of the strategies. Participants were provided with an example of a potential organizational structure/model to stimulate thought and discussion.

Figure A: Example of potential organizational structure/model – used to stimulate discussion



Large group discussion focused on the risks and benefits of formally coordinating next steps in the absence of existing resources or infrastructure. Rather than proposing an organizational structure to work within, however, individuals each took on specific interest areas to continue the work beyond the conference and in preparation for a proposed second meeting at the first annual IN-CAM Symposium in December 2004 (*Appendix X: A Summary of ‘Next Step’ Commitments*). Each of the smaller ongoing groups will continue to be guided by three fundamental principles established during this workshop: national in scope, collaborative in approach and feasible.

1. The Culture of Professionalism and Inquiry in CAHC

The culture of CAHC educational institutions and core values of professionalism and inquiry inclusive of reflection, critical thinking, and evaluation, must be sensitively shaped and nurtured before research literacy and capacity becomes embedded in curricula. National CAHC strategies to promote standards in professionalism, education and accreditation, and ethics in research, should accompany the drive towards provincial legislation and/or recognition.

Group #1 will draft a paper on this subject for publication

2. Research Language and Terminology & National Standards/Competencies in NHP/CAHC Research Literacy/Capacity

The group identified the need to define terms such as *research*, *evidence-based practice*, *best practices*, and *best evidence*; and to look at the use of terms such as *life-long learning*, *process of inquiry*, and *critical thinking* to inform the development of research literacy/capacity curricula.

Group #2 will continue to dialogue on finding common ground amongst all CAHC disciplines and propose common language and terminology for discussing NHP/CAHC research. It is hoped that this will lead towards the development of research literacy and capacity competencies, standards and guidelines.

3. Teacher Education

Nurturing the culture of NHP/CAHC research literacy and capacity, professionalism and inquiry includes valuing and implementing teacher education.

Group #3 will continue discussing teacher education and refining strategies to enhance the CAHC teacher's ability to promote a 'culture of inquiry' amongst their students, with a focus on the development of research literacy skills.

4. Instructional Methods and Delivery Models

Creating multi-layered and diverse educational opportunities for students and faculty for the consumption, distribution, and creation of knowledge in all its forms, involves the creation, sharing and use of diverse curricula, methods of inquiry, and curriculum delivery.

Group #4 will identify and disseminate information on diverse delivery models, including an existing online course in research literacy¹⁰.

An individual in the group will draft a paper on innovative instructional methods for CAHC research literacy and capacity curricula.

5. Building Partnerships, Sharing Resources

Developing partnerships across and within disciplines and with conventional researchers and institutions was another clear theme. Bridges and partnerships need to be built for students, faculty, administrators and graduates to articulate and work with each other and with other educational institutions. Sharing resources and finding realistic approaches

¹⁰ Dryden, T. & Achilles, R. (2003). Continuing education THER705: Research literacy for CAHC practitioners: An online course. Scarborough, ON: Centennial College.

lead the group to identify existing networks with which to work to develop ongoing opportunities for collaboration.

Group # 5 will form a steering committee and explore partnering with IN-CAM in the following ways:

- Create an IN-CAM sub-committee or special interest group on research literacy
- Provide space on the IN-CAM website to post the report from this meeting
- Provide mentorship re: developing of white papers
- Draft an abstract proposing a networking workshop for CAHC educational institutions and educators at an upcoming IN-CAM research forum December 4-5, 2004.

Conclusion

There was clear confirmation by the conference participants that they agreed with the conclusions of the Phase I Final Report. Participants displayed a remarkable degree of energy and enthusiasm to build on opportunities and overcome challenges in developing research literacy and capacity amongst the CAHC professions. At all levels: institutional, professional and societal, initial perceived differences between and amongst the disciplines represented at the conference were quickly replaced by a willingness to work together to find common ground, to avoid duplication of effort and to use available resources wisely and effectively.

Specific strategies generated by the group to individually address institutional, professional and societal readiness were identified as highly interdependent and best addressed synergistically on a number of fronts. The group agreed that the culture of CAHC educational institutions and core values of professionalism inclusive of reflection, critical thinking, and evaluation, must be sensitively shaped and nurtured before research literacy and capacity becomes embedded in curricula. National NHP/CAHC strategies to promote standards in education and accreditation, health care professionalism and ethics in research should accompany the drive towards provincial legislation and/or recognition. Defining what research language means and agreeing to national core competencies in research literacy and capacity that are respectful of the diversity of CAHC practice and consistent with CAHC values, are potential and feasible next steps.

Building upon opportunities for change and growth by supporting teacher education and by developing partnerships across and within disciplines and with conventional researchers and institutions was another clear theme. Bridges and partnerships need to be built for students, faculty, administrators and graduates to articulate and work with each other and with other educational institutions.

Sharing resources and finding realistic approaches lead the group to identify existing networks as potential partners for collaboration. For example, utilizing the IN-CAM web site to facilitate communication and conducting a networking workshop for CAHC educators at an upcoming IN-CAM research forum emerged as clear strategies. Individuals within the group each took on specific interest areas to continue the work on:

- Supporting teacher education that nurtures a culture of inquiry

- Creating national CAHC standards and competencies in research literacy/capacity
- Promoting an existing online continuing education course in research literacy
- Writing papers on the culture of professionalism in CAHC and on innovative instructional delivery models
- Forming a core working group to liaise with the IN-CAM network which would
 - Write a proposal for a CAHC educators networking workshop at the IN-CAM Forum in December, 2004
 - Continue to connect the interest groups into an ongoing and coherent strategy for change
 - Search for sources of funding to support these initiatives.

In summary, Phase I of this study discovered considerable diversity in the ways that CAHC schools across the country support faculty, develop curricula, and prepare students to access, understand, apply and participate in NHP/CAHC research. The identification of common challenges amongst the stakeholders in Phase II of the project led to a willingness to improve research literacy/capacity within this sector through national, collaborative and innovative approaches. Throughout both phases of the study, participants talked about the importance of internalizing the values of inquiry and evaluation at all levels within an educational institution and nurturing a culture of professionalism. Although additional resources and committed leadership will be required to fully operationalize the strategies put forward by the participants in this initiative, it is anticipated that the working groups formed will continue to network and build upon the opportunities they have identified.

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