

Internship Research Abstracts - DC Conference –Toronto - May 28, 2005

Title: Validation and clinical value of the nutrition-screening tool used at Royal Columbian Hospital to assess protein energy malnutrition

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Objectives: To assess the validity of the Nutrition Screening Tool (NST) implemented at Royal Columbian Hospital (RCH) and to identify the frequency of Dietitian intervention for patients with varying degrees of protein-energy malnutrition (PEM) as determined by the NST. **Methods:** 53 patients on medical and sub-acute geriatric units at RCH were ranked for risk and severity of PEM using the NST and Subjective Global Assessment (SGA). SGA is the standard tool used to assess PEM risk. The NST was administered by diet technicians and the SGA was administered by dietetic interns. Patient records were screened to determine frequency of dietitian intervention, measured by documentation of patient assessment and care plan. Inter-observer variability was determined using Kappa (k). Descriptive measures and McNemar Test were used to compare NST to SGA. Chi-squared (χ^2) was used to test whether NST rank and dietitian intervention are independent. **Results:** Inter-observer variability using SGA indicated substantial agreement (k=0.76) and only slight agreement (k = 0.19) using the NST. Sensitivity, specificity and positive predictive value for NST were calculated at 86.84%, 53.3% and 82.5% respectively. The McNemar Test established that the observed differences between NST and SGA rank were not significant (p> 0.05) supporting use of the NST in screening for PEM. χ^2 analysis determined that there is no significance between NST rank and frequency of Dietitian intervention (p>0.05). **Implications & Conclusions:** The results support the use of the NST as a valid tool in measuring PEM for the defined population at RCH. Surprisingly, NST rank did not affect dietitian intervention, requiring further investigation into its clinical value.

Title: Evaluation of a new phosphorous point system as a teaching tool for improving dietary adherence and satisfaction in an outpatient peritoneal dialysis population: a pilot study

Authors: *D. Candiotto, *N. Saxena, C. Huang, P. Darling, P. McFarland, S. Carere. St. Michael's Hospital Dietetic Internship Program, Toronto, Ontario.

Objectives: A low phosphorous diet ($\leq 1000\text{mg/day}$) is recommended in the peritoneal dialysis (PD) patient population. A pilot study examining the efficacy of a new teaching tool, the Phosphorous Point System (PPS) in PD patients showed high satisfaction scores. This study also indicated the need to further revise the PPS to include more food items (M.Ginsler, L.Luu, 2004 intern research project). The objectives of the current study are: 1) To expand and refine the PPS tool for peritoneal dialysis patients and professionals 2) To conduct a focus group with PD patients to obtain feedback on the revised PPS. **Methods:** The PPS was revised by including phosphorus content in foods using a point system scale based on Health Canada's Canadian Nutrient File (CNF) 2001 version. A non-random sample ($n = 12$) of PD outpatients from the Home Dialysis Clinic at St. Michael's Hospital were recruited. Patients selected were on PD > 6 months, understood English and were without acute illness. Qualitative data was analyzed utilizing Colaizzi's (1983) phenomenological method. A post-focus group survey was disseminated to ensure emerging themes were representative of participant viewpoints. Lastly, the PPS tool was modified post-focus group and evaluated by RDs ($n = 10$). **Results:** Pending completion of data collection phase. **Implications & Conclusions:** The PPS tool has the potential to increase dietary flexibility and therefore satisfaction among PD patients. As well, such a tool could be of significant value to help PD patients follow a low phosphorous diet while providing an educational resource for professionals.

Title: Can dispensing nutritional supplements at medication pass increase supplement intake and prevent weight decline compared to standard on-tray delivery in HIV and oncology inpatients with disease-associated weight loss?

Authors: L Moisey, S Schamehorn, S DeMaio, P Darling, D Scaffidi, K Gough, St. Michael's Hospital Dietetic Internship Program, Toronto, Ontario.

Objectives: The conventional strategy to improve energy and nutrient intakes in patients at risk of malnutrition includes providing energy dense nutritional supplements (ES) with meals. The purpose of this study is to determine whether the delivery of ES at medication pass will increase supplement intake and attenuate or cease weight decline compared to on-tray supplement delivery in HIV and oncology inpatients with disease-associated weight loss.

Methods: HIV and oncology inpatients (18 to 70 y) with weight loss $\geq 5\%$ of usual body weight in the last 6 months that provide informed written consent are enrolled in this study. Participants are block randomized to receive ES either at medication passes (120 mL qid, at 1000, 1400, 1800 and 2200 h) or by standard on-tray delivery (2 x 237 mL cans ES/d at breakfast and dinner) for a 2-week period or until discharge from hospital. Energy and nutrient intake from supplements are recorded daily, and body weight is measured at baseline, days 7 and 14, or at discharge. **Results:** To date, 13 patients have been enrolled in the study of whom 7 received ES at medication pass and 6 received on-tray ES. Statistical analysis of the data will be conducted at the end of the data collection period using SPSS 11.5.

Implications & Conclusions: Information gathered from this trial could help to determine whether administration of nutritional supplements at medication pass has the potential to be a more effective method than standard delivery in an acute care setting.

Title: B vitamin deficiency in hospitalized patients with congestive heart failure

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Objectives: Many patients with congestive heart failure (CHF) use diuretics to alleviate circulatory congestion. Previous studies have shown an association between urinary thiamin excretion and diuretic use leading to thiamin deficiency (TD). Thiamin (B1), riboflavin (B2) and pyridoxal 5'-phosphate (B6) are all water-soluble vitamins that are subject to renal excretion and are not stored in significant amounts in the body. Furthermore, sub-optimal dietary intake may compromise the status of these vitamins, as CHF patients are often malnourished. We have recently shown that TD was significantly more prevalent in a cross-section of hospitalized CHF patients (33%) compared to healthy controls (12%) ($p=0.007$). We now wish to determine the prevalence and determinants of B2 and B6 deficiency in these same patients and healthy controls. **Methods:** One hundred consecutive patients admitted to the cardiology ward or coronary care unit with a primary diagnosis of CHF, and 50 age-matched controls were recruited into the study. Serum levels of B2 and B6 were analyzed by HPLC and radioimmunoassay, respectively. The deficiency cutoff for vitamin B6 is < 20 nmol/L, while that of B2 is > 1.2 for erythrocyte glutathione reductase enzyme. Relationships will be examined between riboflavin/vitamin B6 deficiency and age, CHF disease severity, diuretic use/dose, nutritional status, dietary intake of B2/vitamin B6, and B1 deficiency. **Implications & Conclusions:** Given the roles of vitamins B2 and B6 in energy and homocysteine metabolism, knowing the prevalence of riboflavin and vitamin B6 deficiency in CHF patients may help clinicians decide whether their patients would benefit from B vitamin supplementation.

Title: A study of ideal body weight assessment methods and the mini nutritional assessment (MNA) tool to determine risk of malnutrition in hospitalized older adults

Authors: N Heroux, M Warken, L Burns, Regina Qu'Appelle Health Region Dietetic Internship Program, Regina, Saskatchewan.

Objectives: To compare commonly used ideal body weight assessment methods for hospitalized older adults and compare these methods to the risk of malnutrition using the MNA. **Methods:** In-patients over the age of 65 years from two acute care institutions in the Regina Qu'Appelle Health Region participated in this study during the weeks of January 21st-27th and February 4th-10th, 2005. Height and weight were measured to calculate ideal body weight using BMI, Hamwi method, Metropolitan Height Weight tables, and JAMA tables. Researchers completed the MNA with each participant to determine risk of malnutrition. **Results:** The participants (n=58) ranged from ages 65 to 96 years old; 27 females and 31 males. The ideal body weight composite average of the four methods of determining IBW was calculated. Ideal body weight (IBW) calculated using the JAMA tables was similar to the composite average (P =0.874). Metropolitan Life Insurance tables (p<0.001), BMI (p< 0.001), and Hamwi (p<0.001) methods were found to be significantly different than the composite average. Those individuals with an IBW <90% using the JAMA tables were identified to be at risk malnutrition using the MNA. **Implications and Conclusions:** The JAMA tables are recommended to assess IBW in older adults (>65 years old) in the RQHR.

Title: Assessing diabetes self-management of participants of the “Learning to Live With Type 2 Diabetes” Program

Authors: AC Coutts, JI Fenske, LD Skowronski, Regina Qu’Appelle Health Region Dietetic Internship Program, Regina, Saskatchewan

Objective: The objective of this study was two-fold: 1) to determine how many clients, one year after completing the program, are having their A1c and MAU checked regularly; 2) to determine clients’ perceptions of their self-management of diabetes. **Methods:** Program participants (n=117) were sent a questionnaire designed to assess perceptions of diabetes self-management. A chart review of those individuals who responded to the questionnaire was conducted to investigate changes in A1c and MAU after completion of the program. Ethics approval was received to conduct this study. **Results:** Forty-six program participants responded to the questionnaire. The majority of the respondents had positive perceptions of their diabetes self-management. Yet, in looking at laboratory values at three months after the group sessions only 33 out of 46 (72%) respondents had their A1c tested. At six months after the group sessions, 39 out of 46 (85%) had been tested; and at 12 months after the group sessions only 31 out of 46 (67%) respondents had their A1c tested. Eighty three percent of respondents had MAU tested within 1 year of completion of the program. **Conclusion:** Participants of this program perceived that they were in control of their diabetes. However laboratory data suggests that diabetes education improves A1c for up to six months upon completion of the “Learning to Live with Type 2 Diabetes” program.

Title: Evaluation of protein and energy requirements and stress factors for patients with renal disease, chronic obstructive pulmonary disease and head injuries

Authors: C Bodnar, A Sjodin, Regina Qu'Appelle Health Region, Dietetic Internship Program, Regina, Saskatchewan.

Objectives: The purpose of this study was two-fold: 1) to review the literature for protein and energy requirements for adult patients with renal failure, head injuries, adult respiratory distress syndrome (ARDS), and chronic obstructive pulmonary disease (COPD) 2) to compare it to the recommendations in the Regina Qu'Appelle Health Region (RQHR) dietitian handbook. **Methods:** A critical review of the literature was conducted. Research articles were classified using methods proposed by Heyland (1998).

Results: The following results are based primarily on Level III and Level IV studies (nonrandomized control and observational studies). The primary findings for head injuries are 1.3-1.5 times basal energy requirements (BEE), 0.9 times BEE for patients in a therapeutic coma, and 2.0-2.5 times BEE for head injured posturing patients. Protein requirements for head injured patients are 1.5-2.0 g protein/kg/day. Due to the search strategy employed, an evaluation of ARDS was not possible due to a lack of research. COPD recommendations are 1.2-1.4 times BEE for malnourished patients and 1.1-1.3 times BEE for stable patients. No recommendations can be made for protein requirements or regarding the disease-specific energy estimation equations for COPD patients. **Implications & Conclusions:** The results of this study indicate that the energy and protein recommendations in the RQHR dietitian handbook concur with the current literature for renal disease and head injuries, and energy requirements of COPD. It is suggested that sub-categories be included for head injuries and COPD.

Title: Micronutrient intake of exclusively tube fed clients in long term care

Author: JL DeRoose, DR D'Ottavio, Regina Qu'Appelle Health Region Dietetic Internship Program, Regina, Saskatchewan.

Objectives: The objective of this study was two-fold: 1) to determine if clients receiving total enteral support in long term care have an adequate, inadequate or excessive intake of selected micronutrients according to the Dietary Reference Intakes (DRI); 2) to determine if the addition of a multivitamin to clients' tube feeds would change their micronutrient status.

Methods: A retrospective chart review was conducted to calculate micronutrient intakes using type and volume of formula for adult and pediatric clients in long term care.

Micronutrient intakes were assessed according to the DRI for gender and life stage groups to determine if their intake was probably inadequate, possibly inadequate, probably adequate or excessive (UL). A comparison of micronutrient intakes before and after the addition of a multivitamin was also assessed.

Results: Micronutrient analysis from the tube feed showed that specific life stage groups were below the AI for: Vitamin K, choline, manganese, calcium, and vitamin D. For the micronutrients expressed as a Recommended Dietary Allowance (RDA), specific life stage groups are classified as probably inadequate in: folic acid, phosphorus, magnesium, iodine, iron, selenium, and Vitamin E. Analysis of the tube feed alone indicated that eight micronutrients across all life stage groups exceeded the UL. The addition of multivitamin supplements further caused clients to exceed the UL.

Conclusion: Based on the results of this study, it is recommended that the addition of individual micronutrient supplements be determined on a case by case basis. More research is required on micronutrient requirements of clients who are immobile and exclusively tube fed, and/or have a chronic disease or condition.

Title: The relationship between obesity, dietary intake and physical activity among hospital employees at the Dr. Georges-L. Dumont Regional Hospital in Moncton, New Brunswick.

Authors: N. Bujold and A. Morris, Dr. Georges-L. Dumont Regional Hospital, Moncton, New Brunswick.

Objectives: To determine the prevalence of obesity and its relationship, if any, with dietary intake and physical activity among employees at the Dr. Georges-L. Dumont Regional Hospital. **Methods:** A questionnaire was developed to assess dietary intake, physical activity levels and to measure each subject's body mass index. Employees voluntarily came to one of two stands held to complete the questionnaires. **Results:** A total of 145 employees completed the questionnaire, 122 of them women and 23 men. In the study group, 20% of subjects were classified as obese, 41% as overweight, 37% as normal weight and 2% as underweight, compared to the 2003 National average of 15% Canadians classified as obese and 33% as overweight. There was no observed relationship between eating breakfast and obesity in our study group. Dietary intakes of subjects were evaluated based on the recommended daily portions from Canada's Food Guide to Healthy Eating. In this study, obese subjects consumed more portions of foods from the "other" food group than did subjects of normal weight. Conversely, subjects of normal weight consumed more portions of fruits and vegetables and milk products daily than did obese subjects. There was an observed positive relationship between regular use of the hospital stairs and healthy body weight, as well as between healthy body weight and the practice of physical activity 3 to 5 times per week for the duration of 30 to 45 minutes. **Conclusion:** The results of our study indicate that a healthy lifestyle, including a well balanced diet along with regular physical activity, encourages a healthy body weight.

Title: Food service emergency planning

Author: A Gemmill, Manitoba Partnership Dietetic Education Program, Winnipeg, Manitoba

Objectives: Emergency planning relies on imagining events we hope and often believe will never happen. However, the SARS outbreak in 2003 is just one example of the importance of having effective emergency management programs or disaster plans in place. This review was undertaken to assess the current literature in food service emergency planning. It is intended to provide useful information to help develop plans or update and assess current ones. **Methods:** An extensive literature search was conducted on recent research and experiences concerning this topic. **Results:** The 2003 Canadian Health Care Accreditation Report states disaster and emergency preparedness is a common patient safety recommendation in accredited healthcare organizations. The review consists of four main sections: basic emergency management planning, infectious disease outbreaks, natural disasters and bioterrorism. Highlights of the findings include lessons learned from healthcare professionals who have experienced food service emergencies first-hand. **Implications & Conclusions:** Overall, the literature stresses food service facilities should have an emergency management program or disaster plan so that patient/resident/client responsibilities can be continued effectively in the event of adverse situations. However, literature on emergency planning for food service specifically is limited and many issues need to be explored in more detail. This includes planning for the recovery phase after emergencies and the use of personal protective equipment.

Title: Bacterial contamination of open enteral feeding systems

Author: AG Spittal, Manitoba Partnership Dietetic Internship Program, Winnipeg, Manitoba

Objectives: The purpose of this study was to determine the prevalence of bacterial contamination of open enteral feeding systems in an acute tertiary care facility and to examine whether another feeding system, the closed system (CS) would be safer and hence more appropriate to implement. Studies have shown that bacterial contamination does exist in enteral formulas of open feeding systems. Vanek (2000) noted open system (OS) contamination rates may occur between 15-100% from samples collected at 24 hours. On the other hand, Herlick, McKinlay et al, Vanek, Wagner and Bott et al found significantly lower contamination rates in the CS compared to the OS. **Methods:** A total of 36 open enteral tube feed samples were collected from two hospital wards: neurosurgery unit (A5) and medical intensive care unit (MICU) at Health Sciences Centre (HSC) in Winnipeg, Manitoba. For two weeks, tube feed bags were randomly collected from patients connected to a continuous drip tube feed kangaroo bag for 24 hours. Samples were then extracted from the tube feed bag using the aseptic technique and sent to a microbiology lab for analysis and identification of bacterial organisms. If bacterial growth was present within 72 hours, cultures were identified. *E. coli* $\geq 10^1$ cfu/mL or bacteria containing 10^3 - 10^5 cfu/mL were isolated and then analyzed every 24 hours until identification was completed. **Results:** In total, 7 samples or 19% of formula submitted for analysis contained bacterial contamination (2 out of 15 samples from A5 and 5 out of 21 from MICU). Preliminary results using a Risk Assessment Matrix demonstrate a moderate to high-risk rating. **Conclusion:** Since preliminary results (19%) reveal that contamination can and may exist at HSC, serious examination of implementing a safer alternative system such as the CS needs to be considered.

Title: The community food system of Repulse Bay: a needs assessment.

Author: AC Hoover, Manitoba Partnership Dietetic Education Program, Winnipeg, Manitoba.

Introduction: To increase the exposure of dietetic interns to the unique working environment of Nunavut, a partnership between Manitoba Health, the Government of Nunavut, the Northern Medical Unit at the University of Manitoba, and the internship program was established to provide an intern with a six week community placement in Nunavut. Many challenges face the Inuit people in Nunavut to acquire enough safe, healthy, culturally appropriate food. Food insecurity is complicated by changing food consumption patterns of Inuit people and the resulting nutrition transition. The increased intake of market food and less of traditional, or country food is having adverse effects on the health of Inuit people, such as increasing the risk of obesity, type 2 diabetes, and other preventable chronic diseases.

Objective: Perform a foods and nutrition needs assessment to assist in planning future research activities and nutrition programs in Repulse Bay, Nunavut. **Methods:** The community food system will be examined using a validated framework adapted for use in northern isolated communities. Qualitative data will be collected through interviews with community members, policy makers, service providers, community activists, and local business owners. Quantitative data such as community demographics and employment statistics will also be collected. The current peer-reviewed literature will also be reviewed.

Results: The results will be analysed by identifying common themes and concepts that emerge from the data. A SWOT analysis of the community food system will be performed.

Implications: There is great opportunity to enhance the health status and prevent the development of many chronic diseases of Inuit people in Repulse Bay, Nunavut. This needs assessment will provide the basis for further nutrition research by future dietetic interns with the Manitoba Partnership Program.

Title: The development of an evaluation framework for primary care nutrition services in ACCESS centres

Author: BMA Lints, Manitoba Partnership Dietetic Education Program, Winnipeg Manitoba

Objectives: With the constant evolution of health care, population health has become a priority in Canada. To coincide with the 2003 First Ministers' Accord on Health Care Renewal, community access centres are becoming more prominent to help increase accessibility to primary health care services. The Winnipeg Integrated Services Initiative (WISI) is a partnership between the Winnipeg Regional Health Authority (WRHA), Manitoba Family Services and Housing, and Manitoba Health that aims to integrate health and social services in Winnipeg, and it has done so by initiating the framework for community access centres, one of which is in operation in the River East area. Dietitians are employed by many community access centres to enhance the overall well being of clients, so an evaluation framework was deemed necessary to assess the efficiency and effectiveness of these services.

Methods: A literature review of existing community access centres made it apparent that many existing centres have comprehensive evaluation frameworks for the functioning of the entire facility, but not necessarily for nutrition services alone. There are, however, some parallels that can be made with other services.

Results: An evaluation framework for the primary care dietitians working in Access Centres was developed under an advisory committee of two practicing Access River East Dietitians and one WRHA Community Nutrition Specialist. Sample frameworks from other centres were analyzed and adapted to create this framework for Winnipeg. The framework includes measurements, methods, expected outcomes, potential limitations, and the timeline for evaluation. Instrument development must now occur to allow the evaluation process to advance. **Conclusion:** This evaluation framework will allow consistent and continuous evaluation of nutrition services at all the Winnipeg community Access Centres.

Title: Manitoba dietitians discuss ethical considerations in weight management

Author: B Grobb, Manitoba Partnership Dietetic Education Program, Winnipeg, Manitoba

Objectives: Recent increases in obesity in Canada indicate a growing opportunity for dietitian involvement in weight loss counselling. Given that long-term weight loss is seldom achieved, this creates a potential ethical dilemma for dietitians. To date, there has been little research into the ethics surrounding weight management. The objective of this project is to gain insight into the views of Manitoba dietitians regarding ethical considerations in weight management. **Methods:** Three co-investigators interviewed 18 Manitoba dietitians using semi-structured individual interviews. Dietitians were asked a series of ethically approved questions, which focused on obesity, factors influencing dietitians' weight management counselling strategies, and related ethical issues. Interviews were audiotaped, transcribed verbatim, pooled between co-investigators, and coded for themes. Analytical memos were written and then used to write the report. **Results:** Dietitians had mixed views surrounding ethics in weight management. Some felt very strongly that there were ethical issues; some felt there were no ethical issues, and some were unsure. In terms of weight loss promotion, opinions varied again and some admitted they did not know whether dietitians should be promoting weight loss when there is little evidence to support its success. Gastric bypass surgery was thought by some to be dangerous, unethical and non-sustainable. However, the majority believed it may be indicated in certain situations. **Conclusion:** Ethics in weight management is under-discussed among dietitians, and there is a need for more education at the university level around ethical issues in dietetic practice.

Title: Clostridium difficile the “superbug” and the role of dietitians

Author: CM Williams, Manitoba Partnership Dietetic Education Program, Winnipeg, Manitoba.

Objectives: *Clostridium difficile* is accountable for 20% of antibiotic-associated diarrhea cases. Often no milk product diets are in the physician orders of patients with *Clostridium difficile* as an attempt to control *Clostridium difficile* related diarrhea. The objectives of this project were to find evidence-based guidelines for the nutritional management of *Clostridium difficile* and the usage of prebiotics and probiotics for the treatment of *Clostridium difficile* related diarrhea. **Methods:** An in-depth literature review was performed on *Clostridium difficile* and the recommended nutritional management; and an evaluation of the effectiveness of probiotics and prebiotics for the prevention and treatment of *Clostridium difficile* related diarrhea. A one-year retrospective chart audit at a Winnipeg community hospital was completed to evaluate the nutritional and medical care provided to 36 patients diagnosed with *Clostridium difficile*. **Results:** The nutritional management of *Clostridium difficile* was not well defined in the literature. No evidence-based research was retrieved regarding the recommendation of restricting milk products from these patients. The absence of an entire food group complicates the dietitian’s ability to provide optimal nutritional care and can further compromise their patients’ nutritional statuses. Studies related to antibiotic-associated diarrhea recommended the individual’s regular diet as tolerated to restore and maintain nutritional status. Six of the 36 patients diagnosed were restricted milk products during treatment and showed no related benefit to the restriction. **Conclusion:** Further research is required regarding the nutritional management of *Clostridium difficile* related diarrhea. Furthermore, milk products are beneficial for improving one’s nutritional status and providing nutritional supplementation. The use of probiotics and prebiotics in hospitals for the prevention and treatment of *Clostridium difficile* looks promising as part of standard prevention and treatment in the future.

Title: Evaluation of the services provided by the Manitoba Home Nutrition Program: a retrospective quality review

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Objectives: The Manitoba Home Nutrition Program (MHNP) provides training, monitoring, and support to people in Manitoba who require home enteral nutrition, total parenteral nutrition (TPN), and IV hydration. The program currently has a limit of 13 spots for home TPN, which results in a waiting list. The objective of this retrospective quality review was to determine the reasons for delays in the provision of home TPN. **Methods:** Medical and MHNP charts were reviewed on patients accepted for home TPN therapy. All charts were assessed for patient characteristics, such as age, sex, and indication for TPN. In addition, the following data was collected: the length of time from the initial consult until discharge, and barriers to teaching patients to administer home TPN. For subjects accepted onto the waiting list, the length of time that subjects waited in hospital for home TPN prior to being discharged was determined. **Results:** Forty percent of subjects accepted to the wait list were medically stable for the entire time they remained on the wait list, and remained in hospital for a mean of 23 days for the sole purpose of receiving TPN. Barriers to teaching included patient illness, difficulty learning the necessary skills, and family stress or lack of family support in the administration of home TPN. **Implications:** A significant number of individuals requiring home TPN require prolonged hospital stays because of complex medical problems. Increasing the capacity of the MHNP would allow for earlier discharge of medically stable patients. As well, awareness of the barriers to teaching home TPN administration will allow for development of techniques to overcome these challenges.

Title: Cardiovascular disease risk factors – what should we monitor from a population health perspective?

Author: EKD Harasymek, Manitoba Partnership Dietetic Education Program, Winnipeg, Manitoba. **Objectives:** (1) To identify the major risk factors of CVD and best screening measures for predicting high risk individuals. (2) To identify which and how these risk factors are currently being monitored at a population health level in the Winnipeg region. (3) To identify other potential measurements of predicting high risk individuals. **Methods:** A literature search was conducted using on-line databases, Science Direct, PubMed, MEDLINE and Cochrane Library. Studies from 1999 – 2005 and those using a meta-analysis approach were given preference. The Community Health Assessment (CHA) Report 2004 was reviewed to identify the CVD risk factors that are being monitored within the Winnipeg Region. **Results:** In regard to obesity, studies indicate that the waist-to-hip ratio versus BMI, which is used in the CHA report may be a superior measurement. A diet high in fruits and vegetables along with whole grains, fiber, and legumes had a significant impact in reducing risk of CVD but only data on fruit and vegetable intake is available in the CHA report. Inflammation plays a significant role in CVD and markers such as c-reactive protein have been shown to be useful in predicting who is at high risk of CVD complications, but cut-off points are still needed before using this as a screening tool. Monitoring homocysteine levels may also be beneficial in assessing high risk individuals but currently there is insufficient evidence to warrant this screening. **Conclusions:** The burden of CVD could be potentially reduced through risk factor modification. Prevention is key and the major risk factors need to be closely monitored and documented. More research is needed to warrant other screening tools that will be useful in predicting high risk individuals.

Title: An evidence based review for the indication and use of low copper, low iodine, low oxalate and low tyramine diets for the Winnipeg Regional Health Authority diet compendium

Author: JL Cordeiro, Manitoba Partnership Dietetic Education Program, Winnipeg, Manitoba.

Objectives: The low copper, low iodine, low oxalate and low tyramine diets are currently part of the Winnipeg Regional Health Authority (WRHA) diet compendium. However, these diets are seldom used and criteria for these diets are under review. Currently, there is a lack of uniformity regarding the use and the criteria used to exclude foods from these diets. There is also an inconsistency regarding copper, iodine, oxalate and tyramine content of foods. The main objective of this study is to survey facilities across Canada and the US to determine the criteria in use to define foods that are allowed on these diets. This information will be used to develop more appropriate criteria for the WRHA diet compendium. **Methods:** A literature search was completed using electronic journal databases and other credible Internet searches. A questionnaire consisting of six questions was developed to obtain information regarding current practices and diet criteria of the four diets. The questionnaire was distributed to dietitians working in facilities across Canada and the US. **Results:** Analysis of questionnaires is currently being completed. Preliminary results show inconsistent practices and approaches to diet criteria. **Implications and Conclusion:** Utilizing both literature research and completed questionnaires, the current WRHA diet criteria will be revised for these diets to reflect best practice principles.

Title: Effective nutrition messages for females regarding vegetable and fruit intake

Author: K Krueger, Manitoba Partnership Dietetic Education Program, Winnipeg, Manitoba

Objectives: The Nor'west Co-op Community Health Centre is currently working to developing strategies to promote increased intake of vegetables and fruit in their community. The objective of this research project is to determine characteristics of effective nutrition messages for use in health promotion programs.

Methods: Two of three focus group discussions have been held with female participants who regularly attend Nor'west Co-op Community Health Centre programs. Each focus group consisted of different participants. All participants were asked a set of prepared questions relating to their vegetable and fruit intake. Participants were then presented with a variety of nutrition messages, in various forms, followed by open-ended discussions within the group. The focus group sessions were tape recorded and later analyzed for common trends.

Preliminary Results: Differing opinions as well as commonalities have emerged both between and within the two focus groups thus far. Common trends were found in the participants' perceived barriers to eating vegetable and fruit with the most common factors being: cost, not knowing how to prepare them as well as not having the time to prepare them. Preference for color print materials, "how to" information, and hands on learning opportunities such as cooking demonstrations were common among many participants. Differences were noted in preferences for message framing, with a preference for positive framing versus negative framing, as well as their opinion of effective graphics, content, and format of print materials. **Implications and Conclusions:** Results of this study will be used by the Nor'west Co-op Community Health Program to determine how to effectively deliver messages about vegetable and fruit intake to females in their community.

Title: Functional foods and nutraceuticals and prevention and treatment of hypertension

Author: L Begg, Manitoba Partnership dietetic Education Program, Winnipeg, Manitoba.

Objectives: Current nutritional management of hypertension employs the DASH diet (101) and salt restriction (< 2400mg/day). The purpose of this study was to identify functional foods and nutraceuticals that may reduce hypertension when consumed as part of a balanced diet. **Methods:** A literature search was conducted using on-line databases; Blackwell Synergy, British Medical Journals Online, CINAHL, Kluwer Online, MEDLINE, and Science Direct. Key words included hypertension, functional foods, nutraceuticals, blood pressure, prevention, nutrients, peptides, bioactive peptides, and polyphenols. Articles from the year 2000 and beyond and clinically controlled, randomized trials were given preference. Fish proteins, red wine polyphenols, and green and black tea polyphenols were chosen for further discussion. Study interventions, outcomes, and strength and quality of evidence were presented. Roles of these foods for reducing hypertension were discussed. **Results:** Fish proteins were inversely related to blood pressure in hypertensive human and animal models and prevented the development of hypertension in diabetic rats. Red grape and red wine polyphenols reduced blood pressure in hypertensive rats and prevented the development of hypertension in diabetic rats. Moderate wine drinking (<60 g/d) reduced the risk of all-cause mortality in a cohort study of hypertensive men. Drinking green tea (<600 ml/d) decreased the risk for developing hypertension by 65% in a cohort study of Taiwanese men while clinically controlled trials did not demonstrate that either green or black tea could reduce blood pressure in hypertensive subjects. Green tea, however, reduced blood pressure in hypertensive rats and prevented hypertension in diabetic rats. **Implications & Conclusions:** Fish protein, red grape and red wine polyphenols, and green tea may lower blood pressure in hypertensive adults and prevent hypertension in those with diabetes. Further research is needed.

Title: Recommendations for effective nutrition education classes: A focus on elderly adult day hospital participants.

Author: LG Pestaluky, Manitoba Partnership Dietetic Education Program, Winnipeg, Manitoba.

Objectives: To determine what nutrition education clients of Day Hospital programs for elderly would like to receive, and to review current literature to determine whether group classes are effective within this client group. The objective of this project was to make recommendations for effective nutrition education classes provided at elderly adult Day Hospitals. **Methods:** Focus group sessions were held at five Winnipeg Day Hospital programs, with 27 elderly participants. For the purpose of comparison a focus group was held with three participants of a seniors' centre. Surveys were sent to other Canadian Day Hospital programs to collect current nutrition education practices. **Results:** Focus group sessions generated discussion regarding interest in specific nutrition education topics. Identified areas of interest, were, although not limited to: diabetes education, meal planning, and altered appetite. Participants identified effective class presentations to include a combination of lectures, activities, and discussions. Optimal class size was suggested to contain ten or less participants. Current literature identifies numerous barriers affecting learning, and utilization of information among elderly populations. Day Hospital participants are generally affected by chronic health conditions and disease states that greatly affect motivation and self-management of health behaviours. Currently no comprehensive nutrition education models are recommended in existing literature. Group education classes for the elderly have been documented as being responsible for some improvement in nutrition knowledge and practices, belief and attitudes, and physiological health, although these results cannot be generalized to all older adult audiences. **Conclusion:** Elderly participants of adult Day Hospitals have unique barriers and challenges affecting learning. Recommendations to enhance the effectiveness of future health interventions must reflect on the diverse needs and specific interests of this target group.

Title: Closed versus open enteral feeding system: a cost effectiveness analysis

Author: N DeGagne, Manitoba Partnership Dietetic Education Program, Winnipeg, Manitoba

Objectives: The purpose of this study was to examine the cost of the current open enteral feeding system versus the proposed closed system, in an adult tertiary hospital. Cost analysis of the two systems examined the following variables: labour saving, formula cost, formula waste, administration sets and implementation costs. **Methods:** Data from 3923 adult patient enteral feeding days was obtained from hospital records and utilized in creating a database. Formula pricing for both open and closed systems were obtained from various vendors. Formula waste analysis and labour costs were researched through literature review and applied to the current data set. The data related to the cost of the open system administration sets was obtained from hospital records. The data related to the cost of the closed system administration sets was obtained from a local medical supply company. Start up fees were calculated using all areas of data obtained. **Results:** Calculated formula costs including bags and spikes sets were marginally higher for the closed system. Based on current literature, formula waste was 38% for the open system and 10% for closed (based on a 48 hour hang time). Labor costs for an open system (based on 7.5 min/day/patient) equated to \$54,936.00 per year compared to a closed system cost of (based on 2.0 min/day/patient) equated to \$14,649 per year. Total labor savings were calculated at approximately \$40,000.00 annually. **Conclusion:** Although individual variables differed in cost, overall the costs were relatively the same. Factors external to enteral feeding system costs such as bacterial contamination should be considered prior to system selection.

Title: Nutrition education in an alcohol treatment program: What do clients want to learn?

Author: L Pedruchny, Manitoba Partnership Dietetic Education Program, Winnipeg, Manitoba

Objectives: This project was conducted to determine effective strategies for nutrition education /counseling services offered at the Main Street Detoxification Unit to promote positive behavior/attitude changes in clients. **Methods:** An extensive literature review was conducted regarding the evaluation of nutrition education in an alcohol treatment program. Focus groups were conducted at the Main Street Project Detoxification Unit and at the Addictions Foundation of Manitoba to assess client's interests and learning needs. A survey was also mailed to substance abuse treatment centres across Canada. This survey was used to elicit information on the provision (extent and use) of nutrition services, topics, approaches, tools used to measure behavior change, current challenges for educators, program descriptions and goals. **Results:** Although few in number, studies support the position that nutrition education in alcohol treatment programs is directly correlated with improving treatment outcomes. Results of the focus groups revealed a variety of barriers for clients to change their eating habits. Clients wanted nutrition information on low-cost healthy meal ideas, menu-planning techniques, and steps to take to restore health status. They preferred this information to be provided in a form that allowed for interactive participation, followed by take home written resource materials. The results of the survey revealed that no one intervention model is consistently utilized among treatment centres and that variability exists between the extent, topics discussed, approaches, challenges, and program goals. **Conclusion:** The lack of current and extensive research, as well as the wide variability of results obtained from the survey and the focus groups, suggests that further research must be conducted to evaluate the effectiveness of nutrition education in treatment centers. Practitioner involvement will be vital to gain maximum knowledge of effective teaching strategies to help clients adopt new behaviors that aid them in achieving optimal nutritional health.

Title: The role of the registered dietitian in dysphagia management – the perspective of Manitoban dietitians.

Author: N Gurican, Manitoba Partnership Dietetic Education Program, Winnipeg, Manitoba.

Objectives: The objective of this project was to gain insight on the role of Manitoban registered dietitians in dysphagia management. **Methods:** A questionnaire consisting of thirty-nine questions was distributed to 44 dietitians working in long term care facilities/programs. The questionnaire addressed the degree of involvement and the barriers faced by dietitians in dysphagia management as well as the terminology of texture-modified diets used in Manitoba health care facilities. **Results:** The response rate to the survey was 66% (n=29). Results revealed that dietitians dedicate 30% or more of their time to dysphagia management. Sixty-two percent work in facilities with a dysphagia management team. Most, 76 %, are involved in traditional roles such as screening patients with dysphagia, whereas, 34% complete swallowing assessments. Many dietitians are involved in the prescription of liquid viscosities (90%) and diet orders (100%). Fifty-five percent of the respondents stated a desire to expand their role and improve their skills in bedside/tableside assessments due to a limited access to Speech Language Pathologists, a desire to provide continuity of care and a desire for professional development. Barriers to expanding the dietitian's role include a lack of: education/training, EFT, support, and confidence. The survey results also revealed that 27 different terms are used to describe texture-modified diets in facilities across Manitoba. **Conclusions:** Survey results indicate that although dietitians participate in several aspects of the assessment and treatment of patients with dysphagia, dietitians desire additional opportunities for professional development and recognition in dysphagia management. Findings also raise the issue of the lack of standardized terminology for texture-modified diets and the need for additional research in adopting a standardized approach.

Title: A pilot study measuring psychosocial self-efficacy

Authors: JP Lane & KJ McAfee, Sunnybrook & Women's College Health Sciences Centre Dietetic Internship Program, Toronto, Ontario

Objectives: The complex set of skills and associated challenges of self-caring for Type 1 diabetes makes it difficult to achieve target blood glucose levels and consequently increases the risk of developing diabetes related complications. Diabetes education, the main defence against developing these complications, has shifted its focus from knowledge transfer to psychosocial self-efficacy. Previous literature has shown that an increase in psychosocial self-efficacy is effective in ensuring proper diabetes self-care behaviours are practised. The Objective of this project was to measure the change in psychosocial self-efficacy of Type 1 diabetes participants (N=7) attending the TRIDEC Type 1 diabetes 4-session education program. **Methods:** Participants were chosen by convenience sampling. Each participant answered the Diabetes Empowerment Scale (DES) questionnaire including subscales 1) managing the psychosocial aspects of diabetes, 2) assessing dissatisfaction and readiness to change and 3) setting and achieving diabetes goals, plus an additional three exploratory questions at pre- education, post- education and at a 6 week follow-up. **Results:** For all subscales a significant increase in psychosocial self-efficacy was observed from pre- to post-test ($p < .02$; $p < .02$; $p < .03$ respectively) and pre- to follow-up ($p < .02$; $p < .02$; $p < .03$). No significant change was observed from post- to follow-up. Overall psychosocial self-efficacy scores showed a significant increase from pre- to post-test ($p < .02$) and pre- to follow-up ($p < .02$). No significant change in overall psychosocial self-efficacy occurred from post- to follow-up test, indicating the increase in psychosocial self-efficacy was sustained. **Conclusions:** The TRIDEC Type1 diabetes education program was successful in improving the psychosocial self-efficacy of its participants, potentially leading to improved self-care and reduction of developing long-term diabetes complications.

Title: Correlation of a dietary screening tool with saturated fat intake in Healthy Heart Lipid Clinic patients at St Paul's Hospital

Authors: CA Collier, EM Bocskei, and L Normen, Providence Health Care Dietetic Internship, St Paul's Hospital, Vancouver BC.

Objectives: Dietitians at the Healthy Heart Lipid Clinic (HHLC) currently use the Nutrition History Form (NHF), a dietary screening tool, in combination with a patient completed 3-day food record to assess dietary factors contributing to unfavourable blood lipid levels. Our objective was to determine the relationship between the NHF and saturated fat intake.

Methods: 50 former adult patients were randomly selected. Previously recorded 3-day food records were nutritionally analyzed to determine the percent of calories from saturated fat. Information from the NHF was collected. Screening questions significantly associated with saturated fat intake were determined using a two-tailed Spearman's correlation analysis.

Results: Preliminary analysis of select NHF questions was completed. The following were associated with higher saturated fat intake: full fat cheese consumption (2-3 times per week) ($r = 0.35, p < 0.05$), adding milk in tea and coffee ($r = 0.32, p < 0.05$), and cheese as a snack ($r = 0.29, p < 0.05$). The following foods consumed were associated with lower saturated fat intake: low fat cheese (1 time per week) ($r = -0.34, p < 0.05$), red meat (1 time per week) ($r = -0.32, p < 0.05$), cold cuts (seldom) ($r = -0.32, p < 0.05$) and soy milk ($r = -0.32, p < 0.05$).

Implications & Conclusions: Rapid and accurate tools to assess saturated fat intake would be useful for dietitians when counseling to reduce risk of coronary heart disease. Further analysis of this research will identify questions that best predict higher saturated fat intake in at risk patients. Dietitians at the HHLC could utilize these findings to effectively identify patients with higher saturated fat intake and counsel accordingly.

Title: The feasibility of oral creatine monohydrate supplementation in palliative cancer patients.

Author(s): G.Siu, V.Poulios, JMW.Wong & A.Langlois. Mount Sinai Hospital Comprehensive Internship Program, Toronto, Ontario.

Objectives: Creatine monohydrate supplementation in healthy and diseased populations has been associated with the promotion of muscle growth and strength. Rapid weakening of functional status in palliative cancer patients is frequently used to predict death. Creatine supplementation may slow down functional status decline, which may decrease the overall deterioration in this population. The objective of this pilot study is to determine whether creatine monohydrate supplementation is feasible for daily consumption in palliative cancer patients. **Methods:** Palliative cancer patients (n=10-15) from Mount Sinai Hospital medical and surgical inpatient units will be recruited to participate in an observational study with a 60-day supplementation period. Subjects will consume 20 grams of creatine for 10 days (loading), followed by 5 grams for 50 days (maintenance). Subjects will record their creatine intake, adverse events, regimen compliance and supplement tolerance daily, and will be contacted weekly for follow-up. Functional status, quality of life and patient generated subjective global assessment (PG-SGA) will be assessed using the Karnofsky Scale, Function Assessment of Anorexia Cachexia Treatment and PG-SGA questionnaires, respectively, on days 0, 30 and 60. **Results:** Feasibility will be measured through frequency, type and duration of adverse events, supplement taste, amount consumed, regimen adherence, and attrition rate. Data will be analyzed at 1 and 2 months using ordinal logistic regression and t-test. **Conclusions:** To our knowledge, the safety and side effects of creatine monohydrate supplementation in the palliative cancer population have not been studied. Whether creatine is a safe agent for consumption in palliative cancer patients and whether patients are able to tolerate and comply with the regimen will indicate the viability of a randomized controlled trial in the future.

Title: The effect of dietitian-prescribed liquid oral supplements on body mass index in long term care residents

Author: H van Heukelom, Providence Health Care (St. Paul's Hospital) Dietetic Internship Program, Vancouver, British Columbia

Objectives: Oral liquid supplements are often provided to underweight long term care residents to facilitate weight maintenance or weight gain. This research aimed to examine whether dietitian-prescribed oral liquid supplements had an effect on body mass index (BMI) of residents and to identify risk factors which may assist dietitians to assess when to prescribe oral liquid supplements to residents. **Methods:** This is a retrospective study involving 51 residents (n=26 in supplemented group; n=25 in non-supplemented group) at Youville Residence (YR) in Vancouver, BC. Data including demographics, medical history, medications, vitamin and mineral supplements, height, monthly weights for a twelve month time period, calculated BMI, ideal body weight, dental status, diet type and texture, as well as oral liquid supplement type, amount, and frequency during the study period were recorded from the medical charts. Descriptive statistics, chi-square test, and student's t-tests were used to analyze the data. **Results:** The mean age for the supplemented group was 86 ± 0.7 years (mean \pm SEM) as compared with 83 ± 1.8 years in the non-supplemented group ($P > 0.05$). Eighty-five percent of residents in the supplemented group and eight-eight percent in the non-supplemented group were female. The supplemented and non-supplemented groups did not differ significantly in regards to demographics, clinical disease states, types and number of prescribed medications, vitamin and mineral supplements, diet type, and dental status. The mean BMI of the supplemented group at baseline was 21.2 kg/m^2 whereas the mean BMI of the non-supplemented group was 25.4 kg/m^2 ($P < 0.001$). The supplemented group had a net BMI loss of 0.5 kg/m^2 while the non-supplemented group had a net BMI gain of 0.3 kg/m^2 ($P > 0.05$). **Conclusion:** The use of dietitian-prescribed liquid oral supplements is likely an appropriate method to prevent weight loss in residents at risk for low BMI.

Title: Does room service increase patient satisfaction on the maternity ward?

Author: P Vilaysane, K Belzile, Ottawa Hospital Dietetic Internship Program, Ottawa, Ontario.

Objectives: The patient feeding model called Room Service has been found to increase patient satisfaction, primarily among oncology ward patients. The objective of this project was to determine the impact of Room Service on patient satisfaction in the maternity ward at the General Campus of the Ottawa Hospital. **Methods:** Patients admitted to the maternity ward, over a two-week period, were asked to complete a satisfaction survey following the consumption of their third hospital meal. A two-week trial of room service was then implemented by the Nutrition and Foodservices Department of the Ottawa Hospital, General Campus. The satisfaction survey was administered with the third room service meal ordered by the patient. Satisfaction ratings among maternity ward patients before and after program implementation were compared. **Results:** An analysis of the results is pending.

Title: The Usability of the 2004 University of Ottawa Heart Institute Weight Management Website

Authors: J. Macéus, M. Graham, L. Morrin, Ottawa Hospital Dietetic Internship, Ottawa, Ontario.

Objective: To determine if the University of Ottawa Heart Institute's (UOHI) Weight Management website (WMW) website meets the needs of its users. Their feedback will be used to improve the website. **Methods:** Six (1 male, 5 females) UOHI volunteers with a history of Coronary Heart Disease (age, 54.5 ± 10.2 years), Internet access, and weight dissatisfaction (BMI, 33.3 ± 8.1 , wt loss desired 42.9 ± 45.5 lbs) attended one of the two focus groups (FG) lasting 1.5 hours each, held in winter 2005. Prior to coming to the FG, the participants explored the website and completed the Pre-Focus Group Questionnaire (PFGQ) which included 23 Internet Navigation statements related to the WMW, the answers were rated on a scale 1 to 5 (least to most favourable). Prior to the FG discussion of the PFGQ statements, the participants used UOHI WMW to complete a Task List (TL) to test the website's ease of navigation. **Results:** The PFGQ mean scores were as follows: 1) logical flow of information: 4.0 ± 0.4 ; 2) usefulness of information: 3.8 ± 0.4 ; 3) readability of the text: 3.7 ± 0.8 ; 4) ease of use of the interactive tools: 4.1 ± 0.7 . The TL mean scores were as follows: Health risks: 5/6 (83%), Goal setting: 3/6 (50%); Nutrition: 4/6 (67%) and Exercise: 0/6 (0%). The positive feedback was consistent with high PFGQ scores. Low TL scores reflected the negative comments related to WMW's ease of navigation. **Implications & Conclusions:** The data demonstrate that the content of the information WMW was satisfactory, however the ease of navigation needs improvement. These results will be used to update the UOHI WMW and will be useful in designing future health-related websites.

Title: A cross-sectional project to determine the internal validity of a patient satisfaction questionnaire, developed specifically for the Ottawa Hospital's weight management clinic program.

Authors: AC Aylett¹, S Akinsulie² and K Barry². The Ottawa Hospital Dietetic Internship Program¹ and Weight Management Clinic, The Ottawa Hospital-Civic Campus², Ottawa, Ontario.

Objective: To develop and internally validate a questionnaire tool specific to the Ottawa Hospital's Weight Management Clinic program that can accurately determine the level of participant satisfaction. **Methods:** A patient satisfaction questionnaire was developed specific to the Weight Management Clinic program. After pilot testing and revision of the questionnaire, two groups of participants (at different stages of the program) anonymously completed the questionnaire. Two weeks afterward, three volunteer participants from each group were interviewed independently using the same questions. The written questionnaires and recorded interview answers were scored and compared to determine the written questionnaire's internal validity based on the degree of differences between the written answers and interview answers. **Summary of Results:** Of the 23 questions, only one returned a score that exceeded the allowable difference threshold. The question concerned 20 different negative physical symptoms that program participants are prone to experience. The difference can be attributed to new symptoms experienced during the two-week interval between questionnaire and interview, memory bias and lack of anonymity and therefore feelings of embarrassment during the interview. All other questions returned allowable below-difference threshold scores. **Implications and Conclusions:** The written questionnaire can be considered an equally internally valid tool as the interview process for determining patient satisfaction among the Ottawa Hospital's Weight Management Clinic program participants. With further question modification and testing, the questionnaire can be used to determine future program participant satisfaction and the feedback used to make appropriate changes to the program.

Title: Iron deficiency after hematopoietic stem cell transplant for Severe Combined Immune Deficiency (SCID)

Author(s): K Maybank¹, M Barron¹, L Hagen¹, B Reid², A. Atkinson² and E Grunebaum², Department of Clinical Dietetics¹, Blood and Marrow transplantation and Immunology². The Hospital for Sick Children, Toronto, ON.

Objectives: SCID is an inherited disorder affecting the immune system which presents in infancy and is fatal without a hematopoietic stem cell transplant (HSCT). The supportive measures required for transplant include blood transfusions, creating a state of iron overload, therefore iron-deficiency anemia (IDA) post-HSCT is uncommon. However, the poor intake of iron-rich foods, increased growth rates, and frequent phlebotomies may increase the risk of IDA in SCID patients. The purpose of the study is to assess the prevalence of IDA in children with SCID post-HSCT. **Methods:** A 7-year retrospective, descriptive chart review evaluated the complete blood count (CBC): Hgb, MCV, MCH, HCT, and nutritional status as measured by percent Ideal Body Weight (% IBW). **Results:** Nine patients, (7 males and 2 females) received HSCT's. The mean age, weight and % IBW of patients at baseline (first clinic visit post discharge) was 10 months \pm 9 (range: 2 – 31); 7.9 kg \pm 3.0 (range: 5.4 - 13.8) and 81% \pm 10.1 (range: 82 -108). Mean number of days from HSCT to discharge was 109 \pm 53 days (range: 42 - 218). At baseline Hgb, MCV, MCH, and HCT were 89.9 \pm 22.5; 85.6 \pm 9.95; 25.5 \pm 4.04; 0.27 \pm 0.11 respectively. **Conclusions:** These findings show that baseline Hgb values were below normal and some MCV values were below normal therefore looking at the CBC alone in this patient population will not distinguish between marrow recovery and IDA. Therefore, a more specific measure of IDA, such as ferritin and C-reactive protein, should be included in the follow-up of SCID patients after HSCT.

Title: Evaluation of a Fruit & Vegetable Pilot Program for Elementary School Children in Prince Edward Island

Authors: P Crozier, J Gallant, J Taylor. UPEI Integrated Dietetic Internship Program, Charlottetown, PEI.

Objectives: The objective of this study was to evaluate the impact of the Fruit and Vegetable (F/V) Snack Program on children's preferences for and their willingness to try F/V.

Methods: Students (n=379) in grades 1-6 from three Island elementary schools, with one school from each of three school regions were included. A 3 point schematic faces questionnaire, adapted from Birch & Sullivan (1991), was used to determine changes in food preferences and to evaluate their willingness to try F/V. Children completed the questionnaires during class with assistance from dietetic interns, prior to and following a 6 week intervention.

Results: Analysis indicated that there was a significant increase in willingness to try cauliflower and turnip sticks ($p < 0.01$) over the intervention period. Also, there was a significant increase in liking for all F/V offered during the F/V snack program; cantaloupe, cauliflower and turnip sticks ($p < 0.0001$) broccoli, carrots and cucumber ($p < 0.01$) and grapes ($p < 0.05$). Similarly, there was a significant positive change over the study in liking scores of cauliflower, cantaloupe and turnip sticks ($p < 0.0001$) carrots ($p < 0.001$) cucumber and broccoli ($p < 0.01$). **Implications & Conclusions:** Results suggest that the six week F/V intervention increased children's liking of F/V and their willingness to try F/V. Further study using matched comparison schools with an extension of the intervention period is recommended.

Title: Point of impact of marketing a branded product in patient food services

Authors: K Belzile, F Damji and J Miazga, The Ottawa Hospital Dietetic Internship Program, Ottawa, ON.

Objectives: To determine the importance of the point of impact of a branded food product and whether branding has an effect on patient satisfaction and perception of quality at the Ottawa Hospital – General Campus. **Methods:** Inpatients who consumed coffee at breakfast were given surveys to assess satisfaction and perception of quality over the course of three weekends. In the first trial (set 1), brand was not identified. During the second trial (set 2), brand was indicated on the menu and tray ticket. In the last trial (set 3), brand was only indicated on the coffee cup. Surveys were picked up in rooms and collected from trays in the dishroom. The survey questions were designed using a five point scale where, poor=1 and very good=5. In the second trial, surveys were only given to patients on selective menus to ensure the point of impact being evaluated was menu branding. A total of 157 completed independent surveys were collected. **Results:** A chi squared test used to compare satisfaction between sets 1, 2 and 3 revealed no significant differences for any of the parameters used to assess satisfaction, where each set represented a different point of impact of branding . A chi squared test used to assess perception of quality by individuals who had previously consumed coffee in a hospital setting showed no significant difference between all three sets. The same was true for patients who had not previously consumed coffee in a hospital setting. **Conclusion:** The findings show that branding and point of impact of branding do not have a significant impact on patient satisfaction and perception of quality in a hospital setting.

Title: How well do you know your maintenance hemodialysis population?

Authors: T Fansabedian, M Noel, K Dawdy, M Mori, University Health Network Dietetic Internship Program, Toronto, Ontario.

Objectives: More than two million Canadians are affected by kidney disease and its' related co morbidities. Toronto General Hospital (TGH) has one of the largest hemodialysis centres in Canada. To date, a comprehensive profile of TGH maintenance hemodialysis (MHD) population has not been analyzed. The objective of this project was to compile and analyze demographics, nutrition-related biochemical indicators and prevalence of co morbidities of the TGH MHD population. **Methods:** A retrospective chart review encompassing data from July 2004 - February 2005. Patients receiving MHD more than three times a week, nocturnal and home hemodialysis were excluded. Statistical Package for the Social Sciences version 13.0 was used to analyze data. **Results:** Preliminary results included 228 patients (127 male, 101 female) with a mean age of 61.8 ± 15.66 years. Mean body mass index was 26.37 ± 15.76 kg/m², 48.2% were Caucasian, while 32.5% were Asian/Oriental. Primary diagnosis resulting in renal failure comprised glomerulonephritis (30.3%), diabetes mellitus (DM) (19.3%), and hypertension (HTN) (18.9%). Frequency of co morbid conditions included HTN (76.3%), DM (27.6%), dyslipidemia (21.1%) and coronary artery disease (20.6%). Means of the following serum indicators were found: serum potassium 4.52 ± 0.7 mmol/L, albumin 36.79 ± 3.23 mmol/L, phosphorus 1.47 ± 0.519 mmol/L, and parathyroid level 59.1 ± 71.7 µmol/L. **Conclusion:** Preliminary findings suggest that the TGH MHD population is not consistent with parameters of other MHD patients identified in the literature. Further associative statistics will be conducted to highlight the unique factors of this population and identify pertinent nutritional issues. This hypothesis-generating study will identify areas for future education and research, and will redefine the role of the renal dietitian.

Title: Is change in dietary variety an indicator to recovery from anorexia nervosa: a pilot study?

Authors: H Dickinson, M Figliano, K Camelon, L Hoffman, T LaVallee. University Health Network Dietetic Internship, Toronto Ontario

Background: The role of nutrition in the treatment and therapy of Anorexia Nervosa (AN) has been less widely studied than that of psychology and medicine. Research on the role of dietary variety (DV) within this population is also lacking. **Objectives:** The purpose of this project is to define dietary variety and to determine if DV has an influence in the recovery from AN. **Methods:** A DV questionnaire, adapted from the validated Block FFQ, was developed. Revision of this questionnaire required a considerable amount of RD time and expertise. Additional food items, such as diet products, often chosen by patients with AN were included. Food groups believed to be important in the recovery process were also added. The questionnaire was administered to twenty patients pre treatment who fit the criteria for AN. Five of these patients completed this questionnaire post treatment. Pre and post treatment dietary variety will be compared. **Statistical Analysis:** SPSS 13.0 will be used to analyze the data. **Results:** Dietary variety was defined and the DV questionnaire was modified specifically for the AN population. Preliminary data for five individuals who have completed the eating disorder treatment programs has been collected. **Conclusions:** The questionnaire can be used to measure and understand how food variety changes pre and post treatment. **Implications:** Understanding the change in food variety in recovery from AN may provide valuable information for creating more effective treatment programs.

Title: There must be a better way: measuring the dietary practices of people with type 2 diabetes mellitus

Author(s): K Burns, M DeMelo, K Barker, R Agellon, A Offenheim, R Figueroa, University Health Network, Toronto, Ontario

Objectives: Existing literature indicates that there is a lack of valid, efficient, and clinically relevant questionnaires to measure dietary practices that influence diabetes. The purpose of this study was to construct a clinician-administered questionnaire to measure the dietary practices of an ethno-culturally diverse adult population with type 2 diabetes from the Diabetes Education Centre at Toronto Western Hospital. **Method:** Using current literature and clinical experiences of dietitian-diabetes educators, three key constructs were identified as likely to most influence dietary diabetes management including carbohydrate loading, energy and fat intake. The research team designed questions to reflect these specific constructs. An expert panel of dietitians was then recruited to measure content validity or how well the questions represented the three constructs of interest. Inter-rater reliability was also measured to determine the level of agreement amongst experts. **Results:** Expert responses were used to reduce the number of questions, refine existing questions, and add additional questions to cover areas that had been overlooked by the researchers. The questionnaire was reduced from 53 questions to 37 questions. **Conclusion:** Further validity testing is required including plans for comparison with a 4-day food record. It is anticipated that the questionnaire will be further reduced to yield a valid and reliable eating behaviour measurement tool that is practical and efficient in an ambulatory patient care setting. **Implications:** Content validity testing is the first step in ensuring a questionnaire is valid. Validity testing is a rigorous and essential process in the development of a questionnaire that ensures that research is informed by existing literature and accurately measures constructs of interest.

Title: Pumping volumes in the neonatal intensive care unit at mount sinai hospital

Author(s): M McEachern, T McBride, K Lyon-Benton, S Unger, K Kotsopoulos, Mount Sinai Hospital Comprehensive Internship Program, Toronto, Ontario

Objectives: Mothers of preterm infants face many challenges in initiation and maintenance of lactation. Expressing milk, psychological stress regarding the health of their infant and reduced physical closeness with their infant often leads to lower milk volumes in this population. In this study we will determine the pumping volumes of women delivering preterm in the Neonatal Intensive Care Unit at Mount Sinai Hospital. Factors that may contribute to milk volumes in women expressing milk for their preterm infants will also be determined. **Methods:** Women who have delivered preterm infants between 23 and 32 weeks gestation at Mount Sinai Hospital from February 1st to April 30th, 2005 will be recruited. Participants will record the time of expressions and volume of milk expressed for the first 28 days post partum. Participants will be reviewed to determine factors that may affect pumping volumes. Some variables of interest include; maternal age, medications taken during pregnancy and infertility treatment. Infants will also be reviewed to determine illness severity using the Neonatal Therapeutic Intervention Scoring System. Mean milk volumes at one, two, three and four weeks post partum will be compared to determine differences in milk volumes from week to week. Pearson's correlation will be used to determine association or correlation between milk volumes and maternal variables of interest. **Results:** Recruiting of participants and collection of milk volume records is ongoing. To date, 18 mothers have been recruited. **Conclusion:** Results from this study will lead to a better understanding of factors affecting pumping volumes and help us to provide improved support for mothers expressing milk for their preterm infants.

Title: Prevalence of malnutrition risk in out-patients at an acute care hospital chemotherapy clinic: a needs assessment

Authors: M Bianco & E Dimou, North York General Hospital Dietetic Internship Program, Toronto, Ontario.

Objectives: The chemotherapy clinic out-patient population at an acute care hospital consists of individuals with a variety of different cancer diagnoses. Individuals undergoing out-patient chemotherapy treatment may be at risk of malnutrition. This population is not screened initially or regularly for nutritional risk, throughout their treatment. Research has shown that malnutrition occurs in more than 50% of individuals with certain cancers. Malnutrition in individuals undergoing chemotherapy may contribute to decreased quality of life and poor treatment tolerance. Therefore, it is important to assess the nutritional status of these individuals, to identify their nutritional needs in order to provide timely nutritional intervention.

Methods: This study was a short-term, prospective, observational study of the out-patients (n=58) at an acute care hospital chemotherapy clinic over a one-week period. The Patient-Generated Subjective Global Assessment (PG-SGA) tool was used to assess nutritional status and prevalence of malnutrition in this population. This data will also be applied to the validated Malnutrition Universal Screening Tool ('MUST') whose predictive value will be compared to the PG-SGA Assessment tool. As well, medical charts and in-person interviews will be used to identify specific nutritional issues and needs of this population. Descriptive summary statistics of discrete and continuous variables, such as participant characteristics, will be performed. Specifically, means and medians, standard deviations and ranges, will be performed for continuous variables. The kappa test of agreement analyses will be used to compare malnutrition as assessed using the PG-SGA tool with the screen of malnutrition risk using the MUST.

Title: Effects of diabetes counselling on improvement of glycemic control

Authors: J. Chamberlain and J. Hill, The Ottawa Hospital Dietetic Internship Program, Ottawa, Ontario

Objectives: The primary objective of this research project was to determine if type 2 diabetes outpatients improved glycemic control after education sessions at the Pembroke Regional Hospital Diabetes Education Clinic (DEC). The secondary objectives were: to assess whether weight, intake, and physical activity changed after education sessions and to assess if age, sex, blood glucose monitoring, and changes in weight, intake, and physical activity were associated with improvement of A1C values. **Methods:** Participants (n=13) were greater than 18 years of age with newly diagnosed type 2 diabetes referred to the DEC. They attended three individual diabetes education sessions: an initial session where information regarding nutrition, physical activity, medication and self monitoring of blood glucose was provided, and one-month and three-month follow-up sessions where the abovementioned topics were reviewed and further addressed according to individual needs. Participants had serum drawn for A1C analysis after the initial and final follow-up session. Pre and post diabetes education A1C values were statistically analyzed using a paired T-test to determine effectiveness of diabetes education on improving glycemic control. Paired T-tests were also used to assess whether changes in weight, intake and physical activity changed after diabetes education and to assess if age, sex, blood glucose monitoring, and changes in weight, intake, and physical activity were associated with improvement of A1C values. **Results and Conclusions:** The results of this study will assess whether type 2 diabetes outpatients were able to improve glycemic control after attending individual education sessions at the DEC. The findings will also identify, factors that may be associated with improvement of glycemic control.

Title: Examining the prevalence of medical directives for Registered Dietitians in Canada's teaching hospitals

Authors: H. Stiles, M. Roet, D. Quenneville. The Ottawa Hospital, Ottawa, Ontario

Objectives: Medical directives are quickly becoming the way of the future within the politics of the health care system, including the dietetic sector. These written orders have been sought and implemented by Canadian dietitians, enabling the nutrition expert to request a procedure, treatment, drug or intervention without a physician's co-signature. The purpose of this study was to establish the prevalence of these written orders for dietitians across Canada, in order to better understand if their implementation at the Ottawa Hospital would enhance or hinder the scope of practice. **Methods:** Teaching hospitals in all Canadian provinces (territories excluded) were asked to complete a questionnaire via telephone, email or facsimile. Bilingual questionnaires sought information regarding the prevalence of medical directives (specifically those pertaining to written diet orders, enteral nutrition, total parenteral nutrition (TPN) and prescription medication). **Results:** Statistical analysis using Chi-Square test indicated Canada's more western provinces (BC, AB, SK, MB) were more likely to have medical directives than the central (ON, QB) and eastern (NB, NS, PEI, NFLD) provinces ($p=0.013$). Of those with medical directives: 60% could prescribe vitamin/mineral supplements, 20% each included TPN and enteral feeds, or lab value orders. All medical directives in development included those for TPN and enteral orders. Results also indicated those without medical directives believed official authorization for ordering TPN and enteral feeds would be most beneficial. **Interpretations & Conclusions:** The prevalence of medical directives appears to decline as we move easterly across Canada, however members of the profession believe them to be an asset to the professional scope of dietetic practice despite current status of implementation.

Title: Correlation of body mass index with referral for placement in geriatric day hospital patients

Authors: JLE Sills, M LeBlanc, J Chouinard. The Ottawa Hospital Dietetic Internship Program, Ottawa, Ontario.

Objectives: If modifiable nutritional risk factors are identified early, aggressive nutritional interventions could be implemented to delay or prevent placement. The Body Mass Index (BMI) is a quick and reliable tool to assess nutritional status in older patients, but has not been linked with referral for placement. The current study investigated the association of BMI with referral for placement in geriatric day hospital patients. **Methods:** A retrospective case-control study of 370 geriatric day hospital outpatients (126 male; 244 female). The association between referral for placement and various patient characteristics (gender, marital status, BMI, weight loss history, functional independence, ability to procure food or prepare meals, social isolation and living situation) was examined. **Results:** 37 of 369 patients (10%) were referred for placement and had a lower average BMI than those not referred (25.9 vs. 27.2, $p < 0.02$ by one-way ANOVA). A one point decrease in BMI was associated with an 8% increase in the rate of referral for placement in a logistic model ($p < 0.02$). A BMI < 21 on admission was associated with referral for placement (OR 3.84 95% CI 1.86 - 7.80). In a multivariate logistic regression model, referral for placement was associated with (OR, 95% CI): weight loss history (2.74, 1.23 - 6.47), admission BMI < 21 (2.89, 1.32 - 6.21), being married (vs. any other marital status) (0.07, 0.01 - 0.25), and independence in meal preparation (0.33, 0.13 - 0.87) ($p < 0.0001$ for whole model, ROCC AUC 0.82). **Implications & Conclusions:** A BMI of ≤ 21 is independently and powerfully associated with referral for placement in an outpatient geriatric population. Work is needed to identify potential ways to positively impact this relationship.

Title: Detailed dietary intervention compared to usual care in nausea and vomiting of pregnancy

Authors: LJ Burris, E Collins, M Sermer, and JMW Wong, Mount Sinai Hospital Comprehensive Dietetic Internship Program, Toronto, Ontario.

Objectives: Nausea and vomiting is experienced by 50-90% of pregnant women. Dietary change is typically the first line of treatment for nausea and vomiting of pregnancy. Current nutrition recommendations involve general guidelines where prescribed diet plans are not available due to the limited number of well controlled studies. The objective of this pilot study is to investigate the effect of a detailed dietary pattern compared to the general guidelines that are usual care recommended by Health Canada, Dietitians of Canada, and The Society of Obstetricians and Gynaecologists of Canada.

Methods: Participants will be recruited from nutrition consults with the perinatal dietitian. This single-blinded, randomized study lasts for two weeks including a one-week run-in period and a one-week treatment period. Participants will complete the pregnancy-unique quantification of emesis (PUQE) score and a 7-day food record during a one-week run-in period prior to their appointment with the perinatal dietitian. Participants will then be randomized to receive either a detailed dietary pattern or usual care. All participants will be instructed on their randomized diets by the perinatal dietitian and follow the diet for one week. PUQE scores and a 7-day food record will also be completed. Participants' antenatal charts will be reviewed. Results: Outcome measures will include weight change, change in PUQE score, dietary analysis using ESHA computer software, and compliance to the detailed dietary pattern. Recruitment is on-going with 4 participants recruited thus far. **Conclusion:** Results of this study will determine whether a detailed dietary intervention is helpful in treating nausea and vomiting of pregnancy compared to general guidelines in this study population.

Title: Effectiveness of the RYG dietary system in the nutritional management of young children with Prader Willi Syndrome.

Authors: J Balge and J Kitching, North York General Hospital Comprehensive Dietetic Internship Program, Toronto, Ontario

Objectives: To determine if the education program used at NYGH prevents obesity, hyperphagia and other negative behaviours regarding food in children with Prader-Willi syndrome if counseling is started at or before three years of age. Due to the complexity of the problem, an integrated approach, which includes nutrition, lifestyle and behavioural education, is needed to empower all caregivers with necessary lifestyle and environmental changes required for raising a child with Prader-Willi syndrome. Currently at the pediatric outpatient clinic at NYGH, this approach is being used to prevent/delay nutrition and weight problems in children with Prader-Willi syndrome. It is comprised of the Red, Yellow, Green (RYG) dietary system, which uses a structured, concrete approach at teaching nutrition concepts, and appropriate food choices. **Methods:** The study will be an observational matched cohort retrospective chart review. Participants of the study will be children who are attending the NYGH Pediatric clinic who have been diagnosed with Prader-Willi Syndrome. The charts will be reviewed and the age, height, weight and percentage ideal body weight will be examined. The percentage ideal body weight will be calculated using the Tanner and Whitehouse (1975) growth charts for males and females. A likert scale questionnaire developed to assess the changes in behavioural problems with the implementation of the RYG diet, as well as other qualitative data will be obtained from a structured telephone interview with the parents. A study information sheet and consent form will be sent to the parents prior to the telephone interview. However, our main focus will be the chart reviews, and the statistical analysis of the data obtained from them.

Title: Using television to promote the Healthy Measures concept

Author: ZE Barnett, Southeastern Ontario Comprehensive Dietetic Internship Program, Kingston, Ontario.

Objectives: The Hastings and Prince Edward Counties Health Unit (HPECHU) adopted the Healthy Measures toolkit to promote healthy lifestyles and healthy weights to women in the community aged 25 to 45. The purpose of this project was to develop television-based communication material to promote the Healthy Measures concept at the community level. Four short-term and four long-term objectives were developed to provide guidance to the project. The four short-term objectives were: (1) to increase knowledge of leisure-time activities that increase physical activity level, (2) to increase awareness of where to obtain quick and nutritious meal ideas, (3) to increase awareness about body image dissatisfaction and (4) to increase awareness of the Healthy Measures campaign name and key messages.

Methods: Project development was guided by literature about the use of television by consumers, previous health promotion campaigns that used television, and social marketing theories. In addition, two focus groups were held to obtain information from target audience members about preferred format and style of the promotional material. A series of six 60-second television commercials was considered most appropriate. Television scripts were developed, volunteer actors were recruited, and filming locations were identified. Students from a local community college filmed and edited the commercials. **Results:** Members of the target audience will view the commercials, identify whether project objectives have been met, and provide recommendations for ideas on how future commercials can better promote the Healthy Measures concept. **Implications & Conclusions:** This project demonstrates how television can be used to promote healthy lifestyles and healthy weights using the Healthy Measures concept. It also provides specific methods, evaluation techniques and recommendations for future community-based television campaigns.

Title: Do pedometers help adults with type 2 diabetes improve their glycemic control? A pilot research study

Author: KA Burchart, Southeastern Ontario Comprehensive Dietetic Internship Program, Kingston, ON **Objective:** This study investigated the effect of pedometers on glycemic control in adults aged 40-65 years with type 2 diabetes. **Methods:** Participants who gave consent were randomly assigned to an intervention or control group. All participants attended a group class where they learned about healthy eating, exercise and medications to manage type 2 diabetes. Participants were encouraged to set exercise goals each week to help them increase their physical activity. Participants in the intervention group also received a pedometer along with instructions to set step goals they could monitor using the pedometer. All participants received a calendar to track their physical activity; the intervention group was also asked to track the number of steps per day recorded by the pedometer. All participants attended follow-up appointments six and 12 weeks following the group class and completed a physical activity questionnaire on the first and last day of the study. **Results:** Six participants have been recruited to date and recruitment will continue until 14 subjects are obtained. Outcomes to be evaluated are change in A1C, BMI, waist circumference, and activity level; feasibility of using the pedometer will be assessed in the intervention group. **Implications and Conclusions:** Results from this research will help determine if pedometers assist people with type 2 diabetes to improve their glycemic control and whether pedometers will be offered to all eligible adults who attend the Diabetes Education Centre.

Title: Fostering a positive feeding experience for parents and toddlers in North Leeds

Author: KL Taylor, Southeastern Ontario Comprehensive Dietetic Internship Program, Portland, Ontario

Objectives: Healthy eating is essential in order to meet toddlers' large energy and nutrient needs and to establish positive life-long eating practices. Parents of young children frequently report struggles during mealtimes and may require help to foster a positive feeding environment. The objectives of this project were to increase parents' awareness of Satter's division of responsibility in feeding and improve their knowledge of nutrition recommendations for children one to three years of age. **Methods:** Two two-hour workshops for parents were developed as part of Early Years programming at Country Roads Community Health Centre. The workshops addressed feeding dynamics, nutrition, and positive family interaction. Parents' knowledge of the division of responsibility and nutrition recommendations for toddlers will be measured, before and after each workshop, using a written questionnaire. At the end of each workshop, parents will record changes they intend to make to create a more positive feeding experience for their families. One month later, a telephone interview will be used to ask whether parents followed through with their intended changes and if so, the outcome these changes had on the feeding experience. **Results:** It is predicted that parents who attend both workshops will be aware of the division of responsibility and have increased knowledge about nutrition recommendations for toddlers. Parents' skills to effectively cope with challenges when feeding toddlers are also anticipated to improve. **Implications and Conclusions:** If improvements are found, health providers should consider introducing the division of responsibility when counseling families, as it is practical advice and offers new solutions to frequently reported concerns. If no improvements are measured, the workshop will be reformatted to focus more on skill development.

Title: Nutrition Education for a Community Pedometer-Based Walking Program

Author: LD Jones, Southeastern Ontario Comprehensive Dietetic Internship Program, Kingston ON

Objectives: KFL&A Public Health recognizes the importance of combining physical activity and healthy eating in chronic disease prevention programs. The objective of this project was to assist adult community members who were becoming more physically active to also adopt healthy eating behaviours. **Methods:** A nutrition component was developed for an existing pedometer-based walking program (Step Into Fitness) at KFL&A Public Health. A pilot Step Into Fitness program, facilitated by a public health nurse and a dietetic intern, consisted of six weekly two-hour sessions, with 20 participants. Sessions two and three were devoted to interactive nutrition education focusing on *Canada's Food Guide to Healthy Eating* (CFGHE) and portion control. At the end of session two, participants were asked to complete a one-day food record and a handout that rated intakes compared to CFGHE recommendations. At the end of session three, with guidance, participants used self-assessment information to develop individual healthy eating goals. Goal setting and monitoring continued through the remaining weeks; walking remained an integral part of the program throughout. A pre- and post-test quiz on CFGHE, a program evaluation survey, participation in the voluntary healthy eating goal setting and monitoring and participant success in achieving and maintaining healthy eating goals will be used to determine knowledge acquisition, behaviour change and participant satisfaction with the nutrition component. **Results:** It is expected that at least 75% of participants will participate in the voluntary healthy eating goal setting and monitoring, and be successful at achieving and maintaining at least one new healthy eating goal. **Conclusion:** It is expected that the new nutrition component of the Step Into Fitness program will help participants to identify and try new healthy eating behaviours.

Title: Promoting Policy E-26: Creating a healthy school nutrition environment

Author: RJ Robbins, Southeastern Ontario Comprehensive Dietetic Internship Program, Kingston, Ontario.

Objectives: With support from Kingston, Frontenac Lennox and Addington (KFL&A) Public Health, the Limestone District School Board developed Policy E-26: Creating a healthy school nutrition environment. The objective of this project was to develop a promotional strategy to increase school staff, school council and parents' knowledge of and adherence to the nutrition policy. **Methods:** A literature search, pre-test questionnaires, and monthly logs were used to gather input from principals, teachers, school councils and parents from two elementary schools. Promotional materials were developed based on the information collected along with Public Health staff input. Two posters were developed to target school staff: one emphasized that food should not be used to modify classroom behaviour, and the second encouraged schools to provide foods of *moderate and maximum nutritional value*. School councils were provided with a *School Council Healthy Food Planner* listing healthier food ideas for fundraisers and special food days and events. Parents received a newsletter insert introducing the school nutrition policy, and a *Healthy snacks for classroom celebrations* magnet. **Results:** School staff and school council members will complete a second questionnaire, and teachers will receive a second monthly log. Findings from the pre- and post-test questionnaires and monthly logs will be compared to measure the effectiveness of the promotional materials in increasing school staff and school councils' knowledge of and adherence to the nutrition policy. All parents at one school will receive a questionnaire to assess parents' knowledge of and adherence to the policy after receiving the promotional magnet. **Conclusion:** The results of the this project will be used by KFL&A Public Health to determine whether to distribute the promotional materials to all remaining schools and families in the Limestone District School Board.

Title: Diabetes/nutrition education for developmentally disabled individuals - A pilot research study

Author: JJ Reid, Southeastern Ontario Comprehensive Dietetic Internship Program, Brockville, Ontario

Objectives: Developmentally disabled individuals are faced with the challenge of learning how to manage and control diabetes, yet little information and few resources are available to help them. The objective of this study was to develop an education program that would help developmentally disabled patients with diabetes to improve their glycemic control by encouraging them to make healthier food choices and increase their physical activity.

Methods: The diabetes/nutrition education program was developed to meet the unique learning needs of developmentally disabled individuals, such as short attention span, by using interactive learning strategies with visual aids and few written materials. The program focuses on helping the participants to understand diabetes, choose healthier foods, and provides encouragement to become more physically active. The six-week program will be pilot tested with 5 developmentally disabled patients from a psychiatric hospital in Eastern Ontario. **Results:** The results of this study are not yet available; however, it is anticipated that when the participants complete the program, they will have made healthier food choices, increased their physical activity and will have better control of their diabetes. Outcomes will be evaluated through pre/post records of snack purchases from the hospital canteen and pre/post blood glucose and A1c readings. **Conclusions:** If the results do show that the program improved the participants' control of diabetes, then this will reinforce the importance of diabetes/nutrition education for developmentally disabled patients. If glycemic control does not improve, then this may indicate that the education program needs to be revised or other interventions explored.

Title: Health status of children and adolescents born prematurely with low birth weight

Authors: W Barabash, L Boden, Saskatoon Health Region Dietetic Internship Program, Saskatoon, SK.

Premature infants differ physiologically from term infants and require special nutritional care for growth and development. Though the evidence is contradictory, low birth weight (LBW) has been associated with obesity later in life. Breastfed premature infants gain less weight than non-breastfed, and breastfeeding has been associated with reduced risk of obesity later in life. Associations have been demonstrated between LBW non-breastfed infants and the development of chronic disease (coronary heart disease, insulin resistance, type 2 diabetes mellitus and hypertension) later in life. **Objectives:** The purpose of this study is to assess the health status and determine the prevalence of obesity and overweight among children and adolescents born prematurely. **Methods:** Three hundred participants meeting established inclusion and exclusion criteria will be randomly selected from a database. Caregivers will complete a health status questionnaire, which will assess their child's current age, weight, height, incidences of hospitalization, and diagnoses of certain chronic diseases. Subjects will complete a physical activity questionnaire, which assesses their physical activity level over the past week. The subjects' Public Health Growth Records and patient charts will be reviewed collecting maternal indicators, infant indicators and physiological markers of health. Subjects will undergo a physical examination during which their body composition will be measured by dual energy x-ray absorptiometry. The results will be used to build a statistical model to predict obesity in this cohort. **Results:** Pending.

Title: Parenteral nutrition – impact of dietitian consultation

Author(s): K Faasse, L Hilderman, and P Lowe, Saskatoon Health Region Professional Practice Dietetic Internship, Saskatoon, Saskatchewan.

Objectives: The purpose of this prospective observational research study is to monitor the impact of dietitian recommendations on parenteral nutrition. **Methods:** The subjects were adult patients 18 years of age and older who received parenteral nutrition at Saskatoon City Hospital or St. Paul’s Hospital. Upon ethics approval, data was collected by clinical dietitians at each site which included: diagnosis, co-morbid disease, reason for parenteral nutrition, age, gender, height, weight, BMI, serum chemistry (sodium, potassium, magnesium, phosphate, random glucose, blood urea nitrogen, triglycerides, creatinine, C-reactive protein, and pre-albumin), nutritional status, service (ward). The data collected was analyzed and the percent difference between dietitian recommended nutritional provision and actual provision was calculated. **Results:** Results are pending. **Conclusion:** We speculate to find that dietitian recommendations are not being followed consistently and accurately by other health care professionals. This increases health care costs, risk for complications, and length of hospital stay. Furthermore, if dietitian recommendations were followed consistently and accurately there would be a decrease in the above risks and complications.

Title: An investigation into the effects of low sulfate water and prebiotic and probiotic-enhanced diet on symptoms of pediatric ulcerative colitis

Author: C Issel, Saskatoon Health Region Dietetic Internship Program, Saskatoon, SK

Objectives: Pediatric ulcerative colitis patients have a reduced quality of life and limited management options during episodes of exacerbation. Studies have shown altered microbiota in individuals with inflammatory bowel disease. Supplementation with pre and probiotics and reduced dietary sulfate intake may improve colonic health and increase remission length in pediatric ulcerative colitis patients. **Methods:** Participants were recruited through patient records at Royal University Hospital in Saskatoon, SK. Consenting participants were randomly assigned to control (15 g/d of non-resistant maltodextrin; 1 capsule/d placebo probiotic) and treatment (15 g/d inulin; 1 capsule Bifidobacterium longum) supplements and asked to reduce their dietary sulfate intake for a period of twelve months. They were instructed to complete a Study Diary on a daily basis to track their diligence in consuming the supplements, record any changes in their stools and other symptoms, and note whether they avoided sulfate-containing water. A Health-Related Quality of Life Tool, the Short Inflammatory Bowel Disease Questionnaire (SIBDQ), was administered bi-monthly to measure physical, social, and emotional status. Baseline factors were monitored by chart review before, during, and after treatment to measure the effectiveness of the treatments in terms of remission length. **Results:** Results are pending until the end of the study, fall 2005. **Implications & Conclusions:** Current management of ulcerative colitis consists of aggressive combination therapy and has limited success at maintaining remission and improving quality of life. A successful outcome of this study will introduce a new approach to management of ulcerative colitis with diet.

Title: Sensory evaluation of folate-rich pureed foods

Author: C Coburn, Saskatoon Health Region Professional Practice Internship Program, Saskatoon, SK.

Objectives: Inadequate folate intake is a major contributor to elevated serum homocysteine, associated with an increased risk of cardiovascular disease and neurological dysfunction. Individuals who are on pureed diets may have inadequate folate intake due to low intakes of foods fortified with folate. The objectives of the sensory evaluation were to determine the acceptability of high folate, pulse-based purees. **Methods:** Texturally appropriate pureed food were prepared by the Product Development Specialists in the College of Agriculture, University of Saskatchewan. Sensory evaluation of pureed foods by cognitively functional long term care residents and staff was carried out at Parkridge Centre, Saskatoon, SK. Sensory volunteers were assisted in the completion of the sensory evaluation of the pureed food items if required. A five-point Likert ranking scale of aroma, flavour, stickiness/smoothness, ease of swallowing and overall acceptability was used to determine acceptability. **Results:** Ten folate-rich pureed foods were evaluated. Mean acceptability of all the purees is 4.0 ± 1.0 (1= unacceptable; 5 = very acceptable). The mean "ease of swallow" of all the purees was 4.3 ± 0.9 (1 = difficult to swallow; 5 = easy to swallow), aroma was 3.0 ± 1.3 (1 = not detectable; 5 = clearly detectable), flavor intensity was 4.0 ± 1.0 (1 = no flavour; 5 = strong flavour), smoothness was ranked 2.4 ± 1.1 (1 = very smooth; 5 = grainy) and stickiness/adhesiveness was ranked 2.6 ± 1.1 (1 = not sticky 5 = very sticky). **Implications & Conclusions:** Pulse-based pureed foods that are high in folate are acceptable and easy to swallow, and possess the textural characteristics of smoothness and low adhesiveness recommended for swallowing.

Title: Vitamin D education intervention for independent living seniors

Author: H Reimer, S Whiting, Saskatoon Health Region Dietetic Internship Program, Saskatoon, SK

Objectives: The purpose of this study was to deliver a simple educational intervention with the objective of improving vitamin D intakes among a group of independent living seniors, and to determine the impact of this intervention on behaviour and knowledge. **Methods:** Seniors residing in two independent living facilities were invited to participate in the study. At one facility (n = 196), residents received a pamphlet we designed on vitamin D; the other facility (n = 96) served as a control group. All residents were asked to complete a 5-question survey on behaviour (intake) and knowledge of vitamin D. Surveys were conducted at both facilities one week before and four weeks after the pamphlet was distributed. The surveys were anonymous and residents could choose to participate. **Results:** At the intervention site, 67 participants completed the pre-test survey, and 72 completed the post-test survey. At the control site, 39 participants completed the pre-test survey, and 30 completed the post-test survey. At the intervention site, there were significant increases in knowledge of vitamin D's roles in bone health ($P < 0.013$) and muscle strength ($P < 0.002$); there also was a significant increase in reported use of supplements containing calcium with vitamin D ($P < 0.013$). At the control site there was an improvement in knowledge ($P < 0.008$). **Conclusions:** The survey data indicate that the pamphlet intervention had an influence on behaviour. Conducting the survey influenced knowledge at both sites. Further interventions involving multiple strategies are needed to promote sustained behaviour change and to increase vitamin D intakes among independent living seniors.

Title: The comparison of a liberalized diet versus a restricted diet on the perception of food intolerances in ostomy patients

Authors: Adena Lindstrom, Carla Moreau, and Jill Horvey, University of Saskatchewan, Saskatoon, Saskatchewan.

Objectives: The current guidelines for ostomates from the ADA/DC Manual of Clinical Dietetics (2000) include a list of foods that may cause problems to the ostomy, such as stoma obstruction, gas, odour, or diarrhea. Following an extensive review of the literature, it became evident that these guidelines have not been proven for efficacy. Furthermore, they may cause patients to restrict or avoid certain foods unnecessarily, which may put them at nutritional risk. The objective of this project was to identify whether or not ostomy patients can consume a liberal diet based on Canada's Food Guide with additional recommendations to encourage proper mastication, as well as adequate sodium, potassium and water intake with no effects on the incidence of food intolerances. **Methods:** Study volunteers, (n=20) (age 18-75 years) (male and female), undergoing ostomy surgery, will be recruited from Royal University Hospital, St. Paul's Hospital, and Saskatoon City Hospital. Patients will be randomly assigned into two groups. The control group will receive standard ostomy guidelines while the treatment group will receive the revised guidelines as outlined above. Data collection will include two questionnaires administered by telephone interview: one 4-6 weeks after ostomy surgery and the other 6 months after surgery. A 24-hour recall will also be performed at each interview. **Results:** Pending subject recruitment and ethical review of changes made to study protocol. **Conclusion:** If the hypothesis of this study is proven to be correct, future research (based on randomized double-blind crossover design) will be required to establish evidence-based guidelines for ostomy patients.

Title: Do potassium and phosphate levels improve with monthly education in hemodialysis patients?

Author: C. Evans and D. Quenneville, Ottawa Hospital Internship, Ottawa, Ontario

Objectives: There are several dietary restrictions for patients on hemodialysis to help minimize the build up of substances and electrolytes such as potassium (K) and phosphate (PO₄) between hemodialysis treatments. The purpose of this study is to determine if providing a monthly report card to hemodialysis patients serves as an educational tool to improve their K and PO₄ levels. **Methods:** A retrospective chart review was conducted to compile serum K and PO₄ levels of 28 hemodialysis patients (21 male, 7 female) over a 24-month period, from February 2002- January 2004 at The Ottawa Hospital (TOH), Riverside Campus. The monthly K and PO₄ levels over the two- year period were compared to determine if there was a significant difference in K and PO₄ levels with the use of the monthly report card, which started in February 2003. The first year of treatment will then be compared to the second to determine if there is a significant difference between the non-report card period vs. the report card period, via the paired T-test. **Results:** Results have not yet been determined as data collection is still ongoing. The list of subjects for the study has been finalized and 19 months of data has been collected. It is expected that the results should be complete by the end of April 2005. **Implications & Conclusions:** The final outcome will help us determine if there is a positive correlation between the report card and improving serum levels toward desired goals. If results of this study show significant improvements of potassium and phosphate levels, this may support the initiation of widespread use of these report cards for the hemodialized patients at TOH.

Title: Exploring the dissemination of Health Canada's statement on vitamin D supplementation for breastfed infants to community peer educators.

Author: J. Read, Dietetic Internship Program with a Northern and First Nations Focus, Thunder Bay, Ontario.

Objectives: Health Canada released an updated policy statement on vitamin D supplementation for breastfed infants in 2004. The statement was written for health care practitioners with a medical background, therefore it may not adequately target community peer educators in First Nations and Inuit communities. The objective of this project was to explore ways to communicate the policy statement to community peer educators through a literature review and in consultation with the National Nutrition Advisory (NNA), who are nutrition professionals representing the First Nations and Inuit Health Branch (FNIHB) regions and territories. **Methods:** Telephone interviews using a semi-structured questionnaire were conducted with seven NNA members to gather input on the following: who will be the target population for the communication; what form of communication would be most appropriate; if a written form is used, what modifications need to be made to the statement; and how will the policy be disseminated. **Results:** NNA members thought the communication should target Community Health Representatives and Aboriginal educators working in programs that target infants and new mothers. The most appropriate method of communication was thought to be a written form combined with training. Suggestions for modifications to the written statement included simplifying the language, including food sources of vitamin D and addressing that breastfeeding is best. Suggestions for disseminating the message included consulting community peer educators and regional nutritionists and piloting the communication with community peer educators. **Implications and Conclusions:** The results of this study will be used in the development and dissemination of a policy statement for peer educators in First Nations and Inuit communities.

Title: Determining the postpartum needs of clients for Public Health Services' family health drop-ins

Author(s): AL Hayward, N Romaine, Capital Health Graduate Dietetic Internship Program, Halifax, Nova Scotia

Objectives: The family health drop-ins were originally intended to support the World Health Organization's (WHO) mandate to increase breastfeeding initiation and duration rates. However, overtime, the drop-ins have evolved into a place where many parents of newborns, infants and toddlers come to have their child weighed on a weekly basis in addition to discussing any concerns with a Public Health Nurse (PHN). Due to this over emphasis on weight as the sole indicator of a child's health, it was decided that a structural change of the current drop-ins was needed. The objective of this project was to identify the program structure/model that best suits the needs of both current and potential drop-in users.

Methods: A self-administered questionnaire was distributed to current users (n=58) attending randomly selected drop-in locations as well as prenatal class attendees (potential users) (n=73). The questionnaire required respondents to rank three potential services in order of importance: group education sessions, individual child assessments performed by a PHN and breastfeeding assessment/support. Additional questions related to topics of interest, location and frequency of service were also included. **Results:** Similar results were found between the prenatal participants and those already attending the drop-ins. The most highly ranked potential service in both groups was individual child health assessments. Growth and development was identified as an important component of the assessments and was also a frequently chosen topic for education sessions. The lowest ranked potential service in both groups was group education sessions. **Conclusion:** The data received from this study will be valuable in restructuring the family health drop-ins to ensure that excellent service is being provided to new parents.

Title: Improving nutrition risk screening for residents admitted to Capital District Health Authority long term care facilities

Author: BE Rudd, Capital Health Graduate Dietetic Internship Program, Halifax, Nova Scotia

Objectives: To create a nutrition risk screening tool specific to long term care (LTC) in the Capital District Health Authority, thereby allowing for improved provision of nutrition care for an elderly population. **Design:** A cross-sectional study was conducted over a 60-day period. **Sample and Setting:** The sample consisted of residents admitted to three Capital District Health Authority LTC facilities, Twin Oaks Memorial, Hants Community, and Veterans Memorial of the QEII Health Sciences Centre, during the months of February and March, 2005 (n=15). All residents over 65 years of age admitted to the three Capital District Health Authority LTC facilities during this period were eligible for screening. **Methods:** The three dietitians working at each respective LTC facilities screened residents upon admission. Each dietitian screened residents upon admission using both the current acute care screening tool and a previously validated LTC nutrition risk screening tool, the Mini Nutrition Assessment (MNA). Interviews were conducted with the three LTC dietitians regarding the suitability of the screening tools. A new tool was created, through combination of the tools' parameters, to meet the needs of the LTC dietitians and the Capital District Health Authority forms standards. The same residents were screened with the new LTC Nutrition Risk Screen and Consult Form. **Results:** The MNA and new LTC Nutrition Risk Screen and Consult Form were able to detect greater numbers of adequately nourished and moderately malnourished residents. However, with the MNA, the Dietitians found some of the parameters too invasive to conduct on the elderly population and the assessment section of the tool lacking in medical history, laboratory values, goals and plans. The new LTC Nutrition Risk Screen and Consult Form contained all of this information and was deemed suitable for use and ability to adequately prioritize residents according to risk levels, by the LTC Dietitians. **Conclusions:** The new LTC Nutrition Risk Screen and Consult Form showed a higher level of sensitivity, over the acute care screening tool, in screening older residents for risk of malnutrition. This study illustrated the potential use of the new LTC Nutrition Risk Screen and Consult Form as an initial screening tool and system to prioritize nutrition risk among elderly residents and hence a method to ensure the appropriate nutrition care is provided.

Title: Evaluating the effectiveness of a pilot group cholesterol education program in the QEII Health Sciences Centre Nutrition Education Clinic

Author(s): JL Ambler, D Aldous, Capital Health Graduate Dietetic Internship, Halifax, Nova Scotia

Objectives: In order to decrease patient wait times and improve clinic efficiency, it would be beneficial to change the cholesterol education program from a group education session followed by individual follow-up(s) to group sessions with group follow-ups. **Methods:** A pilot group cholesterol education program, consisting of small group three sessions combining education and follow-up which occur over three months was developed by the outpatient Nutrition Education Clinic dietitian. A validated nutrition knowledge questionnaire was adapted and used with permission from the ICRF Health Behaviour Unit, University College London. Twenty participants completed the questionnaire (pre-test) before beginning the current program, and twenty-two participants completed the questionnaire before beginning the pilot program. Both groups of participants will complete the questionnaire (post-test) at the end of their respective programs, three months after their initial visit. Changes in pre-versus post-test scores will be compared between the participants who complete the current versus the pilot program. **Results:** Pending the post-tests to be conducted in May 2005, results will be available in order to conduct analysis and determine if there is a statistically significant difference in the knowledge gained by the participants in the current versus the pilot program. A statistician from Mount Saint Vincent University will be performing this analysis. Preliminary results indicate a low level of nutrition knowledge for both groups of participants pre-education and positive feedback has been obtained from participants in the pilot program. **Conclusions:** Ideally, participants who complete the pilot program will have a statistically equivalent or greater change in nutrition knowledge score, and the pilot program can replace the current program.

Title: Effectiveness of a social marketing intervention to increase sales of fruits and vegetables in a workplace setting

Author(s): JN Haskett, M Cipak, J Pryor, Capital Health Graduate Dietetic Internship Program, Halifax, Nova Scotia

Objectives: The objective of the study was to determine whether fruit and vegetable sales in the Dartmouth General Hospital restaurant could be increased using principles of social marketing. **Methods:** The intervention consisted of: 1) point-of-purchase messaging promoting fruits and vegetables and healthy eating including tent cards and signage with information about recommended intakes, appropriate serving sizes and practical tips about fruits and vegetables; 2) new menu items each providing a minimum of one serving of fruits and vegetables; 3) offering new salad varieties on a consistent basis; 4) offering all fruits and vegetables in convenient packaging able to be taken off-site. Sales volumes of fruits and vegetables were tracked using production inventories and retrospective review of cash register receipts. Daily restaurant specials including one or more servings of fruits and vegetables were included in sales. Baseline data was collected for one week prior to the intervention and were compared to collection of sales data for two weeks post-intervention. **Results:** Results and conclusions are pending completion of data collection. **Implications:** Study results may be used to determine whether this type of intervention could be effective in other hospital restaurants within the Capital District Health Authority, or other workplace settings.

Title: A qualitative analysis of Capital Health Dietetic Internship Program: a preceptor's perspective.

Author(s): J Srikiisoon, MJ Taylor, Capital Health Graduate Dietetic Internship Program, Halifax, Nova Scotia

Objectives: Demonstrating the value of clinical training programs such as a dietetic internship is often essential in hospital-based settings where financial resources are usually restricted. Past research has focused primarily on quantitative research—analysing the costs and benefits associated with dietetic internship programs (i.e. tangible benefits such as independent workload). Minimal qualitative research has been conducted to explore the intangible benefits from a preceptor's point of view. The objective of this research is to conduct a qualitative analysis of the Capital Health Dietetic Internship Program from the perspective of its preceptors. **Methods:** Dietitian preceptors (n=20) from Capital District Health Authority and the IWK Health Centre participated in a focus group to discuss the qualitative value of the Capital Health Dietetic Internship Program. Four separate focus groups were conducted, dividing preceptors into homogeneous groups specific to their work area—administrative or clinical dietetics. A semi-structured interview guide was used and focused on the positive impact of dietetic interns and their contributions to the Department of Food & Nutrition Services. **Results:** Pending data analysis, however, preliminary review indicates all dietitian preceptors that participated in this study view the Capital Health Dietetic Internship Program in a positive manner. Participants commonly affirmed that the dietetic internship program adds value to the Department of Food & Nutrition Services and that serving as a preceptor contributes to various aspects of a dietitian's professional development. **Implications & Conclusions:** The results of this study will serve as evidence-based research to support the qualitative value of the Capital Health Dietetic Internship Program and will complement the quantitative research that has previously been conducted in this area.

Title: To assess the impact of plate and panning wastage on the average amount of daily bulk food wastage, at the Camp Hill Veterans' Memorial Building within the Capital Health District

Author(s): KY Brown, D MacInnis, Capital Health Graduate Dietetic Internship Program, Halifax, Nova Scotia

Objectives: With an increased financial strain on our health care system it is important that we assess department procedures to ensure efficiency and effectiveness. In foodservice departments, food wastage is a concern, thus it is important to determine possible sources of this wastage, so that it can be reduced to an acceptable level. The objective of this study is to determine the average amount of daily bulk food wastage at the Camp Hill Veterans' Memorial Building, while assessing if there is a significant difference between the amount of plate and panning wastage. **Methods:** The residents of the Veterans' Memorial Building, Camp Hill Site, were the subjects of this research project (n=75). This research study excluded residents of two wards, as they are special care units and the residents require a great deal of assistance and coaching from nursing or foodservice staff which may skew the results. Plate wastage for the purpose of this study is being defined as food, which has been attempted by the patient but incompletely consumed, while panning wastage is defined as food that remains in the serving/ retherm pans once the meal is finished, as these residents are served in a dining room setting. These are the two main types of food wastage that must be considered when assessing the cook chill system, as they both contribute to an increased expenditure by the foodservice department. **Results:** Data collection process has not yet been completed. **Conclusion:** Appropriate conclusions will be made once the data has been collected and analyzed.

Title: Correlation between iron status and cognitive development among preterm infants

Author(s): ML Coady¹ and J Ledwidge². Capital Health Graduate Dietetic Internship Program¹ and IWK Health Centre², Halifax, Nova Scotia

Objectives: The Perinatal Follow-up Program at the IWK Health Centre monitors infants born less than 31 weeks gestational age and or less than 1500g birth weight until 3 years corrected age. The objective of this study is to determine the correlation between iron status at 4-months corrected age and cognitive development scores at 18-months corrected age.

Methods: Infants who are followed in the Perinatal Follow-up Program at the IWK Health Centre, Halifax, Nova Scotia and who were born between January 1, 2000 and December 31, 2002 are eligible to be included in the study (n=150). Serum Ferritin, Mean Cell

Hemoglobin, Hemoglobin, Mean Cell Volume and Hematocrit values will be compared with scores from the Bayley's Scale of Infant Development. **Results:** Data has not yet been

analyzed; results are pending. **Implications:** The results from this study could have

implications on public health recommendations for preterm infants, such as: stronger recommendations for iron supplementation in preterm infants and development of new

guidelines/protocols for monitoring iron status post hospital discharge. **Conclusion:** Due to

the increased number of preterm births and higher survival rates of very low birth weight

babies, the results of this study may be very important to health care professionals. This study

is likely to increase the awareness surrounding the need for iron for normal cognitive

development and reinforce the need for more research on this topic.

Title: The utility worker's perspective on how to retain an employee

Author(s): S M LeBlond, D Nowlan, Capital Health Graduate Dietetic Internship Program, Halifax, Nova Scotia

Objectives: The foodservice industry is one of Canada's largest employers. Turnover among foodservice workers is characteristically high and the costs are often significant. High employee turnover represents a considerable cost for the Central Distribution division of the Food and Nutrition Services department at Capital District Health Authority in Halifax, Nova Scotia. To offset such costs, employers must determine the real reasons behind employees' intent to leave a job to ensure the development of relevant and effective intervention strategies. Appropriate programs and strategies represent a savings rather than expenditure to an organization. The objective of this study was to identify factors that contribute to job satisfaction for Central Distribution hosts working in four different locations at Capital Health and how these factors can affect a utility worker's intent to leave. **Methods:** Hosts who had been working with Central Distribution less than two years participated in facilitated group discussions. The facilitator used a pre-tested discussion guide to investigate hosts' perceptions regarding job expectations pre and post hiring, orientation, training, and job satisfaction. **Results:** Data collection and thematic analysis is currently underway. To date the data indicates that hosts identify key elements to job satisfaction as total hours of work available, hours and number of shifts available, direct supervision, poor communication, and lack of room for advancement. Hosts further identify pay, benefits, and job security as factors that would have a positive impact on their intent to stay in their job. **Conclusion:** Preliminary review of the data would suggest by addressing these job satisfaction factors utility worker turnover among hosts in Central Distribution could be reduced.

Title: Handgrip strength vs. subjective global assessment markers of nutritional status in patients with chronic renal failure

Author(s): SL Murphy, S McBride, Capital Health Graduate Dietetic Internship Program, Halifax, Nova Scotia

Objectives: It is unclear as to whether or not handgrip strength is a reliable tool for assessing nutritional status in patients with chronic renal failure. The objective of this project was to examine the relationship between handgrip strength, albumin level, and other subjective global assessment markers of nutritional status to determine whether there is a correlation between them. **Methods:** Subjects (n=34) attending an outpatient renal clinic participated in a mini subjective global assessment. This included a questionnaire and a physical assessment to which an overall score was assigned. Handgrip strength was measured three times in the non-dominant hand of each participant and an average measurement was calculated. The average handgrip strength of each participant was compared to standard percentiles for gender and age group. Recent albumin levels of each participant were obtained. All variables were subjected to statistical analysis to determine whether or not a correlation existed. **Results:** Pending. **Conclusion:** Pending results.

Title: Is dietitian intervention effective in improving clinical outcomes of outpatients on hemodialysis?

Author(s): SE Pearson, P Smith, Capital Health Graduate Dietetic Internship Program, Halifax, Nova Scotia

Objectives: To assess if regular dietitian intervention improves the clinical outcomes of patients who undergo hemodialysis at the QEII. **Methods:** A retrospective survey of 109 charts from the outpatient hemodialysis unit at the QEII was conducted. Blood work values (potassium, phosphorus, and blood urea nitrogen (BUN)) from November 2004 and December 2004 were recorded. The date and length of the dietitian intervention were also recorded. Patients were excluded if they had not been on hemodialysis for at least 6 months. Subjects were sorted into three groups. Group A are patients who had dietitian intervention between November 1st and November 12th. Group B are patients who had dietitian intervention between November 15th and December 3rd. Group C are patients who did not see the dietitian between November 1st and December 3rd. To estimate the improvement in blood work for each of the three groups a paired sample t-test will be used. A one way Analysis of Variance will be used to compare the improvements of the three groups in order to determine if any of the groups differ significantly from the others on each of the blood tests. **Results:** Data analysis is pending. Results of this study should indicate if the frequency and/or length of dietitian intervention have a significant effect in improving a patient's clinical outcomes. **Conclusion:** Pending.

Title: Evaluating the usefulness and cultural appropriateness of food group fact sheets among First Nations communities in Canada

Author: JD Shutt, Dietetic Internship Program with a Northern and First Nations Focus, Sudbury, Ontario

Objectives: In 2003, the First Nations and Inuit Health Branch of Health Canada and collaborators developed five handouts highlighting the four food groups and an “others” category. The purpose of this study was to evaluate the use of these fact sheets among community educators, and the appropriateness of the featured foods. **Methods:** Community educators working in First Nations Communities in Manitoba, Saskatchewan and British Columbia were recruited through regional nutritionists. Participants (n=5) completed a semi-structured telephone interview during February 2005. The data was analyzed qualitatively for themes and categories. **Results:** All participants used the fact sheets with individuals and/or groups. The frequency of use varied from less than once a week to twice a week and often all five fact sheets were provided as a package. Sixteen food items were identified as being consumed but not featured on the fact sheets, or featured, but not available in their communities. Items identified as being consumed but not appearing on the sheets included tortillas, whole wheat breads, fresh fruits and vegetables and cottage cheese, whereas items such as lentils, wild berries, canned fruits and canned vegetables were not found on the sheets but were identified as items consumed. The educators identified dairy products and fresh vegetables as foods not consumed in a traditional Aboriginal diet and noted that these foods were infrequently consumed due to lack of availability, cost, poor quality and dislike. **Conclusions:** Trends discussed provide a starting point for evaluating and potentially revising these food group fact sheets and for creating future education tools of a similar nature.

Title: Evaluation of the Nutrition Labelling Toolkit by community educators

Author: LA Romas, Dietetic Internship Program with a Northern and First Nations Focus, Thunder Bay, Ontario.

Objectives: The Nutrition Labelling Toolkit – First Nations and Inuit Focus is a resource developed in 2003 and distributed across Canada to nutrition educators working in Aboriginal communities. The Toolkit was developed with the objective of increasing awareness and understanding of recent changes to nutrition labelling regulations. The objectives of this project are to determine whether community-level educators are using the Toolkit, and to establish how effective the Toolkit is in meeting their needs. **Methods:** Community-level educators working in Aboriginal communities who had received the Toolkit were asked to participate in a telephone interview to provide feedback on the Toolkit. Interviews took place during the week of February 28-March 4, 2005 and were conducted by the same interviewer to ensure consistency. Participants worked in First Nations communities in Ontario and Nova Scotia (n=7). **Results:** Four of the seven community-level educators had used the Toolkit for group education. The community-level educators who used the Toolkit found it to be appropriate for their community and useful for teaching others about nutrition labelling. Two of the four interviewees who used the Toolkit had attended a training session to learn how to use it. All of the community-level educators who completed interviews were interested in receiving toolkits on other topics in the future. **Implications and Conclusion:** Due to the small number of community-level educators interviewed, further studies are needed to gain a greater understanding of who is using the Toolkit, how effective and appropriate it is in meeting their needs and whether attending a training session to learn how to use the Toolkit would be beneficial.

Title: Proposed Assessment of nutritional status of children on peritoneal dialysis

Author: KR Chalifoux, Capital Health and University of Alberta Integrated Dietetic Internship Program, Edmonton, Alberta.

Objectives: The Pediatric Northern Alberta Renal Program (PNARP) at the Stollery Children's Hospital is assessing possible correlations between adequacy markers and nutritional status in pediatric patients maintained on peritoneal dialysis. **Methods:** A retrospective review of the charts of pediatric patients previously receiving or currently receiving peritoneal dialysis at the Stollery Children's Hospital will be performed. Lab data and other pertinent information will be collected from the eligible patient charts (n=17). The data to be collected includes gender, age, height, weight, height and weight percentiles, body surface area, body mass index, age, rate of transport of glucose, creatinine, urea and phosphate (across the peritoneum into the dialysate), and peritoneal dialysis modality. The dialysis prescription will also be recorded and analyzed; this includes glucose, fill volume, cycles and total therapy volume. Dialysate and urine collection data will also be used in the analysis. Routine retrospective analysis of total creatinine clearance, Kt/V_{urea} , non-protein nitrogen appearance, glucose absorption and protein loss will be included. Past lab values will be reviewed to determine any possible correlations between nutritional status, dialysis adequacy and transport rates. Retrospective lab values for this comparison are phosphorus, calcium, parathyroid hormone, albumin, urea and the presence of anemia. A statistical analysis will be performed using the SSPS statistical analysis software to determine if any correlation between adequacy markers and nutritional status exist in the pediatric peritoneal dialysis patients monitored at the Stollery Children's Hospital. **Results:** The results of this retrospective chart study anticipated by the fall of 2005.

Title: St. Albert and Castledown's School Food Assessment Project

Author: BD Zak, Capital Health Comprehensive Dietetic Internship, Edmonton Alberta

Objectives: Recent research indicates that Canada has seen a steady increase in the rate of childhood obesity. Children and youth between the ages of 5 – 17 years consume one to two meals at school, providing many of them with 1/3 to 1/2 of their daily nutrient requirements. The purpose of this study is to examine the food and nutrition environment in St. Albert and Castledown junior high schools. 1). To assess the types of foods and beverages offered in St. Albert and Castledowns junior high schools. 2). To examine school staff's attitudes and perceived barriers/facilitators in creating a healthy school environment. 3). To determine key stakeholders in nutrition related school issues. 4). To determine if nutrition education is offered at schools. **Methods:** A quantitative questionnaire was adapted from the "Beyond an Apple A Day" questionnaire. Each teacher, counselor and principal completed a questionnaire containing questions regarding: healthy school environment policies and programs, nutrition, and health programs, nutrition and fundraising activities. To verify the results regarding the school environment from the questionnaire, a dietetic intern completed a tour of each school. The data collected from the questionnaire was entered into a Microsoft Access Database (Windows 95). The responses to the questionnaire were analyzed through means, medians, standard deviations, and percentages. The analysis was based on all of the schools. **Results:** Pending. **Conclusions:** Pending.

Title: Patient nutritional health screen implementation in a palliative home care population

Authors: CE Schneck and AR Dorland, University of Alberta Integrated Dietetic Internship Program, Edmonton, Alberta.

Objectives: The Capital Health Palliative Home Care Program piloted the Patient Nutritional Health Screen (PNHS)—a tool based on the scored Patient Generated- Subjective Global Assessment. The purpose of this project was to determine the impact of the PNHS on the workload of the home care dietitian, to analyze the process of using the PNHS, and to determine whether the PNHS nutrition risk scores appropriately identified the need for nutrition intervention. **Methods:** The Palliative Home Care Teams participated in the implementation of the PNHS. A database was developed to track dietitian workload and the results of the PNHS forms. The dietitian attended weekly home care meetings to gain feedback on implementation and review PNHS scores with case managers. Written questionnaire surveys and focus groups were conducted to gather feedback on PNHS implementation and on recommendations for improving the use of the tool. **Results:** The implementation of the PNHS increased the dietitian's workload, on average, by 15%. This was shown by workload measurement conducted by the dietitian. Feedback during focus groups showed that the process of using the tool in home care was straightforward and accepted. Data collected showed that 86% of the clients scored over 9 (with a score ≥ 9 indicating need for intervention). It may be necessary to have additional criteria to identify clients requiring intervention to ensure a manageable workload for the dietitian. **Conclusion:** The PNHS pilot demonstrated that, with some minor adjustments, this screening tool could be used to identify clients in need of nutrition intervention. Implementation of the PNHS has had a significant impact on the dietitian's workload and the requirement for additional resources needs to be addressed.

Title: Evaluation of Telehealth videoconferencing as a means to deliver Canada Prenatal Nutrition Program (CPNP) information and education to Alberta First Nations and Inuit community health workers

Author: DE Sharp, Capital Health Dietetic Internship Program, Edmonton, Alberta

Objectives: To identify issues surrounding awareness, interest and usage of videoconferencing for nutrition education among CPNP community health workers and subsequently form recommendations for the improvement of videoconferencing services to meet community needs and program objectives. **Methods:** Alberta CPNP community health workers (n=14) participated in a structured telephone interview about videoconferencing. The interview focused on worker awareness, interest, use and satisfaction with current CPNP videoconferencing services and asked for suggestions for improvements. **Results:** Results showed a high level of awareness, interest, and usage of nutrition videoconferencing among respondents. Barriers to attending nutrition videoconferences reported were: lack of site access (necessity to travel outside the community to access a site, or conflicting use of equipment within their own community); lack of awareness or timely awareness of videoconferences; time/workload constraints; lack of staff coverage; lack of technical skills; and equipment issues. Time/workload and site access were reported most often as the biggest barriers to attending nutrition videoconferences. Suggestions for improvements included the following: to improve notification of videoconferences; to provide more technical training to more people in the community; to improve ongoing maintenance of videoconferencing equipment; to improve delivery times (many respondents felt that the best times were at the beginning or end of the workday); to improve access for communities currently without; and to set up appropriate facility space to hold videoconferences (i.e. unique versus shared space). **Conclusion:** Results and recommendations of this research will provide the CPNP valuable community perspective for consideration in future videoconferencing initiatives aimed at improving service delivery, thus, enhancing the programs ability to meet its objectives.

Title: Feasibility assessment of implementing nutrient dense food items into the pureed menu at a long term care facility

Author: KA Hancock, Capital Health Regional Dietetic Internship Program, Edmonton, Alberta

Objectives: To determine if a nutrient dense blended breakfast and pureed lentils added to pureed soup will be an acceptable way of providing more nutrients into the diets of residents on a pureed diet in a long term care facility. **Methods:** Ten elderly persons on a pureed diet living at Capital Care Grandview, as well as their family members, will be included in a taste test to determine if a blended breakfast and pureed lentils added to pureed soup will be acceptable. The intakes of the targeted residents will be monitored before and after the implementation of the nutrient dense foods. The amount of added calories, protein, fibre and folate from the blended breakfast and the pureed soup with added lentils will be calculated. **Results:** The feasibility of incorporating nutrient dense foods will be assessed in relation to preparation time, labour and ingredient costs. Nutrient analysis results of enhanced products are pending.. **Conclusion:** Pending.

Title: Familial perceptions and attitudes toward Childhood Obesity

Author: L Cuglietta, Capital Health Dietetic Internship Program, Edmonton, Alberta.

Objectives: The purpose of this study is to assess familial perceptions of and attitudes toward childhood obesity. The factors associated with obesity management and treatment seeking preferences in the families of obese children will be examined. **Methods:** Participants will be recruited from Capital Health Region (Edmonton) via the Pediatric Center for Weight and Health (PCWH) at the University of Alberta. Participants will be 20 children aged 10-13 years (10 female, 10 male), and their parents. Obese children will be recruited based on international body mass index guidelines for obesity among children differentiated by sex. Data will be collected via individual and focus group interviews. The children and one or both of their parents will be individually interviewed. **Results:** The initial interview data will be analyzed and a set of themes will be created. These themes will then be used to guide family focus group interviews. The focus groups will enable us to gather further data and assess the extent to which the initial findings are applicable to other family units. Data from this investigation will be utilized to development weight management strategies provided through the PCWH. **Conclusions:** Pending.

Title: Carnitine status in TPN dependent infants with intestinal failure.

Author(s): R Rosenthal, M Carricato, D Mager, Department(s) of Clinical Dietetics & GI/Hepatology/Nutrition, The Hospital for Sick Children, Toronto, Ontario

Objectives: Carnitine is an essential cofactor that enables the transport of activated fatty acids into the mitochondria for β -oxidation. Total Parenteral Nutrition (TPN) dependent patients have been found to develop hepatic steatosis and cholestasis. The objective of this study was to determine carnitine status in infants dependent on TPN and to identify potential variables influencing carnitine status and liver dysfunction. **Methods:** A retrospective chart review was conducted of premature and full term infants with intestinal failure fed exclusively with TPN (>90% of total nutritive needs). Variables studied included age, weight, length, plasma liver biochemistries (ALT, AST, conjugated, & unconjugated bilirubin) and plasma levels of albumin, INR, and total and free carnitine. **Results:** The mean age and weight of patients (n=9) were 0.67 ± 0.6 years and 6.56 ± 2.4 kg respectively. The mean plasma levels of ALT and albumin were 231 ± 147 U/L and 27.3 ± 5.9 g/L, respectively, suggesting that subjects had mild to moderate liver disease with impaired liver synthetic function. The mean total and free carnitine levels were significantly low ($p < 0.05$) at 20.5 ± 5.1 $\mu\text{mol/L}$ (range 9.5 -26.8 $\mu\text{mol/L}$) and 15.2 ± 3.1 $\mu\text{mol/L}$ (range 9.5-18.8 $\mu\text{mol/L}$), respectively. 50% of the patients studied had sub-optimal carnitine status as determined by the plasma ratio of free to total carnitine. **Conclusion:** Patients with intestinal failure exclusively fed TPN have abnormal carnitine status in the presence of abnormal liver function. It is unknown whether sub-optimal carnitine status in the infant with intestinal failure plays a role in the liver dysfunction associated with long-term TPN.

Title: Attending breastfeeding classes resulted in more mothers breastfeeding and for a longer duration.

Author: S. Blunden, C. Hector, McGill University, Montreal, QC.

Objectives: A phone survey was conducted to determine if participation of mothers of low-income status, who attended breastfeeding courses at a well-baby program, resulted in breastfeeding their child, and the length of time they did, compared to mothers who did not follow the courses. **Methods:** Subjects were randomly selected among women who, after being followed during their pregnancy, gave birth between April and August 2003 in Quebec. The control group consisted of 25 women who did not follow prenatally the breastfeeding courses and the treated group consisted of 25 women who did. The questionnaire used asked in detail the method of feeding from the date of birth until present. **Results:** The results indicated an increased rate and duration of breastfeeding among mothers who followed the courses. At four months, 63% of mothers in the treated group breastfed compared to 35% of mothers in the control group. In comparison, in 2003, only 48% of all mothers in Canada and 38% of all Quebec mothers still breastfed at four months. The results of the treated group surpassed the provincial objective which is set at 60% of mothers breastfeeding at three months. **Conclusion:** Based on the results, it is recommended that mothers should follow prenatally a basic breastfeeding course outlining the benefits, the various breastfeeding positions and should be given a contact if they have questions or need help. The benefits of breastfeeding, such as favouring mother-infant bonding, contributing to optimal brain development and preventing diseases in the baby, are important reasons for promoting breastfeeding classes and encouraging mothers to attend.

Title: Effectiveness of homemade laxatives in a long-term care centre

Author: S.R. Strulovitch*, McGill University, Montreal, Quebec

Objective: Constipation is a common, chronic problem in long-term care (LTC) facilities. Long-term prescription laxative use may aggravate the problem, by causing a dependency. Prescription laxatives and stool softeners can contribute appreciably to the cost of medications at LTC facilities. In an effort to decrease the use of prescription laxatives, a high-fibre “home-made” laxative supplement was pilot tested in a LTC facility. **Method:** Two-week baseline data, including number of bowel movements and laxative use, was collected for 20 patients who were receiving prescription laxatives on a regular basis. This was followed by a 2 week trial of a new protocol, adapted from another LTC centre, including a homemade laxative. The homemade laxative contained applesauce, prune juice, prunes and all bran. The protocol consisted of a 6-day flow chart, in which a certain dose of the homemade laxative was given, based on the number of days it had been since the patient’s last bowel movement. After 3 days of no bowel movements, some prescription laxatives were also given, as per the protocol. The nursing staff documented all laxatives that were given, including the homemade mixture. **Results:** Out of the 20 participants, 19 completed the trial period. At the end of the 2-week trial period, 80% of the patients were having a minimum of 2 bowel movements per week. The cost of prescription laxatives used for these 19 patients dropped from \$34.06/week to \$14.11/week during the trial period. The number of bowel movements did not change significantly between the baseline and trial. **Conclusion:** Using a homemade laxative to replace prescription laxative use is a cost effective way to treat chronic constipation in long term care centres.

Titre : Les produits naturels et la fibromyalgie

Auteur : V. Lachance*, McGill University, Montreal, QC

La fibromyalgie est une maladie rhumatismale chronique reconnue en 1992 par l'organisation mondiale de la santé. Caractérisée par une sensation de douleur musculaire diffuse et souvent confondue au syndrome de la fatigue chronique, cette affection provoque une sensation de fatigue et parfois incapable de vaquer aux occupations quotidiennes. Mal connue, les traitements médicaux offerts reposent davantage sur l'expérience que sur une valeur scientifique établie. Voilà, pourquoi certains individus se tournent vers les médecines alternatives à la recherche d'un soulagement. Le volet nutrition (2.5h) du programme de réadaptation (35h) pour les personnes atteintes de fibromyalgie d'un centre de réadaptation, inclus les suppléments naturels. Le présent groupe, formé de 10 femmes âgées de 35 à 65 ans, devait répondre à un questionnaire portant sur leur consommation de suppléments naturels, la raison d'utilisation, l'efficacité et s'ils étaient encore utilisés. D'après le sondage, les suppléments les plus populaires sont le magnésium (70%), l'huile de poisson (40%), l'huile d'onagre (20%) et l'huile de lin (20%). Le magnésium est consommé à 29% pour la douleur musculaire et la fatigue, à 14% pour le sommeil et à 42% pour d'autres raisons. Toujours utilisé par 71% des participantes, les symptômes ont été atténués chez 43% d'entre elles et 57% n'ont vu aucune amélioration. Les consommatrices d'huile de poisson affirment qu'elle ne soulage pas la douleur, ni la fatigue et l'ont cessée. L'huile d'onagre s'est avérée inefficace contre les symptômes de la fibromyalgie et l'ensemble des participantes affirme ne plus l'employer. L'huile de lin est consommée dans 100% des cas pour traiter d'autres symptômes que ceux liés à la maladie. Cet exercice confirme que la prise de suppléments naturels chez les personnes atteintes de fibromyalgie est courante, allant de un à onze suppléments par individus interrogés.

Title: Recommendations for formative research to develop point-of-purchase interventions targeting isolated northern First Nations and Inuit communities.

Author: LC West, Dietetic Internship with a Northern and First Nations focus, Sudbury, Ontario.

Objectives: Between 2001 and 2003, Indian Northern Affairs Canada (INAC) began implementing Food Mail Pilot Projects in three isolated northern First Nations and Inuit communities to increase the affordability, quality, availability and consumption of healthy foods. Results of the pilot projects to date show a need to enhance nutrition promotion in the retail setting. The objective of this project was to explore formative research and its use for obtaining community members' input on the development and content of point-of-purchase interventions at the Pilot Project sites. **Methods:** A comprehensive literature and document review was completed between October 2004 and April 2005. This review guided the development of a framework and recommendations on the uses formative research in the design of retail-based nutrition education interventions. **Results:** Recommendations for future research included targeting the health care professionals or workers, retail managers and staff and community leaders through focus groups and in depth one-on-one interviews, as well as the general population through a household questionnaire. The framework outlined four stages in the development of nutrition intervention tools, which included identification of current ideas and possible options, completion of an assessment, and tool development and implementation. Key concepts to be addressed during research that were identified include co-learning, community relevance, communication, evaluation, and appropriate cultural applications to First Nations/Inuit populations. **Implications & Conclusions:** This research project will inform a critical stage in the development of point-of purchase interventions for the Food Mail Pilot Projects. Formative research is essential to determine what interventions will be most effective, feasible, culturally appropriate and useful to the target groups.

Title: Kids' Cooking and Body Image

Author: R McBryan, University of Alberta Coordinated Dietetic Internship Program, Calgary, Alberta

Objectives: This week-long afternoon camp was created to teach grade 4-6 students about healthy eating and body image. Children were to develop self efficacy, learn coping skills, and ultimately increase their self-esteem and build resiliency. **Methods:** This project was supervised by the Capital Health Eating Disorder Promotion & Prevention Specialist, and marketed by Metro Community College. Metro Community College advertised that "Kids learn to plan, budget and cook healthy foods... also discover how food fuels our cherished bodies using fun hands on activities". Parents were encouraged to participate by helping their child develop a healthy living goal. Specific cooking topics included food safety, meal planning, recipe reading, food preparation and cooking. The concepts related to healthy eating were nutrition, defining hunger, dieting dangers and managing stress. The students also learned about weight prejudice, changes during puberty and different body types, as well as personal strengths related to body image. The children chose strategies to either, counteract bully/teasing, learn about negative and positive self talk, and/or develop media literacy. To increase resiliency, a safe environment was created where children felt free to express their feelings. Pre/post questionnaires measured self-esteem. **Results:** Seven students registered. Only one parent participated in goal setting. The children enjoyed the opportunity to learn how to cook, and demonstrated their new cooking skills. They showed increased self efficacy around the media. The pre/post questionnaires confirmed that's self-esteem increased after the program. **Conclusion:** Learning about health by hands-on cooking and body image activities developed self efficacy and improved self-esteem in participating grade 4-6 students.

Title: Enhancing consumption of dietary omega-3 fatty acids in pediatric cystic fibrosis patients through diet counseling and nutrition education tools

Authors: N. LeBlanc¹, K. Wadden². Ottawa Hospital Internship¹ and The Children's Hospital of Eastern Ontario², Ottawa, Ontario.

Objectives: The purpose of this study is to determine if a nutrition education tool along with diet counseling compared to an education tool alone and no intervention will affect omega-3 fatty acid (n-3) intake in the pediatric cystic fibrosis (CF) outpatients at the Children's Hospital of Eastern Ontario (CHEO). **Methods:** A pre and post questionnaire on the intake of n-3 was distributed to 39 children (divided into three groups). Groups 1 and 2 were given a nutrition education tool encouraging the incorporation of n-3 in their diet and ways to increase their intake of n-3. Group 1 was also counseled on how to incorporate n-3 foods in their diet. Group 3 served as control. The post-intervention questionnaire was completed at least 2 months after the initial questionnaire. Data will be compared using a paired t-test and a Mann Whitney U test to note any changes in eating habits related to n-3 consumption. **Results:** Results have not yet been determined as data collection is ongoing and is anticipated to be complete by June 30th, 2005. **Implications & Conclusion:** The final outcome will show if a nutrition education tool alone or combined with diet counseling compared to no n-3 information was successful in increasing dietary intake of n-3 in the pediatric CF outpatient setting. If results of this study show increased consumption of n-3 through either teaching method; the teaching method showing the greatest increase of n-3 will be used as part of the n-3 nutrition education approach for CF patients in the outpatient clinic at CHEO.

Title: The impact of glycemic index (GI) education on dietary intake of newly diagnosed children with type 1 diabetes three months following diagnosis

Authors: L Moniz, E Assor, J Buccino, K Perlman, The Hospital for Sick Children Internship Program, Toronto, Ontario.

Objectives: GI education has recently been incorporated into the diabetes education at the Hospital for Sick Children. Consumption of low GI foods may improve metabolic control in people with diabetes due to the smaller post prandial rise in blood glucose. The purpose of this study was to study prospectively the effect of GI education on GI intake in newly diagnosed children with type 1 diabetes. The hypothesized GI education would result in the increased intake of low GI foods with no impact on macronutrient distribution in newly diagnosed children. **Methods:** A 24-hour food recall was completed by a Dietitian or Dietetic intern during the first education session (pre-intervention data) and during the first follow-up outpatient diabetes clinic (post-intervention data) to assess GI intake and percent proportion of macronutrients. **Results:** Mean age, weight and height at baseline (n=8) was 10.5 years \pm 3.5 (range 6-16), 37.7kg \pm 15.8 (range: 18.9-56.0) and 145.94cm \pm 15.52 (range: 122.0-172.5), respectively. Mean weight loss at baseline (n=5) is 4.5kg \pm 0.57 (range: 3.6-5.0). Mean GI intake pre- and post-intervention was (n=8) 57.91 \pm 12.07 (range: 36-82) and (n=3) 52.72 \pm 8.99 (range: 35-76). Mean macronutrient distribution pre-intervention (n=8) of carbohydrate, protein and fat was 59.69% \pm 18.22, 14.27% \pm 6.48, and 26.04% \pm 16.45, respectively. Mean macronutrient distribution post-intervention (n=3) of carbohydrate, protein and fat was 55.78% \pm 10.23, 14.06% \pm 4.14, and 30.17% \pm 9.63, respectively. **Conclusion:** GI education intervention has decreased mean GI intake from a medium GI range to a low GI range.

Title: Does satisfaction with nutritional counselling services influence weight management in obese patients with Type 2 diabetes at Mount Sinai Hospital?

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Objectives: The objectives of this research were to measure patient satisfaction with the dietitian who provides Diabetes Education through a qualitative, open-ended interview and a validated questionnaire and to generate theory to better understand the relationship between satisfaction with the dietitian and weight management. **Methods:** Patients received the validated questionnaire and interview questions in the mail and returned the questionnaire prior to the interview. Interviews were completed over the phone, audio-taped, transcribed and analyzed using a grounded theory approach. The questionnaires were scored using the scoring provided. The population included obese individuals with Type 2 diabetes who had or had not achieved a weight loss of > 5% usual weight. **Results:** All patients scored highly on the satisfaction questionnaire and expressed feeling motivated and supported by their dietitian regardless of a weight loss success of > 5% usual body weight. None perceived negative effects from, nor provided suggestions to improve their experience with the dietitian. The role of the dietitian was perceived as motivator and educator as well as disciplinarian despite the dietitian providing consistent and non-judgmental counselling. All participants described factors that hinder their weight management success that do not relate to the client-dietitian relationship. **Implications & Conclusions:** Satisfaction with services provided by a Registered Dietitian may be a catalyst for some individuals despite barriers faced in daily life. Barriers to weight management are many and may require consideration prior to providing nutritional counselling for some individuals. Despite consistency in counselling style, clients' perceptions of the dietitian's role should be monitored to ensure best practice. Reflective evaluation of practice is a useful tool to determine effective counselling strategies.

Title: Adequacy of and barriers to enteral feeding in the neurotrauma intensive care unit at St. Michael's Hospital

Authors: L. Sutton, B. McVeigh, S. Chatvuttinun, M. McCall, P. Darling, J. Wasserman, S. Ng. St. Michael's Hospital Dietetic Internship Program, Toronto, Ontario.

Objectives: Enteral nutrition is an important therapy in the critically ill patient for preventing malnutrition and promoting immunological function of the gut. This prospective, observational study aims to determine the overall adequacy of EN delivery, as a percent of daily goal volume, and to identify barriers EN delivery in the neurotrauma intensive care unit (NTICU) at St. Michael's Hospital. **Methods:** A convenience sample of 40 subjects will be selected for the current study, representing a maximum of (40 x 30days =120 patient days) or one third of the population of the ICU over one year. Patients admitted to the NTICU who are >16 years of age, mechanically ventilated, and receiving exclusive EN support for ≥ 5 days will be included. All subjects and their families will be informed of the study through individual information letters and posters displayed in the ICU. Data collected daily, from the patient's chart, includes: goal EN volumes; actual EN volumes delivered; incidence and cause of EN interruptions; severity of illness score; patient diagnosis; and patient demographics. Data collection will continue for up to 30 days while patients are in the NTICU and receiving EN support; until patients are discharged from the NTICU; require either oral intake or TPN; or until death. Results will be analyzed using SPSS 13.0. **Results:** Data has been collected on 32 patients to date. **Implications and conclusions:** The results of this study will describe current feeding practices in the NTICU and will identify barriers and improvements to be made order to optimize EN delivery in the NTICU.

Title: Assessment of sodium intake in patients with heart failure

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Objectives: Dietary sodium restriction is the primary nutritional therapy for heart failure (HF), therefore, assessment of sodium intake is important to evaluate adherence to prescriptions. Food records and urinary sodium excretion are the most common methods to assess sodium intake; however these methods have not been tested in the setting of HF. This study will determine the best method of assessing sodium intake in HF patients. We will measure the agreement between urinary sodium excretion and sodium intake calculated from food records. We will also evaluate the correlation between three and seven-day food records to determine the optimal number of days required to assess sodium intake. **Methods:** Sixty patients from the Heart Failure Clinic and general cardiology clinics at Mount Sinai Hospital will be recruited into one of three groups based on clinical status: diuretic-requiring HF patients, non-diuretic-requiring HF patients, and coronary artery disease patients (control group). Stable HF patients with a left ventricular (LV) ejection fraction $\leq 35\%$, serum creatinine $\leq 180\text{mmol/L}$, and New York Heart Association Class II or III are eligible to participate in the study. The control group will have normal LV function. All patients will complete a seven-day food record and will complete two 24-hour urine collections on the last two days of recording intake. **Results:** Recruitment for this study is ongoing. ESHA Food Processor is used for food record analysis. ANOVA will assess baseline characteristics. Pearson's correlation will determine if three-day and seven-day food records correlate. The Bland Altman method of agreement will assess agreement between sodium intake and excretion. **Implications:** This study will determine the best method for assessing sodium intake in the HF population.

Title: Triceps skinfold and midarm circumference as indicators of growth in surgical infants in a Neonatal Intensive Care Unit (NICU)

Authors: C McDonald, J Brennan-Donnan, L Stefanizzi, J Kim. The Hospital for Sick Children (HSC), Toronto, Ontario

Objectives: To determine whether weekly triceps skinfold (TSF) and midarm circumference (MAC) measurements aid in the assessment of body composition and optimal growth in surgical infants. **Methods:** Eligible subjects were infants in the NICU at HSC, ≥ 2 weeks of age and who had a surgical procedure (n=4). Data was collected on each subject for six consecutive weeks or until discharge. Information pertaining to demographics, diagnoses, surgical procedures, nutritional intake and daily weights were recorded from each subject's chart. Length, head circumference, TSF and MAC were measured once a week. Length was measured using an infant stadiometer, MAC and head circumference were measured using a measuring tape and TSF was measured using Holtain calipers. **Results:** At baseline (n=4), the mean gestational age was 43.0 ± 8.4 weeks, with 50% of the subjects being born prematurely. The average weight, length, TSF and MAC were 3490 ± 1159 kg, 50.6 ± 4.2 cm, 6.3 ± 1.2 mm and 10.6 ± 1.3 cm, respectively. One subject was fed only parenteral nutrition, one was fed only enteral nutrition, and two were fed both parenteral and enteral nutrition. At week five of the study (n=2), the mean change in weight and length were $10.2 \pm 7.1\%$ and $6.1 \pm 2.7\%$, respectively. The mean absolute change in TSF and MAC were $26.6 \pm 3.5\%$ and $5.9 \pm 5.2\%$, respectively. **Conclusion:** Tracking TSF and MAC measurements should provide more detailed insight into the type of growth and body composition changes in post-operative surgical infants when used in combination with weight, length and head circumference measurements.

Titre: Étude sur le besoin de surveillants en alimentation dans la province du Nouveau-Brunswick

Auteur : JL Labrecque, Programme d'internat en diététique de l'Hôpital régional Docteur Georges.L-Dumont, Moncton, Nouveau-Brunswick

Objectif : Établir le besoin de surveillants en alimentation dans la province du Nouveau-Brunswick. **Méthode :** Des questionnaires (n=61) ont été envoyés dans les Régies régionales de la santé (n=9) ainsi que dans les foyers de soins (n=52). En fait, sept Régies et 38 foyers de soins ont participé à cette étude. **Résultats :** Parmi les répondants, (62.5%) affirment embaucher des surveillants en alimentation dans les foyers de soins et (100%) embauchent des surveillants en alimentation dans les milieux hospitaliers. Selon les résultats de l'étude, (36.8%) des foyers éprouvent de la difficulté à recruter des surveillants, comparativement à un pourcentage de (100%) dans le milieu hospitalier. Les foyers de soins ont moins de difficulté à recruter leurs surveillants, (10.5%) des embauches peuvent prendre entre 7 et 12 mois. Les hôpitaux, pour leurs part, éprouvent une plus grande difficulté : (28.6%) des embauches peuvent prendre entre 7 et 12 mois. De plus, (78.9%) des foyers de soins et (71.4%) des Régies seraient intéressés à ce que leurs employés suivent un programme de formation s'il y en avait un offert dans la province. Enfin, cette étude comportait les tâches que pouvaient effectuer les surveillants en alimentation au niveau des domaines du service alimentaire et clinique. La grande majorité des surveillants dans les foyers de soins effectuaient les mêmes tâches que ceux retrouvés dans les milieux hospitaliers et ce, tant au niveau du service alimentaire que clinique. **Conclusion :** Le grand besoin de surveillants en alimentation ainsi que la difficulté de recrutement de la province ont été confirmés lors de cette étude.

Titre : Évaluation des effets de la graine de lin moulue utilisée dans le traitement de la constipation chez les patients recevant des soins prolongés à l'Hôpital régional Dr-Georges-L.-Dumont de Moncton

Auteurs : J. Hachey, Programme d'internat en diététique de l'Hôpital régional Dr-Georges-L.-Dumont, Moncton, Nouveau-Brunswick

Objectifs : Déterminer si la graine de lin moulue, ajoutée à l'alimentation des patients souffrant de constipation, peut apporter de meilleurs résultats que la diète riche en fibres contenant du son de blé. **Méthodes :** Pendant trois semaines, les participants (n=10) reçurent 15 millilitres de graines de lin moulues au déjeuner. Lors de cette recherche, le nombre de mouvements intestinaux avant et pendant l'étude, la facilité avec laquelle la graine de lin moulue peut être ajoutée à l'alimentation ainsi que la réponse des patients face à l'utilisation de la graine de lin moulue furent étudiés. **Résultats :** Les mouvements intestinaux de 7 patients augmentèrent d'une moyenne de 13.5 % au cours de l'étude. La graine de lin moulue se mélangeait bien avec le gruau, les céréales sèches, le yogourt et la sauce aux pommes. Cependant, les patients ont préféré la graine de lin moulue ajoutée au gruau et aux céréales sèches. Certains participants de l'étude ont ressenti une différence positive quant au nombre de mouvements intestinaux mais d'autres n'ont pas vu de différence. Certaines limites se sont présentées pendant l'étude. L'échantillon de petite taille, les médicaments laxatifs administrés aux patients pendant l'étude et l'apport en fibres provenant d'autres sources alimentaires ont pu influencer les résultats. **Conclusion :** L'augmentation des mouvements intestinaux des participants pendant l'étude n'est possiblement pas entièrement reliée à la consommation de graine de lin moulue. Cependant, certains patients ont apprécié les bienfaits ressentis grâce à l'ajout de graine de lin dans l'alimentation.