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Élaboration et validation d'un outil de dépistage du diabète chez l'adulte et l'aîné au Cap-Vert, Afrique.

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OBJECTIFS : Élaborer un outil de dépistage du diabète de type 2 simple et valide chez l'adulte et l'aîné au Cap-Vert, Afrique. **MÉTHODES** : Cent-dix-sept sujets non-diabétiques et 45 sujets diabétiques âgés de plus de 18 ans ont participé à l'étude. Des données sur les conditions sociodémographiques, économiques et sur les principaux facteurs de risque du diabète ont été obtenues auprès de l'échantillon. L'hémoglobine glycolysée (HbA1c) a été mesurée chez un groupe de 35 sujets formé par 16 diabétiques et 19 non-diabétiques. L'HbA1c a été utilisé comme étalon pour élaboration de l'outil de dépistage. Une régression logistique multivariée pas-à-pas en descendante a été effectuée. Les seuils de pointages de l'outil ont été définis et la courbe de ROC (Receiver Operating Characteristic) a été dressée. **RÉSULTATS** : Un outil de dépistage composé de l'âge et de l'indice de masse corporelle (IMC) a été obtenu avec une sensibilité de 87,5%, une spécificité de 72,7% et une valeur prédictive globale de 82,5%. L'outil classe les sujets qui sont à risque du diabète lorsque le pointage total est ≥ 4 . L'aire sous la courbe était de 0,905. **CONCLUSIONS** : Un outil simple et valide pour dépister le diabète de type 2 chez les adultes et les aînés Capverdiens est disponible pour permettra une prise en charge rapide des nouveaux cas.

Dietary Acculturation of Arab Immigrants in the Greater Toronto Area and their Perspectives on Factors that Impact their Food Choices

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Purpose: The study was conducted to explore the eating habits of Arab immigrants and determine whether they have maintained their traditional diet or consumed a more Westernized diet after immigrating to Canada as well as examine their perspectives on the factors which impact their current food choices. **Methods:** Posters were used to recruit Arab immigrants who have been in Canada for 8 years or more and currently living in the Greater Toronto Area. A sample of 24 Arab immigrants completed a mailed self administered questionnaire and 6 participated in a focus group discussion. The focus group was transcribed verbatim and the results were recorded. Latent content analysis was utilized to analyze, code and categorize emerging themes. **Results:** Our findings revealed that Arab immigrants consumed a mixture of both Arabic and Western food and perceived their current diet to be healthier than it was prior to immigrating to Canada. Factors that impacted their food choices included an increase in nutrition health awareness, differences in food preferences and preparation methods and managing changes in the social environment. **Implications and Conclusions:** The research findings will help dietitians who work with Arab immigrants to become more aware of factors that motivate this group's food intake choices so that they would be able to assist them in making healthy food choices. Results will help dietitians in creating nutrition programs and enhancing nutrition counselling by making it more culturally sensitive and by providing appropriate interventions.

Public perceptions of the safety of fresh, store-bought foods in London, Ontario

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Objectives: Recent outbreaks of food-borne illness have shaken consumers' confidence in the safety of their food. Food scares affect not only the public's risk perceptions of a particular food, but also the entire food industry. This descriptive qualitative study explored current public perceptions of the safety of fresh, store-bought foods and whether recent outbreaks have affected purchasing and eating patterns. **Methods:** Shoppers at a London, Ontario supermarket were invited to participate in one of three focus groups (n=24) or individual interviews (n=4). The data collected were transcribed verbatim, coded, and analyzed following a constant comparative method. **Results:** Three overarching themes were developed from the data: awareness of food safety recommendations and risk communications, perceptions of risk associated with the food supply, and strategies used to manage perceived food risks. Participants demonstrated good awareness of recent food safety communications and expressed strong emotions associated with their risk perception. Younger and older participants differed in their levels of awareness and perception of risk. While many risk management strategies were discussed, participants' attitudes about food safety did not always match their behaviours. Varying levels of trust also emerged as a major topic of discussion. **Implications and Conclusions:** Findings from this study suggest that increased education about food safety recommendations and increased transparency in the food system may benefit producers, store owners, and consumers. Dietetic professionals need to stay informed about all aspects of the food supply and participate in timely and accurate risk communication strategies.

Nutrition screening in the Saskatoon Health Region Live Well™ COPD and Pulmonary Rehabilitation Programs

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Objectives: A screening tool is needed to identify individuals at risk for malnutrition who are attending the LiveWell™ COPD and Pulmonary Rehabilitation programs in the Saskatoon Health Region (SHR). Seniors in the Community: Risk Evaluation for Eating and Nutrition, second version (SCREEN II) is a tool designed to identify seniors at risk of malnutrition. SCREEN II has not previously been validated for use in the COPD/Pulmonary population. The purpose of this research project was to determine if SCREEN II is an appropriate screening tool to identify COPD patients at risk of malnutrition. SCREEN II was compared to the Malnutrition Universal Screening Tool (MUST) to determine its validity. **Methods:** Forty-two participants from the Live Well™ COPD and Pulmonary Rehabilitation programs were screened for malnutrition using SCREEN II and the MUST. **Results:** SCREEN II identified 27 participants at high risk of malnutrition. The MUST identified one participant at high risk and two participants at medium risk of malnutrition. **Implications & Conclusions:** The MUST is based on BMI and recent unplanned weight loss, whereas SCREEN II uses questions about recent weight change, food intake and other factors that affect nutrition status. The additional information gathered by SCREEN II is advantageous in determining which factors are causing malnutrition risk in this population and may assist in planning nutrition interventions. Because SCREEN II is not based on BMI, it is able to identify risk of malnutrition in patients who are both overweight and underweight. This makes SCREEN II a better predictor of malnutrition risk among patients in the LiveWell™ COPD and Pulmonary Rehab programs than the MUST.

A retrospective audit of growth and nutrition status in children with congenital heart defects

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Malnutrition and failure to thrive (FTT) is high among children with congenital heart defects (CHD). The causes of malnutrition in this population are multifactorial and are linked to increased risk of feeding or nutrition difficulties. Early nutrition intervention by a dietitian has been shown to decrease morbidity and long-term developmental deficits leading to better outcomes. **Objectives:** To determine the number of children with FTT who are diagnosed with CHD in the Saskatoon Health Region Pediatric Cardiology Clinic during the first year of life and to determine how many of these children were referred to a dietitian. **Methods:** A retrospective chart audit of term infants diagnosed with CHD in the first year of life were randomly selected for inclusion (n=32). **Results:** Eighteen subjects (56%) received nutrition support at some point during the first year of life. Seventeen subjects (53%) received hypercaloric formula or formula in addition to breastmilk. A formal dietitian consultation was recorded in nine subjects (28%). A total of 21 subjects (66%) were identified as FTT. Of these subjects, two did not receive nutrition intervention. **Implications & Conclusions:** The prevalence of FTT in our sample of infants with CHD was consistent with that reported in the literature in developed countries (66% and 64% respectively). More than half of subjects (69%) received a nutrition intervention, although the number of recorded dietitian referrals was low compared to the number of nutrition interventions. A nutrition screening tool would ensure that high risk CHD patients are referred to the appropriate health care professionals who may improve long-term outcomes for feeding and growth in this population.

Short-term parenteral nutrition: a study of utilization in the Saskatoon Health Region (Phase 2)

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Objectives: The aim of this study was to investigate why hospitalized patients in the Saskatoon Health Region (Royal University Hospital (RUH) and St. Paul's Hospital (SPH)) received short-term parenteral nutrition (PN) and whether the indications for short-term PN were appropriate according to current literature. This study also examined if having a Nutrition Support Service (NSS), which exists at RUH and not SPH, made a difference in the appropriate initiation and management of short-term PN. **Methods:** A retrospective chart review was completed on patients who received short-term PN (≤ 10 days) between March and October 2009. **Results:** A total of 79 cases were eligible for inclusion; 32% (25 cases) from RUH and 68% (54 cases) from SPH. The main indications for short-term PN at both sites were ischemic gut, upper GI bleed, ileus, bowel obstruction and post-intestinal resection. RUH had 2 (8%) inappropriate and 2 (8%) preventable cases of short-term PN. At SPH, there were 5 (9%) inappropriate, 4 (8%) preventable and 4 (7%) unable to assess cases. RUH used peripheral PN in 40% (10 cases) of cases versus 6% (3 cases) at SPH. **Implications & Conclusions:** These results suggest that short-term PN is more commonly used at SPH, while short-term PN is used less frequently at RUH. There were a higher percentage of inappropriate indications for short-term PN at SPH and fewer attempts of oral or enteral nutrition prior to PN initiation. Peripheral PN was rarely used at SPH. RUH used peripheral PN in nearly half of the short-term PN cases. These results may suggest that having a NSS leads to more appropriate use of PN.

Cultural exchange among university students in London, Ontario: ESL Student Nutrition Awareness Program

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Objectives: Early exposure to cross-cultural encounters may help prepare dietetic students for their professional roles. This descriptive qualitative study explored university students' perceptions of a cross-cultural experience in London, Ontario. **Methods:** The English as a Second Language Student Nutrition Awareness Program (ESL SNAP) linked 11 university-bound ESL students with six undergraduate students in Foods and Nutrition. Following orientation, the students met in pairs or triads for three one-hour conversation sessions. After the program, three focus groups, recorded and transcribed verbatim, allowed the researchers to qualitatively evaluate the program. Data were analyzed using latent content analysis and a constant comparative method. Member checking, independent coding, and an audit trail supported the trustworthiness of the findings. **Results:** The data revealed program benefits and challenges, and recommendations for the future. Participants were excited to learn about other cultures and used various strategies to overcome language barriers. Face-to-face interactions enriched the content of their conversations. Program logistics (length, scheduling) were identified as major challenges. Recommendations for the future included making the conversations more interactive (e.g., use of photographs) and continuing the program through informal come-and-chat sessions. **Implications and Conclusions:** Participants from both groups appreciated this experience; however, the logistics of future programs should be carefully considered. These findings suggest that cultural competence among university students can be simply and economically developed by creating on-campus opportunities for cross-cultural exchanges.

Two-day analysis of menu items remaining on meal trays in acute and residential health care settings

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OBJECTIVES: A visual plate waste analysis was conducted to establish a baseline for the amount and nutritional value of menu items remaining on trays in acute and residential health care facilities. **METHODS:** Four hospitals within the Fraser Health Authority were selected based on methods of food production and number of acute and residential care beds. Over two consecutive days, meal trays were visually analyzed for percentage of menu items remaining at breakfast, lunch and dinner. The data was analyzed using descriptive statistics and tested for significance using the Kruskal-Wallis Test. **RESULTS:** Of 5763 meal trays sent to patients, 3799 (66%) trays and 18,877 menu items were visually analyzed. On average, for all sites, 36.2% of menu items remained on trays over two days. This represented 34.2% of calories and 34.9% of protein remaining from menu items on trays. The mean amount of menu items remaining on trays at breakfast, lunch, and dinner were significantly different ($p < 0.05$). At all meals, menu items were most likely 100% or 0% remaining on trays. Breakfast trays had the least menu items remaining (62.7%). Lunch and dinner trays had 48.1% and 50.9% menu items remaining respectively. **IMPLICATIONS & CONCLUSIONS:** These findings present opportunities to be used in future research to help determine an acceptable level or contributing factors of food waste from both administrative and clinical dietetic perspectives.

A quality improvement study to assess meal satisfaction for patients with dysphagia at Toronto Rehabilitation Institute

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OBJECTIVES: Food and fluid intake for patients with dysphagia may be challenging since treatment required texture modified food and fluid. Studies have shown dysphagia to be associated with malnutrition and dehydration (1). Therefore, this study evaluated meal satisfaction for patients with dysphagia at Toronto Rehabilitation Institute (TRI) and recommended improvements which may lead to improved food and fluid intake. **METHODS:** TRI offers a dysphagia diet with or without thickened fluids in a minced or pureed texture. Over a 5 day period, the 25 patients receiving the dysphagia diet were surveyed in-person regarding their satisfaction with their food and fluids. The following week, a consecutive 4 day consumption audit was conducted. The results from the meal satisfaction survey and the consumption audit were reviewed and themes were extracted. **RESULTS:** The meal satisfaction results show that 56% (n=14) of patients were 'satisfied' and 40% (n=10) were 'very satisfied' with the meal service provided at TRI. The consumption audit supported the results of the meal satisfaction survey. However, results from the meal satisfaction survey showed that the dysphagia diet could benefit with increased variety, a hot beverage option and access to snacks between meals. **IMPLICATIONS & CONCLUSIONS:** This study suggests that patients receiving the dysphagia diet at TRI are overall satisfied with their meals, but could benefit from increased meal variety and beverage options, which may increase the patient's overall food and fluid intake.

(1) Taylor KA, Barr SI. Provision of small, frequent meals does not improve energy intake of elderly residents with dysphagia who live in an extended-care facility. *J Am Diet Assoc* 2006;106:1115-118.

Determining the energy requirements of obese class II and III immobile adults

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Energy requirements of obese, immobile patients have not been studied. Currently there is no predictive energy equation validated for use in this population. This poses difficulties for dietitians to determine caloric requirements for feeding with minimal risk of complications related to over- or underfeeding. **Objectives;**(1) To determine the resting energy expenditure (REE) of obese class II and III immobile participants using indirect calorimetry (IC) (2) To explore the accuracy of selected predictive energy equations for this population (3) To use each predictive equation with actual body weight, adjusted body weight and ideal body weight to determine which weight factor provides the most accurate estimate of REE (4) To determine the correlation between lean body mass (LBM) and REE. **Methods;** In a cross-sectional descriptive study, immobile in-patients at St. Michael's Hospital and control participants with a ~~BMI~~ BMI kg/m^2 will have their REE measured using IC. REE will also be calculated using selected predictive energy equations with a variety of weight factors. LBM will be assessed using bioelectrical impedance analysis. Bland-Altman plots will be used to compare REE measurements from IC and from predictive equations. Spearman correlation will be used to determine the relationship between REE and LBM. **Results;** Data collection is ongoing. **Implications & Conclusions;** This study will provide new descriptive information on the energy needs and body composition of hospitalized patients who are obese class II and III and immobile. The study will also identify the most accurate predictive equation for this population, which could be used by dietitians in order to optimize the nutritional care of these patients.

The Use, Safety and Efficacy of Vitamin B6 (pyridoxine) and Ginger as Alternative Therapies for Nausea and Vomiting of Pregnancy at Health Start for Mom & Me

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Objectives: The objectives of this study were to determine: 1) the safety and efficacy of ginger and vitamin B6 supplements for the treatment of nausea and vomiting of pregnancy (NVP); 2) what Canadian prenatal programs recommend as treatments for NVP; 3) what treatments participants in Winnipeg's Healthy Start for Mom & Me (HSMM) programs use for NVP; 4) if ginger and vitamin B6 supplements are available in the local retail market. **Purpose:** This study will aide dietitians in suggesting treatments for NVP. **Methods:** Literature review and three surveys. One survey was sent to 222 Canadian prenatal programs, one was completed by pregnant women participating in HSMM and the final survey was completed at retail locations. **Results:** 31 Canadian prenatal programs completed the survey. Dietary changes and talking to a doctor about Diclectin® were the most commonly suggested treatments for NVP. Five prenatal programs suggest vitamin B6 supplements and one program suggests ginger supplements for NVP. 62 HSMM participants completed the second survey. 79% stated that they experienced nausea during their pregnancy. The most popular form of treatment for NVP was dietary changes (65%), followed by using medication (39%). The most popular medication for NVP was Diclectin®. 16 retail locations were surveyed. 8 of 16 locations sold ginger and 13 of 16 sold vitamin B6 supplements but no locations carried supplements in exact researched dosages (250mg for ginger and 10 to 25mg for vitamin B6). **Conclusions:** Ginger and vitamin B6 supplements appear safe and effective for NVP when taken in studied amounts for NVP (1000mg per day of ginger and 30 to 75mg per day of vitamin B6). Dietitians should be cautioned when suggesting these two treatments since the researched dosage is not currently available in Winnipeg.

Are total serum calcium and corrected serum calcium concentrations appropriate markers for determining hypocalcemia and the addition of calcium to total parenteral nutrition (TPN) in neonates admitted to the Neonatal Intensive Care Unit (NICU) at St. Boniface General Hospital

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Objectives: To examine the correlation between ionized calcium (iCa), total serum calcium (totCa) and corrected calcium (corrCa) values in very low birth weight neonates receiving TPN and determine which calcium measurement will best indicate the addition of calcium to TPN.

Methods: Medical records of premature neonates weighing less than 1500 grams at birth admitted to the NICU at St. Boniface General Hospital during the past 7 months were retrospectively reviewed. Patient information, blood gases and laboratory chemistries were collected and a literature review was conducted. Calcium status was evaluated as totCa versus iCa and corrCa versus iCa using linear regression analysis and Fisher Exact Test. Statistical analysis was conducted using SYSTAT software. A probability value of 0.05 was considered significant. **Results:** Mean gestational age and birth weight were 28 +/-3.0 weeks and 1117 +/- 264 grams, respectively. Mean albumin was 22 +/- 3.4 and pH was 7 +/- 0.1. Hypocalcemia was correctly predicted by totCa in 62.5% of cases, and by corrCa only 12.5% of the time (P=0.12). Conversely, totCa only accurately predicted hypercalcemia 8.3% of cases, yet corrCa correctly predicted hypercalcemia 67% of the time (P=0.009). **Conclusion:** Since iCa most accurately assesses calcium status in this population, corrCa and totCa measurements should be used with caution in the diagnosis of hypocalcemia. Findings have shown that neither totCa nor corrCa are ideal markers for assessing the addition of calcium to TPN in neonates admitted to the NICU at SBGH. In expanding this study, it is speculated that significance would be obtained. A change in practice in the initial assessment of calcium concentrations should be considered at that time.

Are calorie counts recorded by unit staff the best method for accurately and efficiently assessing oral nutritional intake in adult hospitalized patients at Concordia Hospital?

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Objectives: To determine whether calorie counts accurately and efficiently assess oral nutritional intake in adult hospitalized patients, to investigate alternative assessment methods and to provide recommendations for improving the process of assessing oral nutritional intake for future dietetic practice. **Methods:** Several activities were completed including: A) a national survey of acute care clinical dietitians; B) a comparison of calorie counts completed by researcher and unit staff and the corresponding subjective descriptions of intake documented in the medical chart; C) a retrospective audit of calorie count orders not initiated by the dietitian. **Results:** A) 92% of respondents are currently using calorie counts to assess oral nutritional intake of patients; 85% reported a preference for 3 full days of intake to obtain an accurate assessment; and 81% reported incomplete records as the most significant challenge. B) For the staff recorded calorie counts, there was at least one meal missing for 17/21 calorie count days. Subjective descriptors of intake in medical charts most often did not accurately reflect the corresponding calorie count data. C) Nutrition support was rarely (4%) indicated as the reason for calorie count orders by non-dietitian staff (as compared to 62% in the national survey of dietitians). **Conclusion and Implications:** Calorie counts for a minimum of 3 days are not an effective method for assessing oral nutritional intake in hospitals primarily due to poor completion rates. Future research should focus on trialing alternative methods such as the 1-day calorie count.

Calorie Counts: What is the Best Method for Calorie Counts of Hospitalized Patients at Seven Oaks General Hospital?

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Objective: The objectives of this study were to assess knowledge, beliefs, attitudes, and behaviors' of nursing staff in performing calorie counts and to compare the estimations completed by staff and dietetic intern to nursing documentation. Additionally, the rationales of calorie counts not ordered by dietitians were examined. **Method:** A survey was prepared and sent to nursing staff to determine the possible causes for incomplete and/or inaccurate estimation of patients' food intake. Calorie counts of dietary intake were collected for 6 patients for 3 consecutive days at breakfast, lunch, and supper. The calculations were compared to those completed by health care aides (HCA) and nurses' documentation. Chart audit was performed to identify whom initiated the order, the rationale, and whether dietitians were involved prior to the orders. **Results:** Response rate to the survey was 37%. Lack of education and training were identified as the major factors to inaccurate estimations. Other factors include unfamiliarity with portion sizes, urgency of other tasks, and unawareness of calorie count orders. Calorie counts' incompleteness rate ranged from 0-55% and staff tended to overestimate intake by 30%. Nurses' documentations were comparable to dietetic intern's judgment. A total of 14 charts were reviewed in which 86% of the orders were initiated by physicians and dietitians involvement prior to the order were low (29%). Majority of the orders were related to low oral intake and a few were in transitional feeding from total parenteral nutrition (TPN) to oral intake. **Conclusion:** This study revealed that there are a number of problems within the current practice of calorie counts. However, by implementing strategies to improve the awareness and knowledge of calorie counts among staff the accuracy of orders may improve with increased compliance to completion.

Gastrointestinal Post-operative Diets: How is diet progression established and are minimum nutritional needs being met in patients at the Health Sciences Centre (HSC)?

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Objectives: Determine the source of initiation and progression of post-operative diets for patients undergoing gastrointestinal surgery, progression duration, and determine the nutritional adequacy of post-operative nutritional intake. **Method:** A retrospective chart review from patients who underwent gastrointestinal surgery (elective and non-elective) at HSC from April 1, 2008 to March 31, 2009 was conducted. A prospective chart audit for patients who underwent gastrointestinal surgery in gastrointestinal (elective) and acute care trauma (non-elective) wards was conducted from November 30th to December 18th, 2009. **Results:** Physician diet orders and actual diet received matched in 54% to 62% of patient cases (retrospective / prospective). Diet progression average duration from nil by mouth to standard diet was 6.35 to 5.28 days (retrospective / prospective). Diet tolerance was well or fair to well in 69% to 60% of cases (retrospective / prospective) on day one of standard diet consumption. In 32% of retrospective cases, a poor tolerance, as documented on nursing flow sheets (NFS) was experienced by patients on a standard diet. Gastrointestinal symptoms as documented on NFS and integrated progress notes were experienced by 38% of patients (retrospective) on standard diet. Nutritional adequacy results of the standard diet post-operatively are inconclusive. Initial findings indicate this diet may not meet nutritional requirements of post-surgical patients. **Implications and Conclusions:** It is recommended that concrete diet initiation and progression protocols be established in patients undergoing gastrointestinal surgery at HSC to ensure standard practices are in place. It is recommended that patient preferences and tolerances be considered for the standard diet consumed post-operatively. Further research is recommended to determine if minimum nutritional requirements are being met by post-surgical gastrointestinal surgery patients.

Does decreasing portion size affect intake for long-term care residents at Misericordia Place?

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BACKGROUND: Poor food intake among LTC residents in PCH is of nutritional concern for the dietetic professional. **OBJECTIVE:** To determine if decreasing standard portion sizes to small portion sizes affects intake in PCH residents n=5, that have been reported to have poor intake. **METHODS:** Pre and post-meal weights were recorded. Dining room observations and discussions with nurses and diet aides were recorded. **RESULTS:** This study indicates that there is a small decrease in intake of total calories -4%, protein -6%, fat -4%, and carbohydrates -1% when standard portion sizes are modified to a small portion size. However, data is inconclusive due to the limited control over environmental aspects of the study. **CONCLUSION AND IMPLICATIONS:** Further research is needed to investigate ways to increase food intake in LTC residents.

The use of prebiotics as an effective and acceptable solution for bowel management in constipated long-term care residents at St. Joseph's Personal Care Home

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Objectives: To determine if increased dietary fibre through the addition of Synergy 1 inulin would affect bowel movement habits in a LTC population. To assess the ease of inulin during preparation and detect-ability in prepared food among study residents. To obtain nation-wide data from long-term care dietitians on the prevalence of prebiotic use for constipation relief.

Methods: A literature review, retrospective chart review of select residents, 3-day fibre and fluid intake assessment, resident interviews and sensory evaluation and nation-wide survey through Dietitians of Canada were conducted. **Results:** Literature review showed minimal information pertaining to institutionalized elderly and inulin use to treat constipation. Baseline fibre intake of 26 female and male study participants was on average 11.5g/d and 12.3g/d, respectively. Intervention fibre intake increased by an average of 53% and showed an average 4.5% increase in bowel movement frequency and overall decrease in suppository use, despite the high prevalence of constipating medications. Fluid intake remained below the recommended DRI. Residents who could ambulate experienced an increase in bowel movement frequency with the addition of inulin. Inulin was not detected in prepared foods by a majority of residents and was easy to use by Food Service staff. (Survey results still to come). **Conclusion:** The use of prebiotics to prevent constipation is an emerging concept. Synergy 1 inulin was a non-invasive way to increase nutritional status of elderly long-term care residents and increase the frequency of bowel movements. Due to its unique properties, excellent usability and non-detection in food, inulin is a sensible ingredient choice to increase dietary fibre.

What does the evidence support as “best practice” for growth goals of preterm infants in the Neonatal Intensive Care Unit & Intermediate Care Nursery at the Health Sciences Centre?

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Background: Different growth goals are used in paediatric units, neonatal intensive care unit (NICU) and intermediate care nursery (IMCN) at the Health Sciences Centre (HSC). Proper growth goals for infants are key in preventing neurodevelopmental and metabolic complications later in life. **Objective:** To evaluate what evidence supports as best practice for growth goals of preterm infants at HSC's - NICU and IMCN. **Methods:** Data was collected from 100 retrospective chart reviews, surveys of other NICUs, and interviews with healthcare professionals. Infants studied were admitted to HSC at birth between March 26, 2008 - June 30, 2009 at 24 to 37 weeks gestational age (GA), admission >28 days and birth weight <2500g. No exclusions were made for congenital abnormalities or other health issues. Collected data included GA, weekly weight, length, head circumference (HC), route of nutrition, protein and calorie intake in g/kg/d and kcal/kg/d, until discharge. The survey gathered information on growth goals and parameters used nationally. Post discharge growth information was gathered from two outpatient dietitians and one doctor. Effects of GA, birth weight, growth percentile and feeding route on growth rate was assessed, as well as incidence of extrauterine growth restriction (EUGR) and catch-up growth. **Results:** Once birth weight was reattained, infants gained slower than standard 15g/kg/d at 13.54g/kg/d. Only 33%, 83.2%, 62% of infants met growth goals for weight, length and HC, respectively. EUGR rates were 47.6%, 55.3% and 43.4% in weight, length and HC, respectively. Infants born <1500g experienced higher incidence of EUGR. Infants were not meeting nutritional requirements. For protein, 23.8% and 50% of infants >1000g and <1000g at birth respectively, under consumed protein. Catch-up growth in NICUs across Canada is rare. **Conclusion:** Infant growth rates and nutritional intake are inadequate at HSC's - NICU and IMCU. Further investigation must be conducted to improve neonatal nutritional care.

Do adult patients in the Manitoba Home Nutrition Program achieve their nutrition goals via home tube feeds?

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Objectives: This study sought to identify which nutrition goals are assigned to participants and whether or not the goals were achieved. **Methods:** Patients from the MHNP were studied through a systematic retrospective chart analysis. All patients were adult residents of Manitoba, and were referred to the Manitoba Home Nutrition Program between January 2nd and September 9th, 2008. Goals concerning weight were analysed. **Results:** Mean age was 60 years. Sixty-three percent (n=24) of patients met their nutrition goal, 18% did not meet their goal (n=7), and goal achievement was not measured for the remaining 18% of patients (n=7). Patients who met their goals had the most follow up contacts (mean=3.5) and longest mean home enteral nutrition duration (133 days). Those who did not meet their goals did not smoke or consume more alcohol and all lived with supportive families. This group had the youngest mean age of 50 years (range 26-68 years). All patients studied received a nutrition diagnosis. **Implications & Conclusions:** A large number of patients receiving home enteral nutrition in Manitoba do achieve their nutritional goals. This study was limited by the small number of participants. It was also limited by the fact that some patients were assigned weight goals that could not have been measured as these patients were not able to be weighed. Further analysis of the collected data is required to measure how patients fared with any other goals, and to compare the achievement rate of other goals with that of weight goals.

Can a screening tool to determine preparedness/readiness to change predict attendance at an appointment with a dietitian located at Access River East and the Health Sciences Centre?

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Objectives: The purpose of this study was to determine if screening patients for preparedness/readiness to change predicts attendance at an appointment with a dietitian, and to develop a tool to determine preparedness/readiness to adopt healthy dietary behaviors.

Methods: The Healthy Action Questionnaire (HAQ) was mailed to 72 clients at two outpatient clinics within the Winnipeg Regional Health Authority (WRHA). Results of the HAQ were compared to attendance. Clients who did not show were contacted by phone to complete the HAQ. The results of the HAQ were compared to the dietitian assessment of client stage of change to determine reliability. **Results:** Overall, the no show rate was found to be 14%. A total of 38 questionnaires were analyzed (with a response rate of 49% for mailed questionnaires and 100% for telephone questionnaires). Among those who showed for their appointment, 82% were screened as prepared/ready to make healthy changes to their eating behaviors. For those who did not show for their appointment, 100% were screened as prepared/ready for change. The HAQ was able to match the dietitians' assessment with a 77% accuracy rate. **Conclusions:** Preparedness/readiness to change as assessed by the HAQ does not appear to predict attendance at an appointment with a dietitian. However, the HAQ has shown to have face validity and reliability in assessing whether a client is prepared/ready to change their eating habits. The HAQ is recommended as a pre-assessment screening tool, as it has the potential to help the dietitian determine what strategies or information will be most appropriate to help the client progress through the stages of change.

In patients with chronic kidney disease seen at St. Boniface Hospital – Renal Clinic is there a link between the risk for vitamin D deficiency/insufficiency and secondary hyperparathyroidism?

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Background: There is opinion level evidence to support the safety and efficacy of 25(OH)D supplementation in chronic kidney disease (CKD). **Objective:** To determine if there is a link between the risk for vitamin D deficiency/insufficiency and secondary hyperparathyroidism in patients with CKD that were seen at St. Boniface Hospital. **Design:** 40 participants were called to obtain informed consent and to determine their intake of vitamin D. 20 of these participants were on vitamin D and 20 of participants were not on vitamin D. A retrospective chart review was completed on these 40 participants looking at their past medical history, medications, blood work and their characteristics. A survey was sent out to 225 members of the nephrology association and 23 were returned to determine current practice of 25(OH)D supplementation in these facilities. **Results:** In the group taking a supplement of 25(OH)D, a negative association was found in 12 of the participants between increasing 25(OH)D intake and parathyroid hormone (PTH) levels. There was also no increase in calcium and phosphorous. **Conclusion:** A benefit is seen with an intake of 25(OH)D of at least 700 IU daily; as 25(OH)D increases, PTH is lowered significantly. Current practice at St. Boniface Hospital does not include a recommendation of 25(OH)D supplementation. However, scientific literature addressing the efficacy of 25(OH)D recommend that all patients should be consuming a daily supplement of at least 1000 IU.

Dietitians' and teachers' perceptions and use of *Eating Well with Canada's Food Guide* as a nutrition education tool

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Objectives: To determine whether dietitians and teachers perceive *Eating Well with Canada's Food Guide (EWCFG)* as an effective nutrition education tool, and to determine which educators are actually using or not using the guide and their reasons.

Methods: A convenience sample of dietitians and teachers were surveyed.

Questionnaires were distributed to teachers through the Halton Board of Education and mailed to dietitians in Oakville and Mississauga, Ontario using the Dillman method to improve response rates. Qualitative data was coded to find recurring themes, while quantitative data was analysed using descriptive statistics. **Results:** In total, 85% of participants used *EWCFG* as an educational tool. Complimentary resources were not used as commonly due to lack of awareness and lack of relevance. The guide's design and visual appeal were rated highly. There were some issues with the representation of serving sizes and the sensitivity of the guide to all Canadians including ethnic groups. Overall, 87% of participants agreed or strongly agreed that *EWCFG* was an excellent educational tool. **Implications & Conclusions:** There is a need to train educators on the use of the food guide and its complimentary resources to promote widespread awareness among Canadians. Educators' perspectives should be considered in future revisions.

Development, implementation and evaluation of an in-service on Canada's Food Guide: An assessment of Family Resource Workers' nutrition education

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Objectives: To assess how Registered Dietitians can best support Family Resource Workers (FRWs) with nutrition education. **Methods:** A literature review, key informant interviews and staff questionnaires were used to collect information on methods of past education, current nutrition education needs, and needs for nutrition-related resources. With the guidance of an advisory committee, the information collected was used to develop an in-service on Canada's Food Guide (CFG) for FRWs. Pre and post in-service questionnaires were developed in order to assess the effectiveness of the in-service. **Results:** The assessment phase of the study showed that FRWs were not confident in discussing CFG, breastfeeding practices and, infant formula preparation with their clients. Due to time constraints, one topic was chosen (CFG) to educate the FRWs. A pre-test questionnaire illustrated that 75% of respondents (n=4) felt confident discussing with clients CFG key messages. However, 0% of respondents (n=4) were able to mention at least one interactive tool that can be used with clients when discussing CFG. A post-test questionnaire showed that 37.5% of respondents (n=8) were able to identify one interactive tool found within CFG website. The results also showed an increase in FRWs' confidence to discuss CFG with their clients. **Implications/Conclusion:** This project reinforces the value of training FRWs on current nutrition guidelines so they feel confident in sharing the information with their clients. KFL&A Public Health Dietitians will continue to work towards the implementation of continued in-services and education for FRWs.

Children aged 0-5 years with complex health needs: descriptive profile of their nutritional problems

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Children with complex health needs require specialized care and are at higher nutritional risk due to factors that affect their intake and development. The Vancouver Regional Pediatric Team (VRPT) provides a wide range of services to children with complex health needs. Currently, there is no Registered Dietitian (RD) on the team. **OBJECTIVES:** Describe the medical and nutritional problems of the children referred to the VRPT. Additionally, determine if and how their nutritional problems are addressed. **METHODS:** A retrospective chart review was conducted on 50 charts that were randomly selected from the 172 charts that met the study inclusion criteria, one of which was identified nutritional problem at time of referral. Data collected included: medical diagnoses, growth and developmental disturbances, intake, feeding concerns, referrals for nutritional support, and nutritional problem progression. **RESULTS:** 70% of the sample population had >1 medical diagnosis, and 16% had >3 concurrent medical conditions. 50% of the children were tube fed and 52% had weight identified as a concern. On average, 60% of the children required nutritional support and were referred out for this service. **IMPLICATIONS & CONCLUSIONS:** More than half of the children in this study sample required external nutrition support. Researchers feel the VRPT would benefit from a RD to address the nutritional needs of these complex children.

Prevalence of vitamin D deficiency and associated risk factors in HIV-infected patients at St. Michael's Hospital during fall and winter

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Bone health complications due to HIV infection and anti-retroviral therapy have become growing issues in HIV-infected patients. A high prevalence of vitamin D deficiency, a risk factor for bone disease, has been reported in this population. **OBJECTIVES:** To determine the prevalence of vitamin D deficiency and associated risk factors in HIV-infected patients attending the Positive Care Clinic at St. Michael's Hospital. **METHODS:** This study is a retrospective, cross-sectional chart review of HIV-infected patients (n=123) between the ages of 18 and 65 years, who attended the Positive Care Clinic between September 2009 and September 2010 and had a serum 25-hydroxy vitamin D (25(OH)D) blood sample collected during the same period. Patients that were pregnant or on hemodialysis were excluded. Demographic, clinical, and lifestyle data were extracted from patient charts, including country of origin, skin colour (Caucasian/Non-Caucasian), sex, serum 25(OH)D, CD4 count, viral load, other conditions or complications, medications, multivitamin use, smoking status, alcohol and drug abuse, and income support. Vitamin D deficiency is defined as serum 25(OH)D below 75nmol/L and severe vitamin D deficiency as serum 25(OH)D below 25nmol/L. Associations between each variable and vitamin D status will be determined using chi-square and parametric or non-parametric comparative tests. A multivariate logistic regression model will be considered for all predictors where univariate p-values are <0.2. **RESULTS:** Currently, 128 charts have been reviewed and data analysis is in progress. **IMPLICATIONS & CONCLUSIONS:** Identifying the prevalence of vitamin D deficiency and associated risk factors in this diverse population may inform future screening practices and clinical guidelines for vitamin D supplementation.

Evaluating the effectiveness of healthy choice symbols for hot entrée items in Trillium Health Centre cafeteria

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Objective: The objective of the study was to understand if the implementation of Healthy Choice Symbols (HCS) including nutrient information for fat, fibre and sodium had an impact on Trillium Health Centre (THC) perceived customer buying decisions. The study also looked at sales trends of specific hot entrée items before and after implementation of HCS in the THC cafeteria. **Methods:** A survey was conducted in the THC cafeteria and customers were asked to fill a questionnaire relating to HCS. A total of N= 275 questionnaires were completed however, N=195 questionnaires were used since non-employees and employees not aware of the symbols were excluded from the study sample. Data analysis was conducted for the first part of the study and the questionnaire was tabulated and analyzed. Chi square tests were run in SPSS to understand the relation between perceived buying decisions with variables such as finding HCS useful, continuing HCS and nutrients of interest. Comparative analysis of two different sales data sets were collected from cash register reports and used to understand the impact of implementation of HCS on cafeteria sales. **Results:** The variables namely finding HCS useful and nutrients of interest such as fat and fibre stood out to be statistically significant suggested by a p value<.05 and a high Chi Square value in the cross tabulations. The variable continuing HCS in THC cafeteria was also statistically significant with p value <.05 and had a high percentage of participants response in favor of continuing HCS. Mixed results were revealed from the comparative sales data analysis. The findings of this part of the study were inconclusive as various confounding variables such as new and existing competitors and economic recession could potentially interfere with the results. **Implications & Conclusions:** The research paper unequivocally suggests that THC cafeteria customers want HCS to continue. Customers appear to be satisfied with having mainly fat and fibre nutrient information on HCS. Adding nutrients such as calories, protein, carbohydrate and iron would prove beneficial for customers however; these might not relate to perceived buying decisions of customers. This study also indicates that cafeteria sales do not appear to be impacted by the implementation of HCS in the cafeteria as various confounding variables could interfere with providing an accurate comparison. Further research in this area is necessary to not only understand how customers use nutrition labeling but also to understand whether point of purchase nutrition interventions influence actual buying decisions as compared to perceived buying decisions.

Why are patients not eating 100% of food served? Examining barriers to consumption of hospital food

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Objectives: Malnourishment and food-waste are issues of concern within many acute care settings. Consumption of less than 100% of hospital meals is often anecdotally attributed to food quality; however, there are environmental, organizational, personal, and health condition factors that may also influence intake. The objectives of this study are to explore relationships between these five factors and intake to gain an understanding of consumption barriers at Cowichan District Hospital (CDH) and to facilitate informed Foodservice and Nutrition Services decisions.

Methods: An eleven-question survey was developed based on a literature review as well as feedback from a statistician and experienced dietitians. The survey was designed to gather qualitative and quantitative data from competent patients 19 years or older on a general or modified fat diet at CDH. The survey was piloted for patient feedback and then distributed on breakfast trays with a four-day collection period for participants to anonymously reflect on one meal. The survey inquired about the amount of the meal consumed, typical eating habits and the five factors affecting consumption. **Results:** Of 61 surveys distributed 23 were returned and 22 were available for analysis. The relationships between the amount of food consumed by patients and the five variables will be compared descriptively using bivariate analysis. Results are pending data analysis. **Implications & Conclusions:** The results may suggest whether certain variables have more impact than others on consumption levels at CDH. Knowledge gained from the survey will provide dietitians with insight into patient perceptions of barriers to eating and may influence the direction of further research to decrease food waste and positively impact patient outcomes.

Effects of omega 3 fatty acid supplementation during both pregnancy and lactation

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Objectives: To provide evidence based answers to the following questions regarding omega-3 fatty acid (ω -3) supplementation during both pregnancy and lactation: 1) Is there evidence to support a benefit to the infant and child when a woman takes ω supplements during pregnancy and lactation? 2) What are the effects on breast milk composition of DHA when supplementing with ω -3? **Methods:** A literature review was completed using Ovid and MEDLINE databases. Articles reviewed investigated ω -3 supplementation during both pregnancy and lactation and were published between 1996-2010. Animal studies, and articles that supplemented only during pregnancy or lactation were excluded. Seven studies were critiqued and graded according to Dietitians of Canada's Practiced-based Evidence in Nutrition (PEN) guidelines. **Results:** There is fair evidence that breast milk DHA content is higher when women are supplemented with 200-220mg/day of fish oil derived DHA from mid to late pregnancy until 3 months post delivery, compared to women who were not supplemented. Evidence also suggests that intake of 200mg DHA/day from mid to late pregnancy until 1-3 months post delivery is not sufficient to stop the decline of DHA concentration in breast milk during lactation. Supplementation limited to pregnancy is less effective in raising breast milk DHA and LCPUFA (n-3) levels. There is little evidence to suggest that supplementation with ω -3 from fish oil during both pregnancy and lactation may reduce the risk of infant allergy. There is inconclusive evidence that supplementation of ω -3 during pregnancy and lactation will improve intelligence, or that supplementation is related to a lower Body Mass Index (BMI) in infants and children. **Conclusions:** Further research is needed on the benefits to infants of supplementing with ω -3 during both pregnancy and lactation.

Dietary intake, quality of activity and relationships to body composition in a group of 9 to 11 year-old Barbadian children: a sub-study of body composition and dietary intake patterns among Barbadian school students – the pilot study

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Background: Childhood obesity is a growing epidemic in Barbados. Trends towards a Westernized diet and advancements in technology have led to poor eating habits and sedentary lifestyles. **Objectives:** To examine associations of body composition to dietary intakes and activity patterns in children in Barbados. **Methods:** Anthropometric measurements (weight, height, waist circumference (WC), bioelectrical impedance analysis) were completed for 62 children (29 boys, 33 girls) in an urban elementary school. Two multiple-pass 24-hour recalls and one weekly physical activity recall were conducted for each child, using tools developed by the researchers. **Results:** Body composition measures did not vary by sex, except for percent body fat (PBF) which was significantly higher in boys ($p < 0.05$). Weight status classifications into normal and overweight by PBF percentiles compared to body mass index (BMI), WC, and waist-to-height ratio cut-offs resulted in high sensitivities and specificities for the three latter indices: 0.87 and 0.91, 0.80 and 0.89, and 0.77 and 1.00, respectively for boys and girls. Mean energy intake was 2017 ± 437 kcal (boys) and 1732 ± 379 kcal (girls). Macronutrient intakes were within acceptable ranges. Most frequently consumed foods and beverages were of poor nutritional quality. BMI, fat free mass, and PBF were significantly related to energy, protein, and fat intakes ($p < 0.05$). Neither active nor sedentary activities related to body composition indices or dietary patterns. **Implications and Conclusion:** A baseline representative assessment of dietary intake and activity is imperative. The current study provides useful hypotheses to be explored in the Barbados elementary school population.

Nutrient assessment in hemodialysis patients through buccal exams

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Objective: Renal dietitians may perform physical assessment to assess the risk of vitamin and mineral deficiencies. Since nutrient-based alterations of tissue integrity are visible in the mouth, buccal exams may be used as a tool for assessment. The aim of this study is to evaluate the oral health of hemodialysis patients in a Montreal hospital with the intention of screening for nutritional deficiencies. **Methods:** This study was conducted by using a Healthy Mouth Questionnaire. This questionnaire was developed by a registered dietitian using research released by the National Kidney Foundation on the topic of buccal exams. Information on mouth, gum, and tooth health, as well as on dentures, vitamin and mineral supplementation were observed and recorded for 69 hemodialysis patients by three dietetic interns. **Results:** Analysis of results revealed that 14.5% of patients had bleeding gums which is a marker for vitamin C deficiency. Sixty-one percent of patients had dentures, 36% of those had ill-fitting dentures. This affects the ability to chew and may result in a decreased desire to eat. Forty-six percent of patients had pale tongue which is a sign of vitamin B12, iron, and folate deficit. Four percent had scarlet tongue which is a sign of niacin, vitamin B12, and iron deficit. Eighty-eight percent took at least one vitamin or supplement. The predominant ones taken were vitamin D (42.6%), calcium (39.3%), and a multivitamin (31.1%). **Conclusions** These results indicate that buccal exams can signal vitamin and mineral deficiencies that warrant investigation in hemodialysis patients. There is also evidence that there is a significant problem with denture fit and dental caries. Vitamin and mineral supplementation may be used to correct or prevent nutritional deficiencies in affected or at risk populations.

Flow of traffic in a large hospital's main cafeteria

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Objectives: Marketing Managers of Foodservice departments use tools such as acceptability surveys and cafeteria sales to determine customer trends and satisfaction. Mapping customer pathways is a new method of determining cafeteria hot spots, which can be further stratified by gender. Customers of a large hospital cafeteria were observed to gain insight regarding food choice in relation to station location. **Method:** Separated by hour and gender, from 8AM-2PM, customer traffic was drawn on a transparency over a map of the cafeteria. Peak meal times were observed. Each observer tracked a gender, and different colors depicted male and female patterns. Any client that entered the cafeteria was considered a subject and mapped. Dots were drawn when an individual stopped. **Results:** An estimated 300 customers were tracked, 60% male and 40% female. Male protocol generally consisted of heading directly to their station of choice, whereas women circled the perimeter of the cafeteria before deciding. In the morning, amongst both genders, specialty coffee and baked goods were popular, whereas cereal was not. Chef's Features, containing traditional hot meals, and the soup station, were most frequented by both genders during lunchtime; however, overall, women choose more "To Go" items and men choose more hot items. Men frequented the salad bar much less than women. **Implication and Conclusion:** This study suggests that stereotypical sociological gender roles have not altered over time with regard to food choices. "Traditional" male choices consisted of meat, potatoes and vegetables whereas "health-conscious" females often chose salad bar/"to go" items. Physical layout and station location is an important factor with regard to product placement and popularity in a cafeteria setting. Traffic patterns with overall trends, can be used as tools to design future marketing promotions.

Analyse des interventions de support nutritionnel aux soins intensifs

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La pratique clinique de la nutrition en soins critiques nécessite des interventions spécialisées justifiées par des données scientifiques. Les dérèglements métaboliques, les modifications de la fonction endocrine et l'altération des dépenses énergétiques requièrent des stratégies nutritionnelles adéquates car elles contribuent à des conséquences cliniques importantes.

Objectifs : Évaluer l'initiation du support nutritionnel aux soins intensifs d'un centre hospitalier afin de définir si les délais recommandés par les données probantes sont respectés et analyser le contexte entourant ces interventions. **Méthodes** : Une analyse de données des interventions de support nutritionnel aux soins intensifs au cours de l'année 2008-2009 a été faite en consultant le dossier médical archivé des patients. Les données compilées comprenaient : le nombre de patients nécessitant de la nutrition entérale, le délai de l'initiation, la durée du support nutritionnel et le nombre nécessitant de la ventilation mécanique. **Résultats** : L'initiation du support nutritionnel en moins de 24 heures était de 42.3%, entre 24-48 heures de 26.9% et au-dessus de 48 heures de 30.8%. La durée de l'intervention variait énormément avec une moyenne de 5.88 jours et une tendance de 2 à 15 jours. Le nombre de patients qui ont nécessité de la ventilation mécanique était de 88.5%. **Implications et conclusions** : Cette étude concernant le support nutritionnel a permis de démontrer que 69.2% des interventions ont été initiées selon des recommandations cliniques basées sur les données probantes de 24-48 heures. Le protocole pour le soutien nutritionnel par voie entérale soutient ces recommandations, mais il n'est pas appliqué adéquatement dans la pratique clinique. Le protocole devrait être appliqué plus rigoureusement par l'équipe clinique des soins intensifs afin de prévenir la détérioration de l'état du patient et de permettre l'amélioration de sa condition primaire.

Cost of actual vs. recommended diet for pregnant women with gestational diabetes mellitus: A pilot study

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Objectives: To compare the average actual daily food expenditure costs of pregnant women with Gestational Diabetes Mellitus (GDM) to daily food costs of a recommended ideal diet.

Methods: All participants (n=19) were pregnant and had recently been diagnosed with GDM. Each participant was asked to complete a 24-hour diet recall while waiting for a consultation appointment with a Registered Dietitian (RD) at the Endocrine and Pregnancy Clinic at St. Joseph's Health Care London. A seven-day ideal diet meeting the dietary recommendations for the management of GDM during pregnancy was constructed. All dietary data obtained from the 24-hour recalls and the ideal diet was cost at three local grocery stores within six weeks to account for seasonality. In the event product brand name was unknown, middle price points for each food item were recorded. The average food cost from three grocery stores was used to calculate the preliminary results for this study. **Preliminary Results:** There was no significant difference ($p > 0.50$) between average daily food expenditure costs for participants compare to the recommended ideal diet. The average daily food expenditure costs for participants was \$9.73 (standard deviation +/- 3.65) whereas the ideal diet was \$10.36 +/- 1.80. **Implications & Conclusions:** These preliminary results suggested the average daily food expenditure costs were similar between the ideal diet for the management of GDM and the actual daily food costs of our participants. Further research regarding food costs is needed for healthcare professionals to help counsel patients with GDM.

Protein intake and pressure ulcers in General Internal Medicine patients

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Objectives: Current literature identifies nutrition as a critical component of pressure ulcer prevention and management. Specifically, increased protein intake has been identified as a major factor associated with wound healing. Current statistics for prevalence and incidence of pressure ulcers on General Internal Medicine (GIM) units indicate that the number of pressure ulcers in this population remains high. The purpose of this study is to determine if those patients with pressure ulcers meet protein requirements compared to those with no ulcers.

Methods: Patients with and without pressure ulcers were prospectively followed from Feb to April 2010. Meals trays are monitored and records of additional items consumed were recorded. Total protein and caloric intake from hospitalized patients were calculated for up to five consecutive weekdays, using nutritional analysis program using CBORD Food Services Management Systems software and Dietitians of Canada's EATracker program. **Results:** Eight patients with ulcers and 7 patients with no ulcers have completed the study. Preliminary data suggest that both patient groups are meeting their protein requirements. **Implications &**

Conclusion: Further research is needed to confirm the role of nutrition in this patient population.

Feeding pump or gravity: which method minimizes total weight loss among head and neck cancer patients receiving prophylactic gastro-jejunal feeding tubes? A pilot study.

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Objectives: Patients with Head and Neck (H&N) cancer at Princess Margaret Hospital (PMH) receive gastro-jejunal (GJ) feeding tubes as a prophylactic measure to optimize nutrition status during cancer treatment. Historically, these patients use gravity method (GM) to receive enteral nutrition. However, clinical experience suggests that the pump-assisted method (PAM) to receive enteral nutrition may minimize weight loss and symptoms of intolerance. Therefore, the aim of this study is to determine which method of GJ feeding tube administration will result in less weight loss and symptoms of intolerance for these patients. **Methods:** Eighteen patients were prospectively followed from the time of placement of their tube. They were randomized to receive either gravity method or pump. Currently we have 11 patients in the gravity arm and 7 in the pump arm of the study. **Results:** Preliminary results appear to indicate that there is no difference in weight between the two patient groups. However, those patients in the gravity arm have more symptoms of intolerance than those in the pump arm. **Implications & Conclusions:** The results of this study may help determine the appropriate method of feeding in this patient population.

Comparison and evaluation of two malnutrition screening tools in the oncology outpatient setting.

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Objectives: The prevalence of malnutrition in oncology patients ranges from 40-80%. It is, therefore, important to have an effective mechanism for identifying those at malnutrition risk. This study explores the use of two malnutrition screening tools, the Patient Generated-Subjective Global Assessment (PG-SGA) and the Malnutrition Screening Tool (MST), in the adult oncology outpatient setting. Currently, the first four questions of the PG-SGA are used as a nutrition screening tool, when the entire PG-SGA has only been validated as an assessment tool. Alternatively, the MST has been validated as a screening tool, it is briefer and easier to complete than the PG-SGA. **Methods:** A retrospective chart review was conducted using 100 charts from oncology outpatients at the BC Cancer Agency Centre for the Southern Interior (CSI) in Kelowna and the Regional Cancer Care Unit (RCCU) in Prince George. Inclusion criteria required completion of the first four questions of the PG-SGA in the chart. PG-SGA responses were used to derive MST scores. These scores were compared to an adopted gold standard for malnutrition risk; percentage (%) weight loss. Ten or greater % weight loss over 6 months is indicative of malnutrition. **Results:** Preliminary results show that the PG-SGA and the MST are comparable in identifying well nourished patients (72-74% of the study patients were well nourished). However, the MST showed a stronger correlation with % weight loss than the PG-SGA, in identifying patients at moderate or severe malnutrition risk (correlation coefficients of 0.81 versus 0.38 respectively). **Conclusions:** These preliminary results suggest that the MST is an easy, cost-effective malnutrition screening tool that is suitable for use in the oncology outpatient setting.

Assessment of dysphagia knowledge and confidence in skills of undergraduate nutrition students: a pilot study

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Dysphagia is an increasingly important problem among the rapidly growing elderly Canadian population. The need and desire for more extensive education in the assessment, treatment and management of clients with dysphagia exists, as some dietitians lack confidence, knowledge and skills in this area. **Objectives:** This study assessed the knowledge and perceived confidence in skills of undergraduate nutrition students relating to dysphagia, prior to dysphagia course education. **Methods:** Thirty-nine students enrolled in the undergraduate foods and nutrition program at Brescia University College were invited to complete a questionnaire, before any course material on the topic of dysphagia was presented, to determine the baseline knowledge and confidence in skills of nutrition students relating to dysphagia. **Results:** Most participants were in their third (61%) or fourth (33%) year of the four-year program. Sixty-seven percent of students reported having had previous education/training in dysphagia, while 31% indicated they had worked or volunteered in dysphagia-related care. Results indicated a low level of both baseline dysphagia knowledge and confidence in skills in the majority of participants. **Implications & Conclusions:** Based on our preliminary results, we believe these undergraduate nutrition students would benefit from dysphagia education to increase their knowledge and confidence in skills related to dysphagia. Further research is needed to assess whether dysphagia education can increase the knowledge and confidence in skills of undergraduate nutrition students about dysphagia.

Dietitian managed nasoduodenal feeding tube placement program in the ICU

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Objectives: Enteral nutrition is the preferred route of nutrition support in the critically ill, however aspiration risk due to gastric stasis, gastro-esophageal reflux, and patient positioning may preclude safe feeding into the stomach. A number of barriers to post-pyloric tube placement exist, particularly placement response time and success. Registered Dietitian (RD) managed ND tube placement programs are rare but exist. Vancouver General Hospital (VGH) has been proactive in this area, initiating an RD managed ND placement program in 1994. The purpose of this study is to evaluate the safety and efficacy of this RD managed ND feeding tube placement program in the ICU at VGH. **Methods:** This study was a quantitative, retrospective analysis of data previously collected on ICU patients as part of a quality control initiative. Patients were included in the study if they had an ND tube placement attempted by a dietitian (using a unit specific manual blind feeding tube placement protocol) between April 1, 2003 and April 1, 2008. Data documented included placement response time, placement time, number of confirmatory x-rays required, final tube tip position, and any clinically significant placement complications. Descriptive statistical analyses were applied. **Results:** Data was retrieved on 415 patients. Median response time was 45 minutes, and median total placement time was 15 minutes. Ninety-eight percent (98%) of tubes were successfully placed with 58% of tube tips positioned in the fourth section of the duodenum or further. On average, 1.25 confirmatory x-rays were required. No clinically significant complications were recorded. **Implications & Conclusions:** This study demonstrates a history of safe, timely and successful ND placement by an RD placement service, supporting the practice of dietitians placing ND tubes in the ICU setting.

Process Evaluation and Needs Assessment of the Current Child Poverty: A Problem We Cannot Afford (2nd edition) and a Formative Evaluation of Revised Advocacy Template, Poverty: It Affects us all

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Purpose: In Ontario, in 2007, there were 1.3 million children living in low-income families and one in six children living in poverty.¹ Haliburton, Kawartha, Pine Ridge District Health Unit (HKPRDHU) have collaborated with local community partners in order to address the Determinants of Health (DOH) and the multiple risk factors that affect poverty and hunger. In November 2008, an advocacy tool was released, titled: “Child Poverty: A Problem We Cannot Afford”² in order to help educate and encourage key decision makers to take action on the issues affecting poverty and hunger. The purpose of this research was to determine the usefulness of the previous poverty report and the extent of its effectiveness with key decision makers, and to develop and evaluate a new advocacy tool template. **Methods:** To determine the usefulness and effectiveness of the previous poverty report an evaluation was conducted. A randomly selected sample of key decision makers (n=24) in the local counties of the health unit district completed telephone interviews. Qualitative data was analyzed from transcribed interviews using thematic coding. **Results:** Themes that emerged from the data included incorporating a human story/case study, success stories of local programs, simple steps and contact information on how to take action, localized data and information on DOH specific to each county and increasing distribution of the tool. We used the above results and created a revised advocacy tool template. A formative evaluation was conducted to determine the tool’s usefulness and effectiveness to increase awareness of the DOH, and to motivate the community at large to take action and address the DOH (results pending). **Conclusion:** The evaluations conducted in this research helped to determine the effectiveness of the advocacy tools in increasing public awareness of the DOH, and to motivate the community at large to take action and address the DOH. This may raise the general public’s awareness of poverty in their local communities, and the actions they can take to reduce it.

¹ The Government of Ontario. Breaking the Cycle: Ontario’s Poverty Reduction Strategy.

url: www.ontario.ca/breakingthecycle

² HKPR District Health Unit. Child Poverty: A Problem we Cannot Afford. 2nd ed. November 2008.

The role of the gluten-free diet in diagnosing celiac disease (CD) and mucosal recovery

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Purpose: The gold standard for diagnosing celiac disease is the small intestinal biopsy. Awareness of the disease and use of “semi-scientific” verification via home blood testing has made more people self-diagnose CD and pre-maturely begin a gluten-free diet (GFD), making biopsy results inaccurate. The person must then have a gluten-challenge. A literature review was conducted to answer two questions: how much gluten does one need to consume to ensure proper diagnosis? and once on a gluten-free diet post-diagnosis, how long does it take for a person’s serology and histology to return to normal? **Methods:** A comprehensive literature review was completed using the Ovid database. Pertinent articles were evaluated and the evidence graded using the Dietitians of Canada’s Practice-based Evidence in Nutrition (PEN) methodology. **Results:** 46 articles were reviewed and eight articles were relevant to address both questions. No studies that addressed a gluten challenge after a person was on a GFD were found. A respected guideline, which recognized the lack of evidence, was used in addition to a systematic review, comprising of 13 articles that examined minimum gluten tolerance. Research results regarding recovery in serology and histology were equally limited. Factors affecting recovery included adherence to strict gluten-free diet, close monitoring and a follow-up biopsy. **Conclusion:** If a person follows a GFD before being properly diagnosed by a biopsy, there is inconclusive evidence as to the daily amount of gluten needed or the length of time gluten needs to be ingested. Guidelines suggest some gluten is needed daily for at least six weeks prior to the biopsy. A strict GFD improves but does not guarantee complete recovery of serology or histology.

Vitamin and mineral recommendations: perceptions, feelings, and practices of Interior Health outpatient dietitians

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Objective: To investigate perceptions, feelings and practices of Interior Health (IH) outpatient registered dietitians (RDs) regarding multivitamin with mineral (MVM) supplementation.

Methods: A qualitative research study design was used interview 8 IH outpatient RDs that were not affiliated with MVM companies. RDs were recruited using IH email listserv and telephone interviews were conducted using a standardized questionnaire. Transcribed interviews were analyzed to identify emerging themes surrounding the feelings, practices and perceptions of participants. **Results:** Participants stated they are commonly asked questions about MVMs in their practice and recommendations are made based on patient's diet and medical history. Participants perceived themselves and other RDs as being knowledgeable and reliable when recommending MVMs. However, half the participants were unaware of MVM recommendation practices of other RDs. Participants felt professional organizations such as Dietitians of Canada are good sources of information. Participants also felt best practice guidelines would be beneficial but considered inadequate regulation, marketing and inconsistent formulations as barriers. **Implications and Conclusions:** As RDs are commonly asked questions about MVMs by patients, they are in a good position to assess need for, recommend and comment on MVMs. RDs value the experience and knowledge of their colleagues but there is little sharing of knowledge which maybe due to lack of time or urgency. By opening up a formal dialogue RDs can build upon each others experiences to increase their collective knowledge and facilitate sharing of information between colleagues. Professional organizations can be used as a platform to transfer knowledge as RDs often refer to them for information. By channelling their experiences and ideas, RDs can then concentrate on areas they feel need to be addressed when it comes to making MVM recommendations.

Risk of intra-operative aspiration in feeding up to the operative time in intubated tube-fed ICU patients undergoing tracheostomy at Vancouver General Hospital

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Objectives: Traditional practice to reduce the risk of intra-operative aspiration is to withhold enteral nutrition (EN) for ≥ 8 hours pre-operatively. This practice can lead to sub-optimal energy delivery and malnutrition. Given the absence of evidence supporting the benefit of pre-operative fasting, NPO guidelines allowing EN up to 5 minutes pre-operatively in intubated ICU patients at VGH, including tracheostomy patients, were developed through the Department of Anaesthesiology. This study aimed to identify whether this practice was associated with increased intra-operative aspiration. **Methods:** A prospective chart review of ICU tracheostomy patients from January-March 2010 was undertaken. Data collected from the patient chart, including the surgical and anesthesia record, determined whether aspiration was witnessed during the operative procedure. Aspiration was defined as the presence of matter in the airway, including: EN formula, gastric secretion/bile, and/or blood. Additional data collected included the length of time feeds were held pre-operatively, type of feeding tube, tube tip position, and use of prokinetics. **Results:** Of the thirty-one patients scheduled for a tracheostomy during the study period, all were included in the data analysis. No patient had a recorded witnessed intra-operative aspiration event. The mean ICU pre-operative NPO period was 150 minutes. Only 8 patients had feeds held 5 minutes pre-operatively (ICU fasting guideline). **Implications & Conclusions:** Although 74% of patients exceeded the VGH ICU fasting guideline NPO period, absence of witnessed aspiration supports the safety of a shorter pre-operative fasting period compared to the traditional 8 hour recommendation. A reduced fasting period should improve the nutritional intake of ICU patients. These results require verification with a larger randomized controlled trial.

The iron status of patients with cystic fibrosis at the adult cystic fibrosis clinic at St. Paul's Hospital

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Objectives: Iron deficiency among cystic fibrosis (CF) patients has been found to be highly prevalent and significantly correlated with poor pulmonary function, a leading cause of mortality in this population. Consequences of iron deficiency such as fatigue and impaired immune function can also further diminish the quality of life of these patients. The objective of this study is to examine the prevalence of iron deficiency in CF outpatients at St. Paul's Hospital (SPH) and the association of iron deficiency with pulmonary function, nutritional indicators, selected demographics, and pancreatic enzyme supplement use. **Method:** Data collection was performed via retrospective chart reviews of outpatients registered at SPH's CF clinic. The data collected were anthropometrics, sex, age, age of diagnosis, blood tests (albumin, RBC, hemoglobin, hematocrit, MCV, iron studies), lung function tests (FEV1), and pancreatic enzyme supplement use. Correlational analysis will be done using Microsoft Excel. **Results:** Of the 176 charts reviewed, 123 subjects met the inclusion criteria. The mean iron level found was 12.9 μ mol/L with 17.1% of subjects measuring ≤ 6 μ mol/L. 7.9% of subjects had ferritin levels < 18 μ g/L. The average FEV1 percent predicted was 67% reflecting moderate lung dysfunction. 3.4% of subjects had low albumin levels and 11.5% of subjects were underweight with a BMI < 18.5 . Further results and statistical analyses are pending. **Implications & Conclusions:** Preliminary results suggest that the prevalence of iron deficiency may be lower in SPH's CF outpatients in comparison to the literature, which reports a prevalence of 30-70%. Further implications and conclusions are to be drawn from pending analysis. Future research on the use and effectiveness of iron supplementation in this population would be beneficial.

A quality improvement project to compare the accuracy of a screening tool with the Patient-Generated Subjective Global Assessment (PGSGA) for identifying nutrition risk levels in inpatients at Central Newfoundland Regional Health Center.

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The PG-SGA has been accepted by the Oncology Nutrition Dietetic Practice Group of the ADA as the standard for nutrition assessment in a number of different patient groups. **Objectives:** To compare the accuracy of the screening tool to the PGSGA for its ability to generate RD consults for patients at risk of malnutrition; for its ability to identify patients at high, moderate and low nutritional risk and to determine whether the screening tool, in its current format, should be continued. **Methods:** The screening tools were completed on admission by nursing staff. The PGSGA's were conducted on a random sample (n=133) of patients on admission, from December 2009 - February 2010. A trained assessor and a dietitian blinded to the screening tool results completed the PGSGA on each patient. The results were compared and analyzed with the goal that the screening tool would provide 80% accuracy in generating RD consults compared to the PGSGA. **Results:** The screening tool generated 71% of the RD consults that the PGSGA generated. When completed correctly, the screening tool accurately identified 61% of the patients (versus 38% when not completed correctly) in the same nutritional risk level as did the assessment; 15 at low, 12 at moderate and 32 at high risk. Unfortunately, only 57% of the screening tools were completed correctly. **Implications and conclusions:** The screening tool did not generate the desired 80% of RD consults (at the 95th percentile); therefore it is not as accurate as desired. The screening tool needs revision and nursing staff need to be better educated to complete it properly.

Promoting healthy lunches and healthy food choices among the adolescent population in one rural high school

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Objective: To promote healthy food choices among the adolescent population in a rural high school, improve the quality of students' lunches, and increase students' awareness of the importance of adequate nutrition. **Method:** 143 students at Rideau District High School completed a survey to determine barriers to eating healthy lunches and incentives were distributed to students who completed the survey. Information from this survey was used to create a lesson plan for a Grade 10 Physical Education class to educate students on the importance of healthy lunches and healthy food choices. The lesson took place in March of 2010 and consisted of two 40 minute classes. Surveys were also distributed at the beginning of the first lesson and the end of the second lesson to gather information on what students had learned and what changes they could perceive themselves making to improve their eating habits. Students were asked to be thorough when filling out the surveys and incentives were distributed again upon completion of the final survey. Surveys were approved by high school administration. **Results:** The initial survey indicated that 59% of students felt that making a lunch takes too much time and 28% were unsure of what to make. Surveys distributed during the lessons showed that 86% regularly consumed lunch and 96% found this intervention helpful in making healthier choices. Students' comments and questions during the lessons illustrated their interest in learning about the topics presented and most reported being previously unaware of the importance of healthy eating. **Implication and Conclusion:** A supportive school environment holds a significant role in the choices adolescents make in their daily lives. Students appear highly interested and motivated to learn about the nutrition when the information is tailored to their personal needs. Dietitians can play a vital role in lesson plan development and as consultants to teachers.

Evaluating the effectiveness of the 12-week Steps to Less Group Weight Management Program at St. Michael's Hospital

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Obesity is prevalent worldwide and confers significant adverse health risk. While many commercial weight loss programs exist, limited research is available to demonstrate effectiveness. Steps to Less Group Weight Management Program (STL) at St. Michael's hospital is a 12-week program involving a two-hour nutrition class and 2 hours of fitness weekly, led by a Registered Dietitian and certified fitness consultant, respectively. **Objectives:** To determine whether STL program participants achieve significant reduction in body weight and waist circumference at twelve weeks versus baseline. Secondary outcomes include reduction in dietary energy intake, achievement of personal health goals, increased physical activity, and improved quality of life. **Methods:** All individuals who registered for the January 2010 STL session (n=37) were invited to participate in this prospective, longitudinal cohort study. At baseline and 12 weeks, dietary intake (self-administered 3-day food record), physical activity (validated 7-day International Physical Activity Questionnaire), quality of life (SF-36) and personal health goals were assessed. Participants' body weight and waist circumference were measured using calibrated weight scale and tape measurement, respectively, at baseline, week 7, and week 12. Baseline height was measured by stadiometer. Food records were analyzed by ESHA Food Processor SQL. Participants' co-morbidities, medications, ethnicity, and previous weight loss diets were captured through questionnaire. **Results:** Data collection is ongoing. **Implications & Conclusions:** The results of this study will provide new descriptive data on the impact of the STL program in achieving weight loss and improving lifestyle management and quality of life. This information will be used to assess program effectiveness and identify areas for improvement.

Dietetic internship in Ontario: A descriptive survey of unsuccessful applicants

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Objectives: The education and training of dietetic professionals gives shape to the culture of the profession and defines its future growth. Each year in Ontario, approximately 200 graduates of a Dietitians of Canada accredited undergraduate nutrition program compete for 82 internship positions available in the province. This process fosters rivalry among peers and has implications for students' personal well-being and career development as well as the cultivation of leadership and collaboration within the profession. Prior studies have also suggested that despite unsuccessful applicants' opportunities to reapply in following years, the insufficient number of internship positions means that the many unable to obtain licensure likely leave the profession, which represents a loss of human potential. Little is known about the cohort of eligible applicants who are unsuccessful in securing an internship position. This study seeks to describe this population is guided by two primary research questions: (1) who are the applicants that apply, but are unsuccessful in securing an internship position? and (2) what do applicants do after an unsuccessful internship application? **Methods:** Respondents to a 68-item online survey were recruited via email sent to the memberships of alumni lists at Ryerson, Guelph, and Brescia Universities as well as members of the Ontario Home Economists Association and the Dietitians of Canada Student Network. **Results:** Data collection is on-going and data analysis will begin in June. For further information or to sign-up for notification of the final study results please email: jgingras@ryerson.ca. **Implications & Conclusions:** The results of this study will begin to fill the current gap in dietetic literature on the impact of dietetic education and training on students, interns, and the profession. The results will also set the stage for a qualitative exploration of dietetic training on students and their learning and professionalization experiences.

Évaluation du processus d'implantation de programmes d'éducation en nutrition tel que perçu par des enseignants et des éducateurs physique du 1^{er} cycle du primaire.

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Objectifs : De multiples programmes d'éducation en nutrition font leur place dans les écoles, mais peu d'entre eux ont été évalués. Les objectifs visés par ce projet étaient d'évaluer le processus d'implantation de deux programmes d'éducation en nutrition destinés aux enseignants titulaires et aux éducateurs physiques du 1^{er} cycle du primaire afin d'identifier les éléments facilitants et les barrières à leur implantation. **Méthodes** : Sur 195 questionnaires auto-administrés envoyés aux enseignants titulaires, 54 (28%) ont été retournés tandis que chez les éducateurs physiques, 47 (25%) questionnaires ont été reçus sur 187 envois. Également, quatre entrevues téléphoniques ont été réalisées chez les enseignants titulaires tandis que cinq éducateurs physiques ont été interviewés. **Résultats** : Bien que les programmes soient appréciés de l'ensemble des enseignants titulaires et éducateurs physiques, le degré d'implantation est faible, soit 17% et 21% tandis que le taux de fidélité est de 62% et 71%, respectivement. Le temps disponible pour faire de l'éducation en nutrition ainsi que le budget limité pour l'achat d'équipements ou d'aliments sont les principales barrières à l'implantation d'un programme chez les enseignants titulaires tandis que chez les éducateurs physiques, ce sont des activités parfois moins adaptées au contexte qui représentaient un facteur limitant. Cependant, un programme « clé en main », attrayant et flexible, en plus de contenir des activités et thèmes d'intérêt pour les élèves, ont facilité l'utilisation de ces programmes. **Implications/conclusion** : Une piste de solution afin d'améliorer l'implantation de ces programmes serait d'impliquer davantage les directions d'école afin qu'il offre le soutien de temps et financier permettant une planification plus efficace pour ce type d'activités.

The relationship between skinfold thickness and weight during the renourishment of patients with eating disorders

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Objectives: Renourishment is a crucial component in the treatment of eating disorders. Currently skinfold thickness (SFT) and weight are accepted as indicators of weight recovery in patients, however, the correlation between the change in SFT and change in weight has not been largely studied in this population. Factors such as atypical body fat distribution during weight normalization, inter-practitioner technique, water loading, and edema, make it difficult for clinicians to accurately assess and rely on such measurements. The objectives of this study are to determine the correlation between the changes in SFT and changes in weight for patients with eating disorders, and to determine how variables such as patient demographics and treatment setting influence this relationship. **Methods:** A retrospective chart review was conducted on inpatients and outpatients who were followed by the Eating Disorders Program between 1997 and 2009. Demographic and anthropometrical variables including age, gender, treatment program, length of stay, height, skinfold measurements and corresponding weights, were extracted from clinic records. Statistical analysis will be performed using SPSS for Windows 10.0. Correlational analysis including Pearson product-moment correlation will be conducted to examine the relationship between the trends in weight and body fat percentage change. **Results:** 180 subjects were identified with 33 subjects being repeat admissions for a total of 228 measurement records of weight and SFT. Statistical analysis is pending. **Implications and Conclusions:** The results of this study will provide insight on the effectiveness of using changes in SFT to make treatment decisions in patients with eating disorders at St. Paul's Hospital.

High calcium intake is associated with lower percent total and truncal fat in young, healthy adults.

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Objectives: To investigate the relationship between calcium (Ca) intake and fat mass.

Methods: 181 healthy men and women 18 to 28 y were recruited from South-western Ontario.

Each subject underwent one whole-body dual energy x-ray absorptiometry scan to determine fat mass (%FM) and truncal fat (%TF). Ca intakes were determined using a food frequency questionnaire, and physical activity (PA) scores were collected on a subset (n=151). Ca intakes were divided into quartiles for dairy, dietary, and total sources. Mean %FM and %TF were compared using t-tests between the lowest (109-390 mg/d range, Q1) and highest (1111-1608 mg/d range, Q4) Ca consumers. ANOVA was used to compare Ca intakes between subjects with %FM \geq and $<$ 50th percentile. **Results:** %FM (p=0.051; 0.044; 0.018) and %TF (p=0.050; 0.050; 0.016) were 3.7-4.6% lower for those in Q4 vs. Q1 (all sources). When adjusted for PA, only the relationship between total Ca intake and %FM (p=0.007) and %TF (p=0.02) persisted. Total (p=0.037) and dietary (p=0.004) Ca intakes for those with a %FM \geq 50th percentile were significantly lower; when adjusted for PA, only dietary Ca intake remained significant (p=0.058).

Implications & Conclusions: Our findings support a relationship, even after adjusting for PA, between higher Ca intakes and lower body fat in young adults, with the strongest data for dietary and total Ca. We propose a threshold effect of 1100 mg/d Ca, above which inverse relationships with body fat are detected. We recommend that Canadian adults be encouraged to increase their Ca intakes to at least the Adequate Intake of 1000 mg/d for reasons extending beyond bone health.

Dietary adherence among type 2 diabetes patients.

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Objective: Diet is an important component of diabetes treatment to achieve good glycemic control, but adherence is often reported to be poor. Identifying current nutrient intake will identify which dietary recommendations are most difficult to meet Purpose of this study is to determine how well people with type 2 diabetes in Edmonton meet dietary recommendations. **Methods:** Seventy eight Type 2 diabetes patients over 18 years of age were included in this cross-sectional study. Dietary adherence was measured both subjectively using a three day food record and objectively using a questionnaire adapted from Toobert and Glasgow; this questionnaire of ten questions were framed based on 7 point Likert scale focusing on consumption of recommended food groups. Answers were summed up to determine perceived dietary adherence. Socio demographic information was also collected; Hemoglobin A1C was measured using Siemens DCA 2000+ analyzer. **Results:** Of the 78 participants 48 completed the food record. Mean age and waist circumference were 61.5 ± 10.3 and 100.7 ± 15.5 cm. Mean BMI (32.9 ± 5.8) falls under obese category and hemoglobin A1C (7.3 ± 1.3) is slightly above the recommended level. Mean caloric intake was 1974 ± 412 kcals/day. Mean protein, carbohydrate and fat intakes constituted $18 \pm 4\%$, $53 \pm 9\%$ and $31 \pm 8\%$ of total calories respectively. Intake of saturated fat ($10 \pm 3\%$ kcal) and polyunsaturated fats ($14 \pm 5\%$ kcal) were higher than the recommended level. As per perceived adherence questionnaire only 19% of participants reported to included recommended servings of fruits and vegetables on all days of the week, similarly scenario exist in consumption of low glycemic index foods (31.7%). **Implications & Conclusion:** Analysing both perceived and actual intake results implies that mean macronutrient intakes are within the recommended level while more focus has to be made on altering fruits and vegetable intake, and emphasize on increasing low glycemic index foods and reducing saturated fat intake.

The proactive and reactive role of dietary lutein and zeaxanthin in age-related macular degeneration.

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Objectives: To examine evidence regarding the effectiveness of dietary lutein and zeaxanthin (L/Z) preventing or delaying the development of age-related macular degeneration (ARMD).

Methods: An extensive literature review was conducted using research databases (Cochrane Reviews, Ovid, CINAHL, PubMed, and Medline). Evaluative inclusion criteria consisted of peer-reviewed publications from 2004-2010; longitudinal or cross-sectional human studies; and systematic reviews. Studies pertaining to supplemental L/Z were excluded. Nine articles were appraised and graded using Practice-based Evidence in Nutrition (PEN) guidelines. **Results:** Limited evidence exists to support whether a diet high in L/Z can prevent the initial onset of ARMD. However, there is fair evidence to suggest that a higher than average intake of dietary L/Z may reduce the risk of developing neovascular (wet) ARMD. Similarly, an elevated consumption of L/Z may also reduce the risk of advanced dry ARMD and reticular drusen (yellow pigmentation); however these two are not as well established. While one study found that consuming ≥ 942 $\mu\text{g}/\text{d}$ of L/Z reduced the risk of developing neovascular ARMD, most studies only provided general conclusions that increasing intake of dietary L/Z may reduce risk of ARMD progression. Although L/Z has demonstrated positive effects, increased intakes of dietary L/Z and omega-3 fatty acids together have been observed to accelerate ARMD progression. **Implications & Conclusions:** While dietary L/Z cannot prevent the onset of ARMD, consuming approximately 900 $\mu\text{g}/\text{d}$ of L/Z appears to slow ARMD progression to more advanced forms when examined alone. Since ARMD is the leading cause of blindness in Canada, this is a positive finding in our aging population. Age-related macular degeneration continues to be a popular area for research and there is still more to be discovered.

Magnitude of caloric deficiency of NPO periods for peri-operative pain service showers to patients with total body surface area burns $\geq 20\%$

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OBJECTIVES: 1) To assess the magnitude of caloric deficiency incurred per patient due to periods where a patient receives nothing by mouth (NPO) on account of peri-operative pain service (POPS) showers. 2) To determine whether dietitians in the Burn, Plastics, and Trauma Unit (BPTU) at Vancouver General Hospital (VGH) should advocate for current POPS shower NPO protocol to be re-assessed. **METHODS:** A single-center, retrospective chart review of patients admitted to the VGH BPTU was conducted to estimate calories lost as a result of mandatory NPO periods for POPS showers. Eligible subjects were ≥ 19 years of age, admitted to the VGH BPTU with total body surface area (TBSA) burns $\geq 20\%$, between May 1st, 2007 to April 30th, 2008. Subjects excluded were those fed via parenteral nutrition, and/or who expired while in the Intensive Care Unit (ICU). **RESULTS:** On average, for each POPS shower, patients had a daily caloric deficiency of 1019 kilocalories, and were NPO for 9.3 hours. As per our subject pool, each patient received 3.9 POPS showers, under general anesthesia, in a 30-day period in the BPTU at VGH. **IMPLICATIONS AND CONCLUSIONS:** In burn patients, aggressive nutrition in combination with clean wounds accelerates healing. However, if the debridement procedure results in less nutrition, the overall healing of the burn patient could be compromised. To minimize the deleterious nutritional impact of POPS showers, it could be appropriate to minimize the NPO time by having doctors specify NPO initiation times and by matching the BPTU NPO protocol to match the ICU protocol that specifies a lesser NPO period pre-operatively.

Self-reported demographic characteristics of individuals with prediabetes in a London, Ontario and area population

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The Prediabetes Initiative and Partnership Program is offered to individuals with prediabetes as a community education strategy to assist in preventing or delaying the onset of type 2 diabetes (T2DM). Identifying characteristics unique to this population may assist in the development of programs that are specific and relevant. **Objectives:** To determine demographic characteristics of adults diagnosed with prediabetes who attend the Prediabetes Initiative program. **Methods:** In 2007-08, 108 participants attended group education after being referred by their physician. A questionnaire was completed upon arrival. Responses have been analysed. **Results:** Mean age of individuals was 59.3 ± 12.1 , they were equally from both genders, and most were unaware of having hyperglycemia at diagnosis. Almost all of them were from a low-risk ethnicity. Reported heights and weights were used to calculate BMI. All individuals were classified as overweight or obese, and over half of them had first-degree relatives with diabetes. Approximately sixty percent of individuals indicated they had hypertension, about half indicated they had hypercholesterolemia, and about 10% indicated they had hypertriglyceridemia. Mean number of self-reported risk factors for diabetes as stated in the 2008 Canadian Dietetic Association Clinical Practice Guidelines was 5 ± 1 . Approximately 80% of individuals were taking medications, and of them, mean number of medications was 4 ± 3 . **Implications & Conclusions:** Understanding that our study population is comprised of individuals who are middle-aged, overweight/obese, from both genders, and most are on multiple medications will assist us in better meeting their needs in the development and provision of prediabetes education.

Administrative dietetic training: Practices within Canadian Internship Programs

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Objectives: In our profession we need to have members who can effectively manage resources, systems, and related businesses in order to lead the dietetic profession forward. Traditionally, healthcare foodservice departments have acted as the practice environment where dietetic trainees apply knowledge and practice skills to achieve entry level management competence. Changes in the healthcare industry leading to a reduction of human resources in this area could potentially lead to diluted management learning experiences within dietetic training programs. Little is known about the current training management skills within internship programs. This study seeks to identify the organizational structure, preceptor involvement, and delivery, key activities of foodservice management training within dietetic internship programs, challenges and opportunities for training. **Methods:** A 45 item survey was tested with dietitians and will be emailed program directors of dietetic training programs in Canada using the Dietitians of Canada Program Director list. The survey consists of two sections that will be completed by program directors and management/administrative preceptors within the program. Survey questions focus on describing the length, structure, preceptor support, resources, educational strategies, and activities involved in the management/administrative within the program. **Results:** Data collection will begin in June as the project is pending REB approval and data will be analyzed using descriptive statistics. **Implications & Conclusions:** The results of this survey will provide us with baseline data on the strengths, barriers and opportunities for change in current management training. Furthermore, this study will develop the base for further exploration of dietetic training management experiences.

Does meeting recommendations for dietary intake and weight gain during pregnancy affect serum phenylalanine levels and fetal outcomes in maternal phenylketonuria (MPKU) patients at Mount Sinai Hospital?

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Objectives: Phenylketonuria (PKU) is a genetic disorder that affects the metabolism of phenylalanine. If left untreated the high phenylalanine levels can cause mental disability, microcephaly, delayed speech, seizures, eczema, and behaviour abnormalities. To prevent adverse outcomes in children, infants are tested at birth for PKU and dietary treatment is started early and consists of a phenylalanine restricted diet (low protein foods and medical foods). Infants born to women with PKU are at risk of maternal PKU (MPKU) syndrome if their mother's blood phenylalanine levels are not within the optimal range of 120-360 $\mu\text{mol/L}$. Research in the area of MPKU recommends initiation of a low phenylalanine diet prior to pregnancy and maternal blood phenylalanine levels between 120 and 360 $\mu\text{mol/L}$ to prevent MPKU syndrome. No research has shown if pregnant women with PKU are meeting recommendations. This study seeks to describe the maternal PKU population, to ensure patients are meeting recommended DRI, weight gain and serum phenylalanine levels, and to examine the associations between maternal phenylalanine levels, macronutrient and energy intake, pregnancy weight gain and fetal outcome. The outcome measures of interest in the study consist of macronutrient intake, energy intake, weight gain, serum phenylalanine levels, fetal growth and fetal outcomes. Methods: A retrospective chart review of 20-30 maternal PKU pregnancies at MSH between 2000 and 2009 is in progress. Food records will be analyzed using ESHA and data will be analyzed using SPSS and Prism software ($P > 0.05$). **Results:** Data collection is in progress. **Implications:** With this information we can then determine if the recommendations are being met and if this is associated with optimal fetal outcomes.

The perceived knowledge, skills, attitudes, and training needs of Northern Ontario dietitian preceptors.

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The Northern Ontario Dietetic Internship Program (NODIP) is a distributed community-engaged internship model, with many preceptors practising in rural communities and in various practice settings. **Objectives:** 1) To determine the perceived knowledge, skills and attitudes of dietitian preceptors in Northern Ontario; 2) to identify barriers of Northern Ontario dietitians to preceptoring; and 3) to identify the training needs and preferred training modes of dietitian preceptors in Northern Ontario. **Methods:** A 22-item online survey instrument was modified from the survey developed for the study entitled “Canadian preceptors’ perceived knowledge, skills and training survey”, conducted in 2008. The original survey was modified based on the literature to include items related to self-identified preceptor training content needs and preferred modes of training. The demographics section was modified to reflect the Northern Ontario population. The survey was pre-tested (n=4) for clarity and understanding. An invitation to participate email with a link to the survey through SurveyMonkey was distributed to a sample of 161 eligible dietitians in the NODIP Database practising in North East and North West Local Health Integration Networks (LHIN). **Results:** Sixty four (40%) Registered Dietitians participated. Most respondents were from the Northeast LHIN (55%) and from an urban setting (61%). Other results are pending analysis. **Implications and Conclusions:** The findings of this study will help to identify the professional development needs of Northern Ontario dietitian-preceptors and will aid in future preceptor training initiatives to be undertaken by the NODIP. These results will inform Northern Ontario advocacy efforts for dietitian-preceptor training, content and training formats.

Are you craving a change? : A pilot study to evaluate the Craving Change™ workshop

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Craving Change™ is a workshop that aims to address the needs of clients who have self-identified problematic eating behaviours. There is limited research available that has evaluated the effectiveness of the Craving Change™ workshop in improving client's problematic eating behaviours. **Objectives:** This study aims to 1) measure clients' perceived changes in their eating behavior; 2) determine if clients continue to set goals, their progress of achieving set goals, and the barriers and facilitators to goal setting; 3) determine if clients continue to use self-awareness tools after participating in the Craving Change™ workshop and 4) clients' opinions on program follow up. **Methods:** A seven item survey was developed based on a review of the literature to be administered through a structured interview. Clients were phoned to set up interviews between April 19 and April 30 2010. The interviewer will guide the participants through a series of open- and closed-ended questions using probes as needed. The sample consists of seven clients who completed the Craving Change™ workshop in January 2010. Five females and one male agreed to participate. Qualitative and quantitative data will be collected and therefore mixed methods will be used for descriptive analysis. **Results:** Data collection is in progress. **Implications & Conclusion:** Based on the results of this pilot study, the Marathon Family Health Team (MFHT) may further evaluate the Craving Change™ workshop to include a larger sample size; modifications to the evaluation tool may be necessary. Also, the findings of this pilot study may identify possible modifications to improve the Craving Change™ workshop offered to clients of the MFHT in the future.

Barriers and facilitators of recruitment and retention of Registered Dietitians in Northern Ontario

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OBJECTIVE: To identify perceived barriers and facilitators of recruitment and retention faced by Registered Dietitians in Northern Ontario, in order to better understand the chronic turnover and shortages of dietitians in various settings. **METHODS:** A key informant telephone survey, developed and pre-tested previously, was conducted with a diverse sample of Registered Dietitians working in Northern Ontario. Eligible Registered Dietitians (n=161) employed in Northern Ontario were recruited by email. Those that responded to the Invitation to Participate email were provided a convenient interview time with one of two interviewers during a three week period. The survey consisted of ten questions, including four related to demographics and practice area. Responses to interview questions were audio taped, as well as recorded on data forms by the interviewers. Descriptive statistics will be presented detailing the most commonly identified barriers and facilitators of recruitment and retention of Registered Dietitians in Northern Ontario. **RESULTS:** Seventy-four Registered Dietitians currently working in Northern Ontario were interviewed (response rate: 46%). Most respondents were from the Northeast LHIN (i.e., LHIN 13; 65%) and from an urban setting (70%). The most common areas of primary practice among responding RDs were clinical (42%) and public health (26%). Respondents also came from family health teams (9%), diabetes clinics (5%), food service administration (3%), mixed practice (5%), CCACs (3%), private practice (1%), and other settings (5%). Other results are currently pending. **IMPLICATIONS AND CONCLUSIONS:** The results will be used to aid in future advocacy for Registered Dietitians in Northern Ontario and assist with Health Human Resource planning initiatives.

Use of cognitive behaviour therapy in practice: A six month follow up evaluation

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The Master Craving Change™ two day workshop is designed to provide participants with an opportunity to develop and practice facilitation skills while applying cognitive behavioural theory within the framework of problem eating. This report describes the findings of a six month follow up on-line survey completed with consenting participants.

Objectives: 1) To determine if the participants were using the knowledge gained in their practice six months after attending the workshop; 2) to identify facilitators and barriers to implementing cognitive behavioural therapy into the practices of the participants; and 3) to identify perceived additional education opportunities that may support the participants to further acquire skills and confidence to use cognitive behavioural theory in their practices. **Methods:**

An 18-item electronic survey was developed based on a literature review. The survey was reviewed by three registered dietitians for clarity. Forty four dietitians, one nurse and one social worker (n = 46) from Northern Ontario attended the Master Craving Change™ workshop. Of the 46 participants, 34 (74%) consented to being contacted six months after the workshop. An email invitation was sent to each participant with a link to the survey. Descriptive statistics will be used to collate the quantitative data. Respondents' comments and observations will be categorized into key perceived knowledge, skills, attitudes, barriers and training needs.

Results: Sixteen participants (35%) completed the survey. Other results are pending analysis.

Implications & Conclusions: The findings of this evaluation will provide insight into whether the Master Craving Change Workshop™ met its learning objectives, will identify facilitating factors and barriers to implement this knowledge into practice and offer guidance to local professional groups who organize continuing education opportunities.

The development of an interview guide to identify the barriers to and facilitators of municipal participation in community gardens.

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Municipal support plays a key role in the initiation and/or maintenance of community gardens in Northwestern Ontario. Objective: To design an interview guide that will be used to capture community and municipal perspectives on the barriers to and facilitators of municipal participation in community gardens in Northwestern Ontario. Methods: Two interview guides were developed, one for communities with a community garden and another for communities without. Questions in the guide were open ended and were regarding community gardens in Northwestern Ontario and their history, progression and the participation of the municipality in the community garden. This qualitative design will be used to obtain perspectives from community members, municipal leaders and staff. Results: Two interview guides have been completed and are ready to be used for a pretest. Once the pretest has been completed, the interview guides will be finalized and the data collection phase will begin in various communities in the Northwestern Health Unit (NWHU) catchment area. Implications and Conclusions: The data collected when the interviews are conducted will aid in up-streaming NWHU program efforts addressing food insecurity in Northwestern Ontario. In addition, the results may also be used to identify sources as well as need for funding, staffing, in-kind donations and resources to support community gardens in Northwestern Ontario.

The development of a questionnaire to explore the self-care practices of patients with type 2 diabetes mellitus on hemodialysis.

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Persons with type two diabetes mellitus (DM) on maintenance hemodialysis (HD) are required to manage complex diet prescriptions and demanding self care practices. **Objectives** To develop and pilot a survey that explores the self care practices of patients with type two DM on HD at Hôpital Régional de Sudbury Regional Hospital (HRSRH). To identify whether the questions in the survey tool need to be altered to improve patient understanding and clarity of the tool. **Methods** A 35 item survey was developed based on literature, existing tools and dietitian expertise. A convenience sample of patients (n=3) from the HRSRH Nephrology Program will be selected based on their ability to speak and understand English, diagnosis of DM greater than 10 years, and on HD for at least six months. Each patient will participate in an interview to pilot test the survey. Respondents will be asked a series of four cognitive testing questions after most questions. One interviewer will conduct the interviews and a recorder will be present to record the responses for analysis. Notes will be reviewed after each interview to assess respondents understanding, perceived clarity and comfort with the questions. **Results** Pending data collection. **Implications & Conclusions** Responses to the cognitive testing questions will be used to make recommendations to improve the understanding and clarity of the survey. These results will be used to revise the survey for implementation. The data collected when the survey is administered will aid in future advocacy for the creation of programs in the HRSRH Nephrology Program to support this patient population by providing rationale for funding.

Profile of purchasers of organic foods

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Objectives: The purpose of this study was to determine a profile of purchasers of organic food (OF) who shop at chain supermarkets in Regina, SK. **Methods:** An 18 item exploratory questionnaire was developed. It consisted of both open and closed ended questions pertaining to demographics, purchaser perceptions, health beliefs, purchasing patterns, thoughts and beliefs related to OF. The questionnaire was administered over 3 consecutive days at 7 chain grocery stores in Regina, SK. **Results:** Of the 177 respondents, the majority were female, between the ages of 45-55 years, from the city of Regina, SK, with a university/college degree, were married or common law, with 2 children, and had an estimated annual household income greater than \$100,000. The majority of respondents purchased OF once per month at a grocery store and held the belief that organic means no pesticides/herbicides/chemicals/genetic modification. In addition, the majority purchase OF for health reasons, and see expense as a downside to OF but are willing to pay more. Many use the labels to identify OF, exercise for health, and use the internet as a source of OF information. Purchasers had similar beliefs, health behaviours, and reasons for purchasing OF. **Implications & Conclusions:** Local purchasers of OF have many misperceptions of food and OF which suggests that purchasers may not fully understand OF or why they choose to purchase it. Purchasers seek more information about OF and foods while shopping which shows that grocery stores could potentially help many consumers make better food choices by having a dietitian present.

Initial client perceptions of using the Diet Plate® and Breakfast Bowl

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Objective: Over the years, portion sizes of individually packaged foods, ready-to-eat foods, and restaurant servings have increased drastically in size. In the RQHR Lipid Clinic, the clinic Registered Dietitians were interested in tools to recommend to clients struggling with portion control. The purpose of this study was to investigate how clients of the RQHR Lipid Clinic perceive the use of the Diet Plate® and Breakfast Bowl as portion control tools. **Methods:** Eighteen adult participants were recruited for individual 30 minute instructional sessions on the use of the Diet Plate® and Breakfast Bowl. Participants partook in a telephone follow up survey to identify their perceptions after 2 weeks or 1 month of use. **Results:** All 18 participants were followed up. All participants reported a sense of increased portion awareness by using the tools which also seemed to increase participants' motivation to exercise. The majority of participants reported using the tools 5 to 6 times each week and an average weight loss of 3 kg at the end of the study. From participant responses, the following key initial perceptions were noted: the tools assisted with weight related goals, helped increase awareness and knowledge of portion sizes, and prompted participants to make other lifestyle changes. The majority of participants stated that they would recommend the Diet Plate® and Breakfast Bowl to their friends and family. **Implications & Conclusions:** The Lipid Clinic dietitians should consider recommending these portion control tools to assist clients make dietary changes to decrease serum lipids. These tools may also result in other lifestyle changes such as weight loss and increasing physical activity.

Skills and attributes of dietetic preceptors that are preferred by Canadian dietetic interns

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Objective: To date, there is limited information in dietetics regarding interns' desired preceptor skills and attributes. The purpose of this study was to identify the preferred preceptor skills and attributes desired by Canadian dietetic interns. **Methods:** A ten-item, electronic questionnaire was sent in the English language to all 2009/2010 Canadian dietetic interns in Canada. The questionnaire consisted of six open-ended questions and four demographic questions. SurveyMonkey® tabulated the demographic question responses. Each open-ended question was examined individually and responses were divided into categories based on similarities and themes. **Results:** Of the estimated 292 dietetic interns in Canada, 45 responded to the questionnaire for a response rate of 15%. The main themes identified under skills were: communication, organization, teaching, evaluation/feedback, and continued learning/education. Themes identified under attributes included: professionalism, friendliness, being passionate, and understanding. Under the concept of feedback there were four themes: how feedback was given, timing of feedback, setting where feedback took place, and the content of the feedback. Other themes identified from the questionnaire included: intern autonomy and independent work, preceptors showing genuine interest in their interns, detailed discussions of intern performance, preceptors wanting to have an intern, preceptors being organized and prepared, and preceptors being provided with training in precepting. **Recommendations and Conclusion:** A qualitative list has been formulated of the preceptor skills and attributes desired by dietetic interns and further research into to the relative importance of them may be completed.

The effects of hand held indirect calorimeter on weight loss in bariatric surgery candidates: A retrospective chart review

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Objective: Weight loss or weight maintenance is required of bariatric surgery candidates at the Surgical Assessment Centre (SAC) in Regina. A caloric goal is determined and provided for each client based on his/her resting energy expenditure (REE). This chart review examined whether the use of hand-held indirect calorimetry (HHIC) in determining REE in bariatric surgery candidates at the SAC resulted in greater weight loss as compared to use of the Mifflin St.-Jeor (MSJ) predictive equation. **Methods:** Researchers completed a retrospective chart review on nine clients at the SAC that had their REE measured using HHIC. Of these nine clients, six were included in the review. Information collected included weights, age, appointment dates, gender, initial BMI, reported dietary intake (if provided), and calculated and measured REE. Analysis of the information was completed using a Microsoft Excel spreadsheet to determine rates of weight change prior to HHIC and following the HHIC measurement for each participant. **Results:** An equal number of participants were more successful at losing weight prior to HHIC as there were following HHIC. All participants included in the chart review lost weight with the exception of one. **Implications & Conclusions:** The weight loss experienced by participants could not be attributed to the use of HHIC, as some participants were more successful at losing weight prior to the measurement. Despite this, researchers recommend the continued use of HHIC in this population, as it is the gold standard for measuring REE and is available for regular use at the SAC.