RAISING HEALTHY CHILDREN: A HEALTHY KIDS STRATEGY FOR WINDSOR-ESSEX

PROPOSAL

The Windsor-Essex County Health Unit (WECHU) is pleased to submit a proposal for $10,151,308 over 5 years to combat childhood obesity. WECHU is well-poised to implement this proposal because of existing programs, relationships and the potential for the development of additional capacity to carry out the proposal's goals and objectives. Further, Windsor-Essex County (WEC) is the appropriate site of this proposal because of high childhood overweight and obesity rates. This proposal aligns well with the recent *No Time to Wait: The Healthy Kids Strategy* (NTTW) report. Through the adoption of many of the report's recommendations, including the creation of an EPODE model, we will decrease childhood obesity, following the example of other large cities, such as New York City and Los Angeles (MMWR, 2013).

NEEDS

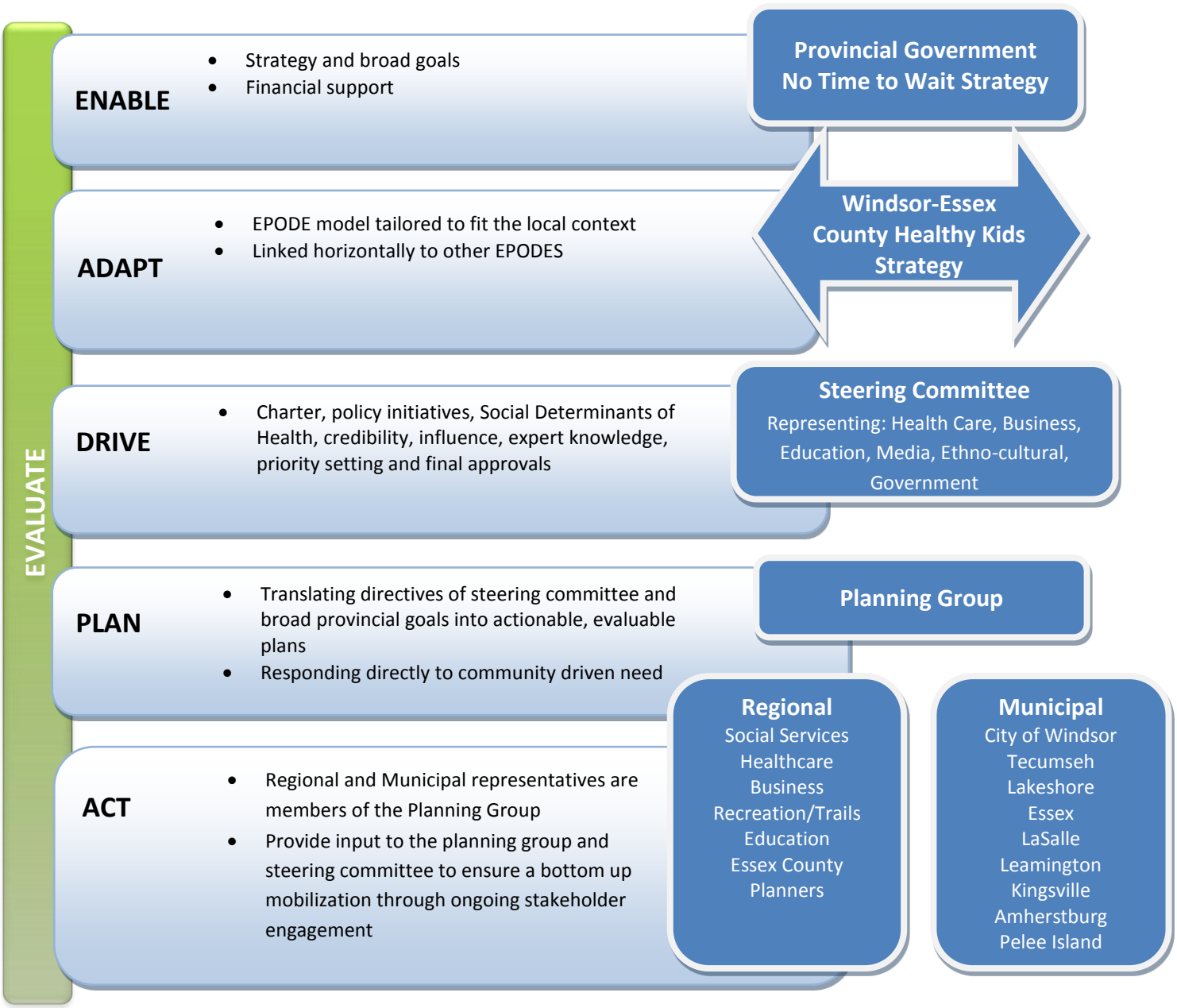
Windsor-Essex County residents self-report higher rates of overweight and obesity, diabetes, high blood pressure, smoking and alcohol consumption when compared with the provincial average, while lagging behind the provincial average in the consumption of vegetables and fruit. Windsor-Essex County also shows higher rates of avoidable mortality when viewed against our provincial comparator (Statistics Canada, 2013). It is estimated that the direct and indirect cost of unhealthy eating, physical inactivity, and unhealthy weights to Windsor-Essex County is approximately $298,390,000 per year (extrapolated from multiple Federal and Provincial Sources, using 2011 Census data).

In regards to the health of children in the Windsor-Essex area, local level data are lacking. However, data taken from the 2009/2010 Canadian Community Health Survey for 12-19 year olds suggest that our youth report lower rates of fruit and vegetable consumption and more inactivity during leisure time compared to the Ontario average. As well, calculations of overweight and obesity based on self-report measures of height and weight were almost 10% higher for youth in the Erie St. Clair LHIN region (of which Windsor-Essex is a part), compared to the province. While overweight and obesity rates for youth in the WECHU area appear to be almost 15% higher than the provincial average, this number should be viewed with caution (Statistics Canada, 2013). Canadian Community Health Survey 2009/2010 data released with the Annual Report of the Chief Medical Officer of Health of Ontario, *Maintaining the Gains, Moving the Yardstick: Ontario Health Status Report 2011,* report a robust weighted average of 42.1% of youth considered overweight or obese in the Windsor-Essex County Health Unit area. Comparing the Windsor-Essex County Health Unit area with other health unit areas for which there is also robust data, we see that Windsor-Essex has higher rates of overweight and obesity than the City of Hamilton, Eastern Ontario, Peel, Simcoe Muskoka, Toronto, and Wellington-Dufferin-Guleph health unit areas (Statistics Canada, 2011). One local study conducted with 1068 grade 7 students at 26 schools across Windsor-Essex County (Woodruff, Fryer, Campbell, & Cole, 2013) from November 2010 to April 2011 showed approximately 42% of students to have measured BMI rates in the overweight or obese range. Similarly, 74% and 51% of students had systolic and diastolic blood pressures at or above the 90th percentile respectively, when compared to children/adolescents from a Canadian Community Health Survey sample. Other local data gleaned from the administration of 114 NutriSTEP™ screens for children 3 to 5 years of age identified 22% of those screened as falling into the high risk category for poor nutrition (i.e., poor growth, inadequate intake, iron deficiency, food insecurity, overweight, obesity, and inactivity) compared to the NutriSTEP™ expected high risk prevalence score of 10-15%. Looking at pre and postnatal factors, 13.6% of women in Windsor-Essex (2008) reported smoking during pregnancy compared to

12.4% in Ontario (BORN, 2008). Windsor-Essex also had higher rates of low birth weight, with 7.1% of live births classified as low birth weight in Windsor-Essex compared to 6.1% of lives births in Southwest Ontario (BORN, 2008).

GOALS AND OBJECTIVES

This multi-year proposal has as its overall goal the reduction of WEC's childhood obesity by 20% over 5 years. WECHU will work with its community partners, employing three essential strategies to achieve that goal. These strategies align with NTTW and require broad community input, support and capacity. The specific community development model will be based on EPODE International (Ensemble Prévenons l'Obesité des Enfants – Together Let's Prevent Childhood Obesity), a model that uses high-level political commitment within the community and a coordinator who brings all players to the table to develop common goals and better ways to work together. This model, tailored to our local context, is shown below. The specific strategies consist of: 1) Starting all kids on the path to health, 2) Changing the food environment, and 3) Creating healthy communities. Following the model is a description of proposed year-by-year activities that will ultimately be subject to stakeholder input and tailoring based on specific community needs, capacity and potential.



ACTIVITIES

The following outlines the proposed activities for year one and years two to five. Activities will be subject to stakeholder input and may be modified and/or adapted based on community consultation and feedback.

YEAR ONE

- Engagement of key community partners from various backgrounds – political (municipality and provincial), educational (day care, primary and secondary schools, University of Windsor), health-related (medical, nutritional/dietary), business, media, and ethno-cultural –to develop a WEC EPODE International chapter.

- Childhood obesity literature will be reviewed, with best and promising practices presented to the WEC EPODE to generate most promising strategies, based on local conditions and capacity. Examples of promising strategies from New York City, which reduced K-8 grade obesity prevalence 5.5%, from 21.9% in 2006–07 to 20.7% in 2010–11, included:

  "Establishment of regulations to require improved nutrition, increased physical activity time and limited screen time (e.g., video game, television, or computer) in group child care, provision of extensive nutrition education training and physical activity equipment to 80% of group child care centers, and provision of on-site nutrition education workers at 300 centers. School nurses were trained to identify and monitor children at high risk for obesity and to know when to notify parents that a problem exists and when to refer children for additional medical care. Nurses also were given information about obesity prevention programs offered at schools and in the community. In schools, substantial improvements in cafeteria food were made, including a shift from whole milk to 1% fat and skim milk in 2005. The number of middle schools in a before-school and after-school physical activity program was expanded from 40 to 225, and nearly 4,000 elementary classroom teachers were trained to provide in-class physical activity breaks. Additionally, individualized BMI and fitness reports were sent to all parents of K–8 public school students beginning in 2005, with guidance on how to help their children maintain a healthy weight." (MMWR 2011; 60(49): 1673-1678)

- WECHU programs and practices aimed at reducing obesity will be reviewed with the belief that most (if not all) can be tailored to children and their families even if children were not the original audience.

- Different childhood obesity strategies and practices (best, promising and current) will be presented to WEC EPODE after analysis at the sub-committee level. The EPODE Steering Committee chooses strategies to pursue, based on the realities of the community, (i.e., the cost-effectiveness (if known), the capacity, the political climate, etc.). The EPODE Steering Committee determines which process and output measures to obtain, based on consultation with its sub-committees. The EPODE Steering Committee also, based on the chosen intervention, the measures to be obtained, and with input from its subcommittees, decides on the best data-gathering and sampling methodology (i.e., as one example, what population to obtain BMI measurements from), including the analysis of data. Finally, the information from the analysis is used to "fine-tune" interventions, and is translated and communicated among EPODE members for potential policy development.

Current programs and practices, organized by strategy, are presented below.

STRATEGY 1: STARTING ALL KIDS ON THE PATH TO HEALTH

- *Losing Weight the Healthy Weigh (LWTHW)* helps adults lose weight by focusing on making changes to their lifestyle. The program runs for 10 weeks with follow-up support at 6 months and 1 year. Each lesson is taught by a Registered Dietitian and includes information on eating better and being more active. This program would be expanded to include families and offered in all municipalities. In addition, the plan is to develop and test an e-Learning version of the LWTHW program to expand its reach and accessibility.
- *Prenatal Education* (in-class and online) is offered to all pregnant women. WECHU also partners with our local Canada Prenatal Nutrition Program (CPNP) *Building Blocks for Better Babies* to provide prenatal education to pregnant women who face challenging circumstances that put their health and the health of their infants at risk (e.g., poverty, poor nutrition, recent arrival to Canada, and substance abuse). Our programs provide information on healthy eating, healthy weight gain during pregnancy, active living, and the adverse effects of smoking and second hand smoke exposure during pregnancy. Program reach is limited and we plan to expand by focusing on first time mothers, especially those in disadvantaged neighborhoods, and providing "early bird" prenatal classes focusing on the healthy lifestyle.
- *The Baby Friendly Initiative (BFI)* is part of the Ontario Baby Friendly Initiative that seeks to protect, promote, and support breastfeeding through the adoption, implementation and maintenance of the practice standards of the BFI. WECHU is currently engaged in becoming a BFI designated health service. Our breastfeeding program includes BFI policy development; prenatal breastfeeding classes; phone and one-on-one breastfeeding support by one Lactation Consultant; general breastfeeding support at four monthly Well Baby and Child Drop In clinics (two city and two county locations); and participation with Public Health Ontario's Locally Driven Project on Breastfeeding Surveillance. We would expand our program by increasing the number of Lactation Consultant available to provide breastfeeding support; developing breastfeeding referral partnerships between hospitals and community partners; and increasing the number of Well Baby and Child Drop-in Clinics offered in Windsor and Essex County.
- *Nutrition Screening* is offered in early year centres and at a community-based preschool screening clinic using the NutriSTEP™ questionnaire for preschoolers (3-5 years) and toddlers (18-35 months). The NutriSTEP™ questionnaires identify young children at risk of poor nutrition (poor growth, inadequate intake, iron deficiency, food insecurity, overweight, obesity, and inactivity). WECHU is only able to refer moderate and high risk identified children to their primary care provider because access to dietitian support is limited and/or fee for use. We would expand our program by: providing free dietitian support to families with children identified as high risk; developing referral partnerships between primary care providers/pediatricians and dietitians; and expanding the number of community partners including primary care providers administering the NutriSTEP™ screen on children between 18 months and 5 years.
- *Online Nutrition Resources and Linkages* that are current, accurate, and relevant can be difficult to access. The Health Unit's website will be a source of healthy eating and healthy weights resources and linkages for a variety of audiences including: health professionals, educators, media and the public. In addition, we will work toward developing or adapting e-learning modules that provide interactive learning on healthy eating, active living and healthy weights at key stages of the lifecycle.
- *Web-Based Healthy Living Challenges* build on the naturally competitive nature of local municipalities. We plan to have municipalities participate in a county-wide web-based Healthy Living Challenge. Using the Challenge Software developed and tested with the WECHU workplace wellness program, residents would be invited to participate in a tailored challenge that would require them to engage in healthy behaviours (e.g., eat healthier, be more physically active, practice resiliency), over a given time and to track their progress. Communities will compete against each other on a level playing field (using a sample weighting formula). In addition to bragging rights, the winning community would receive a $10,000 donation toward a healthy living infrastructure (e.g., park, trails, community centre) in their community. Participants will be eligible to win prizes (e.g., iPad, Gift Certificates) each week during the challenge.

- *Healthy Eating Presentations* There is public demand for credible healthy eating information. A number of groups could also benefit from healthy eating presentations to support the consistent dissemination of accurate, relevant and up-to-date nutrition information. Our plan is to offer and promote community, school and workplace based healthy eating presentations. We will also offer and promote credit-eligible (e.g., CME, CNO) nutrition workshops for health professionals. In addition, we plan to offer and promote at least one family-focused Healthy Living (e.g., healthy eating, physical activity) health fair/education forum in each WEC municipality. These workshops would include participation from all involved Health Unit departments as well as relevant municipality-specific partners.

STRATEGY 2: CHANGING THE FOOD ENVIRONMENT

- *Healthy Eating Policies* The goal of healthy eating policies is to help make the healthier choice the easier choice for individuals and families in a variety of settings. Toward this end, Health Unit staff will Initiate and support local efforts to help ensure the establishment, implementation, and monitoring of healthy eating policies (e.g., marketing of sugar sweetened beverages and snack foods; low nutrient/high calorie point of purchase food displays; food deserts) at the national, provincial and local levels. We also plan to expand the promotion and uptake of the Eat Smart Certification program to all recreation and community centres. Health Unit staff will also help ensure a greater uptake of healthy food choices in workplace cafeterias and vending machines by promoting and supporting an established certification program (e.g., Eat Smart) for area workplaces.
- *Restaurant Healthy Choice Food Rating System* Given the large number of meals consumed at sit down and fast food restaurants throughout the year, any change to these environments that give the consumer knowledge to make informed food choices can have a positive impact on our communities health. Health Unit staff will work with external stakeholders (e.g., local Restaurant Association, growers, etc.) to create and test a framework for a WEC Healthy Choice Food Rating System. The Rating System will recognize restaurants that offer nutrition information for menu items, healthy substitution options and locally sourced food ingredients.
- *Label Reading Education* This education program teaches school age children how to read food labels utilizing toolkits and supermarket tours. The program currently targets children from kindergarten to high school and reaches approximately 100 children per school year. We will expand the program through the development of additional resources, toolkits, videos and staff resources.
- *School Age Nutrition, Education, and Awareness* This education program, delivered by the Nutrition team (Nutritionist and PHNs), provides topic-specific nutrition information/ presentations to children in Grades 4 to High School. The program currently includes the topics: “Sugar Shocker”, “Where’s the Fat?”, and “Portion Distortion”. We will expand the program through the development of additional resources, toolkits, and staff resources.
- *Food Skill Building Activities* Many individuals lack even the basic knowledge on how to purchase, transport, store and prepare healthy foods. Many others also lack the resources. Health Unit staff have worked with community partners to develop, implement and evaluate Food Skill Building classes based on information collected during focus groups. We also have a program that teaches children the skills needed to prepare and purchase healthy food, as well as budget and menu plan. This 6 week program has been adapted from the original “You are the Chef” program to target high school students in high needs areas. We will expand our program by providing additional staff resources, cooking kits, food subsidy, and the development of supportive software applications.
- *Grocery Store Tours* Knowing how to read and understand food labels can help consumers make informed food choices when purchasing their families food supply. It can also save them money. The grocery store is an ideal setting to educate consumers on healthy shopping and healthy eating. In partnership with the Registered Dietitians of Windsor-Essex County and Grocery Store Managers WECHU will offer and promote a series of monthly “Nutrition and Label Reading” grocery store tours in each municipality.

STRATEGY 3: CREATING HEALTHY COMMUNITIES

- *County Wide Active Transportation System (CWATS)* is a comprehensive network of on-road corridors and off-road trails to connect Essex County and selected local roads to improve connections between regional and local systems and to promote active transportation. Currently, WECHU is involved in advocating for municipal support for expansion of this system and in the creation of a generic outreach strategy. Enhanced support would enable us to develop a comprehensive outreach strategy to families, skill building events at trail sites, increased advocacy for more trails to increase connectivity, and creation of a social media strategy to youth and young adults to highlight usability of these trails for non-traditional forms of physical activity like skateboarding, rollerblades, and jogging strollers.
- *Rediscover Your Bike* (Family Focused Bike Safety/Physical Activity/Healthy Eating Event) is a family focused "bike rodeo" that encourages families to renew an interest in bicycling for transportation and physical activity purposes. It takes participants through a course of stations that provide a variety of messaging and materials focused on skill building, safety (including road and off road safety), and healthy eating. Currently this program is operated on an as requested basis through municipal partners. Through enhanced support we would re-focus the program by collaborating with partners, to implement the event in all municipalities with event marketing strategies and a social media marketing plan.
- *Family Physical Activity Engagement Strategy* (including healthy eating) This is in the conceptualization phase, and with enhanced support we will create a comprehensive physical activity plan aimed to convert the normally sedentary time of people into measurable physical activity opportunities and promote the normalization of physical activity. We will start by focusing on parents and spectators during children's team or recreational sport activities in recreational settings (e.g., baseball and soccer fields, hockey rinks) We will work with municipal partners to gain permissions and access to these areas to measure distances and calculate health benefits that can be attained by walking or other physical activities around the perimeter of these areas. The program could also include skill building events related to healthy eating, and the pursuit of healthy eating/beverage and snack policies to be adopted by local clubs and teams. Expansion of the program will include new sites (e.g., i.e. private golf courses and workplaces).
- *Age Friendly Initiative Support Activities* (8-80 concept) The City of Windsor and the Windsor Age Friendly Network are working toward creating an age-friendly community, which consists of policies, services and structures related to the physical and social environment that are designed to help seniors age actively, and also support younger generations to create healthy habits. Working in collaboration with community partners, the goal at phase one is to have the City of Windsor designated as a "Walk Friendly Community." With enhanced support we will assist in a walk-ability assessment and evaluation to identify geographic areas in need of focus, a forum to highlight other successful "Green" communities, and education of key decision makers about the health benefits of becoming a walk friendly, and eventually age friendly, community.
- *Resiliency Education Program* The Resiliency Rocks program teaches resiliency skills and promotes the development of coping skills in children in grades 1-3. Coping skills can offset future mental health issues. We will use information from survey data collected from elementary school teachers to develop toolkits for educators. We will expand our program with additional staff resources, and Resiliency Toolkits.
- *Strengthening Families for the Future* This family change prevention program is designed to reduce risk, build individual resilience, and enhance family protective factors to help prevent children from developing problems with alcohol or other drugs, or mental health problems. The free 14 consecutive weekly sessions plus a "booster" session for families with children between the ages of 7 and 11 who may be at risk for substance use problems, depression, violence, delinquency and school failure is delivered in collaboration with our community partner, CAS. With additional community partners this program will expand to include additional groups for the target families in Windsor and county locations. An equivalent adolescent program, available through Centre for Addiction and Mental Health, could also be offered.

- *Triple P Program* The Triple P Positive Parenting Program is a multilevel, multidisciplinary, evidence-based system of parenting and family support strategies designed to prevent behavioral, emotional and developmental problems in children (or, where applicable, to halt the progression or reduce the severity of such problems). The multi-level strategy includes five levels of intervention of increasing intensity that can be tailored to meet the differing needs of families. Currently, the WECHU staff provide: a seminar series for parents with children 0-12 years, focused on the power of positive parenting, raising confident, competent children, and raising resilient children; and a seminar series for parents with teens 12-16 years, focused on raising responsible teenagers, raising competent teenagers, and getting teenagers connected. Programming could be expanded to include the Triple P level 5 Lifestyles (a group program that helps parents foster healthy lifestyles habits in their children that will last a lifetime). This program is specifically targeted at families with obesity. With funding we will add family lifestyles training to our community schedule and program materials. Based on the need in our community, with the addition of additional facilitators, and additional training of facilitators, we will be better able to meet the growing community demand.
- *WEC EPODE* We will formally join EPODE International and, building on lessons learned from the international experience, continue to evolve a locally derived model tailored to our context. We will also expand to work with other provincial EPODES as they emerge.
- *Environmental Scan* There is a need to gather information regarding the availability of community-based weight management/support programs, non-surgical bariatric treatment or bariatric surgery.

YEARS TWO TO FIVE

- The WEC EPODE, with evidence-informed and -based support from the Windsor-Essex County Health Unit and local research partners, continues to evolve the chosen interventions, incorporating new knowledge whenever possible to enhance interventions and outcomes. We will translate and communicate new knowledge to develop a stronger model, continue development of policies based on successes, and share all new contributory information locally, regionally, provincially and beyond. The ultimate step will involve the wind up analysis of all data, determining success in reaching desired process and output measures.

COMMUNITY PARTNERS

While not representing all our partners, these are many key partners germane to this project.

Education and Child Care:
University of Windsor
St. Clair College
Local School Boards
Private and Faith Based Schools
Home Child Care Providers Network
Licensed Day Care Providers

Health Care:
Family Health Teams (City & County)
Windsor and Essex Community Health Centres
Essex County Nurse Practitioner Led Clinic
City Centre Health Care
Erie St. Clair Local Health Integration Network
Family Physicians, Pediatricians, Obstetricians
Midwives of Windsor
Windsor Regional Hospital
Urgent Care
Victorian Order of Nurses
Ontario Pharmacy Association
Street Health Clinic

Government:
City of Windsor
Municipalities of Essex County
Ministry of Tourism, Culture & Sport
Ministry of Transportation Ontario
Ontario Provincial Police

Networks, Professional Bodies and Coalitions:
Southwest Injury Prevention Network
Southwest Tobacco Control Area Network
Locally Driven Collaborative Projects: Food Skills, Parental Education, Breastfeeding
BFI Ontario, WE BFI Committee
Registered Dieticians of Windsor Essex County
Food Advisory Network (FAN)
Food Education and Skills Group
Food Matters Windsor Essex County
Go For Health Windsor-Essex
Campus Community Garden Project
Triple P Parenting
Best Start Implementation Committee
Building Blocks for Better Babies
Healthy Families Committee
2013 International Children`s Games
Raising the Bar: Windsor Essex County Committee
Ready Set Go

Social Services:
Aboriginal Resource Centre
Bulimia Anorexia Nervosa Association
CAMH
Canadian Cancer Society
Canadian Diabetes Association
Canadian Mental Health Association
Can-Am Indian Friendship Centre
Children First
Children`s Aid Society
Diabetes Wellness
Downtown Mission
Maryvale Adolescent & Family Services
Mental Health Connection
Multicultural Council
New Canadian Centre of Excellence
Ontario Early Year Centres
Pathway to Potential Anti-Poverty Coalition
Plentiful Harvest
United Way
Voices against Poverty
Windsor Essex Food Bank Association
Sandwich Teen Action Group
Parents of Multiple Births Association
Parent and Family Literacy Centre
Citizen Advocacy-Family Service
Children`s Aid Society
YMCA
Youth and Family Resource
SKA: Na Family Learning Centre
Sunparlour Resource Centre
St. Mary's Family Learning Centre
Family Service Windsor Essex
ERCA
Essex Preschool Speech and Language
Green Communities Canada
Life with a New Baby
John McGivney Centre
Heart and Stroke Foundation
Green Shield
Smoker`s Helpline

Business:
Windsor-Essex Regional Chamber of Commerce
CAW Locals
Chrysler Canada Incorporated
Local Grocery Stores

EVALUATION

The project plan will be supported by a comprehensive evaluation plan, incorporating process as well as strategy-specific evaluation activities. The lead evaluator, with the support of an epidemiologist and data analyst, and with local research partners, will work with the steering committee to set priorities for evaluation. Although the expertise is available in house, the methodological complexity and level of comprehensiveness will be determined by the staffing complement and FTEs available to work on achieving the outlined objectives.

The EPODE documentation for scientific evaluation and dissemination suggests the following four levels of evaluation focus: central organizational level, local organizational level, settings level and child level. At each of these levels there are input, activity and output components with indicators including process indicators (e.g., partnerships, steering committee meetings), output indicators (e.g., local actions, participation of kids and families), and outcome indicators (e.g., change in eating habits, decrease in the prevalence of obesity).

The evaluation is intended to be an iterative process that provides feedback, reflection, and response at each stage. The types of evaluation will vary based on the level outlined above, and whether it is a process or an outcome/impact evaluation. Evaluation of central and local organizational activities (level 1 and level 2) will dominate year 1, while the evaluation at the setting and child level (levels 3 and 4) will become more prominent in years 2 through 5. Separate evaluation components will accompany each initiative. The following table outlines the evaluation framework to be followed as the project unfolds. Evaluation activities in years 2 to 5 will be determined in response to the planning and process outcomes emerging from year 1 activities.

Year 1	
Establish baseline data and develop a surveillance system	• Identify data to collect, measure etc. (i.e., what, where, when, how, and how often) • Standardize existing data collection efforts (i.e., when, how, and how often) • Define population parameters (e.g., select grade, schools, etc.) (i.e., who and where) • Use existing registries or electronic records (e.g., ICES, BORN), or expand existing points of client interface to include data monitoring and measuring of BMI (e.g., NutriSTEP™ toddler and Preschool, and preconception health visits) • Collect data systematically and/or cyclically (i.e., when, how, and how often)
Work with the steering committee to set the priorities for evaluation	• Process • Output • Outcome • Establish reporting components and reporting structure
Years 2-5 **Monitor implementation of strategies and interventions, and document movement toward program objectives**	

RESEARCH DESIGN

In considering research design, a number of decisions need to be made. A variety of resources are helpful in this regard including, but not limited to, the New York City study previously identified (MMWR, 2011), the 2008 COMOH Childhood Obesity Surveillance Proposal, and the EPODE documentation (Borys et al., 2011). While the ultimate direction will be shaped and coloured by the input of the steering group and the resources available, the following will need to be considered in greater depth.

MEASUREMENTS OF OVERWEIGHT AND OBESITY

The overall objective is to decrease the rate of obesity among children and youth in Windsor-Essex County. Therefore our primary outcome measure will be obesity rates. It is also clear that self-reported heights and weights are inaccurate and that direct measurements of overweight and obesity are highly desirable. Options for the latter include the International Obesity Task Force (IOTF) criteria and the CDC growth charts. While use of the IOTF criteria tend to yield more conservative estimates of obesity prevalence, both have proven effective for

surveillance purposes (COMOH, 2008). BMI adjusted for age and gender (IOTF cut-off values) is internationally recommended as a practical estimate of overweight in children since it is easy to obtain, has a strong correlation with body fat percentage, a weak association with height, and the ability to identify individuals with acceptable accuracy (Cole, 2000 as cited in Borys et al., 2011). In any case, it is very important to use graded classification of overweight and obesity since it permits meaningful comparisons of weight status within and between different population groups, or monitoring a population over time, as well as providing a firm basis for evaluation (Seidell, 2010 as cited in Borys et al., 2011).

IDENTIFICATION OF ADDITIONAL VARIABLES

Other indicators for potential consideration, identified by either the EPODE or the NTTW documents, include rates of breastfeeding, consumption of certain foods (e.g., sweetened drinks), physical activity, and school policies. The COMOH (2008) report also identifies factors contributing to obesity, such as physical activity/fitness, nutrition status, eating behaviours, body image, and social and environmental factors as important. Finally, appropriate demographic, health equity and other variables must also be identified to support appropriate sample weighting and statistical controls.

SURVEILLANCE VERSUS SCREENING

As outlined in the COMOH (2008) report, basic consideration will need to be given to whether the proposed project seeks to collect data as part of a surveillance or screening initiative. There are benefits and drawbacks to either approach. For example, surveillance can be more cost effective since it is limited to a representative sample, as opposed to screening, which is typically implemented with all members of a group and is therefore, more costly. Conversely, screening typically means more involvement with the child and his or her caregivers (e.g., letters to parents). The latter is more consistent with the New York study (MMWR, 2011) and there is data to suggest a benefit to more in-depth involvement (COMOH, 2008). It is important to note, that such decisions will also be impacted by practical resource concerns at the local level.

CROSS-SECTIONAL VERSUS LONGITUDINAL COHORT MODELS

Similarly, research design could be cross-sectional or longitudinal in nature. The practical realities and the relative cost benefit of each design will need to be considered.

ETHICAL CONSIDERATIONS

In addition to the standard ethical considerations of conducting research with children, one oft-mentioned stumbling block for studies with school-based BMI measurements centres on the potential unintended consequences for particularly vulnerable children (e.g., children with a higher BMI). The COMOH (2008) report identifies the effects on children's body image and self-esteem, as well as teasing, victimization, and bullying as just two potential unintended consequences. Thus, ethical considerations will have to be examined with special care. The Research Ethics and Data (RED) Committee at the Windsor-Essex County Health Unit is governed by the TriCouncil Policy Statement on Research and Human Subjects and processes all research ethics applications.

ACCESS

While the options for accessing children will become more apparent with input from the steering committee, internal consideration needs to be given to the viability of access through existing options. The COMOH (2008) strategy identifies the possibility of access through VPD teams in schools, dental screening, or at school registration. Alternately, access may be independent of other public health programs. Understanding the benefits and drawbacks of utilizing existing options will be important.

BUDGET

We project a need of $10,151,308 over 5 years, as detailed below.

Name of Organization: Windsor-Essex County Health Unit				**Total Expenses for 5-Year Period**	
Program/Project Name: Childhood Obesity					**$10,151,308.45**
Budget Period: 5 Years					
	YEAR 1	**YEAR 2**	**YEAR 3**	**YEAR 4**	**YEAR 5**
	PROJECTED	**PROJECTED**	**PROJECTED**	**PROJECTED**	**PROJECTED**
EXPENSES					
Salaries: (19.5 FTEs)					
Clerical Support (1)	$49,828.00	$50,824.00	$51,841.00	$52,877.00	$53,935.00
Communication Coordinator (1)	$53,472.00	$54,541.00	$55,632.00	$56,744.00	$57,879.00
Data Analyst (0.5)	$27,816.00	$28,372.00	$28,939.00	$29,518.00	$30,108.00
Dietitians (3)	$184,986.00	$188,685.00	$192,459.00	$196,308.00	$200,234.00
Epidemiologist (0.5)	$39,000.00	$39,780.00	$40,575.00	$41,387.00	$42,214.00
Graduate Student (1)	$35,108.00	$35,617.00	$35,981.00	$36,701.00	$37,435.00
Graphic Designer (1)	$55,632.00	$56,744.00	$57,879.00	$59,037.00	$60,217.00
Health Promotion Specialists (2)	$123,324.00	$125,790.00	$128,309.00	$130,872.00	$133,489.00
Manager/EPODE Coordinator (1)	$84,612.00	$86,304.00	$88,030.00	$89,790.00	$91,586.00
Nutritionist (1)	$61,662.00	$62,572.00	$63,190.00	$64,454.00	$65,743.00
Program Evaluation Specialist (1)	$61,662.00	$62,895.00	$64,153.00	$65,436.00	$66,744.00
Public Health Inspector (0.5)	$30,931.00	$31,404.00	$31,714.00	$32,348.00	$32,995.00
Public Health Nurses (4)	$241,404.00	$246,232.00	$251,156.00	$256,178.00	$261,302.00
Social Media Coordinator (1)	$53,472.00	$54,541.00	$55,632.00	$56,744.00	$57,879.00
Web Specialist (1)	$61,271.00	$62,496.00	$63,746.00	$65,021.00	$66,321.00
Sub-total Salaries	$1,164,180.00	$1,186,797.00	$1,209,236.00	$1,233,415.00	$1,258,081.00
Benefits	$256,119.60	$272,963.31	$278,124.28	$296,019.60	$301,939.44
Sub-total Salaries + Benefits	**$1,420,299.60**	**$1,459,760.31**	**$1,487,360.28**	**$1,529,434.60**	**$1,560,020.44**
Administrative:					
Furniture	$65,000.00				
Materials and Services	$174,800.00	$162,900.00	$170,502.00	$176,606.00	$169,212.00
Mileage	$16,000.00	$16,480.00	$16,974.00	$17,484.00	$18,008.00
Office Equipment	$25,000.00			$20,000.00	
Postage/Printing	$15,000.00	$15,300.00	$15,606.00	$15,918.00	$16,236.00
Professional Development	$8,600.00	$8,600.00	$8,600.00	$8,600.00	$8,600.00
Promotion	$48,300.00	$130,050.00	$115,050.00	$115,050.00	$115,050.00
Publications	$5,000.00	$5,100.00	$5,202.00	$5,306.00	$5,412.00
Training/Education	$6,000.00	$6,120.00	$6,242.00	$6,367.00	$6,495.00
Travel Accommodations	$4,000.00	$4,080.00	$4,162.00	$4,245.00	$4,330.00
Sub-total Administrative Expenses	**$367,700.00**	**$348,630.00**	**$342,338.00**	**$369,576.00**	**$343,343.00**
Subtotal Salaries + Benefits & Administrative Expenses	**$1,787,999.60**	**$1,808,390.31**	**$1,829,698.28**	**$1,899,010.60**	**$1,903,363.44**
Administration and Accommodation Fee - 10%	**$178,799.96**	**$180,839.03**	**$182,969.83**	**$189,901.06**	**$190,336.34**
Total Expenses	**$1,966,799.56**	**$1,989,229.34**	**$2,012,668.11**	**$2,088,911.66**	**$2,093,699.78**

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