Alberta Health Services

Maternal Newborn Child & Youth Strategic Clinical Network™

Health Outcomes Improvement Fund – Competition Results: Abstracts

Date of Notice: February 14, 2017

LARGE TARGETED COMPETITION

1. Leonora Hendson (University of Calgary)

Title: Sound beginnings for healthy hearing and development: Augmentation of program evaluation and risk indicator assessment for the Alberta Early Hearing Detection and Intervention (EHDI) Program

Co-applicant(s)/Project Team: Huiming Yang (Alberta Health Services); Tanis Howarth (Alberta Health Services); Julie Evans (Alberta Health Services); Charlene Watson (Alberta Health Services); Brian Schmidt (Alberta Health Services); Trina Uwiera (Alberta Health Services); Warren Yunker (Alberta Health Services, University of Calgary); Jing Yang (Alberta Health Services); Pantea Javaheri (Alberta Health Services); Katie de Champlain (University of Calgary); Steven Ting-Kuang Chao (University of Alberta)

Abstract:

Every year 2-3 per 1000 infants are born with a permanent congenital hearing impairment (PCHI). Based on 2014/15 birth rates, annually approximately 115-170 infants are born in Alberta with PCHI. The first 6 months is a critical timeframe for infants born with PCHI as those that are diagnosed and provided with appropriate intervention before 6 months of age will have better speech, language, cognitive, and family outcomes. Alberta Health Services is implementing a universal publically funded provincial Early Hearing Detection and Intervention (EHDI) program. Our objective is to augment program evaluation during the implementation of EHDI to assess whether key performance standards and metrics are met and to identify gaps in service ("failure to follow-up" in screening/ diagnosis/ intervention). A second objective is to assess the incidence of risk indicators for permanent hearing loss and thereby the impact on resource utilization. Our team has expertise to identify patterns to suggest barriers, to understand why they exist, and to explore solutions to improve processes, pathways and resources. This achieves the MNCY SCN purpose of assessment of a change in newborn care using a newly implemented clinical pathway, ensuring a "sound beginning" for a program of early hearing detection and intervention.

Term of Funding: 3 years

2. Dawn Kingston (University of Calgary)

Title: Evaluation of an antenatal perinatal mental health pathway: A randomized controlled trial

Co-applicant(s)/Project Team: Scott Stuart (University of Iowa); Marie-Paule Austin (University of New South Wales); Anne Biringer (University of Toronto); Katherine Bright (University of Calgary); Paula Harvalik (University of Calgary); Radha Chari (University of Alberta); Lisa Gagnon (University of Calgary); Gina Dimitropolous (University of Calgary); Rebecca Giallo (Murdoch Children's Research Institute); Sheila McDonald (Alberta Health Services, University of Calgary); Sander Veldhuyzen van Zanten (University of Alberta); Maureen Devolin (Alberta Health Services)

Abstract:

This project aligns with MNCY SCN's priority of developing, implementing, and evaluating a perinatal mental health pathway focusing on screening, referring, and treating pregnant women for common mental disorders. It uses the most rigorous evaluation approach (randomized controlled trial comparing pathway vs no pathway) to test a pathway of integrated perinatal mental healthcare that lays the foundation for universal upscaling. Integrated mental healthcare - the systematic linkage of assessment, referral, and treatment -is a cost-effective way of improving service access and effectiveness. This pathway will support universal implementation and target barriers by using a computerized system that supports clinicians through: 1) e-screening that women complete while waiting for their prenatal appointment and that is automatically scored for presence/severity of current symptoms and future risk; 2) computerized referral process that links women's screening result to ideal care options; and 3) a web-based therapy that enables women to initiate psychotherapy within hours of screening. Linking to Alberta's planned pathway for standardized postpartum depression care, this pathway will facilitate comprehensive perinatal mental healthcare across Alberta that can interrupt the cycle of poor mental health that continues throughout women's lives in the absence of treatment and break the intergenerational cycle of risk.

Term of Funding: 3 years

3. Susan M. Samuel (Alberta Children's Hospital, University of Calgary)

Title: The Transition Navigator Trial: Evaluating a patient navigator service to improve transition to adult health services for youth and young adults with chronic health conditions

Co-applicant(s)/Project Team: Andrew Mackie (Stollery Children's Hospital, University of Alberta); Gina Dimitropoulos (University of Calgary); Alberto Nettel-Aguirre (University of Calgary); Scott Klarenbach (University of Alberta); Shannon Scott (University of Alberta); Eddy Lang (University of Calgary); Daniele Pacaud (University of Calgary); Jorge Pinzon (University of Calgary); Greg Guilcher (Alberta Health Services); Lonnie Zwaigenbaum (University of Alberta); Lorraine Hamiwka (University of Calgary)

Abstract:

The Transition Navigator Trial is a randomized controlled trial (RCT) of a patient navigator service versus usual care, aimed at adolescents aged 16-21 years living with a chronic health condition in Alberta who are transferring to adult healthcare. This mixed-methods (quantitative and qualitative) study will evaluate the impact of a transition navigator on Emergency Room and urgent care use, and address modifiable barriers to successful transfer of care. This addresses one of the top priorities set by the Maternal Newborn Child & Youth Strategic Clinical Network (MNCY SCN) and their patient partners, and this study aligns with Alberta Health Services (AHS) Patient First Strategy.

Term of Funding: 3 years

4. Antonia Stang (University of Calgary)

Title: Performance Measurement for High Acuity Pediatric Conditions

Co-applicant(s)/Project Team: Jennifer Thull-Freedman (University of Calgary); Katharine Smart (Alberta Health Services); Tyler Williamson (Alberta Health Services); Eddy Lang (Alberta Health Services); Angelo Mikrogianakis (Alberta Health Services); Bruce Wright (Alberta Health Services); Diana Murray (Alberta Health Services)

Abstract:

Measuring the quality of health care is a provincial, national and international priority. Identifying gaps in care and improving outcomes for seriously injured or ill children requires rigorous, evidence based performance measurement.

The objectives of this project are to establish a provincial performance dashboard to measure the quality of care for high acuity pediatric conditions and to engage patients and families in the process of designing and disseminating the results of healthcare measurement. We will use established consensus methodologies to engage multiple stakeholders including the project team, information technology (IT)/database experts, patient and family representatives and relevant stakeholders from MNCY and Alberta Health Services to select performance measures, identify patient outcomes, and develop the reporting format. Specific deliverables include: 1) a novel method of involving patients and families in health care evaluation and improvement that can be applied to other care settings and; 2) a performance dashboard for high acuity pediatric conditions in the Calgary zone that can be implemented across the province with the implementation of a provincial clinical information system. The expected long term outcome for this project is improved care for pediatric patients with high acuity conditions seen in any ED in the province of Alberta.

Term of Funding: 3 years

5. Keith O. Yeates (University of Calgary)

Title: Implementation of the MNCY Clinical Pathway for Acute Care of Pediatric Concussion: Uptake, Outcomes, and Health Care Impacts

Co-applicant(s)/Project Team: Karen Barlow (Alberta Health Services, University of Calgary); Bruce Wright (Alberta Health Services, University of Alberta); Brenda Clark (University of Alberta); Alf Conradi (Alberta Health Services); Angelo Mikrogianakis (Alberta Health Services); Kathryn Schneider (University of Calgary); Roger Zemek (University of Ottawa)

Abstract:

Pediatric concussion is a significant public health burden. Multiple evidence-based clinical practice guidelines (CPGs) exist to manage the care of concussion in children, but they have not been implemented consistently in clinical settings. This reflects the failure to translate CPGs into specific clinical pathways (CPs) implemented with active, planned interventions. In Alberta currently, CPs do not guide the care of children with concussions presenting to acute care settings. The Maternal Newborn Child Youth (MNCY) Strategic Clinical Network established a work group to develop best-practice, evidence-based CPGs for the management of concussion that are being translated into specific CPs for different clinical settings. The goal of the current proposal is to conduct an expanded evaluation of the implementation of the CP for acute care of pediatric concussion across four acute care sites in Calgary and Edmonton. The project has three objectives: (1) Design an evidence-based, knowledge-user informed, and theory-driven approach to implementation of the MNCY CP for acute care of pediatric concussion; (2) Evaluate the impact of the implementation on patient-centered outcomes using a stepped wedge cluster randomised trial; (3) Determine whether implementation of the MNCY CP is associated with changes in health care utilization and associated costs.

Term of Funding: 3 years

Alberta Health Services
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ABSTRACTS – SMALL TARGETED COMPETITION

1. Maria B. Ospina (University of Alberta)

Title: Emergency Department Use During Pregnancy and Postpartum in Alberta

Co-applicant(s)/Project Team: Radha Chari (University of Alberta); Brian Rowe (University of Alberta); Sue Ross (University of Alberta); Susan Crawford (Alberta Perinatal Health Program); Susan Jelinski (Alberta Health Services); Amy Metcalfe (University of Calgary); Rhonda Rosychuk (University of Alberta); Anderson Chuck (Institute of Health Economics); Cristina Villa-Roel (University of Alberta); Arun Pokhrel (Alberta Health Services)

Abstract:

Emergency departments (ED) are critical access points of health care. The patterns of utilization and predictors of ED services during pregnancy and the postpartum period have not been well documented in the scientific literature. The overall objective of this research is to describe the characteristics and patterns of ED services utilization during pregnancy and postpartum in Alberta, and identify predictors and outcomes of these ED visits. The study is a retrospective population-based cohort study linking administrative health data for all women residing in Alberta, identified within the Alberta Perinatal Health Program registry who gave birth (> 20 weeks of gestation) between April 1st 2002 to March 30th, 2015. We will evaluate annual ED visit rates (obstetric vs. non-obstetric) during pregnancy and the postpartum periods, ED disposition status and ED visit costs. Regression analyses will explore the role of potential clinical, obstetric and sociodemographic predictors of ED visits during pregnancy and the postpartum periods. Information from this study will help to understand potential gaps in access, quality and equity of prenatal and postnatal care in Alberta that may lead to these ED visits, and to identify potential timing and targets of preventive interventions in the prenatal and postpartum periods.

Term of Funding: 2 years

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ABSTRACTS – OPEN COMPETITION

1. Belal Alshaikh (Alberta Health Services)

Title: Prevention of Necrotizing Enterocolitis in Neonatal Intensive Care Units: Quality Improvement Project

Co-applicant(s)/Project Team: Wendy Yee (Alberta Health Services, University of Calgary); Claire Hamilton (Alberta Health Services)

Abstract:

Necrotising enterocolitis (NEC) is one of the most devastating diseases in preterm infants. Infants with NEC have a significant increase in mortality and length of hospital stay. NEC survivors are at high risk of developing severe consequences, related either to the gut or to the systemic insult. Morbidities include development of intestinal strictures, short bowel syndrome, intestinal failure, parenteral nutrition-related complications, and neurodevelopmental disabilities. The financial burden of NEC on the public health care is substantial.
The overall incidence of NEC in the last 3 years in the Canadian Neonatal Network (CNN) was 3-4 %. The incidence of NEC in Calgary according to the most recent annual report from the CNN (2014) has significantly increased above the national average. This quality improvement project aims to reduce the incidence of NEC in the Calgary zone using a multidisciplinary approach to identify local risk factors and implement best clinical practice related to NEC prevention.

Term of Funding: 2 years

2. Geoff Ball (University of Alberta)

Title: Barriers to and enablers of healthy lifestyle habits in adolescents with obesity

Co-applicant(s)/Project Team: Michele Dyson (University of Alberta); Tara-Leigh McHugh (University of Alberta)

Abstract:

Adolescents encounter many challenges in achieving success in managing obesity, including an increased likelihood of discontinuing care prematurely, which limits their potential to make and maintain healthy lifestyle habits for weight management. The purpose of our research, which includes two complementary studies, is to gain a better understanding of the barriers to and facilitators of healthy lifestyle behaviours of adolescents with obesity. In Study 1, we will complete a Scoping Review to examine the published literature on barriers and facilitators related to healthy lifestyle (e.g., nutrition and physical activity) habits in adolescents with obesity. In Study 2, we will conduct a Qualitative Study of adolescents (13 - 17 years old; body mass index >97th percentile) from Edmonton (n=20) and Ottawa (n=20) to explore (in both English and French) their perceptions and experiences in making healthy lifestyle changes for obesity management using 1-on-1 interviews. In addition to conventional academic knowledge translation activities (e.g., peer-reviewed publications), we will use the data generated from this research, in partnership with the Canadian Obesity Network, to inform a follow-up project to develop, test, and disseminate a bilingual tool ('Conversation Cards for Adolescents') to encourage shared decision-making and problem-solving between adolescents with obesity and health professionals.

Term of Funding: 2 years

3. Kim Brunet-Wood (Alberta Health Services)

Title: Pediatric Malnutrition Screening

Co-applicant(s)/Project Team: Laura Norton (Alberta Health Services); Carlota Basualdo-Hammond (Alberta Health Services); Rabin Persad (Alberta Health Services); Dana Boctor (Alberta Health Services); Vera Mazurak (University of Alberta); Mei Tom (Alberta Health Services)

Abstract:

Hospitalized children are at risk for malnutrition, and screening on admission is the first step in identifying and treating malnutrition. Currently there is no standard, validated screening tool recommended in Canada for pediatric hospitals. Our primary objective is to determine which screening tool, Screening Tool for Risk of Impaired Nutritional Status and Growth (STRONGkids) or Pediatric Nutrition Screening Tool (PNST) is best able to identify pediatric patients at risk for malnutrition on admission to hospital. Secondary objectives include prevalence and severity of malnutrition in this population, and length of hospital admission to indicate outcomes. Methodology: Both STRONGkids and PNST will be administered to guardians of children (1 month to 17 years) admitted to inpatient units at the Stollery Children's Hospital. Results from each tool will be compared to the Subjective Global Nutritional Assessment (SGNA) and anthropometrics as standards of nutritional risk assessment. Specificity, sensitivity, positive and negative predictive value and Inter-rater agreement will be determined. Age, gender, admitting diagnosis, and presence of chronic disease will describe the population. There is a need for a screening tool in pediatric hospitals to identify those who are malnourished early in the admission, and enable timely nutrition interventions.

Term of Funding: 2 years

4. Jennifer Conway (Alberta Health Services)

Title: The Long Term Outcomes of Mechanical Circulatory Support Across the Age Spectrum

Co-applicant(s)/Project Team: Darren Freed (Alberta Health Services); Holger Buchholz (Alberta Health Services); Roderick MacArthur (Alberta Health Services)

Abstract:

Cardiovascular disease is a leading cause of death in adults and an important cause of morbidity and mortality in children. Amongst the most series conditions seen in both the adult population and in children is end-stage heart failure, with poor outcomes seen across all age groups. The field of mechanical support is a rapidly growing in both the pediatric and adult populations due to increased number of devices available and increase in experience. The objectives of this comprehensive study are to review the clinical outcomes of patients who received mechanical circulatory support over the last 10 years through the Artificial Heart Program. The formation of this data set will allow for tracking of this unique patient cohort to help address improving health and clinical care in the most vulnerable patients, particularly children, and to compare the outcomes to those reported internationally. These comparisons will allow us to identify areas of improvement and to help to improve the efficiency of health care delivery.

Term of Funding: 2 years

5. Elaine Gilfoyle (University of Calgary)

Title: Improving patient safety during pediatric resuscitation: Team performance and error

Co-applicant(s)/Project Team: Jaime Blackwood (Alberta Health Services); Brian Brooks (Alberta Health Services); Wendy Bissett (Alberta Health Services); Adam Cheng (Alberta Health Services); Amanda Deacon (University of Calgary); Rachel Ellaway (University of Calgary); Michael Esser (Alberta Health Services); Meagan Mahoney (Alberta Health Services); Thomas O'Neill (University of Calgary); Tanya Spence (Alberta Health Services)

Abstract:

Background: Resuscitation teams attempt to stabilize children suffering from cardiac arrest. These teams consistently commit substantial errors and delay life-saving therapies, which contribute to poor patient outcomes.
Study Design: Single-centre, pilot, prospective observational study on resuscitation team performance in real-world settings. Eligible resuscitation events will be video-recorded.
Aim 1: To determine incidence and types of errors performed during pediatric resuscitation events.
• Methods: Video recording of eligible events followed by blinded video review of team performance
• Outcomes: a) incidence and classification of errors, b) rate of adherence to life support guidelines, c) time to initiation and completion of key clinical tasks
Aim 2: To directly link team resuscitation team performance to patient outcomes
• Methods: Patient outcome data will be collected at hospital discharge and at 3 months following discharge. Data related to patient-related covariates will be collected.
• Outcomes: a) mortality rates, b) length of stay, c) neurologic and neuropsychological assessments
Aim 3: To determine feasibility and best methods of studying resuscitation team performance in real-world settings
• Methods: Study screening logs will track patient recruitment and reasons for non-enrollment. Surveys will be used to assess program acceptability.
• Outcomes: a) patient enrollment and follow-up rate, b) acceptability of program by guardians and staff

Term of Funding: 2 years

6. Lisa Hartling (University of Alberta)

Title: Knowledge Synthesis and Knowledge Translation for Parent Priorities in Child Health

Co-applicant(s)/Project Team: Shannon Scott (University of Alberta); Joan Robinson (University of Alberta); Amanda Newton (University of Alberta); Antonia Stang (University of Calgary)

Abstract:

Cochrane Child Health supports evidence-based child health through a number of activities in knowledge synthesis and knowledge translation (KT). In particular, we have advanced methods for conducting and reporting overviews of reviews. Overviews provide a comprehensive synthesis of the evidence, and provide a user-friendly front end to research by bringing together evidence on multiple interventions into a single source for decision-making. We use an integrated KT approach in our work and have recently convened a Pediatric Parent Advisory Group (P-PAG). Using the knowledge and experience of the P-PAG, we will identify priority topics in child health; produce an overview of reviews for the top priority topic; create and evaluate KT products for a lay audience; distribute the preferred KT products; and, evaluate dissemination and uptake. This project will generate evidence addressing the needs and knowledge gaps of Alberta parents. The results will also provide important information for others conducting or supporting child health research in Alberta, including a list of priority topics, a model for effective parent engagement, and appropriate dissemination strategies. These outputs are directly aligned with the mission of the MNCY SCN "to bring together people, evidence and data to achieve the best possible health outcomes."

Term of Funding: 2 years

7. Kumar Kumaran (Alberta Health Services, University of Alberta)

Title: Expansion of Targeted Neonatal Echocardiography Consultation Service in Edmonton zone (Zonal Edmonton Service for TNE: ZEST)

Co-applicant(s)/Project Team: Asma Nosherwan (Alberta Health Services); Dawn Pepper (Alberta Health Services); Chloe Joynt (Alberta Health Services); Lisa Hornberger (University of Alberta)

Abstract:

Targeted neonatal echocardiography (TNE) is increasingly being used in NICU for hemodynamic assessment of newborn infants. The Northern Alberta Neonatal program has a faculty led TNE service at the Royal Alexandra Hospital level III NICU only, without onsite TNE service at the level II NICUs in the Edmonton zone (Grey Nuns and Misericordia hospitals). Babies are transferred to a level III NICU or the Pediatric Cardiology outpatient clinic for cardiac assessments if indicated. These referrals cause prolonged wait times and hospital stay, parental anxiety, overcapacity at level III NICUs and delay in discharge planning. The ZEST is a QI initiative to examine the feasibility of providing a zone wide TNE program and its impact on patient care and system efficiency. The QI initiative uses process improvement methodologies which includes stakeholder focus groups, data collections, value stream mapping and designing care pathways. The care pathway would be piloted for a period of 9 months and results analyzed to modify the pathways. The primary focus of ZEST is to ensure a patient focused care, in the right place at the right time which is accessible, efficient and sustainable.

Term of Funding: 2 years

8. Brenda Leung (University of Lethbridge)

Title: Exploring the Mental Healthcare Needs of Children in Alberta

Co-applicant(s)/Project Team: Maria Santana (University of Calgary); Tamara Pringsheim (University of Calgary)

Abstract:

For children with mental healthcare service needs, current standard practice leaves parents and their children with limited options for treatment, and a lack of support for non-prescription medication treatments. Little is known about the challenges that families face in the search for resources and navigating healthcare system to find options for their children. The goal of this study is to explore the experience of parents and patients (i.e., children with mental healthcare needs) in the pathway of accessing healthcare services, adherence to treatment plans, and finding treatment options (both medical and allied health options)T. his qualitative study will interview parents of children with autism spectrum disorder and attention deficit and hyperactivity disorder, as well as those of children with mood disorders (e.g., depression and anxiety). Findings from this study will help to improve the mental health outcomes of children by identifying benefits and limitations of current treatment options, gaps in or barriers to services, as well as gaining an understanding of the experience of their families in order to develop programs that may help to alleviate the stresses associated with their experiences.

Term of Funding: 2 years

9. Piush Mandhane (University of Alberta)

Title: Sleep, Learning, hEalth, and Environment Project - Edmonton (SLEEP-E) at 3 years of age

Co-applicant(s)/Project Team: Jacquie Pei (University of Alberta); Carmen Rassmussen (University of Alberta); Qingling Duan (Queen's University)

Abstract:

Childhood sleep disordered breathing (SDB), from habitual snoring to obstructive sleep apnea syndrome (OSAS), is associated with poor learning and ADHD symptoms. Unfortunately, tonsil and adenoidectomy for SDB in school-age children did not change their learning deficits. No birth cohort studies have reported on the impact of the age of onset and duration of SDB symptoms on pre-school learning and behavior. Preliminary data: Using data from the 812
CHILD Edmonton birth cohort participants, we identified three patterns of SDB to 2 years: children with early SDB in the first year, persistent SDB, and children who develop late SDB towards the 2nd year life. Infant SDB subtypes were associated with behavioral dysfunction at 2 years. We hypothesize that children with earlier onset and longer duration of SDB are more likely to present with learning difficulties and ADHD-symptoms at 3 years. We propose to test this hypothesis using data from the CHILD Edmonton study; the first birth cohort to complete longitudinal, objective measures of SDB in preschool children. Additional analyses will assess how genes modify the relationship between SDB and neurodevelopment. Determining the relationship between preschool SDB and neurodevelopment has implications for screening children for SDB and triaging limited pediatric surgical resources.

Term of Funding: 2 years

10. Melanie Noel (University of Calgary)

Title: The Role of Parent-Child Narratives in Children's Pain Memory Development

Co-applicant(s)/Project Team: Jill Chorney (Dalhousie University); Susan Graham (University of Calgary); Nivez Rasic (Alberta Health Services); Jill Vinall (University of Calgary)

Abstract:

Children's memories for pain play a powerful role in shaping their future pain experiences. Parent-child interactions have been proposed as being particularly important in children's pain memory development; however, this has not been examined. The objective of this study is to examine the roles of parent-child narratives about pain in children's pain memories following surgery. One hundred children aged 4-7 years undergoing tonsillectomies and their parents
(50 mothers; 50 fathers) will be recruited. At baseline (1 week pre-surgery), measures of individual factors (e.g., anxiety, language ability) will be obtained. Two observers will assess children's anxiety during anesthesia induction.
Children's ratings of pain will be obtained in hospital and on several days at home following surgery. Then, parents and children will come to the research lab to complete a parent-child narrative elicitation task. Narratives about the in-hospital and post-surgery time periods will be elicited. Narratives will be coded for parental reminiscing style and narrative content. One month post-surgery, children will complete a telephone interview to assess their memories of pain. Findings will inform the development of an intervention aimed at promoting positive pain memories by teaching parents adaptive ways of reminiscing with children following painful events to improve subsequent pain experiences.

Term of Funding: 2 years

11. Shahirose Premji (University of Calgary)

Title: Evidence-informed hospital discharge policies for late preterm infants

Co-applicant(s)/Project Team: Thierry Lacaze (Alberta Health Services); Michelle Butt (McMaster University); Deborah Clark (University of Calgary); Karen Foss (Alberta Health Services, Covenant Health); Jeanne Scotland (Alberta Health Services)

Abstract:

Late preterm infants (LPIs) have a greater mortality and morbidity, and higher hospital readmission rates than full-term infants. Clinical practice guidelines (CPGs) informed by the Canadian Paediatric Society (CPS) aim to ensure safe discharge and prevent hospital readmission of LPIs. However, current rehospitalization rates, infant/maternal morbidities, and the emergence of new research, indicate a closer examination of discharge policies is warranted. This study aims to: 1) Examine policies related to hospital discharge of LPIs to determine congruency with CPS recommendations, and assess quality of care delivery indicators; 2) Harmonize current CPGs for Safe Discharge of LPIs with the latest evidence-based recommendations and user perspectives; 3) Examine the adoption/adaption ("implementability") of these harmonized guidelines across Alberta's 50 units that discharge LPIs. This 1-year, multiple case study includes within (Alberta's 50 units) and across province (Alberta and Ontario) analysis of the extent of uptake of CPS recommendations within discharge policies, and infant/maternal health outcomes. Alberta end-user perspectives on discharge policies and factors influencing uptake and health outcomes will be explored using mixed-methods. A 4-step process involving stakeholders will blend current CPGs and the latest research evidence. Researchers and stakeholders will create for Alberta a strategic plan for adoption/adaption of the harmonized CPGs.

Term of Funding: 2 years

12. Spencer Proctor (University of Alberta)

Title: Remnant Cholesterol and Fat Intolerance Causes Sub-Clinical Cardiovascular Risk in Overweight Children

Co-applicant(s)/Project Team: Donna Vine (University of Alberta); Mary Jetha (Alberta Health Services)

Abstract:

Cardiovascular diseases (CVD) remain the leading cause of morbidity and mortality worldwide. While CVD typically manifests in adulthood, there is good evidence that the etiology of heart and vascular diseases begin in childhood. Current guidelines for children rely on assessing "traditional blood lipids" including low density lipoprotein cholesterol (LDL-C), which is often normal in overweight children. This suggests that other cholesterol sources may be involved in subclinical CVD progression. Recent research has demonstrated that remnant cholesterol is associated with enhanced CVD risk in adults. Fat intolerance is the inability to metabolize fats and results in the accumulation of remnants following a high fat meal, which contributes to lipid build up in the arteries and is an independent predictor of CVD risk. Our own group has previously reported that remnant cholesterol is elevated in obese pre-pubertal children. Therefore, we hypothesize that overweight children with fat intolerance are likely to have elevated fasting and non-fasting remnants (as measured by lipid intolerance). We aim to determine both the fasting and non-fasting lipids in healthy-weight and overweight children aged 12-16 years. Findings from this study will determine whether remnant cholesterol is an improved marker for early risk identification for subclinical CVD in children.

Term of Funding: 2 years

13. Hoon Sunwoo (University of Alberta)

Title: A Randomized, Double-Blind, Placebo Controlled, Crossover Trial to Evaluate the Safety and Efficacy of AGY in Persons with Celiac Disease Age > or = to10 Years

Co-applicant(s)/Project Team: Richard Fedorak (Alberta Health Services); Leo Dieleman (University of Alberta); Justine Turner (University of Alberta); Maryna Yaskina (University of Alberta); Diana Mager (University of Alberta); Dory Sample (University of Alberta)

Abstract:

Celiac disease (CD) is a permanent intolerance to ingested gluten. The world-wide rate of 1% is increasing, particularly in children. The intestinal damage from gluten exposure can cause a wide array of symptoms including diarrhea, nutrient malabsorption, delayed puberty, anemia, pain, migraine, osteoporosis, infertility, and malignancy. The only current treatment is strict adherence to a gluten-free diet (GFD). However, total avoidance of gluten is difficult, as many foods contain gluten, product labeling can be vague, and gluten can be hidden in products.
Inadvertent exposure ranges from several milligrams to 2g /day, enough to trigger symptoms and cause interstitial changes. Adolescents/teens have the highest rate of non-adherence to the GFD. We have developed a food-based, natural health product from the egg yolks of chickens immunized with gliadin. The product, called AGY (anti-gliadin antibody), has been tested in the laboratory and in a pilot clinical trial in adults with CD. Based on encouraging results, we propose a double-blind, placebo-controlled crossover trial in 117 individuals with CD age 10+, who are symptomatic while on a GFD. Success with this study could lead to availability of the first product approved for CD symptoms, and dramatically improve the quality of life for those with CD.

Term of Funding: 2 years