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Canada Prenatal Nutrition Program: Nutrition education component for the Good Food for A Healthy Baby groups in Leeds, Grenville and Lanark Counties

A.E. Allin, Southeastern Ontario Comprehensive Dietetic Internship Program, Brockville, Ontario.

The Good Food for A Healthy Baby (GFHB) program provides support for high-risk pregnant women in six locations in Leeds, Grenville, and Lanark (LG&L) Counties. GFHB clients (n=37) in all six locations completed a questionnaire to identify the prenatal nutrition topics of interest and their preferred methods for receiving nutrition education. Key informants (n=9) were asked the same questions in a semi-structured interview. Key informants included GFHB program leaders and coordinators, registered dietitians, public health nurses, homevisitors, and birth companions. A need for nutrition education was identified by all key informants and by 16 (43%) GFHB clients. Key nutrition topics identified by key informants and GFHB clients included: making healthy food choices during pregnancy, key nutrients for pregnancy, breastfeeding versus formula feeding, infant feeding, making homemade baby food, planning meals on a budget, and cooking skills. Preferred methods for receiving nutrition education included interactive activities, cooking sessions and recipes, presentations, and factsheets. Based on these findings, an activity guide that focuses on these key nutrition topics was developed for the registered dietitians who work with GFHB clients. The goal is that nutrition education based on activities from this guide will help pregnant women to make healthy food choices for both themselves and their infants.

Dietitian counseling versus usual care for a sodium restricted diet in patients with heart failure

J. Arcand, S. Brazel, F. Berkoff, M. Choleva, G.E. Newton, Mount Sinai Hospital, Toronto, Ontario.

Heart failure is a very common syndrome characterized by high morbidity and mortality rates. Treatment of heart failure is primarily pharmacological, however several non-pharmacological therapies may be effective in reducing symptoms and preventing hospitalization. The main nutritional therapy is a 2,000 mg or 3,000 mg sodium restricted diet that is prescribed in relation to severity of symptoms and diuretic dosage. Non-compliance to medical and nutritional prescriptions promotes sodium retention and contributes to recurrent hospitalization in patients with heart failure. Compliance to a sodium restricted diet is challenging for many patients. Intensive nutrition intervention by a dietitian may be beneficial in promoting dietary change and improving indices of sodium balance. We are conducting a prospective, randomized, controlled trial to evaluate the effectiveness of dietitian-delivered intervention in an outpatient heart failure clinic. Subjects are being randomly assigned to one of two groups: usual care (UC) or dietitian counseling (DC). Both groups are prescribed a 2,000 mg sodium restricted diet and are given a low sodium diet education package. Patients assigned to DC attend an initial (1 hour) and follow-up (.5 hour) counseling session with a registered dietitian. All subjects are followed for 60-90 days. The primary study endpoint is change in weight, an index of sodium balance over short term observation. Secondary endpoints include total dietary energy, sodium, and fluid consumption, diuretic dosage, NYHA class, jugular venous pressure, and evidence of peripheral edema. The results of the current study will determine the best practice for the dietary management of heart failure by identifying the optimal delivery of nutrition education.

Alimentation entérale à domicile

S. Arseneau et J. Bélanger, Internat en diététique de l'Hôpital régional Dr Georges-L. Dumont, Moncton, Nouveau-Brunswick.

L'objectif du projet est de développer un dépliant destiné à être remis aux patients devant recevoir l'alimentation entérale à domicile. Ce dépliant permet ainsi d'uniformiser l'enseignement effectué par les professionnels avant le congé. Le patient peut donc consulter le document fourni afin de se remémorer les points abordés lors de l'enseignement. Celui-ci renferme de l'information sur la prescription, la préparation et l'administration du gavage, sur la conservation des formules, sur les positions possibles à adopter lors de l'alimentation ainsi que sur l'arrêt du gavage. De plus, les complications courantes sont abordées ainsi que les méthodes de prévention de celles-ci. Les méthodes de nettoyage de l'équipement sont énumérées et l'entretien de la peau est élaboré. En dernier lieu, le dépliant fournit au patient les noms et les numéros de téléphone des professionnels à contacter en cas d'urgence. L'information retrouvée dans le dépliant a été écrite de façon compréhensible et celui-ci comprend quelques illustrations permettant de mieux visualiser les différentes notions mentionnées. Ce dépliant sera bientôt disponible en deux langues pour les patients quittant l'hôpital avec alimentation nasogastrique ou avec gastrostomie ou jéjunostomie.

Clients with HIV and their perceptions towards nutrition, barriers and community supports

J. Arthur, A. Oxelgren, E. Woo, Regina Health District Dietetic Internship Program, Regina, Saskatchewan.

Research indicates that adequate nutrition is important to clients with HIV, however, clients with HIV may experience some barriers which prevent optimal nutrition. The purpose of this study was to determine the significance of nutrition to clients with HIV as well as their perceived barriers to obtain a healthy diet and assess the clients' knowledge of available community supports in Regina. A questionnaire was developed and pre-tested to collect information about the barriers that clients with HIV face. The questionnaire was divided into five sections: personal information, nutrition, barriers, community supports, and social factors. Twenty-two clients from the Regina General Hospital HIV Clinic completed the questionnaire. All clients rated a healthy diet as being very important to them, however the results of the subjects' nutrition related beliefs were inconsistent. Approximately 45% of subjects reported having barriers to obtain a healthy diet. The most common barrier to obtain a healthy diet reported by subjects was not having enough money, with depression following closely. Subjects were not aware of 85% of the community supports in Regina, and 68% of the subjects reported that they did not use any community supports. More education is needed to help clients understand the factors involved in healthy eating practices and food choices. Clients at Regina General Hospital HIV Clinic need to be provided with more information about community supports in Regina.

Staff Evaluation of Home Care Nutrition Services

H. Asafo-Akouwah and M. Atkins, R.D., Capital Health Dietetic Internship Program, Edmonton, Alberta.

Home care clients are at risk for delayed wound healing, pressure sores, infections, decreased muscle strength and lean body mass, and malnourishment. Since dietitians are qualified to assess and implement nutrition interventions, dietitian home visits have not only been found to be beneficial to home care clients but could potentially decrease health care costs by reducing nurse home visit time. In 1997, Home Care Services partnered with Regional Nutrition and Food Service to provide cost-effective, timely nutrition care to homebound clients in the Capital Health Region. Though the role of the dietitian in Home Care has expanded little is known of Home Care staff perceptions and expectations of Home Care Nutrition Services. The purpose of this project is to summarize the current level of services provided; evaluate Home Care staff satisfaction with current practices; and assess staff expectations of Home Care Nutrition Services. An 18-question survey questionnaire was developed and distributed to Home Care Case Managers. Completed surveys were statistically analyzed using Microsoft Excel. Overall, staff is satisfied with current nutrition services. Of the 165 respondents, 67% indicated one or more clients from their current caseload would benefit from nutrition intervention. 51% of the respondents indicated that their clients wait 1 to 4 weeks for a dietitian home visit. Staff suggested more frequent and in-depth inservices on therapeutic diets, practical nutrition strategies and nutritional supplements. Home visits and consultations were ranked important nutrition services to provide while inservices and consultations were ranked effective training methods for Home Care staff. The potential for more referrals, longer wait times, and suggestions for frequent, in-depth inservices indicate a potential to increase the number of dietitians in Home Care Nutrition Services.

Patient food preferences in the Calgary Health Region

A. Beach, J. Biehler, J. Frame, J. Lee, Calgary Regional Dietetic Internship, Calgary, Alberta

The objective of this research was to revisit the 1996 patient food preference study, completed in the Calgary Health Region (CHR), to determine if variations exist between results and identify the potential impact on hospital menus. A revised questionnaire was used to interview 389 in-patients, ranging in age from 18 to 95, representing 20.5% of the acute care population. All patients were eligible to participate, excluding those from pediatrics, maternity, ICU, continuing care, forensic psychiatry, and trauma. The age, sex and diet-type of the adult CHR acute care population were represented proportionately in this sample. All data was analyzed using a computerized spreadsheet program. Results of this survey indicate obvious food preferences at all meals. The most significant regional findings were:

BREAKFAST: Toast (13.9%), Juice (12.2%), Eggs (9.8%), Coffee (9.8%), Hot Cereal (9.4%)

LUNCH: Soup and Sandwich (48.2%), Sandwich Only (17.3%)

SUPPER: Meat, Potato and Vegetable (68.0%), Casserole (20.2%)

Sixty-two percent of respondents stated that they do not expect to receive snacks and 84% indicated that choosing their own menu is important. In this study, the average patient age in the region was 62.3 years, with the majority of patients in the 65+ age range. Upon comparison to the 1996 study results, this study shows that patient food preferences in the CHR have changed very little over the last six years. Also, due to a larger sample size, the results from this study have added relevance as a representative sample of patient preferences. Despite the increase in average patient age noted, patient food preferences remain essentially the same; therefore, these results provide valuable information for the development and revision of menus for acute care facilities.

Does adequate intake of energy and protein minimize cancer symptoms and treatment related side effects for newly diagnosed acute myelogenous leukemia patients undergoing remission induction chemotherapy?

S. Beaman, D. Fierini, T. Burden, University Health Network, Toronto, Ontario.

Patients with acute myelogenous leukemia (AML) undergoing remission induction chemotherapy experience a number of side effects (vomiting, diarrhea, mucositis and anorexia) that can act as barriers to oral intake, and therefore increase the risk of malnutrition. Malnutrition subsequently can increase morbidity and mortality. Use of alternate nutrition support (enteral and total parenteral nutrition) remains controversial in the AML population due to the invasiveness of treatment, risk of infection, and lack of evidence to indicate improvement to treatment outcome. It is hypothesized that patients who maintain adequate intake during chemotherapy will have improved treatment outcome. This study was designed to assess energy and protein intake, duration and severity of treatment related side effects and length of neutropenia, as patients received remission induction chemotherapy. A prospective chart review of 14 patients (thus far), hospitalized for an average of twenty-one to twenty-eight days was undertaken. Baseline information on height, weight, weight loss prior to admission, body mass index, subjective global assessment, as well as energy and protein requirements were obtained prior to treatment. Weekly measures of the following were obtained during treatment: side effects using toxicity criteria, energy and protein intake via three day food records, and neutropenia using neutrophil counts. Results are unavailable at this time due to the fact that the majority of patients are currently undergoing remission induction chemotherapy.

Assessment of the new post-operative diet pathway with respect to length of stay and incidence of complications in patients who have undergone major intestinal and rectal procedures at St. Michael's Hospital (SMH)

L. Beauchamp, A. Young, St. Michael's Hospital, Toronto, Ontario.

A slow progression to solid foods, post-surgically, may delay optimal nutrition and increase length of hospital stay (LOS) in patients who have undergone major intestinal and rectal procedures. A previous study at SMH revealed that post-surgical gastrointestinal (GI) patients received solid foods, on average, 3.1 ± 2.4 days after ileus was resolved (Miles et al., 2000). In light of these findings, a new "post-op diet pathway", that consists of providing solid food immediately after resolution of ileus, was implemented for this patient population. However, there may be barriers to adopting the new "post-op diet pathway". The objectives of this study are: 1) To describe post-operative diet progressions, number of days post-operatively until resolution of ileus, incidence of complications, and post-operative LOS in patients who have undergone bowel resection. 2) To describe the relationship among the aforementioned variables. This is a prospective, descriptive case series study. Patients admitted for bowel resection between February and May 2002 will be included in the study. Anthropometric data, demographic data, and information describing diet progression (diets ordered and date when diets are ordered), incidence of complications (reinsertion of nasogastric tube, nausea, vomiting, diarrhea, anastomotic leakage, abdominal dehiscence, and regression to clear fluids), and post-operative LOS will be collected during the patients' course of admission. This study will describe the post-operative diet ordering process following implementation of the new "post-op diet pathway". In addition, our results will serve as a basis to improve current feeding practices for patients who have undergone major intestinal and rectal procedures.

Early nutrition intervention and nutrition status outcome in acute care hospitalized patients

A. M. Berridge, M. J. Taylor, Capital Health Dietetic Internship Program, Halifax, Nova Scotia.

Protein-energy malnutrition (PEM) is a common, ongoing problem in health care facilities today. The Queen Elizabeth II Health Sciences Centre acute care nutrition risk screening program assists in the early identification of a patient at nutrition risk, to promote early nutrition intervention. The purpose of this study was to explore the relationship between early nutrition intervention and nutrition status outcome in acute care hospitalized patients. A systematic randomized sample was obtained from a list of all inpatients admitted to acute care services within a selected two-month period of time (n = 205). An extensive retrospective chart review was completed to obtain objective information, anthropometric data and serum albumin levels. The assessment of nutritional status upon admission, accuracy of dietetic technician nutritional assessment, prevalence of dietitian intervention, and discharge nutritional assessment were also investigated. Descriptive analysis of data is pending.

Investigation of the Emergency Department Meal Service within Saskatoon District Health

H. Boensch, P. Cheng, H. Hynes, Saskatoon District Health, Saskatoon, Saskatchewan

Objective. To develop and standardize a high quality, food safe and cost effective meal service system that will improve the service provided to the emergency department patients at the three acute care sites within Saskatoon District Health. Methodology. The current meal service at all three acute care sites was evaluated. An extensive literature search was conducted. Food safety and food wastage costs were analyzed. The new cold meal box service to the emergency department was implemented at Royal University Hospital. Results. Time/ temperature was analyzed and was an area of concern. Many of the food items analyzed were in the Danger Zone prior to leaving the Food and Nutrition department. Food wastage costs for the three week period at all three sites was calculated at \$ 45.69. The food wastage costs calculated after the implementation period for the new cold meal box system for all 3 meals was \$48.81. Conclusion. The cold meal system does ensure that food safety standards are met. It decreases the chance for food poisoning by controlling the temperature of the food throughout preparation and delivery to patients. In regards to food wastage analysis no direct comparisons can be made between the evaluation and implementation periods. Safety of patients should be of highest priority, the problems identified with the current meal service should be addressed immediately.

FLAXFLOUR Bowel Care Program in Long Term Care

A. M. Bower, & H. Selig, Integrated Dietetic Internship Program, Mount Saint Vincent University, Halifax, Nova Scotia.

This study describes the implementation of a natural bowel care program using flaxflour in a Long Term Care facility in Windsor Nova Scotia. The program was designed promote regularity in bowel function, and decrease the use of medical interventions to treat constipation. To determine whether the incorporation of flaxflour in residents diets would improve bowel habits and regularity, a prospective study of fifteen elderly residents, six male and nine female, was completed in a LTC facility. Each resident was provided with one to two tablespoons of flaxflour in morning cereal or muffins for twenty-one days. By the end of week one 36% of the residents increased the number of bowel movements per week, weeks two and three increased 73% and 45% respectively. Overall, 93% of residents had a reduction or no change in the number of days bowel medications were required when consuming flax. This study demonstrates that flaxflour has the potential to promote regular bowel movements, and decrease the use of medications required to prevent and treat constipation in the elderly.

Appropriateness of enteral nutrition utilization in Capital Health

E. A. Boyle, E. E. Woodbeck, C. Basualdo-Hammond, Capital Health Dietetic Internship Program, Edmonton, Alberta

In recent years, the costs of providing enteral nutrition within Capital Health Region have been steadily increasing. A chart audit was completed to assess the appropriateness of enteral nutrition orders, evaluate clinical practice according to nutrition support guidelines, and provide an improved understanding of possible drivers behind the growing costs. An audit form was developed to collect data on enteral nutrition initiation, adequacy, and suitability of formula chosen. Fifty-seven charts from the University of Alberta and 24 from the Royal Alexandra Hospitals were audited over four days. Results demonstrated that the majority of patients on enteral nutrition (21/81) were located in the intensive care units of both sites. The average duration of enteral feeds at the time of the audit was 28.9 days at the University Hospital and 32.4 days at the Royal Alexandra. Inability to use the gastrointestinal tract and intubation were the most frequent indicators for enteral nutrition support. The mean nutrition requirements were determined to be 27.8 kcal/kg (+/-10.2) and 1.2 g protein/kg (+/-0.3) at the University, and 24.9 kcal/kg (+/-5.1) and 1.1 g protein/kg (+/-0.3) at the Royal Alexandra. Data analysis of the initial order revealed an average cost of \$7.25 per day at the University and \$6.01 at the Royal Alexandra. Costs on the study day were \$9.01 at the University and \$9.31 at the Alexandra indicating transition to more expensive and specialized formulas. Overall, these findings suggest that patients receiving enteral nutrition differ from the average patient by having significantly longer lengths of stay (mean length of stay 8.9 days University; 6.8 days Royal Alexandra) and require more costly and specialized feeding formulas which validates the current cost of providing enteral nutrition.

Do patients on total nutrition support receive recommended nutrition orally before nutrition support is discontinued?

J.S. Calvert, R.K. Sereda, T.L. Soutar, Regina Health District, Regina, Saskatchewan.

Current ASPEN guidelines (1993, 2001) recommend when transitioning patients from enteral or parenteral nutrition to oral feeding, nutrition support should be discontinued once voluntary oral intake reaches 2/3 to 3/4 of nutritional requirements. The purpose of the study was to determine if these guidelines are used in the Regina Health District. In addition, the oral intake of patients was measured 3 days after nutrition support was discontinued. Four of the seventeen subjects experienced a period in which they received nutrition support and oral nutrition simultaneously. Three of the four subjects met at least 2/3 of their estimated requirements for calories orally and one subject met the estimated requirement for protein orally before the discontinuation of nutrition support. Thirteen subjects did not receive oral nutrition until after nutrition support was discontinued. The patients that had a transition period were able to meet an average of 2/3 to 3/4 of their estimated requirements for calories and protein. However, the subjects who did not experience a transition period were not able to meet this level of oral intake. From our results, it appears that the practice of discontinuing nutrition support before the patient is meeting 2/3 to 3/4 of their recommended nutritional intake for calories and protein is common practice in the Regina Health District and this practice may lead to poor oral intake once nutrition support is discontinued.

Measurement of Physical Performance, Quality of Life and Nutritional Status Outcomes Following Implementation of An Exercise Program for End Stage Renal Disease Patients on Hemodialysis

A. Chan, C.K. Colapinto, St. Michael's Hospital Internship Program, Toronto, Ontario.

Patients with end stage renal disease (ESRD) have a high mortality and morbidity and a low quality of life. This has been related to malnutrition and an inability to perform activities of daily living. In the past, a significant improvement in physical performance and quality of life has been demonstrated in hemodialysis patients following the implementation of an exercise program. However, no studies have simultaneously considered the impact of this intervention on nutritional status in addition to physical performance and quality of life. The objectives of this study are to determine the effect of an exercise program on the physical performance, quality of life and nutritional status of ESRD patients on hemodialysis. A prospective pilot study of outpatients with ESRD undergoing hemodialysis at St. Michael's Hospital was designed. Twelve (12) patients were recruited between September 2000 and June 2001. Each subject was prescribed an individualized exercise program using lower extremity cycling. Data was collected prior to the initiation of the program, and after 3 and 6 months of participation in the study. Outcome measures included: physical performance (6 minute walk test, Timed-Up-and-Go-Test); quality of life (SF-36 Health Survey and Illness Intrusiveness Scale); nutritional status (estimated dry weight, Subjective Global Assessment score, fat free mass, dietary energy and protein intake and biochemical values from routine bloodwork). Data is currently being analyzed using SPSS. Physical functioning is an important predictor of an individual's ability to perform activities of daily living. This study hopes to demonstrate improved physical functioning, quality of life and nutritional status outcomes in HD patients following implementation of an exercise program.

Folic acid awareness campaign for female students enrolled at a local college and university

A. K. Cheyne, Southeastern Ontario Comprehensive Dietetic Internship Program, Kingston, Ontario.

The purpose of this study was to identify the level of awareness about folic acid among women of childbearing age enrolled in a college and university in the Kingston area. Fifty female students at the college and 150 at the university completed a questionnaire to assess their awareness about the benefits of folic acid, the need for supplementation, and the best methods to receive information. A search of published literature and a focus group with public health nurses who work with reproductive health issues helped to identify the critical components of the awareness campaign. Questionnaire results indicated a significant need for increased awareness among college and university-aged women regarding folic acid. Of those surveyed, only 20% at the university and 32% at the college knew that folic acid prevents birth defects, and less than 1% of the respondents at both institutions knew the recommended level of folic acid supplementation. At both schools, public displays were among the top three suggestions on how the students would like to receive folic acid information. The resulting campaign plan included: 1) a display with folic acid information, 2) folate-rich food samples, 3) a radio advertisement, and 4) an article for the student newspapers. To date, I have implemented the display with folate-rich food samples at the university and college for one day each. Students responded positively to the displays, asked many questions about folic acid and supplementation, and expressed interest in learning more about folic acid. Based on this response and the lack of awareness identified in the questionnaire, I recommend that all components of the folic acid campaign be implemented in the future.

The Adequacy of Dietary Management among Homeless Adults with Diabetes Mellitus in Toronto

D. Chislett and N. Ross, St. Michael's Hospital, Toronto, Ontario

A previous study (Hwang and Bugeja, 2000) discovered that diet related issues were the most common difficulties experienced by homeless people in managing their diabetes. There have been no studies to our knowledge that describe how homeless adults with diabetes manage their diet. There are two objectives for this study. For the primary objective, 15-20 homeless adults with a diagnosis of diabetes will be surveyed at the two largest men's and the two largest women's shelters for single adults in Toronto. After obtaining informed consent, the researcher will administer a questionnaire in a face-to-face interview lasting 30 minutes. Information on demographics, diabetes history, current eating behavior, nutrition knowledge and level of satisfaction with the food offered on shelter menus will be obtained. For the second objective, the type and portion sizes of food offered on the shelter menus will be compared to Canada's Food Guide to Healthy Eating and to the Canadian Diabetes Association Food Choice Values. Glycemic Index of the foods on the menu will also be determined. As well, the shelters will be visited at mealtime and the observed meals will be compared to the meals described on the menu in order to verify actual portion sizes served. The findings of this study will contribute towards a better understanding of the underlying causes of the diet-related difficulties experienced by homeless adults with diabetes and could identify strategies aimed at improving the dietary management of diabetes among homeless adults.

What are children eating in the new millennium? A comparison of healthy three to eight year old children's diets with Canada's healthy eating recommendations

D. Chu, R. Figueroa, K. Balko, G. Berall, University Health Network, Toronto, Ontario.

Identifying strategies to improve Canadian children's nutritional status is difficult with limited dietary information. No pediatric studies to date have utilized Canada's Food Guide to Healthy Eating. This study aims to determine whether healthy three to eight year old children meet Canada's recommendations for healthy eating. Given the increases in high-calorie processed foods marketed to children, we hypothesize that 100% of subjects will exceed the recommended energy intakes, 75% will meet Dietary Recommended Intakes for iron and calcium and only 50% will meet the minimal recommendation of five servings of fruits and vegetables daily. A validated questionnaire addressing children's eating habits and a one-day food record was mailed to 147 children's parents from three outpatient pediatric clinics in the Toronto area. The returned data was analyzed using SPSS 10.0 and Esha Food Processor 7.7. To date, nineteen have been returned (13% response rate) with an equal gender ratio. However, further responses are anticipated. Preliminary results of only 19 participants indicate that over 90% of subjects usually or always eat from all four-food groups. However, ~53% did not meet daily recommendations for fruits and vegetables. Macronutrient distributions were consistent with Canadian recommendations – 53.6% carbohydrates, 19.7% protein and 27.8% fat. Surprisingly, 36.8% did not meet recommended daily energy allowances, while 84.4% and 73.7% met calcium and iron recommendations, respectively. Despite societal dietary changes, preliminary results remain consistent with previous studies of a low energy-to-nutrient ratio and low fruit and vegetable intake. Lower energy intakes may be due to inadequate portions. Knowledge about children's eating habits will allow for appropriate dietary interventions. Final results are pending.

Vitamin, mineral and herbal supplement use by outpatients at the Metabolic and Diabetes Education Centre (MEDEC) and the Lipid Clinic in the Regina General Hospital

A.J. Clatworthy, A.L. Anderson, Dietetic Internship Program, Regina, Saskatchewan.

Supplement use has become increasingly popular worldwide. For this reason, health professionals should become more aware of what supplements their patients are taking and how it will affect their medical status. The purpose of this study was to determine what vitamin, mineral and herbal supplements adult outpatients at MEDEC and the Lipid Clinic in the Regina General Hospital are consuming. A six-item questionnaire was developed for outpatients to complete. The questionnaire was divided into two sections. The first section collected information on the subjects' age, gender, current supplement use, and perceived safety of supplements. The second section gathered information on which supplements were being used, the length of supplement use, amount used, sources of information, reasons for use, and the perceived effectiveness of the supplements. A total of one hundred and eighty-six adult outpatients (101 male, 85 female) completed the questionnaire. One hundred and forty-seven subjects (79% of the total subjects) reported using supplements. Only 67% of supplement users believed supplements were safe to use and only 23% of the supplements used were thought to have a health benefit. The most frequently used supplement was a multivitamin and the most popular reason for supplement use was for heart health. Physicians were the most common sources of supplement information. Health professionals and patients should work together to maximize the benefits of supplement usage and prevent adverse effects.

Swallowing assessment in acute stroke patients: comparison of the assessment using the nursing dysphagia protocol with the assessment by the dysphagia team

C. A. Collins, W. M. Clancy, C. Burgess, Capital Health Dietetic Internship Program, Halifax, Nova Scotia.

The Nursing Dysphagia Protocol was developed by an interdisciplinary team for use by nursing staff to assess swallowing when the dysphagia team is not available. While the intent of the assessment protocol is to ensure that patients are not placed at risk by prolonged NPO orders or inappropriate diet orders, the protocol has not been evaluated to ensure that the swallowing assessment done by the nurses corresponds with that done by the dysphagia team. Thus, the purpose of this study is to evaluate the Nursing Dysphagia Protocol by comparing the swallowing assessment performed using the protocol with the swallowing assessment done by the dysphagia team. Subjects will be patients admitted to the Halifax Infirmery at the Queen Elizabeth II Health Sciences Centre site with a diagnosis of acute stroke, NPO at the time of admission and referred by the physician for dysphagia assessment. Every third patient meeting these inclusion criteria will be asked to participate. The assessments will be performed independently on the subjects, one directly following the other. The first assessment will be initially blinded from the group doing the second assessment. In some cases, these patients will be administered a modified barium swallow. These results will be analyzed as a subgroup. Descriptive data such as stroke severity, location of stroke and comorbidities will also be used as part of patient evaluation. Diet orders based on the Nursing Dysphagia Protocol assessment will be compared to those of the dysphagia team and will be categorized as to whether the recommendations are more conservative, equivalent, or less conservative than the dysphagia team.

The macro- and micro-nutrient intake of patients at the Dr. L.A Miller Centre identified at high risk of skin break down

C. P Dawson, S. Varghese, Health Care Corporation of St. John's, St. John's, Newfoundland.

A three-day dietary intake record was used to assess the macro- and micronutrient intake of patients identified at high risk of skin break down in the convalescent care/ long stay units. Five patients who were medically stable, non-demented, not on tube feeds and free from acute illness gave consent to take part. The Human Investigations Committee of Memorial University approved the study. Data was coded into the Microsoft Excel Package and descriptive statistics were utilized to analyze the data. Total food consumption was determined for two weekdays and one weekend day. The participants mean intake of energy, fat and protein was 7397 KJ, 54.2 g and 87.5 g, respectively. This was lower than the average calculated requirements for energy (7977 KJ), and for fat (63.6 g) and slightly higher than the mean requirement for protein (85.3 g). The average amount of iron, zinc and copper consumed was 114%, 77% and 70% of the average requirement. The mean intake of vitamins A, C, B₆ and K was 583%, 109%, 72% and 25% of the average requirement. Thiamin, pantothenic acid, and folacin was 77%, 103%, and 52% of the average requirement. Copper, folacin and vitamin K intake was suboptimal for all subjects. Participants with mild communication difficulty and those on a chopped texture consistently consumed a lower amount of most nutrients. Recommended amounts of folacin and vitamin K were not offered to participants. The food services department should collaborate with the clinical dietitians to ensure adequate amounts of nutrients are offered. More studies are needed to determine the association between skin integrity and the nutrient adequacy of the diet.

Night snacks and adolescents with type 1 diabetes: attitudes and behaviors

N. A. De Amicis, P. J. Canning, E. A. Cummings, Capital Health Dietetic Internship Program, Halifax, Nova Scotia.

Nutrition recommendations play a significant role in the care of adolescents with diabetes. Education regarding appropriate food selections and meal planning is essential to help these teens achieve good glycemic control. The inclusion of night snacks in the meal plan has been traditionally encouraged by health care professionals in order to prevent nocturnal hypoglycemia. However, diabetes knowledge and management is changing and this practice may no longer be necessary or beneficial. The purpose of this research project is to evaluate the behaviors and attitudes concerning night snacks held by adolescents (aged 13-17) with Type 1 diabetes attending the IWK Pediatric Diabetes Clinic. The clinic provides secondary and tertiary care for 400 children and adolescents with Type 1 diabetes. Participants randomly selected from the current patient list who met the inclusion criteria were asked to complete a questionnaire sent by mail. The variables measured included attitudes and behaviors regarding night snacks and other diabetes management activities. Most items were closed-response with four or five response options. A follow-up phone call was made by the researcher to help facilitate the return of the questionnaires. Data will be analyzed using mainly descriptive statistics. Hb_{A1C} values obtained from clinic charts will also be investigated and correlated with other outcome measures. Study results may assist health care professionals in counseling patients about night snacks, and could be used to lay the groundwork for future research to determine the role of the night snack in overnight glycemic control.

Protein modification and liver disease: determining the optimal amount

N.D. Delbaere, Health Sciences Centre Dietetic Internship Program, Winnipeg, Manitoba

The optimal amount of protein provided to patients with liver disease is currently under investigation. Long-standing principles are being proved controversial and current evidence-based dietary guidelines are needed. Moderate to severe malnutrition is common in liver disease, the severity of malnutrition worsens prognosis. *Objective:* Determine the level of protein modification patients with liver disease should receive and provide evidence-based nutrition guidelines determining optimal modifications during the progression of liver disease. *Method:* A literature search was completed to determine current protein needs in patients with liver disease. A survey was produced and delivered to facilities across Canada to determine current nutritional practices of liver disease. Evidence-based nutritional guidelines were then determined. *Results:* Protein restriction is not recommended. An increased metabolism and decreased liver function requires patients to consume a greater amount of protein and energy to remain in positive nitrogen balance and improve their nutritional status. Chronic liver disease and cirrhosis requires 1.2-1.5g of protein per kg of dry ideal body weight (dIBW), per day and 25-35kcal/kg dIBW/d. Hepatitis requires 25-35kcal/kg dIBW/d and 1.0-1.5g/kg dIBW/d, depending on liver function. Hepatic encephalopathy, without intolerance, requires 1.2-1.5g/kg dry IBW/d and 30-35kcal/kg dry IBW. Evidence of protein intolerance modifies need to 0.6-0.8g/kg dIBW/d and reintroduce protein as tolerated (10g/d). The specific disease should be treated pre-liver transplant. Post-liver transplant indicates 1.2-2.0g/kg dIBW/d protein and 25-35kcal/kg dIBW. For all stages of liver disease: supplementation with BCAA should be used as a last resort; vegetable and dairy protein should be used as alternate protein sources; and consuming smaller more frequent meals may help to curb encephalopathy. Optimal nutrition includes supplementing protein intake in order to achieve nitrogen balance without inducing hepatic encephalopathy.

Communication of inpatient allergen information

K. Deutscher, J. Hayden, C. Placatka, M. Laycock, C. Pilat- Burns, Food and Nutrition Services, Saskatoon District Health, Saskatoon, Saskatchewan*

To ensure a safe environment for hospital patients, it is important to minimize the risk of exposure to potential allergens. The objective of this study was to identify and reduce errors occurring in the transfer of inpatient food allergy/intolerance information from the nursing unit to Food & Nutrition Services. Food allergy/intolerance information was gathered from the patient admission sheet and the nursing cardex on Medicine, Orthopedics and Surgery at one of three hospitals in Saskatoon District Health. Diet Clerks recorded any changes they made to the nursing cardex. After initial data analysis, interventions to encourage accurate allergy/intolerance communications were carried out including: memos in the communication log and a reminder notice on each nursing cardex holder. Two weeks after the intervention, a second data collection was performed. The results were analyzed and compared to the pre-test results. The pre-test for all newly admitted patients showed a 25% error rate in the transfer of allergy/intolerance information, while the post-test revealed a decrease to 17%. Comparison of allergy/intolerance patients only, showed a pre-test error rate of 82% and a post-test error rate of 88%. Errors on the admission sheet, lack of clarity with who transfers the information to the nursing cardex and a false sense of security with information from a patient's previous admissions all contributed to these errors. Results revealed serious gaps in the communication of food allergy/intolerance information and the education intervention was unsuccessful in decreasing the error rate. Developing a protocol to identify who is responsible for the transfer of allergy/intolerance information was recommended to reduce the risk of patient exposure to potential allergens in the acute care setting.

Sweetener Intakes of Children with Type-1 Diabetes

L. Devitt, J. Buccino, D. Daneman, Hospital for Sick Children, Toronto, Ontario.

The Joint FAO/WHO Expert Committee on Food Additives (JECFA) and Health Canada have established Acceptable Daily Intakes (ADIs) for artificial sweeteners. These represent amounts that can be ingested daily over a lifetime without considerable risk to human health. Previous international studies have demonstrated that children and adults with Type-1 diabetes consume more artificial sweeteners than other subsets of the population. Therefore, it is likely that young children with Type-1 diabetes will continue to have higher than average intakes over extended periods of time, thus validating the need to ensure this group is consuming below the ADIs. Canadian clinicians do not have current data estimating average sweetener intakes amongst our population. In the present study we aim to determine average daily intakes of aspartame, sucralose, acesulfame-potassium, and cyclamate within a sample of 2-6 year old outpatients with Type-1 diabetes at the Hospital for Sick Children. Furthermore, we will compare group mean and 90th percentile intakes to the ADI value for each sweetener studied. A cross-sectional descriptive study is currently in progress. Quantitative and qualitative estimates of foods and beverages consumed by the study subjects are acquired from parents through an interactive 24-hour food recall using food models, household measuring devices and brand specific food labels. Data of this nature will yield current Canadian estimates of sweetener consumption relative to the ADIs. If there is a potential to consume in excess of the ADIs for individual sweeteners it will be observed in this specific subset of the population. In the case that ADIs are approached or exceeded, clinicians and regulatory authorities will be alerted to reevaluate our current food supply in terms of sweetener additives.

Assessing the Availability of Breastfeeding Resources in Saskatchewan

J.J. Dickie, T.N. Stadnyk, Professional Practice 4, Dietetic Internship, University of Saskatchewan, Saskatoon, Saskatchewan

The purpose of this study was to identify the need for organizing breastfeeding resources in Saskatchewan. A mailed survey was distributed to various individuals in the province that have an invested interest in breastfeeding information. The target population was identified using mailing lists and contact information from professional breastfeeding organizations. A survey was developed and a focus group conducted prior to surveys being distributed. The survey focused on questions relating to what resources the target population have access to, if there was a need for organizing breastfeeding resources provincially, what obstacles were faced when accessing resources, positive and negative outcomes of centralized resources, as well as how the resources would be organized. One hundred and thirteen surveys were mailed out and 35% were returned. Most individuals faced challenges in obtaining breastfeeding information. Lack of time, lack of funding, and the cost of the resources were identified as key issues. Ninety percent of respondents felt that it would be beneficial to organize breastfeeding resources. This study has led to the conclusion that breastfeeding resources need to be organized provincially. However, more in depth research will need to be conducted to determine precisely how breastfeeding information will be organized in Saskatchewan.

Volunteers as nutrition education partners in elementary schools

K.M. DuChene, Dietetic Intern, Southeastern Ontario Comprehensive Dietetic Internship Program, Kingston, Ontario.

Healthy eating is important in childhood for growth and development and for establishing healthy habits for prevention of chronic disease. Community Food Advisors (CFAs), volunteers trained by the Kingston, Frontenac and Lennox and Addington Health Unit, provide services to elementary schools. The objective of this project was to develop standard, curriculum-matched presentation modules for the CFAs to use in grade 1,2, and 3 classrooms. I collaborated with Health Unit staff and CFAs as well as with teachers and parents at a local elementary school to develop healthy eating presentation modules. Information gained from a literature review and interviews with teachers, CFAs, and a dental hygienist was used to identify key issues to include in the presentation modules. In order to measure the effectiveness of the CFAs' presentations in teaching the students the material required by the curriculum, students were asked to complete a culminating activity. The objective was that 75% of children would perform the activity at grade level. The modules were pilot-tested with 96 children in grades 1, 2, and 3. The program objective was surpassed as 78% of the students performed at grade level. Given the positive results, the presentation modules will be delivered by CFAs in more local schools during the next school year.

Comparison of arm span versus knee height method for the estimation of stature using a flexible tape measure

L.P. Dybenko, McGill University, Montreal, Quebec.

The purpose of this study was to determine the validity of measuring knee height and arm span, using a flexible tape, in estimating stature. As well as to determine which of these two measures is the most accurate. Fourteen free living individuals employed at three long term care facilities participated in this study. These subjects included 12 females and 2 males with a mean age of 47.6 with a standard deviation of 10.5. Estimated height using the arm span method was determined by doubling the length measured with a flexible tape, between mid sternum and fingertip. Estimated stature using knee height was determined by using the methods and equations developed by Chumlea et al., although a flexible tape measure was used instead of calipers. Standing height was measured by using a standard stand-alone physician scale. Correlation coefficients for arm span ($r = 0.84$) and knee height ($r = 0.73$) indicated a clear association with standing height. The strongest correlation was obtained with knee height measurements. ANOVA analysis revealed no statistical difference between the means, further indicating that both methods are appropriate for estimating stature. The use of a flexible tape is extremely practical and eliminates the need for bulky and rigid tools such as knee height calipers, which apparently are no longer available for purchase in North America. Both arm span and knee height methods to estimate stature may be especially useful in the elderly, since they do not require the subject to stand. Knee height appears to be the better method as it produced the most accurate estimation of stature.

Impact of self-management practices on quality of life of adults with type 2 diabetes

N. Forooghian, D. Keys, Capital Health Dietetic Internship Program, Halifax, Nova Scotia.

The present study investigated the impact proper self-management practices (i.e. blood glucose monitoring, diet, exercise, and medication use) have on the quality of life of adults with Type 2 Diabetes. Quantitative data was collected from adults using a mailed questionnaire. Participants chosen for the study were patients with Type 2 Diabetes who visit the Diabetes Education Centre upon initial assessment, at six-month, one-year, and two-year intervals. This time interval was selected to allow patients time to adjust to self-care practices. Inclusion criteria was ability to read English. Of those participants who reported having a good to excellent health status (57%), 92% practised regular blood glucose monitoring, 77% reported eating three regular meals/day, and 100% reported being active for a minimum of 30 minutes/day. Of those who reported a fair to poor health status (43%), 80% practised regular blood glucose monitoring, 70% reported eating three regular meals/day, and 80% reported being active for a minimum of 30 minutes/day. Of those participants who reported being very satisfied with their knowledge of self-management practices, 100% reported never experiencing social discomforts due to their illness. Of those participants who reported being very satisfied with their knowledge of self-management practices, 67% reported never experiencing adverse health symptoms due to their illness. Adults with Type 2 Diabetes who practice proper self-management guidelines are more likely to report a higher health status than their counterparts, demonstrating that a higher level of knowledge of these practices will result in a higher self-reported quality of life for an adult with Type 2 Diabetes. Analysis of data for statistical significance is pending.

Are the energy needs of the pediatric Crohn's disease population being met with current TPN therapy?

M. Fortin, D. Mager, H. Richards, C. Jackson, P. Pencharz, The Hospital for Sick Children, Toronto, Ontario.

Background Malnutrition is a common sequela of Crohn's disease (CD) and may result in reduced skeletal muscle function and growth retardation. A retrospective study at the Hospital for Sick Children identified sub-optimal TPN volume delivery as a potential factor accounting for the weight loss observed in our CD in-patients. Besides underfeeding, it is possible that the FAO/WHO/UNU equation underestimates the energy requirements of our CD population, thus contributing to weight loss. **Objectives** This study will quantify the resting energy expenditure of parenterally fed hospitalized patients with active CD using indirect calorimetry in order to assess whether the FAO/WHO/UNU equation is appropriate for use in this population. The study will also examine whether the energy requirements of hospitalized patients with active CD are being met with current TPN therapy. **Method** Subjects will undergo calorimetry on the day when the goal TPN order is achieved, at which time anthropometric data including skinfold measures will be collected. Bioelectrical impedance analysis will be conducted at this time. Disease severity will be quantified using the Pediatric Crohn's Disease Activity Index. **Hypothesis** We hypothesize that the energy needs of parenterally fed children and adolescents with active CD are greater than those estimated using the FAO/WHO/UNU equation. **Significance** It is anticipated that this study will provide impetus for the routine use of calorimetry in the nutritional assessment of children with active CD. Our study will provide critical information regarding the energy needs of the hospitalized patient with CD. This is particularly important as this group is at high risk of energy-protein malnutrition.

Nutrition services in Canadian neonatal/perinatal follow-up programs: The role of the dietitian

Jennifer K. Fowler, BSN, Dietetic Intern, Calgary Regional Dietetic Internship Program, Calgary, Alberta

The benefits of nutrition assessment and support of the high-risk infant are well established. The premature infant remains vulnerable for poor growth and developmental disabilities, requiring consistent monitoring, intervention and follow-up. The purpose of this study was to determine the role of the registered dietitian (RD) in neonatal/perinatal follow-up programs. Twenty-six programs in Canada were surveyed by questionnaire and resulted in a response rate of 81%. Sixty-seven percent of these programs had RD involvement. Of these, 43% of RDs were assigned to a follow-up program and 57% were involved on a consult only basis. The average time devoted to programs with assigned RDs was 0.3 full-time equivalents. More than 80% of the RDs developed, evaluated, and modified nutrition care plans on an ongoing basis. Seventy-one percent of the RDs nutritionally screened new patients, and 100% instructed patient families and developed teaching materials. The value of this research will be to assist programs wishing to establish a position for the dietitian in a neonatal/perinatal follow-up program. For RDs already working in such programs, the results may provide some guidance on role definition and expansion.

Détermination des besoins énergétiques et administration des lipides lors de l'alimentation parentérale totale

R. Gagnon, Internat en diététique de l'Hôpital régional Dr Georges-L. Dumont, Moncton, Nouveau-Brunswick.

Ce projet a comme but principal de déterminer s'il est plus approprié d'effectuer le calcul des besoins énergétiques des patients recevant l'alimentation parentérale totale en utilisant les calories totales ou les calories non protéiques. De plus, nous voulons déterminer dans quelles situations il est plus convenable d'administrer les émulsions de lipides 10% ou 20% et identifier quel mode d'infusion, soit continu ou intermittent, est le plus approprié. Les données pour cette étude ont été recueillies à l'aide d'un questionnaire envoyé à différents hôpitaux à travers le Canada. Il devait être répondu préférentiellement par une diététiste ou autres professionnels impliqués dans les cas d'alimentation parentérale totale. D'après les résultats obtenus, 84% des répondants se servent des calories totales pour calculer les besoins énergétiques de ces patients. Lors d'une prescription standard d'alimentation parentérale totale, 69% utilisent les émulsions de lipides 20% et 84% les administrent par mode d'infusion continu. Une des raisons pour l'utilisation de cette concentration et de ce mode d'infusion est afin d'éviter la surcharge liquidienne et afin de combler les besoins énergétiques des patients. Pour conclure, d'après la littérature et les résultats obtenus, il serait préférable de se servir des calories totales pour calculer les besoins énergétiques des patients recevant l'alimentation parentérale totale. Ceci évite de nombreuses complications telles que la suralimentation et permet d'estimer plus précisément les besoins des patients. Cependant, plusieurs autres études seraient nécessaires pour établir une méthode de calcul plus uniforme.

The introduction of a nutrition screening tool at the Allan Blair Cancer Centre (ABCC)

A. N. Gillies, P. Lai, D. C. Leech, Regina Health District Dietetic Internship Program, Regina, Saskatchewan.

Malnutrition and cancer are synonymous. At present, the prevalence of clients at risk for malnutrition at the Allan Blair Cancer Centre is not known. The purpose of this study was to identify clients at ABCC who required dietitian services through the implementation of a reliable and validated nutritional screening tool. In addition, the clients identified at nutritional risk were compared to the clients actually seen by the dietitian around this time period. At present, the dietitian covering ABCC is unable to meet the nutritional needs of every individual at risk for malnutrition. Using the Scored Patient Generated Subjective Global Assessment (PG-SGA) screening tool, information about the clients' nutritional status was collected. The screening tool is divided into two sections. The first section is completed by the patient and includes information on weight change, food intake, and activities and function. The second section was completed by the researchers who reviewed patient charts for diagnosis, stage of disease, age, and metabolic demand. Patients at risk for compromised nutrition were identified using the total score of the tool. Of the 49 subjects who were screened during the two-week period, 23 were identified at increased risk for malnutrition. The age of these subjects ranged from 41-86 years and included 9 males and 14 females. A nutrition screening tool may need to be implemented at ABCC to identify individuals at risk for malnutrition.

Allergies au lait de vache et aux œufs chez les nourrissons et les jeunes enfants - Développement d'un protocole de référence

G. Grégoire, Internat en diététique, Hôpital régional Dr Georges-L. Dumont, Moncton, Nouveau-Brunswick.

Ce projet de recherche vise à développer un protocole portant sur les allergies au lait et aux œufs afin de permettre aux patients ou leurs familles de recevoir l'information nécessaire pour bien s'alimenter. Des questionnaires (n = 56) ont été envoyés aux diététistes canadiennes travaillant en pédiatrie afin d'obtenir de l'information sur les différentes préparations pour nourrissons, les suppléments vitaminiques et de minéraux, les conseils à donner aux mères qui allaitent lors d'allergie aux protéines de lait de vache ainsi que sur les succédanés d'œufs. Parmi les questionnaires reçus (n = 28), 35,7% des diététistes indiquent que leur institution possède un protocole traitant de ces allergies. Les principaux résultats démontrent que les préparations recommandées pour nourrissons lors d'allergies au lait de vache doivent tenir compte du type d'allergie (IgE et non IgE), du statut nutritionnel et des symptômes. Il est aussi important de bien distinguer les préparations à base de protéines partiellement et fortement hydrolysées. Des suppléments (spécialement de calcium et de vitamine D) peuvent être nécessaires selon l'âge de l'enfant et l'apport des préparations utilisées. Cependant, il est essentiel de vérifier la liste d'ingrédients non médicamenteux de ceux-ci. Certains produits, comme Viactive® (Mead Johnson), n'est pas recommandé lors d'allergie au lait puisque celui-ci en contient. La même situation se présente pour le produit Egg Beaters® lors des allergies aux œufs. Des produits spécialisés, comme EggReplacer® de Kingsmill Foods, et plusieurs recettes maison existent pour substituer les œufs. Les allergies au lait, aux œufs, au blé et au soja disparaissent parfois dans la période de la jeune enfance ou avant l'âge de trois ans.

Filling the Gap - A Summer Snack Project

T.M. Griffore, Dietetic Intern, Southeastern Ontario Comprehensive Dietetic Internship Program, Kingston, Ontario.

In Kingston, children at risk of food insecurity have access to school feeding programs during the school year but no feeding programs are available during the summer. The Nutrition Working Group, a coalition of community residents and organizations whose members are concerned with the nutritional well-being of children and families, was interested in launching a summer snack program. An area of Kingston where significant numbers of families have limited incomes was identified as the target area for the program. In collaboration with the Nutrition Working Group, I investigated the feasibility of a pilot program to provide summer snacks. Eight key informant interviews conducted with school principals and recreation programs leaders, a telephone interview and a focus group with parents, and a search of literature using key words “children”, “breakfast program” and “child hunger” provided information for the assessment. Results from the assessment supported the need for summer food access. A city-run drop-in agreed to deliver a pilot program called Filling the Gap. The drop-in was chosen because it is well established and has no criteria or cost for children to attend. The objective of Filling the Gap is to provide a nutritious snack and an interactive child-focused nutrition education session for school-aged children in the target area of Kingston in the summer of 2002. The program plan includes serving 3,225 nutritious snacks to over 75 children in two local parks. I will not implement the program myself but have worked to plan sufficient funding, coordination, and administration of the project.

Achieving optimal blood glucose control: An opportunity for dietitians

N. Hallett, L. Kirste, R. Figueroa, University Health Network, Toronto, Ontario.

Increased risk of infection, delayed wound healing, and ketoacidosis are documented consequences of sustained high blood glucose levels among individuals with diabetes. Additionally, hyperglycemia may result in an increased length of hospital stay. Despite these known risks, the prevalence of poor glycemic control among hospitalized patients receiving enteral nutrition support has not been extensively investigated to date. This study was undertaken to determine the prevalence of sustained high capillary blood glucose in hospitalized patients with type 1 and type 2 diabetes receiving enteral nutrition support and to develop a description of this population during hyperglycemic events. A retrospective chart review of exclusively enterally fed patients with type 1 or type 2 diabetes admitted to the general internal medicine program at a large urban teaching centre over a two year period yielded 16 subjects. Final results are pending, however, initial analysis revealed the following:

Gender	Male	62.5%
	Female	37.5%
Age		73.4±15.4 years*
Diabetes	Type I	6.3%
	Type II	87.5%
	Unknown (Newly diagnosed)	6.3%
Experienced sustained high capillary blood glucose	Yes	56.3%
	No	43.7%
Frequency of sustained hyperglycemic events		2.56±2.24*
Number of days on enteral nutrition support		19.2±21.3 days*

*Mean±Standard Deviation

Variables associated with hyperglycemic events included anatomic position of the feeding tube, enteral formula administered, administration of insulin/oral hypoglycemic agents, and number of days on nutrition support. The high prevalence of sustained hyperglycemia in the study population and the associated factors, indicate that improved glycemic control through an intensive multidisciplinary approach is critical. The dietitian is well positioned to lead the effort to enhance the team approach to the care of enterally fed patients in order to optimize blood glucose control and improve clinical outcomes.

Evaluation of the Environmental Scan for Healthy Eating Is In Store For You™

L. Hannah, Capital Health Regional Dietetic Internship Program, Edmonton, Alberta

S. Roberts, RD. National Project Coordinator, HESY, Edmonton, Alberta

K. Lindhorst, M.Sc. Evaluation Consultant, HESY, Douglas, Ontario

This study reviewed how committee members of Healthy Eating Is In Store For You™ (HESY) used the Environmental Scan of Nutrition Label Education Tools (ES). The ES attempted to identify best practices and review the literature concerning nutrition labelling education worldwide. It was anticipated that these findings would provide resources and direction for HESY. The ES was also circulated to members as an internal document, for assistance when directing the evolution of HESY. Guided telephone interviews served to measure three objectives: usage; value; impact. Subjects were members of HESY (n=28). Participation rate was 24 members (86%) with 3 members no longer active and 1 did not receive the list of labelling education collected. All subjects had at least skimmed through the ES and seven out 19 (37%) had used it in the development of HESY outputs. Ninety percent (18/20) found the quantity and 45% (9/20) felt the quality of tools collected were satisfactory. Seventy percent (14/20) believed there were no gaps in key informants chosen and 85% (17/20) found the criteria used appropriate. Sixty two percent (13/21) were aware that recommended actions for the direction of HESY originated in the ES and 90% (19/21) developed an increased awareness of nutrition labelling education materials. This survey determined that the ES had been used effectively and that subjects felt it had value and a positive impact. These findings will be incorporated into future evaluations of the HESY project.

Factors that influence breastfeeding incidence and duration in the neonatal intensive care and high-risk antepartum/postpartum units at Mount Sinai Hospital

V. Hau, S. Brazel, E. Collins, K. Mitchell, Mount Sinai Hospital, Toronto, Ontario.*

Breastfeeding rates tend to be lower among women who give birth to preterm, ill, low and/or very low birth weight infants. Similarly, infants born to women with various antenatal and postnatal complications have lower rates of breastfeeding than infants born to healthy mothers. Although factors exist which influence the incidence and duration of breastfeeding, there are no published Canadian studies on the identification of these factors in high-risk populations. This paper examines the factors that influence the breastfeeding incidence and duration in the neonatal intensive care and high-risk pregnancy units of an urban tertiary care facility. The mothers of 139 infants (91 singleton, 24 twin) participated in a retrospective validated mailed questionnaire. The questionnaire gathered demographic data, as well as other information regarding the mother's breastfeeding intentions, breastfeeding experience and level of antenatal/postnatal support in the hospital and at home. At initiation, 37.2% of infants were breastfed exclusively, 34.3% partially and 15.3% were fed token amounts of breast milk. At four months postpartum, the rate of exclusive breastfeeding increased to 42.5% while partial and token both decreased to 14.3% and 6.5% respectively. Factors that influence breastfeeding rates will be investigated to determine how the rate of breastfeeding in this population can be increased. Statistical analysis will include univariate analysis of all possible variables associated with breastfeeding behavior. Variables with significant impact on initiation and the duration of breastfeeding, will be formulated into a multiple logistic regression analysis to isolate independent indicators of breastfeeding. The exclusive initiation rate is lower compared to studies on healthy term infants. However, studies on NICU or VLBW infants post similar results. No comparative data exists for duration rates of exclusive breastfeeding at four months.

Degree of growth impairment among critically ill infants with congenital heart disease during intensive care unit stay

K.A. Hogger, B. Larsen, Capital Health Dietetic Internship Program, Edmonton, Alberta.

The nutritional needs of critically ill infants are complex and fundamentally different from those of adults. In addition to common physiologic issues of nutrition during acute illness, infants have nutritional requirements related to growth and development. Growth failure is well recognized as a severe consequence for infants and children with congenital heart disease. Research has shown that cardiac malformations are responsible for malnutrition that ranges from mild undernutrition to severe failure to thrive, thus putting the child with congenital heart disease at significant risk for long-term growth impairment. In addition to the long-term consequences associated with malnutrition, it is clear that nutritional status has a profound effect on the infant's metabolic response to injury and strongly influences the outcome of surgical treatment and post-operative recovery. Appropriate nutrition is imperative for the critically ill infant to facilitate optimal growth, development, and healing, while avoiding further stress to these physiologically unstable infants. Using pediatric and neonatal growth charts as a benchmark, the objective of this investigation is to determine the degree of growth impairment experienced post-operatively by pre-term and term infants with congenital heart disease during their stay in the neonatal intensive care unit. A group of approximately 20 infants with congenital heart disease and a minimum intensive care unit stay of 25 days will be studied. Growth will be measured in terms of weight, length, and head circumference, while taking into consideration the independent variables of average calorie intake, average protein intake, and biochemical parameters. While it is clear that some growth impairment is expected among this population of patients, this investigation will provide an indication of how badly these infants fall off projected growth measures in comparison to normal, healthy infants. It may also set a foundation for further inquiry into the most appropriate nutrition provision for this population of infants.

Development of a quality of life questionnaire module for measuring the impact of enteral feeding on head and neck cancer patients: phase 2

J. Horbal, B. Lemon, C. Chatalalsingh, M. McCarney, J. Ringash, University Health Network, Princess Margaret Hospital, Toronto, Ontario.

Quality of life (QOL) is an important outcome for Head and Neck (H&N) cancer. H&N cancer patients receiving radiation treatments are often at risk for malnutrition and dehydration requiring enteral nutrition therapy. The impact of tube feeding on QOL in this population is unknown. A validated assessment tool is necessary to determine QOL in patients receiving enteral nutrition. Phase 1 of the study identified a list of relevant issues to this population based on a literature review and expert panel opinion. The purpose of this study (phase 2) is to determine the most important tube feeding issues to H&N cancer patients based on patient opinion. In current phase, previously identified issues were used to generate the preliminary questionnaire, which was administered to a sample patient population via interview. Patients rated the importance of listed issues using a Likert scale. They were also encouraged to identify any unmentioned challenges that they have experienced in relation to tube feeding. Data was analyzed using descriptive statistics and judgmental theory for reducing the number of questionnaire items from 41 to 25. Two novel items were adopted into the next version of the questionnaire. The results of the current study identified relevant issues pertaining to enteral feeding in H&N cancer patients. Knowledge gained will be passed on to phase 3 of the project. The completed questionnaire module will be the first validated instrument for measuring QOL in patients with H&N cancer receiving enteral nutrition.

Educational resources for overweight children and their families

A. Jardine and L. Bender, Dietetic Interns, Calgary Health Region, Calgary, Alberta

Objective: To obtain data from health care facilities and organizations in Canada regarding childhood obesity management. This information was used as a needs assessment to determine if there was a lack of resources available for obese children and their families. Method: Data was obtained by phoning 15 hospitals and 8 nutrition/health organizations. Each facility was asked if they treat obese children and if so, what resources were available for the family. Results: All of the hospitals stated that obesity was not addressed unless there was a secondary problem and no resources specific to obese children were available. Conclusion: There is a vast amount of information on preventing obesity but nothing specific for obese children and their parents for weight management. Our task was to conduct current research into childhood obesity and develop resources that focused on management for the child and their family.

Evaluation of an osteoporosis education session: does knowledge increase adoption of lifestyle and nutrition practices that help prevent osteoporosis complications?

P. Kirkland, J. Plowman, K. Legg, Capital Health Dietetic Internship Program, Halifax, Nova Scotia.

Osteoporosis is a major health condition effecting women in Canada leading to early morbidity and mortality. Complications such as bone fractures result from the gradual weakening of bone structure. Further weakening of bone and the subsequent complications can be prevented through healthy lifestyle and nutrition practices along with medical intervention. The Queen Elizabeth II Health Science Centre osteoporosis education session aims to help decrease complications of participants through education of the lifestyle and nutritional practices that help maintain bone strength. To determine if the session is effective in increasing participant's preventative practices, a questionnaire will be given before the session and a phone interview five weeks after. The pre-session questionnaire will determine the profile of participants. The profile includes: reason for attending the session, family heritage, age, family history, calcium and Vitamin D intake, smoking habits, alcohol consumption, caffeine consumption, and exercise type and frequency. The follow-up phone interview will determine if there are significant changes in the nutrition and lifestyle practices of the participants after attending the session. The participants were randomly selected from five sessions. All participants have a diagnosis of either osteoporosis or osteopenia. Descriptive statistics will be applied to all pre-session questionnaire data to determine the profile of the participants. Comparative statistics will use the *t* test to determine if there is a significant difference in the practices before and after education. Data collection is not finished therefore the results and conclusions are pending.

Nutritional screening tool for Health Sciences Centre PsychHealth Centre

S.Kizar, Health Sciences Centre Dietetic Internship Program, Winnipeg, Manitoba

Nutrition screening has been shown to be a very important and effective process in identifying patients at nutritional risk. Currently the PsychHealth Centre is not included in the nutrition screening program at Health Sciences Centre (HSC) because the current nutrition screening tool (NST) is not appropriate for this population. The purpose of this study was to develop a NST that would be specific for patients with psychiatric disorders. An informal survey, via email, of Canadian and US facilities was done regarding their current nutritional screening practices for psychiatric patients. A request for a copy of their current NST, if applicable, was made. Seven of the 15 facilities responded. Comparison of the forms was done to find questions common to other nutrition screening tools, and those that were specific to psychiatric patients. The current NST used at HSC was then modified for screening the psychiatric population. The next step is to determine whether the modified NST is reliable and valid for this population.

Renal out-patient display

K. Klassen, Health Sciences Centre Dietetic Internship Program, Winnipeg, Manitoba.

The objective of this project was to create a series of four rotating, interactive displays highlighting nutritional concerns, for patients in the Renal Out-Patient Program at the Health Sciences Centre. Comprehensive literature searches were performed on the following topics:

1. how to effectively communicate messages through posters and displays,
2. the validity and standards for a sodium and fat modified diets for renal failure, hypertension, cardiac disease, and diabetes,
3. carbohydrate and sweetener use in patients with diabetes, and
4. the importance of consumers understanding food labels.

Based on information from the research and suggestions from the project advisors, the displays were created. The displays highlight four important nutritional messages for the renal out-patients. These messages include: sodium restrictions, dietary fat modifications, carbohydrate awareness, and food labelling education. Each display will be exhibited for one month at a time. A total of twelve 11" X 17" posters, three for each topic, were created. Handouts accompanying the posters include a "Heart Healthy" quiz, low fat cooking tips, information about nutrition claims, a carbohydrate crossword puzzle, a sugar word jumble, an herbs and spices crossword puzzle, and low sodium recipes. Several food products will also be included in the display to highlight healthy food choices for people with renal diseases. Test tubes showing the amounts of salt and sugar in specific foods will be used as visual aids for the low sodium and sugar displays. As the various displays are exhibited, they will be evaluated by the participants, and modified according to their understanding.

Organization of an educational seminar between the capital district health authority department of food and nutrition services and its suppliers of food and equipment

C. D. Lavandier, D. MacInnis, S. MacIntosh, Capital Health Dietetic Internship Program, Halifax, Nova Scotia..

The objective of this project is to organize a seminar between the members of Capital Health Food and Nutrition Services Department who define product and purchasing specifications and their main suppliers of food and equipment. The purpose of the seminar is to educate the suppliers and to determine what requirements must be met by all parties in order to work effectively together. Educational material for the seminar includes a discussion of the background, mission and vision of the department; a visual presentation of the food production centre and a discussion of inventory control, ingredient control, and cook-chill production method; a visual presentation and discussion of patient food service meal assembly, both bulk and tray rethermalization, and distribution systems; an outline of sample specifications for various purchased products; a discussion of the importance of food safety in serving a vulnerable population; and a description of Carex, an electronic food management system. By organizing this half-day seminar, the Capital Health Food and Nutrition Services Department will explain its needs, both present and future. The suppliers, in turn, will gain a better understanding of how the Department operates at the food production, assembly and distribution level. This will help the suppliers inform the purchasers of best buys and potential new products as well as new trends in the marketplace that may better accommodate present and future production, assembly and distribution methods. This topic outlines the important role of the relationship between buyer and supplier in the ever-growing and ever-changing business of hospital foodservice.

Evaluation of snack consumption provided to inpatients and developing recommendations to minimize snack waste

G. Le Gal, Health Sciences Centre, Winnipeg, Manitoba

Food Services need to ensure snacks are being distributed to intended inpatients and to minimize snack waste. The objective was to identify and recommend procedures that may be implemented to ensure inpatients were receiving snacks intended for their consumption and to reduce snack waste. A literature search revealed no relevant information. Three separate surveys were developed. Seventeen acute care centres across Canada were surveyed via e-mail to identify current procedures in snack distribution, and sixteen responded. Twenty-seven inpatients on three selected units at Health Sciences Centre were surveyed via an in-person questionnaire conducted by a student volunteer to determine if snacks were being consumed. A written questionnaire to identify obstacles, and new ideas to improve snack distribution, generated four responses from nine unit assistants surveyed. Unit assistants surveyed confirmed that waste occurs, and cited reasons being lack of variety, and inpatients not hungry. Eighty-six percent of surveyed inpatients reported their snacks as always delivered, or often delivered to them. Seventy-one percent of surveyed inpatients receiving evening snacks reported consuming fifty percent or more, and of these fifty-nine percent reported consuming one hundred percent of their snack. Five out of sixteen acute care centres indicated a computerized checklist was used to verify distribution to inpatients. While inpatients reported consuming snacks, unit assistants perceived waste to be a wide spread problem. Inaccurate patient recall may explain this discrepancy. One recommendation to consider is the computerized checklist as a method to verify daily distribution of snacks.

Supports and barriers to intake of calcium and vitamin D in continuing care

L.T. Lee, Calgary Health Region Dietetic Internship, Calgary, Alberta.

One of the established preventative interventions against osteoporotic fractures is obtaining adequate calcium and vitamin D. Previous studies have found that discrepancies exist between current Dietary Reference Intake (DRI) recommendations and actual intake for calcium and vitamin D in the continuing care elderly population. The objective of the study was to describe how beliefs between nutrition and osteoporosis/fracture risk and the supports and/or barriers that exist for registered dietitians (RDs) may or may not contribute to this care gap. A survey was developed and pre-tested to investigate the study objective. The sample for the survey included participants in the Geriatric and Continuing care Dietitians' Interest Group – Northern/Southern Alberta. Eighteen surveys out of 30 were completed. The majority of RDs (83.3%) surveyed agreed that nutrition intervention plays a role in decreasing the risk of osteoporosis/fracture of the older adult population, however, the remaining 16.7% were unsure of the risk-lowering effect nutrition has on those with osteoporosis/fracture. Although all respondents indicated supportive factors to promote calcium and vitamin D intake, the majority (72%) also indicated barriers. Strategies that RDs have found effective in ensuring adequate bone nutrition include a standing order for all weight-bearing residents to receive calcium and vitamin D, milk offered at every meal, and interdisciplinary support. Greater access to studies supporting supplementation, increased funding for feeding assistance, and more RD hours to share workloads were amongst suggested initiatives to overcome barriers. This survey demonstrates that the application of the calcium and vitamin D DRIs for continuing care clients is an area in which dietitians are only one component of the care delivery model. Beliefs and barriers appear to contribute to the care gap.

Does nutrition education in an outpatient cardiac rehabilitation program translate to diet change?

J. Loder, J. Sparkes, Capital Health Dietetic Internship Program, Halifax, Nova Scotia.

Due to the decreased length of stay in hospital in recent years, a cardiac rehabilitation program is being offered on an outpatient basis. This study will measure the ability of cardiac rehabilitation participants who have received nutrition education to change nutrition-related practices. The subjects for the study are those who attend the Cardiac Rehabilitation program that have some history of heart problems, including Coronary Artery Bypass Graft (CABG), myocardial infarction (MI), and angina. The patients participate in a core education class upon entry into the program and attended three 1 ½-hour nutrition education sessions throughout the 12-week program. A pre-post test design will be used to assess nutrition related behaviours before and after attending the sessions. The expected sample size for the study is thirty-five (n=35). Subjects were given a self-administered food frequency questionnaire that was designed to assess fat intake prior to and upon completion of the program. Preliminary findings indicate an improvement in overall scores on the questionnaire, though not all subjects have completed the post-test to date. Statistical analysis will include comparison between subject's overall pre-test and post-test scores and comparison of specific questions. The statistical analysis of the result is pending.

The role of the dietitian in assisting primary caregivers with the nutritional needs of children with Down syndrome

A. Logan, Southeastern Ontario Comprehensive Dietetic Internship Program, Belleville, Ontario.

The purpose of this study was to conduct a needs assessment to determine the role of the dietitian in assisting primary caregivers with the nutritional needs of children with Down syndrome. Data were collected from 1) Behavioural Feeding Assessment Parent Interview, 2) discussions with dietitians familiar with children with developmental delays, and 3) published literature on Down syndrome. Results suggest that dietitians can play a significant role in assisting primary caregivers with the nutritional needs of children with Down syndrome. Primary caregivers expressed concern that they were providing adequate nutrition and felt information regarding appropriate portion sizes and quantity of foods would be beneficial. Feeding problems such as food refusal, gagging, inability to self-feed, and food selectivity have a negative impact on the feeding relationship between primary caregivers and children. This information will serve as a framework for developing a resource package for dietitians and primary caregivers. A resource package will be developed to contain information about how to promote a supportive and positive feeding relationship, how to progress to solid foods, appropriate portion sizes, and number of servings required daily according to Canada's Food Guide for Preschoolers. Information about oral-motor functioning, tongue protrusion, and how to feed a 'picky eater' will also be included. The goal of the resource is to build awareness and increase the knowledge of dietitians and primary caregivers in order to improve the feeding relationship and provide optimal nutrition for the child.

Development of nutrition education resources for patients with spinal cord injury

T. Ly, Health Sciences Centre, Winnipeg, Manitoba.

Individuals with spinal cord injury are at an increased risk of developing the following complications: weight gain, pressure ulcers, bowel and bladder incontinence, and cardiovascular disease. The prevention of these complications through education is extremely difficult due to the high prevalence of low literacy in the general population. The integral role of nutrition coupled with low literacy skills, demands for comprehensible nutrition resources specific to spinal cord injury, to educate patients in preventing these complications. The objective of this project is to develop effective nutrition education resources addressing the prevention of these complications in response to this demand. The fourteen page resource is written using an active voice in questions and answers, formatted with plain language to ensure reader comprehension and promote active learning. It is also designed with clear and attractive illustrations and easy to read text that is effectively laid out to increase readability and learner's interest in the material. The resource can be used by professionals in a hospital or community setting as teaching material for spinal cord injury patients during counselling sessions and/or given as take home material to reinforce verbal instruction. The resource was focus tested with spinal cord injury patients at Health Sciences Centre and members of the Canadian Paraplegic Association in Winnipeg, and was further evaluated by health professionals. The resource has been revised according to feedback provided by patients and health care professionals to produce the final version that has been proven to be useful and meet the needs of the target audience. This resource provides comprehensible nutrition information to patients with spinal cord injury to educate them in the prevention of various spinal cord injury related complications.

The Acceptability of Flaxseed Supplementation by Low Income, Pregnant or Postpartum Lactating Women

M. Lyroudias, N.Haddad. McGill University, Montreal, Quebec.

During pregnancy and lactation, both maternal stores and dietary intakes of n-3 fatty acids (FA's) are important in ensuring adequate amounts for infant growth and brain development. Ground flaxseeds provide a source of n-3 FA's at low cost. The aim of the study was to assess the acceptability and potential continued use of flaxseed supplementation to the diet of low income pregnant or postpartum lactating women. Subjects were collected following an information session on n-3 FA's and flaxseed to 60 clients of the Montreal Diet Dispensary (MDD). Subjects were given a sample of ground flaxseed to taste with yogurt or pudding along with a two week supply, including indications for use and storage and an educational pamphlet. Upon their return to the MDD two weeks later, subjects were given a questionnaire evaluating flaxseed use over the two week period. Subjects not returning were contacted by telephone. Forty three subjects completed a questionnaire (either in person or by telephone). Of these women, 97% tried the flaxseed; 58% used it daily, 16% used it 10 times and 21% used it 2-4 times. Consumption was mainly by addition to ready prepared items such as yogurt and cereals. Eighty eight percent of subjects stated they would continue to use flax daily if provided to them, with 79% considering buying it on a regular basis (cost on average: \$0.09 per week). Results show that the addition of flaxseed to the diet of low income women throughout pregnancy and lactation appears feasible with respect to cost and client acceptability. Flaxseed benefits both mother and child, by providing n-3 FA essential for infant growth and a source of fiber that helps alleviate constipation, common during pregnancy.

Evaluation of a school based universal breakfast program in Charlottetown, Prince Edward Island

C. MacGregor, C. Palmer, J. Taylor, Queens Region/UPEI Integrated Dietetic Internship Program, Charlottetown, Prince Edward Island.

The overall aim of this research was to evaluate a school based breakfast program at an intermediate school in Prince Edward Island. The specific objectives were to 1) describe the breakfast skipping rate and food use among program participants/ non participants and 2) to assess perceived effectiveness of the program among students and teachers. A total of 328 of 440 (75%) students completed an in class survey. Food use patterns were assessed using a previously validated 25 item food frequency questionnaire. Questions concerning perceived program benefits were adapted from instruments developed for other Atlantic region program evaluations. Chi square analysis (SAS, v.6.1) was used to assess differences in daily food use by participation and sex. The breakfast skipping rate (% who did not eat breakfast daily) was 55.9%, with no difference between participants (n=43) and non-participants (n=285). Females were more likely to skip than males (65% vs 47%, $p<0.001$). More participants consumed yogurt, ice cream, rice, cooked cereal, salad ($p<0.01$), snacks, candy and french fries ($p<0.05$) on a daily basis than non-participants. Participants indicated that having breakfast at school gave them more energy (47.2%), helped with school work (37.3%), and helped improve marks (30.6%). The majority of teachers (95%) indicated that the program benefited the school “ a lot”, with 69% reporting that the program improved academic performance, class attendance (59%) and decreased disruptive behaviour (63%). Few students and teachers expressed concern regarding stigmatization associated with participation. Although participants were more likely to make healthy food choices than non-participants, their higher snack food consumption suggest the need for nutrition education to supplement school based breakfast programs.

A new method to evaluate the effectiveness of an elementary school newsletter

T. MacKinnon, M. Murton, B. Conrad, Capital Health Dietetic Internship Program, Halifax, Nova Scotia.

Capital Health Public Health Services publishes the Healthy, Well-thy, & Wise (HWW) newsletter which is distributed to parents of elementary school-aged children within Nova Scotia. The objective of this study was to determine the effect of HWW newsletter on parents' awareness, knowledge, and behaviour as it relates to healthier lifestyle choices and to pilot a new method of evaluation. In previous evaluations, a questionnaire was sent home with the newsletter and parents mailed it back to Public Health Services, resulting in a low response rate (8.2%). The new method of evaluation involved randomly selecting a school in which parents attending parent/teacher night completed a pre-tested questionnaire (n=58). This method of evaluation showed a significant increase in response rate (32%). Data was analyzed using frequency distribution and the identification of common themes by comparing the results with a previous evaluation (1997). The results showed that 96% of respondents were satisfied with the newsletter but would like to see more information regarding allergies, children's health and disabilities, nutritious snacks and recipes. As well, 28% reported making behaviour changes after reading HWW, such as exercising more, eating healthier and trying different foods. The majority of subjects also reported receiving nutrition and health-related information from other sources for example family doctors (55%), television (55%), internet (45%), and newspapers (40%). The new evaluation method improved the response rate, as well as offered a means of promotion for the newsletter. Evaluation results also indicate that HWW is an effective information dissemination tool that may lead to healthier lifestyle choices for some individuals. To provide continuous feedback from the readers and to guide future issues of the HWW newsletter, ongoing evaluation on a larger scale is necessary.

Development of an intervention program for overweight children and their families

L.C. Matheson, Dietetic Intern, Southeastern Ontario Comprehensive Dietetic Internship Program, Brockville, Ontario.

Childhood obesity is the most common health problem facing children today. Currently in Canada, 29% of boys and 24% of girls are overweight. Key informants were asked questions in a semi-structured interview to identify their perceptions on the prevalence of overweight children in the area served by Brockville General Hospital, the possible causes of overweight, and how they feel this issue should be addressed. Key informants included registered dietitians, a principal, and a pediatrician. All key informants identified a need for an intervention program designed for overweight children and their families. A literature review revealed key methods for delivery of treatment of overweight children including using a family-based approach, targeting younger children, focusing on behavioural change, and parenting skills. Based on these findings, a program was designed to provide the knowledge and skills necessary for overweight children and their families to adopt healthier eating habits and increase physical activity. The goal of the program is to help children develop lifelong healthy eating and physical activity habits. The program will be offered to overweight children, ages four to eight, who are referred by their doctors. The program will consist of two group sessions, one for the parents of overweight children and one for children and parents together. A dietitian will facilitate the group sessions and follow the families every three months. A pre-program questionnaire will be administered to collect baseline data. The questionnaire will be repeated after one year to assess changes in knowledge and behaviour and the program will be adapted as necessary.

Obesity and Poor Surgical Outcomes

J. Maytchak, Health Sciences Centre, Winnipeg, Manitoba.

Morbid obesity is associated with increased morbidity and mortality in surgical patients, but it is not clear at what BMI level risk increases, or if the relationship is different for different surgery types. The purpose of this project was to determine what level of obesity is associated with poor surgical outcomes, and if nutrition intervention can have an impact. A literature review regarding these issues was performed. A BMI of >27-30 was associated with a significant increase in wound infections for all types of surgeries. For transplants, a BMI >27 significantly increased the mortality risk post heart and lung transplants, while a BMI >40 significantly increased the mortality risk for liver transplants. Obesity was associated with major pulmonary complications for abdominal surgery and with arrhythmias and MI's for heart surgeries, but no specific BMI level was indicated. The evidence was insufficient regarding a correlation between obesity and postoperative nausea/vomiting. With regards to the impact of nutrition intervention preoperatively, there was a trend of better postoperative recovery in patients having undergone preoperative weight reduction. For morbidly obese patients, a 7-24 week, very low calorie diet program was implemented before surgery. Results showed no increased postoperative complications. This indicates that these programs are suitable and seem not to compromise the immune system. A data collection tool was developed so relevant information can be easily recorded for future studies. The profile sheet is on one 8½" by 11" paper; designed to collect information regarding the patient's nutritional objective data and complications experienced postoperatively. In conclusion, the research indicates that wound infection significantly occurs in overweight patients for all surgery types, while other complications occur more frequently as the level of obesity increases. Preoperative weight loss may reduce the occurrence of complications.

Management of corticosteroid-induced osteoporosis in post lung transplant patients

J. McCaine, Health Sciences Centre, Winnipeg, Manitoba.

The objective of this research paper is to determine the level of vitamin D and calcium intake that should be recommended to patients receiving a lung transplant. Corticosteroid therapy following lung transplant has many complications, including osteoporosis. Research indicates that corticosteroids have a dual effect on bone: the inhibition of bone formation and the acceleration of bone resorption, especially in the first six months posttransplant. The majority of studies indicate that vitamin D and calcium supplementation is beneficial, however, dosages have yet to be determined. Researchers have been investigating additional therapies to combat the negative impact that corticosteroids have on bone health. Antiresorptive therapy (bisphosphonates) are potentially beneficial in the management of the post transplant patient. A survey was developed, based on the research, and sent to lung transplant centres across Canada and the United States. The survey included questions regarding the assessment of bone health status, vitamin D and calcium supplementation for the management of corticosteroid-induced osteoporosis and monitoring bone health post transplant. Of the fifty-six centres surveyed, 5 completed surveys were returned. The results indicated that all centres assess bone health status pre-transplant and all patients are prescribed 400-800 IU vitamin D and 1000-1500 mg calcium supplementation post transplant. Four of the 5 centres indicated that bisphosphonates were used in conjunction with vitamin D and calcium supplementation. The current practice of supplementing with 400-800 IU vitamin D and 1000-1500 mg calcium appears to be beneficial, however the use of bisphosphates show promise. Further investigation is required to determine the optimal combination of therapies to provide the best results.

A meal satisfaction survey after implementation of a non-selective menu

S. Mercure, McGill University, Montreal, Quebec.

A new non-selective menu system, adjusted for surveyed patient food preferences and dislikes, was recently implemented in a large teaching hospital. In-patients' satisfaction with both product and service quality of this new menu was assessed, on a five point scale ranging from "very poor" to "very good". The results were compared with those obtained the previous year to identify changes in satisfaction, possibly due to the new non-selective menu. Three hundred and fifty-two patients were surveyed; 123 (35%) responded. The established acceptability standard was a rating of "good" or "very good" for each characteristic from 80% of the respondents. The lowest rating was for taste, rated as good or better by 51% of respondents compared with 65% the previous year. For temperature and variety of foods, though still not meeting the set standards, the percentage of good and very good ratings combined increased from 54% to 62% and from 59% to 62% respectively. Seventy-eight percent of respondents said "yes" when asked if they were satisfied overall with the meals; a drop from the previous year's 85%. Evaluation of service (sufficient time for meals, interaction with dietary staff and overall satisfaction with service) remained unchanged from the previous year, meeting the standard with 88% of respondents giving ratings of good or very good for each of these aspects. The non-selective menu system had only recently been implemented at this hospital. Once further adjustments have been made in light of this survey and the new system is fully functional, there should be a re-evaluation, using the same questionnaire. Particular attention should be given to those results pertaining to client preferences in taste, temperature and variety of foods.

The use of vitamin, mineral, and herbal supplements in the lung transplant population at the University Health Network

S. Minicucci, BAsc, J. Madill, RD, MSc, M. Mori, RD, CDE, University Health Network, Toronto, Ontario.

Based on current literature, 30-40% of pre-surgical patients are using herbal therapies and 50% are taking vitamins. There is limited research on the use of supplements within the lung transplant population. The objective of this study is to describe the use of vitamin, mineral, and herbal supplements in the lung transplant population at the University Health Network. The hypothesis is that pre-lung transplant patients are self-administering vitamin, mineral, and herbal supplements. Descriptive statistics, including frequency calculations and Pearson's chi-square were used to analyze the data. A retrospective chart review of 314 lung transplant patients yielded 256 patients who met the inclusion criteria (mean age=46.2 ± 13.3 years; 48% females). Sixty-four percent of the lung transplant population were taking supplements pre-transplant, 59% were self-administering supplements and 44% were taking herbal supplements specifically. A total of 43 different types of supplements were being consumed; among the most popular types of supplements were multivitamin (51%), vitamin E (37%), vitamin C (28%), calcium (28%), garlic (6%) and Echinacea (3%). Cystic fibrosis patients were the most likely to take supplements, excluding those patients who were taking supplements recommended by the health care team ($p < 0.001$). Younger patients (17-39.9 years) were most likely to take vitamins ($p < 0.05$). In conclusion, patients are self-administering vitamin, mineral, and herbal supplements. The implication for the clinical dietitian is to gain insight into the use of supplements through routine assessment pre-transplant and reduce any unnecessary risk post-transplant

Investigating and quantifying differences in weight and length percentiles among Tanner-Whitehouse, National Center for Health Statistics and Center for Disease Control growth charts

A. Nash, K. Sherwood, J. Saab, D. Secker, D. O'Connor, The Hospital for Sick Children, Toronto, Ontario.

Growth charts are a tool used in clinical and research settings to assess growth, nutritional status and aid in determining the overall health status of infants, children and adolescents. Currently, the British Tanner-Whitehouse growth charts are in use at The Hospital for Sick Children (HSC). American National Center for Health Statistics (NCHS) and the new Center for Disease Control (CDC) are other charts commonly used in pediatrics. This research study is examining and quantifying the differences that exist between the three previously mentioned charts. Lengths (using infant length boards) and weights (using calibrated pediatric scales) of 538 infants (269 females and 269 males) are being collected for children ≤ 24 months of age admitted under/attending clinics in Pediatric Medicine or Respiratory Medicine at the HSC. Mean length and weight percentiles for age will be calculated (using computer software programs) and compared to determine whether differences exist between the charts when infants are plotted. Percent ideal body weight will be calculated and compared to identify if and how much clinical nutritional assessments made by health care professionals would differ depending on the growth chart in use. Results will be described separately for males and females and be divided by age ($>$ and $<$ 6 months). In-services were held to describe the purpose of the research and review proper measurement techniques. This research will help assess how the charts perform in a pediatric clinical setting. Results will be valuable in deciding if the CDC growth charts will be implemented at HSC.

Pre-dialysis urea levels as an early indicator of Protein Energy Malnutrition in the hemodialysis population: A Pilot study

M. Noseworthy, L. Hines, S. Colucci, M. Mori University Health Network, Toronto, Ontario.

Protein energy malnutrition is a chronic problem in maintenance hemodialysis patients resulting in increased morbidity and mortality. The standard lab analysis used to identify this problem has been serum albumin. Low serum blood urea nitrogen (BUN) levels, before being dialyzed (pre-dialysis), indicate a decreased oral protein intake and can serve as an early indicator of malnutrition in maintenance hemodialysis patients. However, limited documented evidence exists. The purpose of this study was to determine if pre-dialysis serum BUN increases after nutritional intervention by a Registered Dietitian and to establish whether BUN would be an early indicator of malnutrition as compared to serum albumin levels. A retrospective chart review of 14 ambulatory hemodialysis patients was conducted at the University Health Network using data spanning an eight-month period. Our study included seven patients (6 females, 1 male) who received a dietary intervention and seven patients (age matched, 5 females and 2 males) who did not. Only adequately dialyzed patients with BUN levels <17.0 mmol/L, were included. Pre-dialysis BUN and albumin lab values were compared at baseline and one-month post intervention. The mean age of the intervention group was 77 ± 11.5 versus 63 ± 14.0 for the comparison group. Preliminary data reveals an initial increase in pre-dialysis BUN one-month post intervention (12%) versus the comparison group (9%). No significant changes in albumin were seen in either group. Further analysis is required.

Evaluation of nutritional oral supplements provided to patients

L. Oakley, Health Sciences Centre Dietetic Internship, Winnipeg, Manitoba.

Objective: Since nutrition screening was introduced at Health Sciences Centre, more patients have been identified as being at nutritional risk and are provided with oral supplements. There is anecdotal evidence that oral supplements sent on patient trays are often returned to the kitchen untouched and therefore not fulfilling the need to provide nourishment to patients. The purpose of this analysis was to assess patient compliance for consuming nutritional oral supplements. Methodology: Two surveys were developed. The first survey was developed to inquire how eight other acute care centers in the country evaluate the intake of nutritional oral supplements provided to patients in their facilities. The second survey involved a patient-based sample of 26 individuals completing questionnaires regarding awareness of why they were receiving supplementation and to assess how much, if any, of the supplement they were consuming. Results: Care center's evaluation of patient compliance involves informal means such as an as needed basis to more standardized follow up procedures. Calorie count sheets, audits, tray checks and utilizing dietetic interns were some of the tools used. A total of 15 of the 26 patients surveyed (58 %) were aware they were to receive supplementation and 14 of the 26 patients (54 %) were aware of the reason why they were to receive it. Of these 26 patients, 16 individuals (62 %) were consuming 50 % or more of the nutritional oral supplement provided for them on a regular basis. Conclusions: Informing patients of the reasons why supplementation is provided for them is an important first step to increase compliance. Implementation of standardized follow up procedures would provide appropriate and timely nutrition intervention leading to improved health outcomes and lower hospital costs.

Comparison of inulin and modified starch as a thickening agent in the preparation of thickened fluids

G. M. O'Grady and C. J. Sakowsky, Food and Nutrition Services, Saskatoon District Health, Saskatoon, Saskatchewan.

Insufficient research exists on using inulin as a thickening agent and a fiber source in thickened fluids for dysphagic adults in long-term care. Commercial inulin is considered to be about 96% dietary fiber, and when fed, is known to stimulate the growth of Bifidus bacteria in the gut as well as increase the absorption of calcium and magnesium. The purpose of this study is to investigate the acceptability and functionality of inulin versus modified starch as a fluid thickening agent for dysphagic adults in long term care. A combination of inulin and modified starch was added to 4 beverages commonly consumed by residents of Parkridge Center, Saskatoon SK. Thickening beverages with inulin alone was found to produce an undesirable product appearance and aroma. Beverages thickened with inulin only, would also contain an excessive amount of fiber; therefore, a combination of inulin and modified starch was used. Inulin and modified starch was added until the desired pudding like consistency was achieved. Pudding consistency was determined using a consistometer to compare the consistency of pudding against the consistency of the beverages thickened with inulin and/or starch. Twelve subjects between the ages of 18 and 59 were recruited from Parkridge Center and were asked to taste and evaluate control and inulin fortified thickened beverages. The results obtained indicated that there was no significant difference between the control and the test beverages, and fruit beverages were rated as acceptable. These results indicate that inulin can be successfully added to thickened beverages and remain acceptable and, therefore, offer a possible source for functional fibre supplementation for dysphagic wheel chair bound adults.

Breakfast Skipping and Eating Behaviours Among Elementary School Children in Prince Edward Island

C. Palmer, C. MacGregor, Dr. Taylor, Queens Region/U.P.E.I Integrated Dietetic Internship Program, University of Prince Edward Island, Charlottetown, Prince Edward Island

The overall aim of this research was to assess the need for a breakfast program at an elementary school (Grade 1-6) in Prince Edward Island. Specific objectives were to assess the breakfast skipping rate and describe food use among students (n=362). The Halifax Breakfast Survey Instrument was used to assess breakfast skipping and breakfast food consumption in students grade 1-3 (n=183). For children in grades 4-6 (n=179), food use in the past week was assessed using a previously validated 25 item food frequency questionnaire during an in class survey. Response rates for the surveys were 84.7% (grades 1-3) and 84.4% (grades 4-6). The breakfast skipping rate (proportion not eating breakfast daily) increased from 12% in Grades 1-3 to 30% in grades 4-6. There were no differences in breakfast skipping between males and females across grades. The top five breakfast foods consumed by students in grades 1-3 were milk, bread, cereal, juice, peanut butter/cheese. One third of students in grades 4-6 did not consume milk daily. Only 43% students reported consuming vegetables other than potatoes on a daily basis. However, fruit and fruit juice were consumed daily by 60% students. One third or more of students in grades 4-6 had snack foods, candy, soft drinks, cakes/cookies and french fries on a daily basis the week prior to the survey. There were no differences in reported food use among girls and boys in grades 4-6. Study results suggest a need to reduce breakfast skipping, particularly in grades 4-6, and indicate a need for nutrient interventions aimed at increasing calcium rich foods and fruits and vegetables and decreasing higher fat snack foods.

Progression of meals post-surgery: opinions of patients

K. Parsons, McGill University, Montreal, Quebec.

Surgical dietary progression from a clear, to full fluid, and finally to a regular diet is used in many hospitals. Recent literature suggests for some surgeries, the full fluid diet step can be omitted, and solids can be consumed as early as the second post-operative day. Understanding patient's post-surgical dietary tolerances can increase satisfaction, and decrease length of stay. *Objective:* Assess patient's intake of post-surgical meals, and obtain preferences for a clear fluid, full fluid, or low-lactose and low-residue meal for post surgical meals 1, 2, and 3. *Design:* 23 gynecological, obstetrical, or gastrointestinal surgical patients were interviewed. Patient's dietary intake for first three post-surgical meals was recorded. Perceived tolerance towards three offered diets for postoperative meals 1, 2 and 3 was also obtained. *Results:* After the NPO order was lifted and clear liquids tolerated by the patient, full-fluids and solid food were introduced within the next 48 and 72 hours, respectively. Half (52%) attempted to consume clear liquids within the first 24 hours, but 75% ate less than ¼ of their first clear liquid meal. Assessments of diet tolerance revealed 65% of patients wanted a clear fluid diet for meal 1, and 61% thought they could have tolerated a low-lactose, low-residue diet by meal 3, thus omitting the full-fluid diet step. G.I patients were more likely to think that they could tolerate solid food by the third postoperative meal than gynecological and obstetrics patients, who were less confident to progress. *Conclusion:* While clear liquids continue to be preferred for the initial postoperative meals, more than half of patients think they are ready to progress to low-lactose, low-residue meal by their third postoperative meal. In the opinions of surgical patients, the full-fluid diet step may not be necessary.

Fiber intake and laxative use among older adults admitted to the Geriatric Assessment and Rehabilitation unit of the Leonard A. Miller Center

M. Pilgrim, S. Varghese, Dietetic Internship Program, Health Care Corporation of St. John's, St. John's, Newfoundland.

This pilot study assessed the laxative use and fiber intake of elderly patients admitted to the Geriatric Assessment/Rehabilitation unit. A chart review method and three-day food intake record were utilized to collect the data. Only patients who were medically stable, not on tube feeds and non-demented were included. The Human Investigation Committee of Memorial University of Newfoundland reviewed and approved the study. Of the 11 patients who met inclusion criteria, seven gave verbal and written consent to participate. The three-day food intake record was analyzed for fiber content using Med-Dietary analysis package. Data collected was entered into the SPSS statistical package and paired t-test and descriptive statistics were conducted to summarize the data. The average fiber intake (13.1g/day) and average amount of fiber provided to patients (18.0g/day) did not meet Health Canada's recommendations (25.0 g/day). Of the seven patients who took part in the study, six were taking either regular or prn laxatives. The participant who used the highest number of laxatives (4 /day) had the least dietary fiber intake (11.5 g/day). There was a positive correlation between average daily carbohydrate intake and fiber intake ($p < .05$). Participants on chopped texture and 6500 KJ Diabetic diet tend to have higher fiber intake compared to those on regular texture and No Added Salt/Low Fat diet. Considering constipation is a chronic and costly problem among the geriatric population, more education should be given to patients and staff regarding the importance of adequate fiber intake. There should be more collaboration between clinical nutrition staff and the food services department to provide recommended amount of fiber to patients.

The evaluation of a breastfeeding support line

J. D. Pinksen, B. Conrad, Capital Health Dietetic Internship Program, Halifax, Nova Scotia.

The objective of this study was to evaluate the breastfeeding support line offered by Capital Health Public Health Services. The breastfeeding support line offers assistance for women experiencing breastfeeding problems, with the intention to improve breastfeeding duration rates. Women who called the support line between September 17 - December 31, 2001 (n=47) were selected to participate in the study. These subjects were surveyed using a telephone-mediated questionnaire, that addressed the following areas: 1. Breastfeeding concerns (i.e. reason (s) for using the support line); 2. Satisfaction with the breastfeeding support line; 3. Recommendations for improving the breastfeeding support line; and 4. Demographics. To date, 40% of the subjects have completed the survey. Preliminary results indicate that 83.3% of the participants' opinion of the support line was very good or excellent and 83.3% of the participants felt that the breastfeeding support line helped them to continue breastfeeding. Additional data collection and analysis will potentially help Public Health Services improve the effectiveness of their breastfeeding support line.

Gastrostomy tube feeding: a family decision

N.D. Rogers, Health Sciences Centre Dietetic Internship Program, Winnipeg, Manitoba.

A number of pediatric illnesses warrant the use of gastrostomy tube feeding (GTF) but parental hesitation to accept this feeding method is frequently encountered at Winnipeg's Children's Hospital. The project's purpose was to determine factors influencing parental acceptance of gastrostomy tube feeding, and to create a resource to introduce this feeding approach to parents. A comprehensive review of the literature was completed. A closed-questioned survey was developed and administered to collect additional, first-hand information from parents. Concerns identified from both sources were addressed in the resource (pamphlet). This was developed to its third draft with input from advisor Valerie Renn, RD and the Health Sciences Centre's Gastrostomy Tube Working Group. The literature identified indications for gastrostomy tube feeding, the impact of tube options on a child's self-image, misconceptions about this feeding method, and possible complications. The literature also revealed the need for health professionals to support parents in decision-making. Unfortunately only four surveys were completed, one written and three via telephone interviews. Although not a representative sample, these parents agreed with the literature that GTF decreased feeding time, decreased stress at mealtimes, increased the child's energy, improved nutritional status, facilitated weight gain, and improved the quality of life of both family and child. The most commonly identified complications included infections around the gastrostomy site, tube leakage, and tube and button replacements. A description of gastrostomy tubes, conditions indicating enteral support, advantages and possible complications of GTF, and sources of additional information were incorporated into a three-column, double-sided pamphlet resource on 8.5" x 11" paper. Upon completion and approval, this pamphlet will be used throughout the Children's Hospital in areas including the Pre-Admission Clinic and the Surgical Clinic.

Nutritional management of corticosteroid-induced hyperlipidemia in lung transplant recipients

L.M. Shaw-Hoepfner, Health Sciences Centre Internship Program, Winnipeg, Manitoba.

Hyperlipidemia is a frequent complication following solid organ transplants, with a reported incidence of 60% in heart, kidney and lung transplant recipients. Hyperlipidemia is associated with post-transplant cardiovascular disease, and may influence allograft vasculopathy and rejection. Immunosuppressive therapies have been linked to the development of hyperlipidemia post-transplant. The objective of this project was to determine the recommended nutritional management of corticosteroid-induced hyperlipidemia in lung transplant recipients. Current nutritional management was assessed through a literature review and survey of lung transplant centres across Canada and the United States. Although dietary modification, (<30% of total calories from fat, and decreasing saturated fat and cholesterol) was recommended as the initial step in the treatment of hyperlipidemia, the efficacy of diet alone has been questioned. The majority of evidence from the literature supports the use of diet and lipid lowering medications to obtain desirable serum lipid levels. However, a 1999 study by Barbagallo et al. found an isocaloric diet restricting total fat, saturated fat and cholesterol, and increasing monounsaturated fats and fibre, significantly reduced serum triglycerides, LDL, total cholesterol and LDL:HDL. Fish oil supplementation and magnesium repletion have also been investigated as possible treatments, and results are promising. Of the 56 centres surveyed, five completed surveys were returned. All centres used a trial of diet to treat hyperlipidemia prior to using lipid-lowering medications. During the post-transplant maintenance phase, a modified fat diet, (restricted in total and saturated fats, and cholesterol), was prescribed for patients with elevated serum lipids. In conclusion, the recommendations for nutritional management of post-transplant hyperlipidemia are to restrict total fat, saturated fats and cholesterol, and to increase monounsaturated fats and fibre. Intensive nutrition counseling is also warranted to ensure diet comprehension and compliance.

Need for nutrition counseling for female breast cancer patients receiving treatment at the nova scotia cancer centre

W. Simmons, C. Algee, Capital Health Dietetic Internship Program, Halifax, Nova Scotia.

Female breast cancer patients receiving treatment at the Capital Health Nova Scotia Cancer Centre receive no nutrition counseling unless the dietitian receives a consult. However, nutrition counseling has been deemed important by studies concluding that women with breast cancer are concerned about nutrition. In particular, patients believe diet is a key factor in cancer prevention and avoiding recurrence. Furthermore, women who adopt dietary change after a diagnosis of breast cancer are often successful at sustaining the new behaviour. As a result, nutrition counselling is believed to be desired and useful in the treatment of breast cancer patients. Therefore, the objective of this study is to identify the main nutrition concerns of female breast cancer patients and the need for nutrition counselling to be incorporated into their regular care. A short telephone-administered questionnaire was developed to obtain this information. The questionnaire aimed to identify the awareness of a dietitian's services, the most appropriate timing and method of nutrition counselling, as well as an insight into their current nutritional topics of interest. A non-probability purposive sampling method was used to gather participants. The sample population (n=35) consisted of patients who were currently receiving radiation treatment at the Nova Scotia Cancer Centre. Patients with varying stages of breast cancer and combined treatment modalities were selected in order to represent the issues of most breast cancer patients. Subjects were contacted via telephone, provided a brief description of the study and its purpose and asked for their participation. The data gathered from this study will be analysed using descriptive statistics.

Utilization of the Transtheoretical Model for nutrition program planning for overweight patients at the University Health Network – a pilot study

C. M. Somers, J. Caruso-Ditta, D. Klar, and L. Hoffman, University Health Network, Toronto, Ontario.

The prevalence of obesity has increased dramatically from 22% in 1985 to 34% in 1996. Obese individuals are at increased risk of numerous health problems including cardiovascular disease, hypertension, type 2 diabetes, and dyslipidemia. The Transtheoretical Model (TTM) measures individual readiness to change and has been extensively utilized in the study of addictive behaviors. However, the TTM has been applied to a much lesser extent in the planning and development of more effective, client-centered weight control programs. The purpose of this pilot study was to obtain a profile of an individual's readiness to change in those attending as compared to those not attending the Healthy Eating Program. We hypothesized that a differing relationship would exist between readiness to change, healthy eating behaviors and program attendance between those attending and not-attending. Between March – May 2002, nine participants (attended=3, not attended=6) were administered a validated questionnaire. This questionnaire measured readiness to change regarding low-fat eating, consumption of 5 or more fruits and vegetable servings, and meal frequency. Demographic variables of both groups were similar in age, gender and education level. Results indicated that those attending were within the pre- action or action stages (preparation, action and/or maintenance) versus the majority of those not attending were in the non-action stages (pre-contemplation and contemplation), in one or more of the variables, which concur with the literature. Implementation of specific strategies to encourage individuals in the pre-action stages to attend the healthy eating program, are now warranted.

Évaluation de l'effet de l'apport calorique et liquidien chez les personnes hémodialysées

M. Stever, Internat en diététique, hôpital régional Dr Georges-L. Dumont, Monton, Nouveau-Brunswick.

L'objectif de cette étude était d'évaluer l'effet de l'apport calorique et liquidien chez les patients pendant le traitement d'hémodialyse. Le projet s'est déroulé en deux volets. Le premier consistait à envoyer un questionnaire à 63 hôpitaux à travers le Canada afin de connaître leurs directives ou protocoles face à l'alimentation du patient pendant le traitement d'hémodialyse. Le second visait à amasser, pour une période de trois semaines, des données sur 36 patients sujets à l'hypotension. De l'information a été recueillie sur la quantité d'aliments et/ou de liquides ingérés, le moment de consommation de ceux-ci, les symptômes ressentis (hypotension, nausées, vomissements, diarrhée et crampes musculaires) ainsi que le poids interdialytique du patient. Parmi les 33 questionnaires reçus, 27 hôpitaux (82%) permettent à leurs patients de consommer de la nourriture et/ou des breuvages pendant le traitement d'hémodialyse. Seulement 9% ne le permettent pas et l'autre 9% évaluent chaque situation avant de prendre une décision. D'après les répondants, les symptômes les plus souvent associés à la consommation d'aliments et/ou de liquides pendant le traitement d'hémodialyse sont l'hypotension artérielle (55%) et les nausées (39%). Selon 46% des répondants, moins de 25% des patients ressentent un ou des symptômes lorsqu'ils consomment des aliments et/ou des breuvages lors du traitement. Toutefois, 15% affirment que ceci se produit plus de 25% du temps. L'autre 39% n'a pas fourni de réponse à cette question. Pour ce qui est du deuxième volet, 68% des patients qui ont souffert d'hypotension avaient consommé des aliments et/ou des breuvages. Plus de patients avec un poids interdialytique supérieur ou égal à 3kg, ont eu de l'hypotension (58%) comparativement à ceux avec un poids interdialytique inférieur à 3kg (27%). En conclusion, les patients ne sont pas tous affectés par la consommation de nourriture et/ou des liquides pendant l'hémodialyse. Il n'est pas nécessaire d'empêcher les patients de manger et/ou de boire pendant la session d'hémodialyse si ceux-ci ne démontrent aucun symptôme. De plus, un contrôle du poids interdialytique est aussi à conseiller dans le but de tenter de le maintenir à une valeur inférieure à 3kg.

Assessment of changing trends in nutrition education clinic referral patterns over a 24 month period

J. Thibodeau, D. Aldous, Capital Health Dietetic Internship Program, Halifax, Nova Scotia.

Nutrition counselling provided by professional dietitians has been shown to enhance health outcomes and reduce likelihood of hospital admissions. An ambulatory clinic at the Queen Elizabeth II Health Sciences Centre provides a range of nutrition services. The purpose of the present study was to identify possible trends that may effect the type and number of referrals to the Nutrition Education Clinic. The identification of such trends could lead to a more cost-effective utilization of ambulatory services. To conduct this study, a systematic sample of 120 male and female patients was retrieved from a list of all patients referred to the nutrition education clinic for three consecutive months from fall 2000 to winter of 2001. Data collected from the patient files included information regarding physician referral patterns, nutrition intervention provided, clinic wait times and client demographics. Results are pending.

Development of outcome indicators for the Saskatoon Community Clinic Good Food Box service

C.A. Thiessen, J.D. Stanger, Saskatoon District Health Dietetic Internship Program, Saskatoon, Saskatchewan.

This study aims to evaluate if the Saskatoon Community Clinic's Good Food Box service is meeting its goals of improved access to nutritious foods, improved nutritional status of clients, increased client awareness of nutrition issues and overall client satisfaction. . The study and results are to be obtained and framed in the form of outcome and process indicators. Based on the results of a literature review and the previously identified program goals a telephone questionnaire was designed and conducted with 34 consumers of the Good Food Box. Both past and present consumers of the service were included. Of the 34 consumers surveyed 16 were classified as current participants of the Good Food Box service and 18 as past participants. Those respondents currently ordering the Good Food Box reported a higher intake of fruit and vegetables over those respondents no longer accessing the service. Current participants also showed increased awareness of nutrition knowledge compared to past participants. Both current and past participants reported a high level of satisfaction with the service. Until the current results are established into benchmarks for future progress and follow-up, they lack significance in terms of program evaluation. Results from the telephone survey suggest that the community clinic's Good Food Box service is meeting some of its broader goals. Based on the results from this study potential outcome indicators have been developed. The next step is for the Community Clinic to refine the current information, survey and indicators, and proceed with tracking and setting targets for the future.

The most appropriate parameter to use for serum albumin when screening obstetrics patients

L.M. Thomas, Health Sciences Centre, Winnipeg, Manitoba.

Many physiological and biochemical changes occur during pregnancy. Biochemical data is assessed in pregnancy to gain an objective and precise indicator of nutritional status. Health Sciences Centre in Winnipeg, MB, uses an obstetrical screening tool to assess nutritional risk during pregnancy. Serum albumin, the most abundant plasma protein, is recorded on the screening tool to assess visceral protein status. The obstetric patient is considered to be at nutritional risk if their albumin level is below 35 g/L. Many obstetrics patients have albumin levels below 35 g/L, however, once assessed by a dietitian, many are not found at nutritional risk and results are considered to be false positive. A literature review indicated a range of 25-45 g/L, with an average of 30.3-45 g/L as acceptable levels for albumin in pregnancy. The literature indicated that albumin levels decreased in pregnancy more towards the latter stage, due to the expanded plasma volume that alters the concentration of serum proteins. The majority of the literature reviewed indicated that albumin did not have a significant effect birth weight, despite decreased albumin levels. A questionnaire regarding serum albumin levels was sent to dietitians who worked with obstetrics patients in hospitals across Canada. Results indicated an acceptable range of albumin levels between 25-56 g/L, with an average of 33.6-48.7 g/L. Four hospitals indicated that albumin was not specifically used to indicate nutritional status or routinely followed in pregnancy, due to the ambiguity of results related to fluid status. Based on a combination of the average reference values from the literature and results across Canada, 32-47 g/L was determined as the most appropriate parameter to use for serum albumin in pregnancy.

Perceived lactose intolerance in inflammatory bowel disease patients at Mount Sinai Hospital

T. Turrini, Hons.B.A.Sc., S.Brazel, MSc.RD, J.Robers, RD, V.Poulllos, RD. Mount Sinai Hospital, Toronto, Ontario.

Background: Lactose intolerance (LI) refers to the gastrointestinal symptoms experienced by individuals who lack the ability to adequately digest lactose. Many with IBD restrict dairy products due to perceived lactose intolerance, which may increase the risk of calcium deficiency and osteopenia. Few studies have investigated the proportion of IBD patients who unnecessarily restrict dairy due to perception of lactose intolerance, when in fact they are not intolerant.

Hypothesis: There is discordance between perceived lactose intolerance and clinically proven lactose intolerance in IBD patients.

Objectives: To determine the prevalence of lactose malabsorption in IBD patients using H₂ breath testing and the proportion of patients with IBD who accurately identified themselves as lactose intolerant. Also, to determine if patients routinely restrict dairy products, sources of nutritional advice and calcium supplementation, by self-reported questionnaire.

Study Design: Of the 962 IBD outpatient charts screened, 32 patients met eligibility criteria. *Twenty-two telephone questionnaires were successfully administered.*

Results: *Of the 22 patients (mean age 33 ± 11yrs, 64% males, 36% females) enrolled in the study, 77% were clinically LI. The questionnaire revealed that 9/22 patients perceived themselves to be LI and of these, 6/9 (67%) were clinically LI (according to H₂-breath test). Restriction of dairy was reported by 64% of patients and of these, 21% were restricting unnecessarily. Of the sub-group diagnosed LI and restricting dairy (n=11), 91% were not taking calcium supplements.*

Conclusions: Over half of IBD patients were able to predict clinical lactose intolerance. Many IBD patients are restricting dairy products and not taking calcium supplements. IBD patients may be at risk for calcium deficiency considering the decreased intake of dairy products and effects of disease and treatment.

Prevalence of poor appetite in an outpatient HIV population and its relationship to weight loss, viral load and CD4 count

S.E. Van Niekerk, S.M. Carere, St. Michael's Hospital (SMH), Toronto, Ontario.

Poor appetite is associated with decreased nutrient intake, which may lead to weight loss and adverse health outcomes. There is limited information on appetite ratings in people with HIV with only one very recent study reporting the prevalence of poor appetite in an HIV population in the Boston area (44%). The objective of the study is to determine the prevalence of poor appetite in an HIV outpatient population and its relationship to disease severity outcomes: weight loss, viral load and CD4 count. This is a prospective, cross-sectional, descriptive study involving 95 subjects who attend the HIV positive care clinic at SMH. After obtaining their written informed consent, participants will be surveyed using a researcher administered questionnaire that includes a 10-cm visual analogue scale to assess appetite, frequency of nausea and vomiting and weight loss. Anthropometric and demographic data will be collected from the participants' clinic chart including; height, weight (at present and 3 months prior), age, gender, country of origin, race, number of years since diagnosis of HIV, mode of disease transmission and medication regimens. Viral load and CD4 count will be obtained from routine blood work. SPSS data analysis software will be used to describe prevalence and relationships between variables. If a relationship is found between poor appetite and any of the specified end-points, dietitians can utilize this indicator to identify patients who may be at risk for malnutrition and perhaps for worsening of disease outcomes. This information may also lead to the development of intervention strategies to improve appetite and nutritional status in this population.

Using the internet to educate Canadian women on making healthy food choices

L. Williams, Dietetic Intern, Southeastern Ontario Comprehensive Dietetic Internship Program, Belleville, Ontario.

The Internet has become the second most common means for Canadians to get health information, second only to contact with health professionals. Women access the Internet for health-related topics more than any other group. A page on the Hastings and Prince Edward Counties Health Unit website will be developed to include nutrition information that would be of particular interest to women. The purpose of this project was to determine what nutrition information should be included. Three data collection methods were used: 1) review of both national and local data examining nutritional concerns of women, 2) a self-administered questionnaire distributed to all members of the Ontario Women's Health Network and female Health Unit staff, and 3) three key informant interviews with website developers. Almost three-quarters of Canadian women consider nutrition to be extremely or very important and yet only half get the recommended number of servings from each food group of Canada's Food Guide to Healthy Eating. When asked what they would be interested in seeing on a web page, the majority wanted information on making healthy food choices in the grocery store, how to prepare healthy meals at home, and healthy recipes. The key informants pointed out that individuals read information on websites differently than printed material. Websites tend to be scanned quickly; key words must be easily visible and text should be kept to a maximum of 250 words. Based on this research, the Health Unit's nutrition web page will target women and include information about making healthy food choices. The page will define what healthy food choices are and focus on the three areas of greatest interest to the women surveyed.

The effect of method of figure presentation when using figure drawings for body image assessment

N. Willows, PhD & M. Doll, Coordinated Dietetics Program, Edmonton, Alberta

Sets of figure drawings are a commonly used method of body image assessment. These sets contain a discrete number of figures ranging from underweight to overweight. Researchers have presented these figure drawings to subjects in a variety of ways. The objective of the study was to determine the effect, if any, of method of figure presentation on ratings made by subjects. Ratings of current, ideal and socially acceptable body sizes were elicited from 350 university students who had completed less than six years of university. Using one of three presentation methods, nine male and nine female figure drawings were presented in a questionnaire format to the subjects. In the first method, the figures were presented on paper in an ascending array from underweight to overweight. In the second method, the figures were presented on paper in a randomly ordered array. In the third method, each figure was placed individually on a card; the cards were fastened together in ascending order from underweight to overweight. Subjects among the three methods were comparable for age, height, weight and body mass index, although the number of years of university completed was significantly different among methods. Significantly different figure ratings were observed among all three methods of figure presentation for current figure, ideal figure and socially acceptable body sizes. The results suggest that figure presentation method may be responsible, in part, for results reported in body image assessment studies. The study adds to the growing body of literature that questions the validity of figure drawings for body image assessment.

Recommended versus actual dietary intake of calcium and vitamin D among the elderly long-term care residents at the veteran's pavilion units of the Dr. L.A. Miller Centre

J.P. Woodrow, L.M. Johnston, S. Varghese, Health Care Corporation of St. John's Dietetic Internship Program, St. John's, Newfoundland.

A three-day food record was used to assess the calcium and vitamin D intake of the study population (n=36). All residents who were medically stable, free from acute illness and who were not on tube feedings were included in the study. Written consent was obtained from participants and their families. Approval was obtained from the Human Investigations Committee and from the Health Care Corporation of St. John's. Calcium content of food was determined using the MedDietary nutrient analysis package. Mean calcium intake was $811.01 \text{ mg} \pm 270.60$ with an average of 1187.50 mg provided. Vitamin D content could not be obtained through MedDietary, therefore a manual estimation was calculated for each food item. Mean vitamin D intake was $157.96 \text{ IU} \pm 61.80$ with an average of 211.60 IU provided. A SPSS t-test showed that residents were not meeting the RDA for both calcium and vitamin D (1200 mg and 600 IU respectively). It was found that calcium and vitamin D intakes varied such that: demented residents consumed higher amounts than non-demented, residents able to communicate consumed higher amounts than those not able to communicate and residents able to eat independently consumed higher amounts than the eating dependent. Residents consuming a puree diet had the highest consumption of calcium and vitamin D of the 5 texture modifications studied. Considering the importance of calcium and vitamin D in preventing/managing hypertension, colon cancer and osteoporosis we recommend increasing collaboration among clinical nutrition/food services and nursing staff to ensure adequate intake of these nutrients in long-term care residents.

Validation of a Quick Visual Tool to assess patients' nutrient intake: A pilot study

E. Zamajski, K. Camelon, A. Murphy, J. Madill. University Health Network, Toronto, Ontario.

Nutrient analysis software currently used to assess nutritional adequacy is time consuming, labour intensive, and therefore costly. A Quick Visual Tool (QVT) based on Canada's Food Guide to Healthy Eating (CFGHE) to estimate nutritional adequacy is cost efficient but is it accurate? The objective of this study is to validate the QVT as an accurate method to assess nutritional adequacy. Overall, eighty 3-day food records will be examined. We now report on 20 randomly selected food records, which were analysed using Professional Diet Analyzer (PDA), a nutrient analysis program, and the QVT. Nutritional adequacy for the QVT was based on key nutrients for each of the food groups in CFGHE. These results were compared to the key nutrients determined by PDA. Statistical analysis was conducted using the Cross-tabulation Chi-square on SPSS. The analysis demonstrated that the key nutrient values for each of the food groups derived from the QVT were similar to those derived from PDA. Those individuals, who met CFGHE recommendations, using the QVT, also met the corresponding key nutrient RNI requirements via PDA analysis for Milk products (87.5%), Fruits and Vegetables (91.7%), Grain (100%) and Meat products (100%) groups. Preliminary results indicated that there was a positive association between the QVT tool and the PDA nutrient analysis.