

ABSTRACTS

FIRST ANNUAL COMPLEMENTARY AND ALTERNATIVE HEALTH CARE & PAEDIATRICS FORUM

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Brennan Hall, St. Michael's College, University of Toronto

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N-OF-1 CLINICAL TRIALS AND OTHER NOVEL DESIGNS

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OVERVIEW: Complementary and alternative medical therapies (CAM) are widely used. For example, 2/3 of children with arthritis use CAM products or services. Whereas allopathic medical practices have been the subject of scientific scrutiny and rigorous regulation for over a century, scientific evaluation of CAM is more recent. The randomized controlled trial (RCT) is considered the gold standard for evaluation of new therapies. However, especially for children, RCTs are sometimes seen as unacceptable and accrual is low.

METHOD: One solution is to study fewer patients, but to get more information, in a way that is more acceptable. N-of-1 clinical trials tell us whether a treatment works for a single individual. These studies can be combined using a Bayesian framework to provide an estimate of the population treatment effect using very few subjects.

RESULTS: We have used this method to show the probable efficacy of vitamin E, and metopimazine as adjunctive agents in cancer treatment, as well as the probable inefficacy of amitriptyline as a pain reliever in childhood arthritis. Novel study designs may allow the rigorous evaluation of CAM in situations that would otherwise be difficult

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PAEDIATRICS COMPLEMENTARY AND ALTERNATIVE MEDICINE SURVEY

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BACKGROUND: Canadian children are receiving complementary and alternative medical care in record numbers. There is little data regarding CAM practitioner knowledge, attitudes, and behaviour towards children in their practice.

OBJECTIVE: To survey naturopaths, chiropractors, and osteopaths in Ontario and Quebec regarding their knowledge, attitudes and behaviour with respect to the children in their practice.

METHODS: Three cross-sectional surveys were developed to assess naturopaths, chiropractors, and osteopaths. 1200 surveys (400 per practitioner group) were deployed using accepted survey methodology.

RESULTS: Once the surveys are complete, we will have much more information about what conditions are commonly treated by various CAM professionals, what pediatric education they have received, and how they would manage children given particular clinical scenarios.

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COMPLEMENTARY & ALTERNATIVE MEDICINE AMONG CANADIAN YOUTH

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INTRODUCTION: This study uses the Canadian Community Health Survey (CCHS) to provide information on a representative sample of young Canadians about utilization of five types of complementary and alternative medical (CAM) services.

OBJECTIVES: The specific objectives of the study are: 1) To determine the characteristics of youths using CAM. 2) To explore the use of CAM among youth with allergies, asthma and disability. The design of this study is cross-sectional, involving the secondary analysis of data collected by Statistics Canada in 2000-1. Our sample consists of 17,545 individuals aged 12-19 who live in private dwellings. Preliminary findings show that a relatively small proportion of youth used health services at all in the year 2000-1 (about 22%). Of these, more than ¾ (17%) used exclusively traditional health services, 3.4% use CAM alone, and 1.5 use both. Those who used CAM, either alone or in combination with traditional medical services, tended to be female, older, from well-off families where the educational level is high. Further they tended to have at least one chronic condition. There are notable regional differences in CAM use, with rates being highest in the west, and lowest in the Atlantic provinces. These differences do not appear to be attributable either to insurance coverage or provincial registration of CAM professionals.

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A QUALITATIVE STUDY TO DEVELOP A THEORY OF ADOLESCENTS' LIKELIHOOD TO USE COMPLEMENTARY/ALTERNATIVE THERAPIES (CAM)

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BACKGROUND: Emerging evidence suggests that adolescents use CAM. Currently, there is a lack of research specific to examining influencing factors of adolescents' use of CAM.

OBJECTIVE: To develop a theory about what influences adolescents' use of CAM.

METHODS: Thirteen adolescents were interviewed using a semi-structured interview guide. Grounded theory methods guided the data collection and analysis.

RESULTS: The adolescent's unique world was identified as the broad environment that generated specific influencing factors. Specific influencing factors were 1) related directly to CAM, 2) occurred at the level of the individual, and 3) occurred at the social level. These factors play a direct role in adolescents' decision-making. The likelihood to use CAM, identified as the core variable, is influenced by general and specific factors as well as perceived barriers and benefits of use.

CONCLUSIONS: Adolescents' likelihood to use CAM is based on a decision involving a complex interplay between general and direct influencing factors.

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COMPLEMENTARY AND ALTERNATIVE MEDICINE USE BY CHILDREN VISITING A PEDIATRIC EMERGENCY DEPARTMENT

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BACKGROUND: Most pediatric literature regarding Complementary and Alternative Medicine (CAM) is limited to the United-States and based on non-randomized self-administered questionnaires, with a low response and completion rate that have not taken into account the non-English speaking families. Literature regarding the use of CAM therapies by children in Canada is very limited.

OBJECTIVES: The purpose of this cross-sectional study was to determine the rate of CAM use by children visiting the Pediatric Emergency Department in a large tertiary center, to characterize the children and caregivers, including non-English speaking families and to determine if the visit to the Emergency Department is possibly caused by an adverse effect of CAM use or due to drug interactions with CAM.

METHODS: We used quasi-randomization of the population studied, a sample size of over 1500 children, and we conducted face-to-face interviews with English and non-English speaking families.

RESULTS: Determining the rate and type of CAM used can help verify the awareness of parents to safety, detect serious adverse effects and possible interactions between CAM and current conventional treatments. We will present the preliminary findings of this large-scale cross-sectional study and share some interesting findings on the rate and type of CAM used by children visiting our Emergency Department.

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COMPLEMENTARY & ALTERNATIVE MEDICINE: A SURVEY OF ITS USE BY CHILDREN & YOUTH

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INTRODUCTION: The use of Complementary and Alternative Medicine (CAM) by Canadian children youth has received little attention by way of systematic study. The lack of information suggests the urgent need for research because many pediatric patients are using these therapies in the absence of safety and efficacy data.

OBJECTIVE: Beginning in January 2005, selected paediatric populations in two metropolitan areas (Ottawa, Edmonton) will be surveyed in order to determine who is currently using CAM, what kinds of CAM are being used and for what reason. The same questions will also be asked about these children's use of CAM over the past year.

METHODS: Information will be gathered from two groups of children: 1) those who might be considered to be at "high risk" because they have a chronic and/or serious illness and are seen at hospital-based clinics and, 2) children who are otherwise healthy, but visit their community physician for scheduled "well child" visits or because of an acute illness. Patients/families will be asked to participate in the study while they wait for their medical appointment; those who consent will be mailed the survey. Dillman's Method will be used for all follow-up procedures.

RESULTS: By identifying "mismatches" between CAM use and the "evidence," this study will permit future research to target those areas in most need of exploration.

KEYWORDS: *Children, pediatrics, survey*

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CAMLIN: EVIDENCE-BASED REVIEWS OF THE SAFETY AND EFFICACY OF NATURAL HEALTH PRODUCTS FOR CHILDREN AND EXPECTING MOTHERS

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INTRODUCTION: CAMline is a joint project of the Ontario College of Family Physicians, the University of Toronto, Department of Family and Community Medicine, the Ontario Branch of the Canadian Society of Hospital Pharmacists, the Friends of Alternative & Complementary Therapies Society and the Leslie Dan Faculty of Pharmacy, University of Toronto.

OBJECTIVE: This web site (www.camline.org) has been created to meet the complementary/alternative medicine (CAM) informational needs of healthcare practitioners, and the public. The distinct features of the website are: 1) the clinical focus of the information – it is practical, concise and applicable to the clinical practice of professionals or the self-management of consumers; 2) the Canadian focus of the material and, 3) the focus on providing children’s doses and reporting what is known about safe use during pregnancy or lactation. Databases will be established on natural health products and CAM therapies/ practitioners. In this presentation, the content currently online is reviewed and the reviews that are “in progress” are discussed. The presentation will conclude with a discussion of the accomplishments and biggest challenges for the project.

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EVALUATING THE SAFETY OF ST. JOHN’S WORT IN HUMAN PREGNANCY

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BACKGROUND: The use of complementary and alternative medicine (CAM) is on the rise, with St. John’s Wort (SJW) as one of the best selling herbs on the market. It was shown to be effective in the treatment of mild to moderate depression, a disease commonly affecting women in their childbearing years. Considering that at least half of all pregnancies are unplanned, inadvertent exposures to this agent during pregnancy are likely to occur.

OBJECTIVE: To determine the risk for major congenital malformations following maternal exposure to SJW in pregnancy and to determine the risk for other adverse pregnancy outcomes.

METHODS: This study will be conducted using a prospective controlled cohort design. Structured, standardized interviews will be used to collect data from all subjects. Exposed subjects will be recruited prospectively, compared to a disease-matched control group and to a healthy control group.

RESULTS: A limited evaluation of completed subjects suggests that SJW is not associated with an increased risk for malformations or other adverse pregnancy outcomes. Subject recruitment continues and more detailed analysis will be performed upon completion.

CONCLUSIONS: The prospect of SJW as an alternative safe treatment for depression in pregnancy remains to be evaluated.

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A PROSPECTIVE COHORT STUDY EVALUATING PREGNANCY OUTCOMES AND RISK PERCEPTIONS OF PREGNANT WOMEN FOLLOWING GLUCOSAMINE USE DURING PREGNANCY

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INTRODUCTION: Glucosamine (GLS) is a natural health product (NHP) used for the symptomatic relief and prevention of osteoarthritis and joint degenerative diseases. Since most pregnant women consider 'natural' products synonymous with 'safe', they often choose to use NHPs over allopathic medications. The safety or risk of GLS supplements in pregnancy should be addressed in order to aid in pregnancy risk assessment.

OBJECTIVES: To determine whether glucosamine treatment during pregnancy is associated with an increased risk of birth defects above the baseline risk of 1-3%; to investigate perceptions of risk and effectiveness of glucosamine by pregnant women and physicians.

METHODS: This is a prospective cohort study with two matched comparison groups. Pregnant women and their matching controls are selected from the Motherisk cohort of callers. Their medical and obstetrical history is documented in a standardized intake form. After the expected date of confinement all women are contacted over the telephone for a pregnancy follow-up. The exposed group of patients are compared to two groups of healthy-matched and disease-matched patients according to maternal age at the time of conception (± 2 years) and gestational age at the time of recruitment (± 2 weeks). To investigate the attitude of physicians toward complementary and alternative therapies and glucosamine, a standardized questionnaire is faxed to randomly selected family physicians, rheumatologists, sports medicine doctors, and obstetricians practicing in Ontario.

RESULTS: The study is still in progress. Pregnant or planning women on GLS are continued to be recruited in the study. Since September, 2003 there were 44 women contacted. Thirty five women were recruited in the study. Twenty women have been followed-up. Fifteen women are still expecting. Questionnaires are continued to be distributed among physicians.

KEYWORDS: *Glucosamine, pregnancy, fetal outcome*

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DECISION-MAKING ABOUT COMPLEMENTARY AND ALTERNATIVE THERAPIES FOR CHILDREN AND YOUTH: LEGAL, ETHICAL AND CLINICAL ISSUES.

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INTRODUCTION: Use of CAM by children and youth raises legal, ethical and clinical issues.

OBJECTIVE: The aim of this project is to identify current law and policies regarding CAM and children as well as the gaps remaining, and to develop the basis for a coherent, well-grounded policy framework.

METHOD: The study is organized in two parts:
 1) Collection and synthesis of existing law and policy data on legal, ethical and clinical issues that arise when children and youth use complementary and alternative therapies and, 2) Through case scenarios, application of legal, ethical and clinical care policies to identify gaps and develop recommendations.

RESULTS: We have completed the first part, and are beginning the second. Legal review and analysis has surfaced the following issues: the duty of care CAM practitioners owe patients; the standard of care by which CAM practitioners will be measured; the standard of care to which medical practitioners who provide CAM (dual practitioners) will be held; and issues specific to use of CAM in paediatric populations. The bioethics literature tells us that we should presume that parents are motivated by what is doing best for their children, and treat them respectfully, although there may be some situations where health care providers have a moral duty to the child to contact child protection authorities. Finally, there is the same moral imperative to research CAM as there is to research conventional therapy. This is necessary for making decisions in children's 'best interests', ensuring properly informed consent, and making responsible decisions about whether or not to fund certain interventions.

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ASSESSING THE QUALITY OF REPORTS OF RANDOMIZED TRIALS IN PEDIATRIC COMPLEMENTARY AND ALTERNATIVE MEDICINEMoher D,¹ Sampson M,¹ Campbell K,² Beckner W,³ Lepage L,¹ Gaboury I,¹ Berman B³¹Children's Hospital of Eastern Ontario Research Institute, and Department of Pediatrics, Faculty of Medicine, University of Ottawa; ²Canadian Coordinating Office of Health Technology Assessment; ³Center for Integrative Medicine, University of Maryland School of Medicine**OBJECTIVE:** To evaluate the quality of reports of complementary and alternative medicine (CAM) randomized controlled trials (RCTs) in the pediatric population. We also examined whether there was a change in the quality of reporting over time.**METHODS:** We used a systematic sample of 251 reports of RCTs that used a CAM intervention. The quality of each report was assessed using the number of CONSORT checklist items included, the frequency of unclear allocation concealment, and a 5-point quality assessment instrument.**RESULTS:** Nearly half (40%) of the CONSORT checklist items were included in the reports, with an increase in the number of items included. The majority (81.3%) of RCTs reported unclear allocation concealment with no significant change over time. The quality of reports achieved approximately 40% of their maximum possible total score as assessed using the Jadad scale with no change over time. Information regarding harms was reported in 22% of the RCTs. Information regarding costs was mentioned in only a minority of reports (4%).**CONCLUSIONS:** There is a need to redouble our efforts to ensure that children and their families are participating in RCTs that are conducted and reported with minimal bias.

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PROBIOTICS IN PEDIATRIC HEALTH CONDITIONS [SYSTEMATIC REVIEW]Green J,¹ Boon H²¹Sick Kids Foundation grant recipient;²Faculty of Pharmacy, University of Toronto**OBJECTIVE:** To conduct a systematic review that summarizes evidence for the safety and efficacy of probiotics in pediatric health conditions other than diarrhea and dental caries.**METHOD:** The following databases were searched from their inception until April 2004; EMBASE, Alt HealthWatch, AMED, Pre-CINAHL, CINAHL, Nursing and Allied Health Collection Basic, Biomedical Reference Collection Basic, MEDLINE, Cochrane Database of Systematic Reviews, Cochrane Controlled Trials Register, Database of Abstracts of Reviews of Effectiveness and Health Business FullTEXT. All reference lists were then hand-searched for additional studies. Randomized controlled trials were evaluated according to CAMline's Quality Assessment Scale (see www.camline.org).**RESULTS:** Likely Effective: (Minimum of two positive quality randomized controlled trials): Prevention of atopic eczema, Treatment of atopic eczema. Possibly Effective: (Minimum of 2 positive human trials): Prevention of respiratory tract infections, Prevention of necrotizing enterocolitis, Colonization of preterm infants. Further Research Required: (Less than 2 positive/negative human trials): Prematurity prevention, Colic prevention, Juvenile chronic arthritis, Cystic fibrosis, Vaccine effectiveness, Failure to thrive, Urinary tract infections, Diabetic complications, Crohn's, Short bowel syndrome, Herpetic gingivostomatitis, H.pylori, Leukemia, Halitosis, Milk intolerance**CONCLUSIONS:** This systematic review found good evidence for the use of probiotics in the prevention and treatment of atopic eczema in children. There are many promising areas of treatment where additional research is required.**KEYWORDS:** *Probiotics, pediatric, lactobacillus, bifidobacterium*

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PROBIOTICS FOR THE PREVENTION OF PEDIATRIC ANTIBIOTIC-ASSOCIATED DIARRHEA: A META-ANALYSIS

Johnston BC, Wiebe N, Crumley E, Vohra S. CARE, University of Alberta

BACKGROUND: Antibiotic treatment is known to disturb the gastrointestinal microflora, resulting in a range of clinical symptoms, most notably, and diarrhea. Previous meta-analyses of probiotics suggest that the co-administration of probiotics with antibiotics is efficacious in the treatment of antibiotic-associated diarrhea in adults. A few trials, including a number of recent trials have been conducted in pediatric populations.

OBJECTIVES: To conduct a systematic review of co-administered probiotics in pediatric patients taking antibiotics.

METHODS: A comprehensive search was performed of all major electronic databases (e.g. CENTRAL, MEDLINE, EMBASE, CINAHL, AMED). In addition, meeting abstracts were hand searched and bibliographies of relevant articles were reviewed for additional studies. Only randomized controlled trials (RCTs) that compared probiotic treatment with placebo or no treatment, in children less than 19 years of age were included. Searches were screened and two reviewers independently applied eligibility criteria. Studies were assessed for methodological quality using the validated Jadad scale. Data were extracted by one reviewer and checked by a second reviewer; data were analyzed using standard Cochrane methodology.

RESULTS: Six studies were included (n=501 patients). The risk of diarrhea was reduced by 50% (RRR 0.50; 95% CI 16, 71), however, statistical heterogeneity was large (I squared= 65%). No serious adverse events were reported.

CONCLUSIONS: The number needed to prevent diarrhea with probiotic treatment, five, is worth serious consideration (NNT 5; 95% CI 4, 17). However, larger rigorous trials using probiotic strains and doses demonstrating benefit are needed.

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FEASIBILITY STUDY FOR A CONTROLLED, RANDOMIZED TRIAL COMPARING RITALIN AND NEUROFEEDBACK THERAPY IN THE MANAGEMENT OF ATTENTION DEFICIT HYPERACTIVITY DISORDER

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BACKGROUND: Attention Deficit Hyperactivity Disorder (ADHD) is one of the most common psychiatric disorders in the childhood population, affecting approximately 3-5% of children under 18 years of age.

OBJECTIVES: The purpose of this study is to determine if neurofeedback therapy is effective in the treatment of children with ADHD. The objectives of the feasibility study are to assess the adequacy of sham neurofeedback for potential use in a full trial comparing neurofeedback to treatment with Ritalin; to assess subject accrual rates; and to document subject retention rates, reasons for drop-out/non-compliance, and adverse events.

METHODS: This study is being conducted as a randomized, double-blind, controlled trial with repeated measures. Subjects who meet the inclusion criteria are randomly assigned to either a neurofeedback group or a sham neurofeedback group. Data are collected from the subjects at pre-intervention (baseline), interim (after 20 sessions), and post-intervention (after 40 sessions). It is hypothesized that subjects in the neurofeedback group will show a greater degree of improvement on the outcome measures than subjects in the sham neurofeedback group. It is also hypothesized that there will be no difference between groups (during the initial neurofeedback sessions) in terms of subjects guessing which group they are in.

POSTER PRESENTATIONS

POSTER 1

MASSAGE RELIEVES SUFFERING

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MUHC, Sainte Justine, Leucan

BACKGROUND: Since 1988, LEUCAN has offered a hospital based massage therapy program for children with cancer. The program now provides massage to children with cancer and their families in hospital, at home, and at summer camp.

OBJECTIVES: To explore benefits, negative consequences, and limitations of the LEUCAN Massage program from the perspective of the parents and their children.

METHODS: A series of focus groups, using semi-structured interviews, were conducted with former massage program participants (7 mothers, 2 fathers, and 7 children). Children varied in cancer diagnosis, age at diagnosis, and time since participation in massage program. Sessions lasted 60 to 90 minutes, were audio-taped, transcribed verbatim, content analyzed for themes.

RESULTS: Parents seemed to relive their child's cancer experience. They talked about their own suffering seeing their child suffer. Mothers especially felt that they could trust the therapist as a resource. Parents talked about how the massage therapist brought relief from pain and comfort to their child. They saw that their child was less tense, that their child smiled and visibly relaxed and even slept better. Some parents referred to massage as a distraction. When asked if they had a massage, parents felt hesitant to accept one in hospital fearing that it would be a lost opportunity for their child. Once at camp, parents more readily accepted a massage for themselves, allowing themselves "to be pampered".

CONCLUSION: Massage provided relief from symptoms and/or isolation created by their cancer experience for both parents and their children. Therapist was a valued resource.

POSTER 2

THE USE OF NATUROPATHIC HEALTHCARE SERVICES BY CHILDREN UNDER THE AGE OF 15 – WORK IN PROGRESS

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BACKGROUND: The use of complementary & alternative medicine (CAM) by children under the age of 15 is on the rise. While information on CAM use in adults is substantial, few studies have assessed disease and sociodemographic characteristics of children who use CAM. Naturopathic medicine is a primary health care service that has been classified as a part of CAM. Naturopathic medicine is unique in its effort to combine basic medical sciences with an array of nonconventional therapeutic modalities in assessing and treating patients. Thus, naturopathic medicine may be a CAM system that can bridge the disparity between conventional and nonconventional principles. Presently, little is known about the patients seen by naturopathic doctors and less is known about children who use naturopathic therapies.

OBJECTIVE: To describe the characteristics of children and their use naturopathic therapies, including sociodemographic background; types of conditions that are seen; the reasons parents choose naturopathic medicine for their children; the perceived efficacy of naturopathic treatments; and how conventional and naturopathic therapies are being combined by parents for their children.

METHODS: A cross-sectional survey of children seen in naturopathic offices from the greater Vancouver regional district in British Columbia. Proxy assessment will be used to obtain information regarding children's use of naturopathic medicine.

CONCLUSION: The findings of this study may provide insights into how the healthcare needs of children are met by naturopathic healthcare services, outside the standard medical system, and how conventional and naturopathic services are being combined to treat children.

POSTER 3

PROBIOTICS FOR THE PREVENTION OF PEDIATRIC ANTIBIOTIC-ASSOCIATED DIARRHEA: A META-ANALYSIS.

Johnston BC, Wiebe N, Crumley E, Vohra S.
CARE, University of Alberta

BACKGROUND: Antibiotic treatment is known to disturb the gastrointestinal microflora, resulting in a range of clinical symptoms, most notably, and diarrhea. Previous meta-analyses of probiotics suggest that the co-administration of probiotics with antibiotics is efficacious in the treatment of antibiotic-associated diarrhea in adults. A few trials, including a number of recent trials have been conducted in pediatric populations.

OBJECTIVES: To conduct a systematic review of co-administered probiotics in pediatric patients taking antibiotics.

METHODS: A comprehensive search was performed of all major electronic databases (e.g. CENTRAL, MEDLINE, EMBASE, CINAHL, AMED). In addition, meeting abstracts were hand searched and bibliographies of relevant articles were reviewed for additional studies. Only randomized controlled trials (RCTs) that compared probiotic treatment with placebo or no treatment, in children less than 19 years of age were included. Searches were screened and two reviewers independently applied eligibility criteria. Studies were assessed for methodological quality using the validated Jadad scale. Data were extracted by one reviewer and checked by a second reviewer; data were analyzed using standard Cochrane methodology.

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CONCLUSIONS: The number needed to prevent diarrhea with probiotic treatment, five, is worth serious consideration (NNT 5; 95% CI 4, 17). However, larger rigorous trials using probiotic strains and doses demonstrating benefit are needed.

POSTER 4

EVIDENCE-BASED REVIEWS OF NATURAL HEALTH PRODUCTS: DEVELOPING CONSUMER SUMMARIES

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BACKGROUND: The Canadian public's growing interest in complementary and alternative medicine (CAM) has led to the need for a reliable source of CAM information. The CAMline website (www.camline.ca) was developed to meet this need. The CAMline website currently provides evidence-based reviews of natural health products.

OBJECTIVES: The purpose of this project was to create consumer summaries of the natural health product reviews on the CAMline website.

METHODS: A variety of consumer medical literature sources were reviewed in order to create a consumer summary template for the CAMline website. The template includes the following major sections: uses, adverse effects, drug interactions, cautions/contraindications, dosage information, product quality information, and additional resources for the consumer. Scales were developed for many of these sections in order to systematically assess the evidence and provide consumers with a simple means of understanding the evidence. A user-friendly glossary and a coded colour scheme used in the summaries were also developed to enhance consumer appeal. Pediatric and maternal information included in the consumer pages were highlighted in pale yellow. Pilot testing of three of the summaries with various health care practitioners and consumers was conducted and the feedback given was incorporated into the template design. To date, the summaries completed include chamomile, chaste tree, chondroitin sulfate, dong quai, echinacea, essiac, evening primrose oil, garlic, ginger, ginkgo, glucosamine, St. John's wort, tea tree oil and valerian.

CONCLUSIONS: Based on the feedback received, it is anticipated that these consumer summaries will be a convenient, credible, and useful source of CAM information for the public.

POSTER 5

**RETROSPECTIVE REVIEW OF REQUEST FOR USE OF COMPLIMENTARY AND ALTERNATIVE MEDICINE IN PEDIATRIC HEMATOLOGY/ONCOLOGY CLINIC
WORK IN PROGRESS**

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BACKGROUND: A dramatic increase in the use of complimentary and alternative medicine (CAM) has been well documented in the pediatric oncology patient population.

OBJECTIVE: To describe the interest in the use of CAM in a pediatric hematology/oncology clinic.

METHODS: Drug information requests to the pharmacist regarding the use of CAM in the hematology/oncology clinic were summarized over a period of two years. Each request was assessed for safety, efficacy, adverse effects and potential drug or disease interactions based on the current literature.

RESULTS: The majority of patients (65%) inquired about more than one product. The most common request was for multivitamin and mineral preparations. Vitamin C/ascorbic acid and vitamin A (beta-carotene) were specifically the most popular requests (13 patients each) followed by the B vitamins, vitamin E, zinc, calcium and selenium. The most common single herb request was for bovine whey protein and aloe juice/latex, with eight requests each, followed by ginseng and reishi mushroom with seven requests each. Astragalus, burdock, ginger, grape seed/skin, licorice and slippery elm followed with six requests each. Patients that were further along in the disease process, or had relapsed were more likely to inquire about CAM.

CONCLUSION: Further research will need to be done to assess safety and potential drug interactions between conventional chemotherapy and the most common CAM requests in the clinic.

POSTER 6

INVESTIGATING THE EFFECTIVENESS OF TREATING INFECTIOUS MONONUCLEOSIS IN BOTH THE CONVENTIONAL WESTERN AND TRADITIONAL CHINESE MEDICAL SYSTEMS

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BACKGROUND: Infectious mononucleosis (IM) is a ubiquitous illness that contributes significantly to the public health burden. Although conventional medicine can readily diagnose IM no cure is available and treatment is limited. Traditional Chinese medicine (TCM) has historically been used to treat viral infections; numerous studies have recently been conducted on the potential of TCM to lessen the burden of hepatitis.

OBJECTIVE: To compare the effectiveness of TCM to conventional medicine in the treatment of IM

METHODS: Part 1: Systematic review of TCM versus conventional medicine for IM.

Part 2: Development of a double-blind randomized controlled trial (RCT) protocol of TCM versus conventional medicine for IM: Participants diagnosed with symptomatic IM will be randomized to conventional care or TCM arms. Participants will receive individualized treatment or sham therapies from a TCM practitioner or standard care or placebo from a conventional care provider. Outcomes will be assessed through re-examination at predetermined intervals. The primary outcome will be fatigue; secondary outcomes may include other subjective and objective measure of acute symptoms of infection.

Part 3: Piloting of the RCT

CONCLUSION: Viral infections contribute significantly to the burden on health care yet effective treatments in conventional medicine are often limited. CAM related treatment options may be appropriate for such conditions but the quality of this research has been poor. Methodologically rigorous investigations of promising CAM therapies are necessary and timely. This project will provide evidence for a common condition with an important public health burden.

POSTER 7

COMPLEMENTARY AND ALTERNATIVE MEDICINE: A PUBLICATION BIAS OF HOMEOPATHIC CLINICAL TRIALS IN PEER REVIEWED JOURNALS.

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BACKGROUND: Growing popularity of complementary and alternative medicine (CAM) in the public sector is reflected in the scientific community by an increased number of research articles assessing its therapeutic effects. There is some suggestion that publication bias occurs in mainstream medicine, and may also occur in CAM. Homeopathy is one of the most widespread and most controversial forms of CAM. The purpose of this study was to compare the representation of homeopathic clinical trials published in traditional science and CAM journals.

METHODS: Literature searches were performed using Medline (PubMed), AMED and Embase computer databases. Search terms included "homeo-pathy, -path, and -pathic" and "clinical" and "trial". All articles published in English over the past 10 years were included. Our search yielded 251 articles overall, of which 46 systematically examined the efficacy of homeopathic treatment. A comparison of review and meta-analysis articles on homeopathy was also performed.

RESULTS: We examined 46 peer-reviewed articles published in a total of 23 different journals. Twenty-six experiments published in traditional journals were compared with twenty articles published in CAM journals. Of those in traditional journals, 69% reported negative findings compared with only 30% in CAM journals.

CONCLUSION: More studies showing positive results are published in CAM journals compared with traditional journals. These results suggest a publication bias against homeopathy exists in mainstream journals. We found a large variation in the type of homeopathic remedy examined, the dose administered and the number of patients in each study making comparisons across trials difficult.

POSTER 8

A CROSS-SECTIONAL ANALYSIS OF CAHC (COMPLEMENTARY AND ALTERNATIVE HEALTH CARE) USE IN TWO PEDIATRIC COHORTS

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BACKGROUND: Use of complementary and alternative health care (CAHC) is reportedly high in adults with chronic conditions but few studies have explored use of CAHC in Canadian children with chronic conditions.

OBJECTIVES: 1) To describe CAHC use in two cohorts: one with JIA patients and another with children with physical disabilities. 2) To explore whether CAHC use was associated with patient-specific, parent-specific and medical management factors.

METHODS: Parents of children who attended the JIA clinic at the Montreal Children's and BC Children's Hospitals completed a series of questionnaires including those on adherence to treatment, utilization of CAHC, quality of life and parental coping. Parents of children who were referred to physiotherapy or occupational therapy for physical disabilities from the Montreal Children's Hospital and Hôpital Sainte-Justine answered questionnaires about medical history, utilization of private services and CAHC, quality of life, burden of care, coping and empowerment.

RESULTS: Among children with JIA, ever use of CAHC was 46/118 (33.9%) and use in the past 3 months was 14/118 (11.9%). Factors associated with the use of CAHC were parental use of CAHC and Canadian ethnicity. Among children with physical disabilities, 48/219 (21.9%) used CAHC. The factors associated with use of CAHC in this cohort were higher socioeconomic status, lower quality of life score on the physical subscale and receipt of services from the French hospital (HSJ).

CONCLUSIONS: Use of CAHC in children with chronic conditions is high. Factors such as ethnicity, higher SES, parental use of CAHC and lower physical quality of life were associated with CAHC use.

POSTER 9

USE OF COMPLEMENTARY AND ALTERNATIVE MEDICAL THERAPIES IN A PEDIATRIC NEUROLOGY CLINIC

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OBJECTIVES: 1) to determine the prevalence of complementary and alternative medical (CAM) therapies used in children with neurological disorders. 2) To examine the associations between the use of CAM therapies and caregivers' socio-demographic profile or pediatric disease-related variables.

METHODS: This was a pilot survey involving 127 families attending the pediatric neurology clinic at Alberta Children's Hospital between January and May 2004.

RESULTS: The mean age of patients was 9.5 to 4.8 years. Fifty-three of 127 (42%) patients received one or more types of CAM therapies, with the most common types being dietary supplements (33%) and chiropractic manipulations (16%). Caregivers' personal experience or success stories from friends and media were common reasons for trying CAM therapies in these children. Socio-demographic profile did not influence CAM therapies utilization. Fifty-seven percent of CAM users reported benefits, and only two percent experienced side effects. There was no significant association between the use of CAM therapies and either types of neurological complaints, degree of disability, or pediatric quality of life. The average self-reported cost of CAM therapies was significantly lower than that reported for conventional therapies in these children (\$18 vs. \$98 per month, $p=0.023$).

CONCLUSIONS: The use of CAM therapies was common among pediatric neurology patients. Over half of the families reported benefits with CAM therapies and side effects were few. Further studies should address the specific evidence for the use of CAM therapies in children with neurological disorders, and to determine potential interactions between CAM and conventional therapies in these patients.