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These abstracts represent research projects of dietitians that were accepted through a peer-review process for presentation.

**Indicates the presenter*

[R] = Research abstract

[E] = Experience-sharing abstract

Education and Counselling

Dietitians' Perceptions on Childhood Sugar Intake

*M.J. Cooper**, *A.V. Piekartz*, *S.H. Zlotkin*, *Division of Gastroenterology/Nutrition, Program in Metabolism, Research Institute, The Hospital for Sick Children, Toronto, Ontario. [R]*

Literature addressing the contribution of added sugars in children's diets has largely concluded that there are no adverse health effects except for an association with dental caries. Despite this, many parents remain concerned about the role of sugar in healthy eating. Given that pediatric dietitians are in the position to influence the food choices children make, little information is known about the practices and attitudes of dietitians regarding this nutrition issue. The objective of the current research was to examine the practices and attitudes of dietitians related to school-age children's sugar intake using survey data collected as part of a larger study that assessed the awareness, practices, and attitudes towards pediatric dietary policy. A self-administered questionnaire was sent to 509 members of Dietitians of Canada who had indicated skills in pediatrics on their 2000 membership application. The response rate for the study was 70% (N=356). 303 of these dietitians met the study criteria of working in the field of pediatrics. 45% of dietitians recommended practice involved the suggestion that, 'the consumption of a variety of foods (including meals and snacks) is important. Therefore, it is not necessary to make any recommendations for sugar intake.' The majority of dietitians indicated that sugar restriction was important (35.6%) or somewhat important (31.4%) for 6-12 year olds. Dietitians held affirmative attitudes (strongly agree, somewhat agree) towards the moderate use of foods high in sugar to avoid dental caries (83%) and obesity (70%). These results suggest that the apparent divergent practice and attitudes regarding sugar intake reflects a growing need to make improvements in the dissemination of nutrition policy to dietitians.

Evaluation of the efficacy of a nutritional follow-up among patients discharged from a geriatric assessment unit

*J. Cowan Weber**, *H. Payette*, *G. Lacombe*, *Sherbrooke Geriatric University Institute (IUGS), Québec [R]*

The objective of this study was to evaluate the impact of a systematic nutrition follow-up on dietary intake and nutrition status in patients treated for malnutrition in the Geriatric Assessment Unit of the IUGS and discharged to the community, group homes or to nursing homes. Among 75 eligible individuals, 41 consented to participate in the study and were randomly assigned to one of two study groups after stratification for sex; experimental group (E) and control group (C). Subjects (E) received nutritional follow-up counselling by a dietitian at their residence within two weeks following discharge and two telephone calls at two and three months post discharge. Among 41 elderly subjects who accepted to participate, 33 completed the study (15 E; 18 C). Socio-demographic characteristics of the two groups during hospitalisation were similar. Nutritional intervention during hospitalisation resulted in significant increase in serum albumin levels ($p < .001$) in both groups. The majority of subjects were discharged to either private residences with meals provided or free living with a significant other. Two weeks following discharge both groups had adequate and similar daily protein intakes. Three months post-discharge, experimental subjects had maintained adequate daily protein intakes while a decrease was noted in (C) ($p < .01$). Daily vitamin B₆ and niacin intakes were similar in both groups two weeks post-discharge but were significantly higher in (E) as compared to (C), three months post-discharge ($p < 0.05$). No differences were noted in energy, other nutrients or serum albumin levels. This study demonstrates that a three month systematic nutrition follow-up by a dietitian following discharge from a Geriatric Assessment Unit improves dietary quality in elderly individuals identified at nutrition risk.

Variability in protein content of meals and snacks offered in long term care facilities

W.J. Dahl, S.J. Whiting & J.R. Sanden. College of Pharmacy and Nutrition, University of Saskatchewan, and S.L. Hildebrandt, Luther Care Communities, Saskatoon, Saskatchewan. [R]*

The provision of adequate protein to residents of long term care is vital, as many are known to suffer from malnutrition. As residents of long term care consume only ⅓-¾ of food offered, it may be necessary to offer more protein/day than that which meets requirements. As 1g protein/kg body weight is a suggested estimate of protein requirements, 1.3 -1.6 g/d may need to be offered. The objectives of our study were to determine the week to week variation of protein offered to residents of long term care and assess the protein contribution of snacks. Menu analysis was carried out to determine the daily and weekly protein content offered in the standard five-week rotation menu. Ingredients, amounts and serving sizes of all foods in the five-week rotation menu were recorded. Analysis, using Food Processor ® Nutrient Assessment Program, showed that 77g of protein/day was offered with weekly averages ranging from 65-86 g/day. Although offered twice a day, snacks provided only 4% of protein (14% of energy). The average protein requirement for residents in the test facility was estimated at 61 g/day, therefore, it would be prudent for the menu to offer 81- 97 g/day. Only 2 of 5 weeks in the rotation menu offered this level of protein. We conclude that the protein offered may be insufficient when partial intake of residents is considered. As snacks provided little protein, steps should be taken to improve the protein content of snacks offered.

Supported by the Saskatchewan Pulse Crop Development Board and Parrheim Foods.

Collaborative development of a skill-building cooking and nutrition program for persons at risk for or affected by diabetes

G. Kasten, W. Barrett, M. Blanchet, S. Graves, A. Noc, E. Thirsk, D. Van Walleghem, Cooking for Your Life! Steering Committee, Canadian Diabetes Association, BC - Yukon Division, Vancouver, British Columbia. [E]*

"Cooking for Your Life!" is a 12 hour community-based "hands on" cooking and nutrition education program funded by the Canadian Diabetes Association to develop healthy eating habits, nutrition knowledge and cooking skills for diverse groups at-risk for or affected by diabetes. Multiple collaborations have contributed to the success of the program. These include program development by a cook educator, dietitians and the Canadian Diabetes Association education team (to ensure the cooking and nutrition information taught was practical and appropriate in content). School districts host the course through their Continuing Education

programs. Health Canada, Canadian Diabetes Strategy contributed funding for course materials' development including a participant handbook, facilitators' manual, and consultation with diverse groups to adapt and translate program materials for their needs (these include the Chinese community, people who are hearing-impaired and families of children with type 2 diabetes). Facilitators' and promotional videos are being developed in collaboration with Capilano College media program students and Canadian Diabetes Association staff. The program includes three cooking sessions held in a home economics classroom and one supermarket-based nutrition education session. The co-facilitators, a cook educator and a dietitian, provide techniques that encourage participants to make healthy changes (i.e. strategies for setting goals; modifying recipes for fat, fibre and sugar content; reading labels; planning meals; and increasing fruit and vegetable consumption.) Participants apply their newly-acquired nutrition knowledge to the recipes they cook in class. This program demonstrates how dietitians can consider using broad-based collaborative approaches to develop and implement cooking and nutrition education programs.

Beginning a new nutrition conversation with consumers: creating messages that work

L.J. Kelly, S.T. Borra, M.B. Shirreffs, S.B. Rowe, S.M. Goldberg, International Food Information Council, Washington, DC. [E]*

Nutrition communications are key to all dietitians' success in motivating healthy eating and physical activity behavior change. However, sometimes the path of nutrition communications follows a one-way street—messages reach the consumer, but do we know how, or even if, these communications have impact? Advertisers and marketers often use a five-step process to obtain consumer input about a potential product or campaign. It became apparent that marketing models used to sell tangible "product" can also be applied to the food, nutrition, and physical activity "product." The International Food Information Council utilized a marketing tool to develop message concepts on dietary fats and sweet foods. Through a series of consumer focus groups, creative message development, and qualitative validations, several basic message concepts were developed which resonate with consumers. By utilizing this process, dietitians can maximize communications with their clients, and facilitate the maintenance of balanced, healthful lifestyles. Knowing what consumers are thinking and feeling about their food choices, why they make the decisions they do, and how they respond to nutrition messages are essential to successfully communicating and motivating behavior. Subsequently, dietary information can be conveyed in a way that is received in an understandable and actionable manner by consumers. In other words, a dialogue to talk *with* consumers, rather than *at* them, should be established.

Nutritional deficiency in newly diagnosed head and neck cancer patients in Northeastern Ontario

S. Lamoureux, S. O'Keeffe, P. Ho-Tai, P. Demeyre, C. Vaillancourt, D. Gauthier-Frohlick, Supportive Care Program, Supportive Care Oncology Research Unit, Northeastern Ontario Regional Cancer Centre, Sudbury, Ontario. [R]*

The objective of this pilot study was to assess the nutritional status of a group of newly diagnosed head and neck cancer patients prior to radiation therapy at the Northeastern Ontario Regional Cancer Centre (NEORCC), Sudbury, Ontario. Nutritional status was assessed using dietary, anthropometric, and biochemical parameters. Four-day measured food records including nutrition supplements, alcohol, and vitamin preparations were used to quantify dietary intake. These were analyzed using the Canadian Nutrient Database (CANDAT). Stature, weight, elbow breadth, mid-arm circumference, and both triceps and subscapular skinfold thicknesses were measured as anthropometric parameters. Fasting blood samples were analyzed for biochemical indices including: serum, folate and RBC, B12, total iron binding capacity, Zn, prealbumin, albumin, and ferritin. Thirty newly diagnosed head and neck cancer patients (22 men, 8 women), without metastatic disease, from the NEORCC completed the study prior to beginning a course of radiation treatment. Food records showed low intakes of energy, protein, magnesium, calcium, zinc, vitamin E, and folate. However anthropometric and biochemical data only indicated deficiencies in protein and iron status in 5 and 4 patients respectively. The data suggests that this population is entering radiation treatment with adequate nutrient stores but sub-optimum intakes thus placing them at risk for compromised nutritional status. Current referral practice is appropriate (all head and neck patients planned for radiation treatments are referred for nutrition counseling). In addition, efforts to encourage patients to decrease alcohol intake and encourage consumption of nutrient dense foods earlier need to be enhanced. Further studies should focus on early nutrition interventions related to lean body mass and micronutrient levels.

Attitudes, but not knowledge, of dietetic professionals in Maine affect practices regarding complementary/alternative medicine

Jennifer Lawrance, D. Klimis-Zacas, P. Pratt, University of Maine, Orono, Maine. [R]*

Consumer interest in complementary and alternative medicine (CAM) has increased substantially in the past thirty years, as the knowledge of the link between diet and disease has grown and health care costs have risen and accessibility has decreased. The objective of the study was to determine the knowledge and attitudes of dietitians and diet technicians in Maine regarding the use of CAM. Members of the Maine Dietetic Association

were mailed surveys using a modified Dillman method. Of the respondents (n=260; response rate=63%), 73% were dietitians and 26% were diet technicians. While nearly all dietetic professionals considered knowledge to be important/very important about nutrient supplements (96%) and functional foods (93%), somewhat less percent (80%) perceived knowledge of herbal products as important/very important. Fewer respondents considered themselves knowledgeable/very knowledgeable about nutrient supplements (71%) and functional foods (58%); only a small percent (19%) indicated knowledge of herbal products. Over half (56%) of respondents were dissatisfied with their overall knowledge of CAM. Media was the greatest source of informal education for respondents. Over 80% perceived nutrient supplements and functional foods as safe/very safe, while only 21% perceived herbal products as safe. Respondents perceived nutrient supplements to be most effective and herbal products least effective in maintaining health and treating and preventing disease. Attitudes about CAM did affect practices, but knowledge did not. In order to educate clients and consumers, it is imperative that dietitians recognize and address issues posed by the alternative medicine revolution. The results of this study may provide guidance to the American Dietetic Association for the development of practice guidelines and education requirements regarding complementary/alternative medicines.

Calcium Intake: Can Individuals with Self-Reported Lactose Intolerance Meet Age Appropriate Adequate Intake Levels?

H.Y. Lovelace, S.I. Barr, R. Levy-Milne, Human Nutrition, University of British Columbia, Vancouver, British Columbia. [R]*

Numerous studies indicate that more people claim to be lactose intolerant than there actually are, which suggests widespread misconceptions exist. However, little research has assessed how people decide that they are lactose intolerant, and the nutritional implications of this perception. Perceived lactose intolerance may be just as important as true lactose intolerance since dietary changes may ensue, possibly compromising calcium intake and increasing osteoporosis risk. The objective of this study was to assess calcium intake of individuals with self-reported lactose intolerance. Participants, recruited through newspaper advertisements, completed a food frequency questionnaire to estimate calcium intake from food and supplementary sources. Questions to elicit information on diagnosis and demographics were included. A total of 159 participants completed and returned questionnaires (84% response). Respondents were 47 ± 15 yrs, 72% female and 28% male, 67% Caucasian, and most had self-diagnosed their lactose intolerance. Mean estimated food calcium intake was 591 ± 382 mg/d. There were no significant differences by sex or age, nor was there an age-by-sex interaction.

Only 11.5% of participants met their age-appropriate Adequate Intake (AI) levels from food calcium sources alone. However, two-thirds of participants reported consuming calcium supplements, which significantly increased calcium intake to 1313 ± 711 mg/d, and increased the proportion of participants meeting their AI to 65.5%. In comparison to large population studies (Alaimo, McDowell, Breifel et al., 1994) participants in this investigation had lower estimates of calcium intake from food sources alone. Thus, health professionals involved in diagnosis of lactose intolerance should be encouraged to discuss calcium needs, food sources of calcium and calcium supplementation with those self-reporting lactose intolerance to promote individuals' ability to meet AI levels.

The perceptions of clients regarding nutrition counselling in the acute care setting

R.Nasser, S.L.Cook, Clinical Nutrition Services, Regina Health District, Regina, Saskatchewan. [R]*

To date there have been few Canadian studies that assess the value of nutrition counselling by Dietitians from the perspective of in-patients. There is a growing need to quantify this information to not only secure financial support for Dietitian services but also to provide feedback to Dietitians regarding their service. The purpose of this study was to measure the perception of clients of the counselling session in the acute care setting using Hauchecorne and co-workers (1994) survey. This survey was mailed one week after discharge to 304 clients from 2 acute care hospitals. Dietitians provided counselling to in-patients in this study requiring specific diet modifications for diabetes, heart health, surgical conditions and general nutrition. The majority of clients were seen for diabetes and heart health counselling. Of the 304 clients, 164 responded (54% response rate). Ninety-three percent of respondents agreed that the Dietitian provided useful information and 94% identified the Dietitian as knowledgeable. Eighty-eight percent of respondents reported that the Dietitian provided advice specific to their needs and 91% identified that anyone with their condition should talk with a Dietitian. The results are encouraging for Canadian Dietitians providing in-patient nutrition counselling services. This study confirms that the provision of in-patient nutrition education is valued by the client and Dietitians do make a difference in the lives of clients. This is the first part of a two part study funded by CFDR.

Dietary Intervention for Bowel Care and Maintenance in Long-term Care

H.S. Selig, J. Boyle, Valley Nutrition and Food Services, Middleton, Nova Scotia. [R]*

This study reviews the development and implementation of a program for bowel care in a forty-four resident

nursing home in Nova Scotia, based on a multi-disciplinary approach. The care team, comprised of nurses, dietitians, and physicians, developed a dietary fibre formulation supported by water and exercise programs. Post program, an 80% reduction in the number of residents requiring medical interventions for bowel care and maintenance was observed. After adjustment of the dietary formulation to include flaxflour (milled flaxseed) as an alternative to the whole flaxseeds and bran, there was an equivalent reduction in the use of enemas. Residents and staff have shared in the benefits which this program has provided. These benefits include less intensive nursing care, greater resident control over their own bowel care, and reduced pharmaceutical costs.

Health related quality of life and health care utilization: a pilot study with overweight women participating in a behavioural weight loss program *H. Toews*, P. Brauer, M. Gray, S. Schwenger, University of Guelph, Guelph, Ontario. [R]*

Health related quality of life (HRQL) and health care utilization are policy relevant health outcomes of group-based behavioural weight loss programs. This pilot study evaluated short- and long-term changes in these outcomes. Overweight women were recruited from LessOn Lifestyles (G&S Nutrition Communication Consultants Inc.), a commercial weight loss program that promotes moderate, lifelong behaviour change and was a 1998 recipient of a "Speaking of Food and Eating" award from Dietitians of Canada. Anthropometric data and HRQL, assessed by eight scales of the SF-36, were collected at baseline, program completion (10 weeks) and one year. Self-reported health care utilization over the past three months was assessed at baseline and one year. Data were analysed by mixed model methods for repeated measures (SAS ProcMixed). Of 103 participants, 60 women were initially recruited and 27 (ages 25 to 74) completed all measures. All analyses were adjusted for age and initial BMI. In study completers, weight decreased 4.9% over one year (mean \pm SE: 87.8kg \pm 3.3 to 83.4kg \pm 3.3, $p=0.002$), with no weight regain. Physical function ($p=0.04$), role-physical ($p=0.005$), body pain ($p=0.0004$), vitality ($p=0.02$) and social function ($p=0.06$) SF-36 scores improved after program completion. At one year these scores were above baseline levels but were no longer statistically significant. General health, role-emotional and mental health scores did not change. Health care utilization also did not change. Participants achieved sustained moderate weight loss accompanied by improved physical dimensions of HRQL. The clinical and policy relevance of these promising results needs to be confirmed in a larger study. Dietitians should consider evaluating programs for HRQL.

Learning about the food groups: An experience in facilitated learning

J.M. Triandafillou, L.M. English, St. Francis Xavier University, Antigonish, Nova Scotia. [E]*

This study evolved from concerns expressed by the public, and in the literature, that nutrition information can be confusing. A facilitated small group approach was used in two nutrition workshops to assist learners address their specific needs for information. The workshops were each conducted in two 90-minute sessions, and included a pre-registration to assess needs and a follow-up interview. The main activity was an experiential exercise in which participants analyzed their diets using food composition tables partitioned into the four food groups. They then compared the nutrients in their food records to recommended values. By reflection and discussion they were able to associate the nutrients with particular food groups, and plan ways to improve their diets. They also participated in other activities that provided them with information and enabled discussion of topics that were personally relevant to group members. The workshops were evaluated using two questionnaires filled out by participants during the workshop and an interview with the facilitator a month later. Participants reported improved eating habits as a result of the workshop and noted aspects of process which contributed to their learning, including participation, sharing, interaction, atmosphere, and discussing their own questions. Studies on the use of facilitated groups to teach nutrition are limited. In these workshops nutrition information was shared among group members, and between the facilitator and the group. Based on this experience we recommend facilitated learning as an option for presenting nutrition information to the public; and for reaching a number of learners, while preserving individual contact and addressing their specific needs.

The “Population health promotion tree”– An innovative plain language teaching resource

E. M. Vogel, Population & Public Health Branch Alberta/Northwest Territories, Health Canada, Edmonton, Alberta. [E]*

The “Population Health Promotion Tree” is a plain language educational resource designed to assist community-based health professionals increase knowledge and awareness of population health promotion with stakeholder groups, and the public at-large. The resource creatively employs the parts of an apple tree (i.e., roots, trunk, branches, leaves, flowers, and fruit) to facilitate discussion related to a population health approach. In linking health promotion and population health theory, the text and illustrations draw on the World Health Organization’s definition of health, and the Guiding Principles from the Ottawa Charter on Health Promotion. The educational resource has generated positive feedback from health professionals and community stakeholders seeking to increase their understanding of population health promotion. The diverse examples of effective strategies have assisted users in understanding important population health promotion principles and terminology including health determinants, intersectoral collaboration, “upstream approach”, and “evidence-based.” The 2002 resource was developed by the Health Promotion Association of Lethbridge and Area, in partnership with the Chinook Health Region, and the Population and Public Health Branch-Alberta/NWT (PPHB-Alberta/NWT), Health Canada. Dissemination plans have not been finalized at this time. It is anticipated that English and French versions of the resource will be available on the PPHB-Alberta/NWT web site. The “Population Health Promotion Tree” is a practical, easily accessible, and valuable addition to the toolkit of resources employed by community-based health professionals, including dietitians and dietetic educators. The oral presentation will provide an overview of the recently released “Population Health Promotion Tree.” The presenter will emphasize how the educational resource can be used with diverse groups of community stakeholders to increase knowledge and facilitate discussion related to population health promotion.

Children and Youth

Parents' awareness and application of dietary fat messages for preschool children

M.L. Campbell, L. Corby, H.J. Milton, Department of Foods and Nutrition, University of Manitoba, Winnipeg, Manitoba. [R]*

Health Canada recommends that fat should not be restricted for children. This study examined parents' awareness and application of this message in a telephone survey of parents of children, 24-48 months, in Manitoba. A three-step process was used to develop the survey questionnaire: focused group discussions, expert review, pilot testing. Open-ended questions explored what parents had heard or read about fat, what fat-related preparation and buying practices were used, and which sources of information were used. Responses were analyzed thematically. Of parents contacted, 90% (n=722) participated. Fewer parents had heard/read something about what to do about fat in the preschool diet than in the adult diet (42 vs 91%). Sixty-five percent had heard/read that adults should eat less fat, while only 20% had heard/read something about the fat recommendation for children, more often talking about moderation than restricting fat. Main sources of information included print media (76%), especially magazines; family/friends (52%); own experience/common sense (40%); and, health professionals (37%). Over 80% reported they did something to influence the fat their preschooler ate by modifying preparation or buying practices, or limiting certain foods. Higher-fat milk was viewed as either acceptable for preschoolers or acceptable only to a certain age, usually 2 years. Dichotomous thinking was evident in parents' classification of fat as either "good" (from nutritious foods) or "bad" (from low nutrient foods). The premise that adults, but not children, should limit fat contributed to buying lower- and higher-fat forms of some foods (e.g., milk, cheese, yogurt) for different family members. These results highlight the importance of helping parents make food choices in the context of the total diet. (Funding from the CFDR)

Manitoba School Food and Nutrition Survey

P. Fieldhouse, Manitoba Health, Winnipeg, Manitoba. [R]*

A survey was conducted to obtain baseline data on food-related activities, programs and policies in Manitoba schools. The purpose of the study was to identify current practice and areas of nutritional concern in schools that would inform action by agencies and government departments concerned with promoting child health. A self-administered questionnaire covering topics such as student health, food provision, facilities, fundraising, commercial sponsorship and school policies was sent to all public schools. A seventy percent response rate was

achieved. The results indicated that food allergies and obesity were the most common health-related concerns, followed by eating disorders and hunger. Thirteen percent of schools offered breakfast programs, with the main funding support coming from the schools themselves or their school divisions. School facilities for food provision were frequently described as inadequate. One in three schools received some form of sponsorship by food and beverage companies and vending machines - many featuring the products of these companies, were found in half of all schools. Food was a popular fundraising item in the form of school hot-dog and pizza days; chocolate was the product of choice for out-of-school sales. Food also featured in social and cultural contexts and in both curricular and non-curricular activities. School or divisional policies, which were few, dealt mainly with fundraising or with food allergies. The survey showed clearly that eating is an important material and cultural element of school life and that schools invest significant human and financial resources in administering food services and programs. While there are widespread concerns over hunger, obesity and unhealthy eating habits there is little evidence of co-ordinated approaches that address healthy eating in the context of the whole school and that strive for consistency between pedagogic and environmental messages.

How effective is an innovative day treatment program for youth with moderate to severe eating disorders?

D. Gomez, K.A. Henderson, A. Buchholz, C. York, Eating Disorders Program, Children's Hospital of Eastern Ontario, Ottawa, Ontario. [R]*

The Day Treatment Program at the Children's Hospital of Eastern Ontario is for youth with moderate to severe eating disorders who are medically stable but who require intensive treatment and support. This innovative program provides nutritional, medical, educational, and intensive psychotherapeutic treatment from an interdisciplinary team, including a full time dietician. The effectiveness of day treatment programs for adolescents has not been demonstrated with research. Treatment outcome in comprehensive treatment programs has little research so far. Preliminary outcome data from the first two years since the opening of the program will be presented. Analyses focussed on the short-term treatment goals of medical rehabilitation, normalization of disturbed eating, and improved psychological functioning. Eating disorder symptomatology was measured with the Eating Disorder Inventory-2 (Garner, 1991) and the Binge Scale (Hawkins, 1980). Psychological functioning was measured with the Children's Depression Inventory (Kovac, 1992) and the Multidimensional Anxiety Scale for Children (March, 1997). Body mass index and

menses were also measured. The preliminary findings indicate that the day treatment participants' medical, nutritional, and psychological functioning significantly improved from the beginning to the end of treatment. The practical challenges of nutritional rehabilitation within a pediatric eating disorder day treatment program will be discussed.

A Survey of food and nutrition policies in Saskatchewan school divisions

C.J. Henry, W. Dahl, College of Pharmacy and Nutrition, University of Saskatchewan, Saskatoon, Saskatchewan. [R]*

Adequate nutrition is seen as a major influence on the growth and development of school-aged children. In recent years, national and international governments have recognized the importance of school policies in achieving positive health outcomes for children. The Comprehensive School Health (CSH) Framework that defines a healthy environment as hygiene, safety, foods and nutrition, has been adopted by the Saskatchewan Department of Education. It is not known whether school divisions in the province have responded to this framework through the development of food and nutrition policies. The purpose of this study was to examine the current food and nutrition policies of Saskatchewan School Divisions in regards to foods sold, offered, encouraged and nutrition education, in addition to the curriculum, provided. A letter, requesting information on all past and present School Division's food and nutrition policies, was mailed to all Directors in August, 2001, with a follow-up letter in October. Of the 33/101 responses, 30 indicated that they had no formal policy, one division was currently involved in policy development, two had discussions at the board level and two expressed interest in receiving a template for the development of food and nutrition policies. Only two reporting school divisions had in place a food or nutrition policy. The results of this study indicate that school divisions have not adequately responded to the CSH Framework and may need guidance in the form of a template for food and nutrition policies. Further investigation is required to determine possible issues and related concerns associated with implementing the CSH framework. Supported by the Isabelle Irwin Awards, College of Pharmacy and Nutrition, University of Saskatchewan.

The habit of eating while watching television, the frequency of consumption of specific foods and food preferences, as reported by Quebec children

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Statistics suggest that Canadian children spend almost 16 hours per week watching television (Statistics Canada,

2001). This North American lifestyle has inspired research studies relating the numbers of hours of television watched to obesity, the food categories being advertised on television, the effect of watching television at mealtime on the consumption of food advertised on television, among others. The objective of the present study was to explore whether or not, in the Quebec context, the habit of consuming food while watching television is related to specific food behavior and to food preferences of children. A self-administered questionnaire, part of a larger project, was completed by 543 10-year-old children. The questions included items concerning the frequency with which children reported eating in front of television, eating healthy and less healthy foods, the frequency with which they requested advertised foods, the importance given to healthy food choices and the frequency with which they received weight-related comments from their peers. Statistically significant correlations were obtained where children spending more hours eating in front of television reported eating more unhealthy foods, making more requests for advertised foods and receiving more negative, weight-related comments from their peers. Moreover, statistically significant correlations showed that children spending less time eating in front of television reported eating more healthy foods and were more motivated to select healthy foods. By pinpointing which foods correlated to children reporting the habit of consuming food while watching television, it will be possible to suggest strategies for nutritionists working with children and families.

Research financed by the Danone Institute of Canada

Evaluating the school health index as a motivational tool for nutrition change

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The School Health Index is a tool to help schools complete a nutrition and physical activity self-assessment and is based on the Comprehensive School Health Model. This research evaluated the usefulness of a Canadianized version of the index to motivate New Brunswick schools to undertake improvements to nutrition during one school year. Three randomly selected elementary schools were chosen. Baseline data on school instruction, food services, and the school environment were collected through three-day observations prior to schools' completion of the index. Schools completed the index, and half the team members (n=15) were selected to complete 20 minute semi-structured interviews following the index to determine their response to it. Three-day post index observations were also completed. Results indicated a positive response by team members to the index. They felt it

gave them greater focus, expanded nutrition beyond the school to parents and community health professionals, and broadened their views toward school nutrition. Differences between pre-and post-observations included the introduction of a healthy snack program for all students, involvement of a dietitian in parent meetings at school, a request for a dietitian to review a school cafeteria menu, and expanded nutrition month activities led by a parent. Further actions are planned at each school, including expansion of a school breakfast program, modifications to school lunch, and greater integration of nutrition into day-to-day school activities. Challenges to change include financial pressures on school food services, attitudes to nutritious foods by students and staff, the role of nutrition policy, and the coordination of nutrition education, services, and environments within schools. The research was funded by the New Brunswick Medical Research Fund.

Nutrition Messages on Saturday Morning children's Television: 1989-1998

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Past research has indicated television viewing plays an active role in shaping health attitudes, beliefs and behaviours. As well, increased viewing time has been linked to increased incidence and prevalence of obesity. Hence, the purpose of this study was to identify and describe food related messages on Canadian network Saturday morning children's programming. A total of 16 hours of programming was videotaped on a randomly selected Saturday, from 3 networks (CTV, CBC, YTV) for each of 3 years (1989, 1994, 1998). Content analysis with a tested coding tool gathered coded data from commercials and programs. Data analysis indicated that significant differences ($p \leq 0.05$) existed between years within each network and that the number of messages differed between networks. Nutrition messages and food portrayals varied from current nutrition guidelines, with emphasis given to foods higher in fats and sugars and lower in fibre and nutrient density. Body image messages favoured a slim, female body type and vilified larger body sizes for both genders. These results support recommendations for media literacy programs and media advocacy for improved balance in mediated nutrition messages.

Pregnancy and Infant Feeding

Nutrient intakes and growth of very preterm infants born <28 weeks gestation

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Recent studies indicate that postnatal growth failure occurs in the vast majority (>90%) of very preterm infants. The purpose of this study was to describe nutrient intakes and growth of very preterm infants born <28 wks gestational age (GA) aggressively fed with predominantly nutrient fortified expressed breast milk (EBM). All infants born at <28 wks GA, admitted during 1998-1999 to a neonatal intensive care unit, and were fully enterally fed at 32wks, and still hospitalized at 36wks post-menstrual age (PMA) were eligible. Infants were fed either EBM with commercial milk fortifier or preterm infant formula aimed at achieving recommended energy and protein intakes (P-RNI). Infants were

monitored daily and if growth rate was <15 g/kg/d, supplemental energy was added as fat (Microlipid®). Intake data were retrospectively collected. Weight at birth and at 36wks PMA were compared to Canadian growth standards. Seventy five infants with GA (mean \pm SD) of 25.5 ± 1.0 wks and birth weight of 782 ± 167 g were studied. Four infants were small-for-gestational-age (SGA). At 32 and 36wks PMA, total fluid intakes were 158 ± 8 and 152 ± 18 ml/kg/d, energy intakes were 140 ± 13 and 127 ± 24 kcal/kg/d, and protein intakes were 3.5 ± 0.4 and 3.0 ± 0.5 g/kg/d. At these same time points, 61% and 57% of infants received >75% of milk volume as EBM. As for growth, 52% of infants were below 3rd percentile at 36wks PMA, in contrast to literature reports of >90%. These findings suggest that individualized monitoring and supplementation with additional energy beyond P-RNI (105-135 kcal/kg/d) may result in improved postnatal growth in very preterm infants.

Enhanced weight gain in preterm infants on lactase-treated feeds: a randomized, double-blind, controlled trial

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The objective of this study was to evaluate whether lactase-treated preterm feeds have a beneficial effect on weight gain and feeding tolerance in premature infants. The design was a prospective, double-blind, randomized, controlled trial involving 130 infants (26-34 weeks post-conceptual age). The primary outcome variable was weight gain (g/day). Other outcome measures included gains in length and head circumference, biochemical indices, feeding intolerance and incidence of necrotizing enterocolitis (NEC). On Study Day (SDAY) 10, daily weight gain (mean \pm SEM) of the treatment group was significantly greater ($P < 0.05$) than the control group (20.4 ± 1.8 g/d vs. 15.5 ± 1.6 g/d). By study end, no significant difference in weight gain between treatment and control groups was observed. There were no significant differences in caloric intakes, length gain, head circumference gain, feeding intolerance and incidence of NEC. The difference in serum albumin level was statistically significant at SDAY 14 with a value of 29.3 ± 0.6 g/L in the treatment group compared to 27.1 ± 0.4 g/L in the control group ($P < 0.01$). These results suggest that weight gain may be enhanced during the period of low functional lactase activity of prematurity by the addition of lactase to preterm feeds. No adverse effects on feeding tolerance resulted from lactase treatment of preterm feeds.

Evaluation of the effectiveness of the Perinatal Feeding Team

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The objective was to identify factors associated with improvement in children who had received services of the Perinatal Feeding Team (PNF) and to determine the effectiveness of this model of care. Forty-three children met the eligibility criteria; they were divided into "Improved" and "Not Improved" groups. Rating of improvement was by consensus of PNF at closure. Measures used included growth, intake, Parenting Stress Index (PSI) and a Parent Feedback Form. Statistical tests included t-tests, Chi-Squares and Fisher's Exact tests. The two groups did not differ significantly on birth and health variables. Decreased growth velocity was the most frequent reason for referrals in the Improved group (72.7%), whereas it was suspected oral motor sensorimotor dysfunction for the Not Improved group (80%). The latter group was seen initially at a significantly younger age ($p = .006$), but then transferred to other treatment services, whereas the Improved group

were followed by PNF a significantly longer period ($p = .007$). Growth and nutrition status were comparable for groups initially; any differences were non-significant at closure. Of the 81% PSI forms completed, parents' self-reported stress levels were not significantly different between the two groups. Many premature children with feeding difficulties stemming from sensory-oral aversion improved with the PNF approach, whereas children with more significant motor based feeding problems did not. Ratings by therapists of degree of change, using specific objective criteria, indicated that nearly 77% improved following service, whereas 97% of parents rated their children as improved in feeding. The improvement in feeding for these children suggests that sensory-oral aversion in children with perinatal difficulties can be ameliorated by a multidisciplinary feeding team approach.

Association among age, parity, and food insecurity on pregnancy weight gain attitudes

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Attitudes toward weight gain can influence the weight gain itself and the maternal outcomes such as birth weight of infants, mortality and morbidity. While the prevalence of varying attitudes related to weight gain during pregnancy has been well documented, there is little research on the association among age, parity and food security or socioeconomic status on weight gain attitudes. Thus, the purpose of the present study was to examine the association among age, parity as primipara or multipara, and level of food insecurity on pregnancy weight gain attitudes. Eighty nine women representing the Northern, Central, and Western regions of Nova Scotia were selected using a quota non-probability sampling strategy. Measures included background questionnaire, Pregnancy Weight Gain Attitude Scale (Palmer et al., 1985), and Household Food Security Scale (Blumberg et al., 1999). All questionnaires were completed by trained interviewers. The age of the participants ranged from 17 to 38 (26.1 ± 5.1), 52.1% were primiparas and 36.6% were food insecure. In terms of the attitudes regarding weight gain during pregnancy, 3.4% had negative attitudes, 42.7% had neutral attitudes and 53.9% had positive attitudes. Regression analysis showed that only age was a significant correlate of pregnancy weight gain attitude, with older women having a more positive attitude related to weight gain. Neither parity nor the level of food security was related to pregnancy weight gain attitudes. The results of the present study have implications for maternal and fetal health, particularly related to 1) a higher prevalence of food insecurity among pregnant women in Nova Scotia and 2) the association between young age and negative attitudes about weight gain.

A Practical Workbook to Protect, Promote and Support Breastfeeding in Community Based Projects

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This presentation shares the process of developing a workbook to assist community based projects such as the Canada Prenatal Nutrition Program (CPNP) to protect, promote and support breastfeeding within a population health context. This workbook was initiated through a partnership between the Breastfeeding Committee for Canada and the CPNP. Throughout the process, an array of Canadian organizations and individuals, including CPNP project staff, partners and volunteers, provided valuable feedback and suggestions. What began as a need for a simple statement on breastfeeding evolved into a comprehensive workbook with key strategies, follow-up actions and stories woven throughout the workbook, reflecting examples of CPNP activities that nurture successful breastfeeding within its' population. The workbook supports global breastfeeding standards such as the International Code of Marketing of Breastmilk Substitutes and the UNICEF/WHO Baby-Friendly Initiative. Challenging issues related to the protection of breastfeeding in vulnerable populations were widely reviewed. As a result, a "Food for Thought" section of the workbook was developed. This section captures what has been learned from the research and experiences of over 300 CPNP projects across Canada gathered through sources including: a National 'Think Tank' on breastfeeding, on-line discussions, funding renewal reports, national evaluation and participant focus groups and case studies. Current thinking on issues such as the linking of food supplements to breastfeeding; responding appropriately to women in circumstances where a baby may not receive breastmilk or an appropriate breastmilk substitute; and vitamin D supplementation; are shared. The workbook will continue to evolve as we expand our knowledge and experience of breastfeeding in the community. This workbook is also a model for presenting other topics within community based prenatal programs.

Effectiveness of early fortification of breastmilk in very low birth weight infants

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We examined the effectiveness of early supplementation of expressed breastmilk (EBM) with human milk fortifier (HMF, Similac Human Milk Fortifier®) in very low birth weight (VLBW) infants (BW \leq 1250g). A retrospective review was performed on 2 non-concurrent cohorts of VLBW infants, before and after adopting

revised feeding guidelines, aimed at earlier EBM fortification (i.e. at \geq 100ml/kg/d vs. at \geq 48 hrs of full-volume feedings). Infants who received EBM were included; infants who expired within 2 weeks of life or who developed necrotizing enterocolitis before HMF introduction were excluded. Feeding details and clinical information were extracted from hospital records. The 22 infants from 2000 (Cohort A) and the 20 infants using revised guidelines in 2001 (Cohort B) were similar in gestational age, birth weight, SNAP-II scores, and major diagnoses. Enteral feedings were initiated at 3.7d and 3.4d, and full-volume feedings (\geq 135ml/kg/d) were established at 31 \pm 12d and 26 \pm 9d, respectively (ns). HMF was introduced significantly earlier in Cohort B (24 \pm 9d vs. 32 \pm 16d, $p<0.05$), with corresponding earlier achievement (30 \pm 9d vs. 37 \pm 16d, $p<0.05$) of maximal nutritional intake (protein intake \geq 3.5g/kg/d). Optimal weight gain was achieved significantly earlier and was greater in Cohort B following the achievement of maximal intake (21g/kg/d vs. 20g/kg/d) (ns). Cohort B experienced a significantly greater intake of calories (122 \pm 4kcal/kg/d vs. 119 \pm 7kcal/kg/d, $p<0.02$), protein (3.7g/kg/d vs. 3.5g/kg/d, $p<0.01$), calcium (5.9mmol/kg/d vs. 5.4mmol/kg/d, $p<0.02$) and phosphorous (4.2mmol/kg/d vs. 4.0mmol/kg/d, $p<0.02$) following this phase. There were no adverse effects of HMF and no differences in feeding intolerance between groups. The results indicate early breastmilk fortification is safe and effective in providing earlier and higher nutrient delivery with earlier optimal weight gain. Disclosure: Grant-in-aid from Abbott Laboratories, Canada.

Dietetic Administration and Practice

Communication of inpatient allergen information

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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 reliability uncertainties regarding information from a patient's previous admission record, 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.

Dietetic intern perception of prior learning assessment

D.J. Lordly, Mount Saint Vincent University, Halifax, Nova Scotia. [E]*

Prior Learning Assessment (PLA) is a process for documenting competence gained through formal and informal opportunities. While this approach has been endorsed by adult educators, it has not been widely used in dietetic education even though many students entering internship have significant prior experience. At Mount Saint Vincent University, graduate students with work experience relevant to dietetics are given the opportunity to develop a portfolio documenting competence in lieu of formal internship experience. This study describes the experiences of graduate students (n=2) participating in a

pilot test of the process. These students were using PLA to document experience in one of the three required practice modules, and both were awarded "exceeded entry level" competence as a result of the attestation. After completing the documentation process, students participated in a semi-structured interview consisting of 16 open-ended questions concerning the authority to attest competence, practice areas eligible for credit, relationship of transferable skills, influence of the process on subsequent learning, and the risks and benefits of obtaining/not-obtaining prior learning credit. Results indicate that students viewed the PLA as a positive experience. Thematic analysis revealed increased confidence, a sense of accomplishment, and an appreciation of the opportunity to build relationships with professionals in the field. Students also benefit in that PLA allows more appropriate placement during formal internship training. In view of the limitation on placements available for practical internship experience, PLA can be a useful alternative to the more traditional approach. This study shows that the process of doing the PLA is a beneficial experience for students choosing to go this route.

Entrepreneurship and recent dietetic graduates

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Environmental change is influencing the roles of dietitians with an emphasis on initiative, innovation and entrepreneurship, within organizations or independently. The purpose of this study was to determine the current or intended entrepreneurship by graduates of a dietetics program, as influenced by self-perceived competence in entrepreneurship education experiences, internal and external environmental factors. This study employed an exploratory descriptive methodology with an ethics approved, validated, self-administered questionnaire distributed to graduates (1994 to 1998) of the MSVU dietetics program. Data from the returned questionnaires (n = 90) was analyzed with Microsoft Excel2000 Analysis ToolPak for descriptive statistics. Two-way table analysis and the Chi-Square test for independence were used to assess relationships between internal and external factors, and involvement in entrepreneurship. Seventy-six percent of all respondents had business planning education. Forty-one percent of those with this education indicated that they either have or intend to start a business while only 20% of those without business planning education have or intend to start a business. There was no significant difference between low and high self-perceived competence evaluations of entrepreneurship education experiences and entrepreneurship. Internal factors most often identified as helpful to entrepreneurship were creativity, business skills and persistence; while lack of skills in business

and/or technology, and creativity, hindered. External factors most often identified as helpful were knowledge/skills gained from education and internship, and employer support; while lack of financial resources, job security and/or employer support, hindered. It was concluded that there was a strong relationship between entrepreneurship in early careers of dietitians and their education experiences. This study illustrates the importance of incorporating entrepreneurial training in dietetic education and the need for ongoing training and support systems to enable dietitians to be successful in entrepreneurship.

Yukon First Nations Dietetic Internship Program: a unique approach

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Culturally sensitive, holistic approaches to health and nutrition are necessary because of the northern geography, demographics and the tripartite approach to government in the Yukon. The program is jointly funded and delivered in partnership with the Yukon Hospital Corporation; Council for Yukon First Nations; Yukon Government; London Health Sciences Center and Aboriginal Organizations. The program was created to address the need for Registered Dietitians, with cultural capacity, to provide expertise in aboriginal communities. The uniqueness of this program lies in the capacity of the organization, stakeholders and providers to combine First Nation's culture and professional competency. Intended learning outcomes are achieved in the program through application of a competency-based framework, performance objectives, enabling activities, and performance appraisal. The framework outlines six areas of competency and allows for a holistic and professional approach to nutrition. Specific cultural competency statements are currently under development. Performance objectives, enabling activities, tools, resources and appraisal methods are designed, where possible, within the cultural context of First Nations people.

Enabling activities expose interns to First Nations Diabetes Wellness, Traditional Diet, Traditional Medicine, Interpretation Services, First Nations nutrition care, and First Nations Communities. First Nations Registered Dietitians working for Yukon Government and First Nations Health Programs participate actively in the assessment, planning, implementation, evaluation, marketing and delivery of the program.

The Yukon First Nations Dietetic Internship Program received accreditation from Dietitians of Canada in 1999. Four First Nations graduates have since entered the profession and two more interns are enrolled each year. The program enhances capacity at the professional level and increases the likelihood that programs and services

have the desired impact on First Nations people and populations.

Multi skilled worker implementation impact on patient food service satisfaction

M. Mueller and J. Claessens*, London Health Sciences Centre, London, Ontario. [E]*

In 1997, a multi skilled worker model, called the Patient Service Associate (PSA), was implemented at LHSC to provide single person contact between support services and the patient. The PSA role was designed, implemented and continues to be maintained by Support Services in conjunction with Patient Care. As part of their role, PSAs took on previous dietary worker functions of tray, nourishment and water delivery, tray pick up, opening containers for patients, menu selection assistance and stocking nourishment supply rooms. A four week PSA training program included four hours of food service education administered by nutrition assistants. PSAs were instructed on basic food handling skills, patient diets, menu marking, meal service standards, tray delivery and pick up, nourishments, water delivery and customer service. Joint meetings with food services, PSAs, PSA leadership and patient care provides feedback and develops action plans to maintain food service standards. Annual and daily patient food service satisfaction surveys gather information on PSA related food service tasks and reports the results back to the specific PSA - patient care area for discussion and follow up. Prior to PSA implementation in 1996, annual patient food services satisfaction surveys indicated that overall patient satisfaction was 90%. With the inception of the PSA program, the 1997 survey results indicated 88% satisfaction and continues to remain high at 87% in 2001. Daily surveys rate PSA assistance with menu marking, opening packages, and courteousness. PSA assistance on these levels are high with December 2001 results at 84%, 82% and 88%, respectively. Collaborative relationships between the PSA program and food service department has developed a successful multi skilled role implementation and maintained quality food service standards at the patient bedside.

Revision of the Saskatchewan Nutrition and Dietetics program

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Ongoing concern regarding the uncertainty faced by students competing for dietetic internships was the driving force in the early 1990s for a major curriculum review of the Nutrition Program at the University of Saskatchewan. The initial task was to survey Saskatchewan dietitians to ask if they philosophically accepted the principle of including professional practice

requirements in the degree program. An overwhelming majority of practitioners favored this principle. After several years of planning, a revised program that included academic preparation and the required professional experience was approved in 1998. A model unique to Saskatchewan was developed through a partnership between the University, the Regina Health District and Saskatoon District Health. Influencing factors included budget constraints and the nature of dietetic practice in Saskatchewan. Issues included determining the numbers of students that could be accommodated in professional placements, admission criteria and the roles and responsibilities for those involved. A Nutrition Program Partnership Coordinating Committee was formed to set the direction for the program, coordinate its delivery and evaluate its outcomes. Program applications are accepted following one year of university in Arts and Science. The application process includes a testing of critical thinking skills and evaluation of a personal profile. Professional Practice classes begin in year one and focus on developing professional competencies. The majority of professional practice experience occurs in year 4. The first graduating class of twenty-two students in May 2002 is evidence of successful planning and change. The Partnership Committee continues to guide the program and work on challenges with this model. These include determining the numbers to accept into the program, admission and promotion standards, and the roles and responsibilities of the committee.

Telehealth: Improving access to nutrition education

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Telehealth enables health care professionals, including Clinical Dietitians at the Atlantic Health Sciences Corporation, to link to remote sites across the province. Patients and health professionals communicate with the aid of audio and visual components through Internet Protocol on the Local Area Network.

Telehealth improves quality, access, acceptability, and patient cost in patient care. The Telehealth program is being utilized to conduct nutrition assessment and client education for outpatient clinics at the Grand Manan Hospital on Grand Manan Island, New Brunswick. Prior to the use of the Telehealth program, the dietitian was required to travel from St. Stephen to Grand Manan, a three hour trip including a ferry ride, and stay overnight at a local bed and breakfast. One day a month was available to see clients at the hospital. With the use of the Telehealth program, patients are now being seen on a weekly basis through the Diabetic and Hypertension Clinics at the hospital, as well as individuals that are referred by their family physician. The use of the Telehealth program has therefore increased the quality of care by allowing for shorter waiting lists for nutritional assessment and education. Access to outpatient nutrition

counseling has improved by having appointments available one day a week rather than one day a month. Acceptability is improved as patients can be seen more frequently for follow up visits. Patient acceptability of the new technology is very well received. Improvements in cost are present in terms of decreased dietitian travel costs for the Nutrition and Food Services Department of the Atlantic Health Sciences Corporation. This experience-sharing project will include a poster presentation and a demonstration of the Telehealth equipment used at the Atlantic Health Sciences Corporation.

Pilot project “ready to serve” meal service- Oromocto Public Hospital

B.J.Thompson, E.Archibald, Food Service Department, Region 3 Hospital Corporation, Fredericton, New Brunswick/ARAMARK Canada Ltd [E]*

In 1997, the Region 3 Hospital Corporation Board of Directors approved that the corporation move forward to purchase and implement current meal service and delivery systems to support patient food service. The approach was conservative due to funding availability and the New Brunswick experience with “rethermalized food”. In April 2000, a pilot project at the Oromocto Public Hospital was approved. This provided the opportunity to evaluate the cart technology, economic feasibility and patient satisfaction of the system before considering implementation on a larger scale. The pilot project “went live” in June 2000 for 16 months. The Oromocto Public Hospital is a 55 bed community hospital, with an inpatient medical unit and a rehabilitation and geriatric unit. The site provides meals on wheels, a cafeteria and is the primary day surgery centre for the region. Patients receive both trayed meals and bulk service. Trayed meals are cold-plated. Table service in a “home-like” dining room is provided on the rehabilitation and geriatric unit.

Patients select their menu choices at the time of service. Food carts for both trayed meals and a bulk cart for dining room service utilize convection heating. Food production uses a 60/40 mix of foods purchased “ready to serve” and prepared on-site. Production peaks have been removed from the workload. There was no reduction in staffing. Non-nursing duties were transferred from nursing staff to food service. The outcomes of the pilot were very positive. Hot foods were hot and cold foods cold. Patient satisfaction surveys indicate patients were very satisfied. There was less food waste. Food costs were reduced. Table service in the dining room improved the food intake of patients and is in keeping with the current care philosophy for a geriatric population. Food Service now delivers and picks-up meal trays and provides table service. Nursing can focus on providing nursing care to patients. The pilot was a success. Other sites in the region are currently under review.

Development of a dietetic employment survey

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In recent years, Dietitians of Canada (DC) has surveyed graduates of dietetic internships and other post graduate programs. More recently, DC has embarked on an initiative to survey employers of recent graduates in addition to graduates, to evaluate how well graduates are prepared for employment in dietetics at one year post-graduation, using electronic technology. The feedback from these surveys will contribute to the improvement of existing internship programs and indicate employment trends within the field of dietetics. The survey was developed as an 18-item questionnaire for the graduates and a 14-item questionnaire for employers that includes details on employment status and evaluation of knowledge, competencies and skills. After peer review by content experts, the surveys were sent to 3 employers and 3 recent graduates for feedback on content and process. Revisions to the survey tool were made based on this feedback. The survey was then sent via

electronic mail to 60 dietetic educators across Canada for suggestions on improvement of the survey tool and the administration process. Based on feedback from dietetic educators, a thematic analysis was carried out. Overall, dietetic educators found the survey worthwhile and are willing to participate in the survey. Dietetic educators provided suggestions to improve content and organization of the questions within the survey. Concerns about the survey included: timing of the survey, terminology used in the survey and the ability of dietetic educators to find e-mail addresses for recent graduates. It is anticipated that this survey will be adopted as a national tool used to identify trends within the dietetic field and determine how well interns are being educated and trained in dietetics.

Food Intakes and Adult Health

Perceptions of healthy body weight among health professionals in Wolfville, Nova Scotia: A Pilot Study

L.L. Boates, S.E. Hogan, School of Nutrition and Dietetics, Acadia University, Wolfville, Nova Scotia. [R]*

The prevalence of overweight and obesity in Nova Scotia is reaching astonishing proportions (Nova Scotia Health Survey, 1996). Taking this into consideration, the purpose of this study was to identify perceptions of healthy body weight among health professionals in the area of Wolfville, N.S., and evaluate these perceptions. 16 health professionals including 2 physiotherapists, 2 nurses, 4 doctors, and 8 dietitians responded to a questionnaire that was developed to determine perceptions of healthy body weight including related attitudes, practices and knowledge level. Results showed that forty-four percent of respondents had specialty training in obesity management. Although concern for excess body weight was high among the professionals surveyed, the mean rate of counseling about exercise across all professionals studied was only forty-seven percent and mean scores for knowledge were also consistently low among the professionals. Eighty-one percent of the sample had correct perceptions about personal body weight and an accurate assessment of healthy weight ranges. No negative stereotypes about overweight persons were identified in this study. Fifty-six percent of subjects cited a lack of time, training and information as barriers to counseling attempts. Fifty

percent cited patient factors, such as lack of motivation, as barriers. Overall, the health professionals practiced sound treatment methods. Although the health professionals demonstrated strengths in many areas of weight counseling, further professional-related education was needed to increase their confidence and involvement in obesity management. In addition, more effort should be made to treat and follow all persons in need of weight counseling, encouraging physical activity. These recommendations may prove instrumental in partly ameliorating the high rates of overweight and obesity seen in Nova Scotia today.

The relationship of body mass index to depression in Nova Scotians

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It is well established that increased body weight is related to a host of chronic diseases but less certain is its relationship to mental health. Data from the 1995 Nova Scotia Health Survey were analyzed to determine the relationship between BMI and the risk of depression as measured by the Centre for Epidemiological Studies Depression Scale (CES-D). Clinical measures for height and weight and CES-D scores were available for 2,658 subjects from an initial sample of 5,578 Nova Scotians stratified probabilistically to be representative of age,

gender and area of residence. BMIs were categorized according to the international standards (BMI 18.5 – 24.9 acceptable weight; 25 – 29.9 overweight; ≥ 30 obese). Of the participants, age ranged from 18 to 98, 48% had more than 12 years of education, 72% had an annual income of over 20,000 dollars, 34.7 % were overweight and 24.5% were obese. Slightly more women were obese than men (25.8 vs 23.4 %). Based on the summary score of the CES-D (≥ 16), 15% were categorized as depressed. Logistic regression indicated that years of education ($p < .001$), income ($p < .001$) and BMI category ($p < .05$) were all significantly related to risk of depression. The results indicated a U-shaped curve with BMIs in the acceptable and obese categories associated with an increased risk of depression. There was a significant interaction among BMI category, sex and age and between BMI category and sex; thus the association between weight status and risk of depression was different for men and women and varied across the lifespan. Understanding the relationship between depression and weight may help in the design of more effective weight management programs.

Food expenditure patterns in Canada: implications related to the affordability of nutritious foods

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Studies in several countries have found income-related differences indicating that those of higher socioeconomic status have diets more conducive to good health. Despite the paucity of population-based dietary intake surveys in Canada, the existing evidence suggests similar patterns in this country. Considerable nutrition research in Canada has focused on low-income groups, finding substantial levels of nutrient inadequacy, suboptimal nutrient intakes, and limited food selection among subsamples of the low-income population. Also, there is some evidence to suggest that the adoption of healthy eating patterns is complicated for low income Canadians by the higher costs of some recommended foods. Secondary analyses of data from the 1996 Family Food Expenditure Survey, undertaken to compare food expenditure patterns between low- and higher-income households, indicate that the quantity and selection of foods in many Canadian households is constrained by income. Specifically, low income appears to limit the purchase of dairy products and fruits and vegetables, even though low-income households place no less priority than other households do on the purchase of these foods. The effect of low income on milk product purchases persists when the sample is stratified by education and expenditure patterns examined in relation to income within strata. Constraints appear to be more pronounced among low-income households with housing payments compared to those without housing payments. The availability of nutrients to low-income households

follows a similar pattern, most notably for calcium and vitamin C. Our findings indicate that among Canadian households, access to foods from food groups promoted for good health may be constrained in the context of low income, highlighting the need for attention to the affordability of nutritious foods.

Benefits and barriers to fruit and vegetable consumption among adult women consumers on Prince Edward Island

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The consumption of 400 gm/day or more of a variety of vegetables and fruit could decrease overall cancer incidence by as much as 20%. PEI Nutrition Survey data indicated that the mean intake of vegetables and fruit among adults, aged 18-74 years was 160 gm for men and 230 gm for women. The objective of our study was to identify the means by which vegetables and fruit can be changed on PEI. The specific aims were to determine the perceptions of adult women regarding the nutritional benefits and health-promoting attributes of vegetables and fruit and to identify perceived barriers. Forty in-home interviews were conducted with women (ages 20 - 49), with and without children at home, who were either meeting the recommended intake of 5 or more servings of vegetables and fruit daily or who were not. Interviews were transcribed and analyzed by thematic coding. Results indicate that although effort and time are perceived as major barriers, if there are children in the home who will eat a particular food, it will be prepared. Women who ate more than 5 servings per day talked about being "conscious" of the importance of vegetables and fruit and their impact on overall health. Suggestions for increasing consumption included food skill development and convenient recipes, promotional activities in the grocery store and nutrition education. A lack of knowledge about the number and size of servings needed per day was also an issue, despite an awareness of the existence of *Canada's Food Guide to Healthy Eating*. This study indicates that multiple strategies are needed to address this problem.

Challenges in developing an instrument to assess overall dietary and nutritional quality

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Developing a dietary assessment tool or adapting an existing instrument is a daunting task. We report on the development and validation of a 73-item self-administered semi-quantitative food frequency questionnaire (FFQ) for adult Quebecers. Our instrument had to: 1. reflect Quebecers' dietary reality; 2. capture usual diet and intake variability for foods and nutrients; 3. provide a summary measure of diet quality; be: 4. valid at the individual and group level; 5. able to classify participants by relative nutrient intakes for hypothesis testing; 6. simple and relatively inexpensive to administer. A stepwise, population-based approach was used to adapt an existing tool, the Block National Cancer Institute Health Habits and History Questionnaire (HHHQ). The HHHQ, associated analysis software and documentation were downloaded from the DietSys website, and transformed to reflect research goals. Specifically, data from the 1990 Enquête québécoise sur la nutrition were used to build the food list, determine consumption frequency options and portion sizes, and update the nutrient database to reflect Canadian food composition data. Ancillary questions were modified and others added. The questionnaire layout was redesigned to be attractive and conducive to accurate recording of responses. Visual tools were developed to aid respondents provide valid information, and cover letters, nutrient profiles and innovative rewards for participation were designed. All materials were developed and pretested in French and English. Recruitment and communication methods were tested and instituted. Finally, a validation strategy was devised, pretested and integrated. The authors hope that this validated dietary assessment instrument will contribute to regular nutrition monitoring in Québec and serve as a model for other Canadian nutrition research.

Nutrient intakes among adult Islanders: The PEI Nutrition Survey

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The objectives of the PEI Nutrition Survey (PEINS) were to estimate dietary intakes of Islanders aged 18-74 and identify groups at nutritional risk based on dietary intakes. A stratified sample of 1,995 adults were surveyed using home interviews; a 71% response rate was achieved. A peer reviewed protocol consistent with other provincial nutrition surveys was utilized. A 24 hour recall and a second non-consecutive recall (1/3 of sample) and the CANDI system for Nutrient Analysis using the 1991 version of the Canadian Nutrient File

were used to estimate nutrient intakes. Nutrient intake data were adjusted for intra-subject variation prior to statistical analysis. Dietary adequacy was assessed by determining the number of respondents with nutrient intakes above the relevant Estimated Average Requirement (EAR) or Adequate Intake (AI). Total fat intake exceeded the recommended 30% of energy in all age/sex groups, with more than 40% of men (18-64) consuming 35% or more energy from fat. Folate was the nutrient most likely to be inadequate, with <5% of women and <10% men having intakes above the EAR. Calcium intakes declined with age, with few men and women >50 having intakes above the AI (7-8% and 0-2%, respectively). Only 1/5-1/3 of women and men >30 had magnesium intakes above the EAR. Women were more likely to have inadequate zinc intakes compared to men. Vitamin C was also identified as a concern in approximately half of the sample. Results are comparable to other provincial surveys. The PEINS has provided population based dietary information for the first time since 1970, and has identified potential target groups for health promotion interventions in the province.

Abstracts Presented by Dietetic Interns

Note: These abstracts represent research projects of dietetic interns across Canada and were not subject to the DC peer-review process.

1. C.A. Thiessen, J.D. Stanger
Saskatoon District Health Dietetic Internship Program
Saskatoon, Saskatchewan
Development of outcome indicators for the
Saskatoon Community Clinic Good Food
Box service
2. H. Boensch, P. Cheng, H. Hynes
Saskatoon District Health Dietetic Internship Program
Saskatoon, Saskatchewan
Investigation of the Emergency Department
Meal Service within Saskatoon District
Health
3. G. M. O'Grady and C. J. Sakowsky
Saskatoon District Health Dietetic Internship Program
Saskatoon, Saskatchewan
Comparison of inulin and modified starch
as a thickening agent in the preparation of
thickened fluids
4. J.J. Dickie, T.N. Stadnyk
Professional Practice 4, Dietetic Internship
University of Saskatchewan
Saskatoon, Saskatchewan
Assessing the Availability of Breastfeeding
Resources in Saskatchewan
5. K. Deutscher, J. Hayden, C. Placatka*, M. Laycock,
C. Pilat-Burns
Saskatoon District Health Dietetic Internship Program
Saskatoon, Saskatchewan
Communication of inpatient allergen
information.
6. A. Jardine and L. Bender
Calgary Health Region
Calgary, Alberta
Educational resources for overweight
children and their families
7. Jennifer K. Fowler
Calgary Regional Dietetic Internship Program
Calgary, Alberta
Nutrition services in Canadian neonatal/
perinatal follow-up programs: The role of the
dietitian
8. A. Beach , J. Biehler, J. Frame, J. Lee
Calgary Regional Dietetic Internship Program
Calgary, Alberta
Patient food preferences in the Calgary
Health Region
9. L.T. Lee
Calgary Health Region Dietetic Internship
Calgary, Alberta
Supports and barriers to intake of calcium
and vitamin D in continuing care
10. N. Willows, PhD and M. Doll
Coordinated Dietetics Program
Edmonton, Alberta
The effect of method of figure presentation
when using figure drawings for body image
assessment
11. R. Gagnon
Internat en diététique de l'Hôpital régional
Dr Georges-L. Dumont
Moncton, N.B.
Détermination des besoins énergétiques
et administration des lipides lors de
l'alimentation parentérale totale
12. C. MacGregor, C., Palmer, J. Taylor
Queens Region/UPEI Integrated Dietetic Internship
Program Charlottetown, Prince Edward Island
Evaluation of a school based universal
breakfast program in Charlottetown,
Prince Edward Island

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| 13. | Palmer, C; MacGregor, C. and Dr. Taylor
Queens Region/U.P.E.I Integrated Dietetic Internship
Program Charlottetown, Prince Edward Island | Breakfast Skipping and Eating Behaviours
Among Elementary School Children in
Prince Edward Island |
| 14. | K. Parsons
McGill University
Montreal, Quebec | Progression of meals post-surgery: opinions
of patients |
| 15. | L.P. Dybenko
McGill University
Montreal, Quebec | Comparison of arm span versus knee height
method for the estimation of stature using a
flexible tape measure |
| 16. | M. Lyroudias, N.Haddad
McGill University
Montreal, Quebec | The Acceptability of Flaxseed
Supplementation by Low Income, Pregnant
or Postpartum Lactating Women |
| 17. | S. Mercure
McGill University
Montreal, Quebec | A meal satisfaction survey after
implementation of a non-selective menu |
| 18. | E. A. Boyle, E. E. Woodbeck,
C. Basualdo-Hammond Capital Health
Dietetic Internship Program
Edmonton, AB | Appropriateness of enteral nutrition
utilization in Capital Health |
| 19. | N.D. Delbaere
Health Sciences Centre
Dietetic Internship Program
Winnipeg, Manitoba | Protein modification and liver disease:
determining the optimal amount |
| 20. | S. Kizar
Health Sciences Centre
Dietetic Internship Program
Winnipeg, Manitoba | Nutritional screening tool for Health
Sciences Centre PsychHealth Centre |
| 21. | K. Klassen
Health Sciences Centre
Dietetic Internship Program
Winnipeg, Manitoba | Renal out-patient display |
| 22. | G. Le Gal
Health Sciences Centre
Winnipeg, Manitoba | Evaluation of snack consumption provided to
inpatients and developing recommendations
to minimize snack waste |
| 23. | T. Ly
Health Sciences Centre
Winnipeg, Manitoba | Development of nutrition education resources
for patients with spinal cord injury |
| 24. | J. Maytchak
Health Sciences Centre
Winnipeg, Manitoba | Obesity and Poor Surgical Outcomes |
| 25. | J. McCaine
Health Sciences Centre
Winnipeg, Manitoba | Management of corticosteroid-induced
osteoporosis in post lung transplant patients |

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| 26. | L. Oakley
Health Sciences Centre Dietetic Internship
Winnipeg, Manitoba | Evaluation of nutritional oral supplements provided to patients |
| 27. | N.D. Rogers
Health Sciences Centre
Dietetic Internship Program
Winnipeg, Manitoba | Gastrostomy tube feeding: a family decision |
| 28. | L.M. Shaw-Hoepfner
Health Sciences Centre
Dietetic Internship Program
Winnipeg, Manitoba | Nutritional management of corticosteroid-induced hyperlipidemia in lung transplant recipients |
| 29. | L.M. Thomas
Health Sciences Centre
Winnipeg, Manitoba | The most appropriate parameter to use for serum albumin when screening obstetrics patients |
| 30. | A.E. Allin
Southeastern Ontario Comprehensive Dietetic Internship Program
Brockville, Ontario | Canada Prenatal Nutrition Program: Nutrition education component for the Good Food for A Healthy Baby groups in Leeds, Grenville and Lanark Counties |
| 31. | A. K. Cheyne
Southeastern Ontario Comprehensive Dietetic Internship Program
Kingston, ON | Folic acid awareness campaign for female students enrolled at a local college and university |
| 32. | A. Logan
Southeastern Ontario Comprehensive Dietetic Internship Program
Belleville, ON | The role of the dietitian in assisting primary caregivers with the nutritional needs of children with Down syndrome |
| 33. | K.M. DuChene
Southeastern Ontario Comprehensive Dietetic Internship Program
Kingston, ON | Volunteers as nutrition education partners in elementary schools |
| 34. | L.C. Matheson
Southeastern Ontario Comprehensive Dietetic Internship Program
Brockville, Ontario | Development of an intervention program for overweight children and their families |
| 35. | L. Williams
Southeastern Ontario Comprehensive Dietetic Internship Program
Belleville, ON | Using the internet to educate Canadian women on making healthy food choices |
| 36. | T.M. Griffore
Southeastern Ontario Comprehensive Dietetic Internship Program
Kingston, ON | Filling the Gap - A Summer Snack Project |
| 37. | J.P. Woodrow, L.M. Johnston, S. Varghese
Health Care Corporation of St. John's
Dietetic Internship Program
St. John's, Newfoundland | 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 |

38. C. P Dawson, S. Varghese
Health Care Corporation of St. John's
Dietetic Internship Program
St. John's, Newfoundland
The macro- and micro-nutrient intake of patients at the Dr. L.A Miller Centre identified at high risk of skin break down
39. M. Pilgrim, S. Varghese
Health Care Corporation of St. John's
Dietetic Internship Program
St. John's, Newfoundland
Fiber intake and laxative use among older adults admitted to the Geriatric Assessment and Rehabilitation unit of the Leonard A. Miller Center
40. L. Hannah
Capital Health Regional
Dietetic Internship Program
Edmonton, Alberta
Evaluation of the Environmental Scan for Healthy Eating Is In Store For You™
41. A. M. Bower and H. Selig
Integrated Dietetic Internship Program,
Mount Saint Vincent University
Halifax, Nova Scotia
FLAXFLOUR Bowel Care Program in Long Term Care
42. C. M. Somers, J. Caruso-Ditta, D. Klar, and L. Hoffman
University Health Network
Toronto, Ontario
Utilization of the Transtheoretical Model for nutrition program planning for overweight patients at the University Health Network – a pilot study.
43. D. Chu, R. Figueroa, K. Balko, G. Berall
University Health Network
Toronto, Ontario
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.
44. E. Zamajski, K. Camelon, A. Murphy, J. Madill
University Health Network
Toronto, Ontario
Validation of a Quick Visual Tool to assess patients' nutrient intake: A pilot study.
45. J. Horbal, B. Lemon, C. Chatalalsingh, M. McCarney, J. Ringash
University Health Network, Princess Margaret Hospital
Toronto, Ontario
Development of a quality of life questionnaire module for measuring the impact of enteral feeding on head and neck cancer patients: phase 2
46. M. Noseworthy, L. Hines, S. Colucci, M. Mori
University Health Network
Toronto, Ontario
Pre-dialysis urea levels as an early indicator of Protein Energy Malnutrition in the hemodialysis population: A Pilot study.
47. N. Hallett, L. Kirste, R. Figueroa
University Health Network
Toronto, Ontario
Achieving optimal blood glucose control: An opportunity for dietitians
48. S. Beaman, D. Fierini, T. Burden
University Health Network
Toronto, Ontario
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?

49. S. Minicucci, BAsC, J. Madill, RD, MSc, M. Mori, RD, CDE
University Health Network
Toronto, Ontario
The use of vitamin, mineral, and herbal supplements in the lung transplant population at the University Health Network.
50. D. Chislett and N. Ross
St. Michael's Hospital
Toronto, Ontario
The Adequacy of Dietary Management among Homeless Adults with Diabetes Mellitus in Toronto
51. S.E. Van Niekerk, S.M. Carere
St. Michael's Hospital
Toronto, Ontario
Prevalence of poor appetite in an outpatient HIV population and its relationship to weight loss, viral load and CD4 count
52. A. Chan, C.K. Colapinto
St. Michael's Hospital
Toronto, Ontario
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
53. T. Turrini, Hons.B.A.Sc., S.Brazel, MSc.RD, J.Robers, RD, V.Poulllos, RD.
Mount Sinai Hospital
Toronto, Ontario
Perceived lactose intolerance in inflammatory bowel disease patients at Mount Sinai Hospital
54. V. Hau, S. Brazel, E. Collins, K. Mitchell
Mount Sinai Hospital
Toronto, Ontario
Factors that influence breastfeeding incidence and duration in the neonatal intensive care and high-risk antepartum/postpartum units at Mount Sinai Hospital.
55. J. Arcand, S. Brazel, F. Berkoff, M. Choleva, G.E. Newton
Mount Sinai Hospital
Toronto, Ontario
Dietitian counseling versus usual care for a sodium restricted diet in patients with heart failure
56. H. Asafo-Akouwah and M. Atkins
Capital Health Dietetic Internship Program
Edmonton, Alberta
Staff Evaluation of Home Care Nutrition Services
57. A. N. Gillies, P. Lai, D. C. Leech
Regina Health District Dietetic Internship Program
Regina, Saskatchewan
The introduction of a nutrition screening tool at the Allan Blair Cancer Centre (ABCC)
58. A.J. Clatworthy, A.L. Anderson
Regina Health District Dietetic Internship Program
Regina, Saskatchewan
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
59. J. Arthur, A. Oxelgren, E. Woo
Regina Health District Dietetic Internship Program
Regina, Saskatchewan
Clients with HIV and their perceptions towards nutrition, barriers and community supports
60. J.S. Calvert, R.K. Sereda, T.L. Soutar
Regina Health District Dietetic Internship Program
Regina, Saskatchewan
Do patients on total nutrition support receive recommended nutrition orally before nutrition support is discontinued?

61. L. Beauchamp, A. Young
St. Michael's Hospital
Toronto, Ontario
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)
62. L. Devitt, J. Buccino, D. Daneman
Hospital for Sick Children
Toronto, Ontario
Sweetener Intakes of Children with Type-1 Diabetes
63. A. Nash, K. Sherwood, J. Saab, D. Secker, D. O'Connor
Hospital for Sick Children
Toronto, Ontario
Investigating and quantifying differences in weight and length percentiles among Tanner-Whitehouse, National Center for Health Statistics and Center for Disease Control growth charts
64. M. Fortin, D. Mager, H. Richards, C. Jackson, P. Pencharz,
Hospital for Sick Children
Toronto, Ontario
Are the energy needs of the pediatric Crohn's disease population being met with current TPN therapy?
65. A. M. Berridge, M. J. Taylor
Capital Health Dietetic Internship Program
Halifax, Nova Scotia
Early nutrition intervention and nutrition status outcome in acute care hospitalized patients
66. C. A. Collins, W. M. Clancy, C. Burgess
Capital Health Dietetic Internship Program
Halifax, Nova Scotia
Swallowing assessment in acute stroke patients: comparison of the assessment using the nursing dysphagia protocol with the assessment by the dysphagia team
67. C. D. Lavandier, D. MacInnis, S. MacIntosh
Capital Health Dietetic Internship Program
Halifax, Nova Scotia
Organization of an educational seminar between the capital district health authority department of food and nutrition services and its suppliers of food and equipment
68. J. Loder, J. Sparkes
Capital Health Dietetic Internship Program
Halifax, Nova Scotia
Does nutrition education in an outpatient cardiac rehabilitation program translate to diet change?
69. J. D. Pinksen, B. Conrad
Capital Health Dietetic Internship Program
Halifax, Nova Scotia
The evaluation of a breastfeeding support line
70. N. A. De Amicis, P. J. Canning, E. A. Cummings
Capital Health Dietetic Internship Program
Halifax, Nova Scotia
Night snacks and adolescents with type 1 diabetes: attitudes and behaviors
71. N. Forooghian, D. Keys
Capital Health Dietetic Internship Program
Halifax, Nova Scotia
Impact of self-management practices on quality of life of adults with type 2 diabetes
72. J. Thibodeau, D. Aldous
Capital Health Dietetic Internship Program
Halifax, Nova Scotia
Assessment of changing trends in nutrition education clinic referral patterns over a 24 month period

73. T. MacKinnon, M. Murton, B. Conrad
Capital Health Dietetic Internship Program
Halifax, Nova Scotia
A new method to evaluate the effectiveness
of an elementary school newsletter
74. P. Kirkland, J. Plowman, K. Legg
Capital Health Dietetic Internship Program
Halifax, Nova Scotia
Evaluation of an osteoporosis education
session: does knowledge increase adoption
of lifestyle and nutrition practices that help
prevent osteoporosis complications?
75. W. Simmons, C. Algee
Capital Health Dietetic Internship Program
Halifax, Nova Scotia
Need for nutrition counseling for female
breast cancer patients receiving treatment
at the Nova Scotia Cancer Centre
76. K.A. Hogger, B. Larsen
Capital Health Dietetic Internship Program
Edmonton, Alberta
Degree of growth impairment among
critically ill infants with congenital heart
disease during intensive care unit stay
77. G. Grégoire
Internat en diététique
Hôpital régional Dr Georges-L. Dumont
Moncton, Nouveau-Brunswick
Allergies au lait de vache et aux œufs chez
les nourrissons et les jeunes enfants –
Développement d'un protocole de référence
78. M. Stever
Internat en diététique, Hôpital régional
Dr Georges-L. Dumont
Moncton, Nouveau-Brunswick
Évaluation de l'effet de l'apport calorique
et liquidien chez les personnes
hémodialysées
79. S. Arseneau et J. Bélanger
Internat en diététique, Hôpital régional
Dr Georges-L. Dumont
Moncton, Nouveau-Brunswick
Alimentation entérale à domicile