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Canada

# REDUCING HEALTH DISPARITIES RELATED TO DIABETES:

## *LESSONS LEARNED THROUGH THE CANADIAN DIABETES STRATEGY COMMUNITY-BASED PROGRAM*

# CONTENTS

**"To promote and protect the health of Canadians through leadership, partnership, innovation and action in public health."**

*Public Health Agency of Canada*

*This report was produced by the Public Health Agency of Canada regional offices in collaboration with the organizations that implemented the projects highlighted in the case studies.*

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# CONTEXT

# REDUCING HEALTH DISPARITIES RELATED TO DIABETES:

## LESSONS LEARNED THROUGH THE CANADIAN DIABETES STRATEGY COMMUNITY-BASED PROGRAM

Approximately 2 million Canadians are living with diagnosed diabetes, and another 6 million are believed to be at high risk for future diagnosis of diabetes. Projections indicate that, by 2012, almost 2.8 million Canadians will be living with diagnosed diabetes. Research shows that certain ethnic groups in Canada—including Canadians of South Asian, Asian, Latin American and African heritage—and Aboriginal people are at higher risk of developing diabetes.[1, 2] In addition, factors such as insufficient income, stress and access to health services can both increase the risk of developing diabetes and prevent adequate management of diabetes. Effective programs exist to prevent and manage diabetes in the general population. However, there is limited information on how to address the specific needs of high-risk populations such as new immigrants, low-income earners, seniors and those working shifts.

Since 2005, the Public Health Agency of Canada has provided funding to community-based organizations through the Canadian Diabetes Strategy (CDS) Community-Based Program. The CDS aims to establish effective diabetes prevention and control approaches and share this knowledge. The Strategy addresses a wide range of issues related to diabetes information, education and disease management for high-risk populations. Its primary focus has been the prevention of type 2 diabetes through action on risk factors, early detection and management of both type 1 and type 2 diabetes. This report highlights seven case studies that provide examples and lessons learned from innovative community-based CDS-funded projects designed to prevent and manage diabetes in certain high-risk populations. These projects were selected for the report because each one used a unique approach to meet the needs of the target population.

Carrying out evaluation at the community level can present challenges, particularly with community organizations that may have limited capacity and resources for evaluation. The community-based projects highlighted in this report were provided with additional funding through CDS to carry out a more in-depth evaluation. The evaluation approach varied greatly among the projects; however, in all cases, the evaluation yielded critical lessons learned that will help to shape future projects to prevent and manage diabetes. It is anticipated that sharing the early lessons learned from these projects will be helpful to other community organizations struggling to improve Canadians' outlook for diabetes and other chronic conditions.

[1]Manuel DG and Schultz SE. (2003). Diabetes health status and risk factors. In: Hux JE, Booth GL, Slaughter PM et al. Diabetes in Ontario: An ICES Practice Atlas. Toronto: Institute for Clinical Evaluative Sciences

[2] Anand SS, Yusuf S, Vuksan V et al. (2000). Differences in risk factors, atherosclerosis, and cardiovascular disease between ethnic groups in Canada: the Study of Health Assessment and Risk in Ethnic groups(SHARE). The Lancet; 356: 279-284

# CASE STUDY 1

# A CULTURALLY SENSITIVE DIABETES PREVENTION PROGRAM FOR INDO-ASIAN WOMEN WITH A HISTORY OF GESTATIONAL DIABETES

## TAILORING A PROGRAM TO A DIVERSE POPULATION

**Lead Organization**

(Former) Calgary Health Trust

**Key Partners**

Community physicians' offices

Diabetes in Pregnancy (DIP) Clinic

(Former) Calgary Health region

Indo-Asian Community

**Funder**

Public Health Agency of Canada

**Target Group**

Indo-Asian women with a history of gestational diabetes mellitus and their families

**Communities**

Calgary, Alberta

## BACKGROUND

Approximately 5% of Calgary's population is Southeast Asian (based on 2006 Census figures). Some ethnic groups—Canadians of Southeast Asian, Hispanic and African origin—are three to four times more likely to develop diabetes than the general population. The incidence of gestational diabetes mellitus (GDM) is higher among Indo-Asian women than among women of European or American origin. It is estimated that approximately 50% of Indo-Asian women with GDM will develop type 2 diabetes within five years postpartum.

The goal of the Culturally Sensitive Diabetes Prevention Program was to develop an effective, community-based, culturally sensitive and sustainable postpartum diabetes prevention program for Indo-Asian women with a history of GDM.

## IMPLEMENTATION

***Program Recruitment***

Referrals were made by the DIP clinic, community health services and physicians located in northeast Calgary (where a large proportion of Calgary's Indo-Asian population reside).

***Program Development***

The project team sought input from members of the target population on: perceived barriers to program awareness and participation and possible solutions, and perceived barriers to positive lifestyle changes and strategies to address these barriers.

***Diabetes Prevention and Program Awareness***

Culturally specific materials were developed and distributed, including posters, brochures, articles and television and radio segments in English and Punjabi. These materials were displayed in locations (e.g. temples, community pharmacies) and media (e.g. an Alberta cable channel, an Indo-Asian radio program) accessed by the target population.

***Educational Intervention***

Three Indo-Asian women with a history of gestational diabetes were recruited and trained as community workers to assist the program team.

Five two-hour educational classes were held with Indo-Asian women, followed up by a second meeting. The program was offered in Hindi, Punjabi and Urdu. Content focused on nutrition and exercise and was tailored to the participants' culture. For example,

- Modifying food preparation techniques;
- Altering culturally based meal habits that may hinder blood glucose regulation (e.g. suggested eating the first and last meals of the day earlier); and
- Providing recipes based on culturally relevant foods and food preparation methods.

## EVALUATION

Individual, community and system-level outcomes were measured and evaluated using project records, pre-post telephone surveys, program surveys, telephone interviews, and qualitative interviews. In addition, an assessment of the extent to which project outcomes continued to be sustainable after project funding ended was undertaken.

## RESULTS

Seventeen out of the twenty-three women who participated in the diabetes prevention educational program completed a pre- and post-education survey. Survey results revealed

- An increase in the perception of the seriousness of diabetes;
- An increase in the awareness of risk factors for diabetes;
- An increased perception of personal risk for diabetes; and
- That women were less likely to see lack of knowledge, time and social support as barriers to healthy eating and exercise.

After attending the educational program, women self-reported

- An increased compliance with oral glucose tolerance testing;
- Improvement in nutrition;* and
- An increase in exercise.*

(*Statistically significant $P<0.05$)

## REACHING THE POPULATION

To serve the population,

- The program was offered in various Indo-Asian languages.
- The program was short in duration and flexible (to accommodate busy schedules).
- The program was offered at convenient times and often in participants' homes.
- Participants were given supplementary take-home written materials and videos.
- Transportation and childcare were made available, although these amenities were discontinued due to logistics and liability issues.

## LESSONS LEARNED

- The program has been modified to meet the needs of the population, by providing transportation and childcare, and offering classes close to where the women lived.
- Despite these modifications, some barriers remained; for instance, in some cultures, women do not leave the house for 40 days after giving birth.
- To accommodate these needs, home-based educational materials were developed, and the program is now offered on DVD and online
- Participants who are unable to attend classes in person are still assessed initially by a health care provider and have ongoing contact with them while they are completing the program
- Once the initial project ended, the program was adopted by the Calgary zone of Alberta Health Services
- A paper describing the project and its results has been submitted to a peer-reviewed journal.

**"There were differences in the educational and acculturation levels of women attending programs—a challenge because you have to meet [everyone's] needs. Our staff took into consideration health literacy and educational levels, and other social determinants of health that impact participants' participation in the program. Having health professionals from the same cultural background who are familiar with community norms was very helpful."**

*Project Coordinator*

## RESOURCES

Posters, brochures, articles and television and radio segments were developed in English and Punjabi.

For additional information:
Bahigi Fyith, Program Lead
Diverse Populations, Alberta Health Services
E-mail: bahigi.fyith@albertahealthservices.ca

Shahnaz Davachi, Director,
Diverse Populations, Alberta Health Services
E-mail: shahnaz.davachi@albertahealthservices.ca

# CASE STUDY 2

## CULTURALLY RESPONSIVE AND FAMILY SUPPORT PROJECT FOR DIABETES PREVENTION AND MANAGEMENT:

### INVOLVING A COMMUNITY HEALTH BROKER TO SUPPORT FAMILIES IN HOLISTIC CARE

**Lead Organization**

Multicultural Health Brokers Co-operative

**Key Partners**

(Former) Capital Health Region, Regional Diabetes Program (now Alberta Health Services)

**Funder**

Public Health Agency of Canada

**Target Group**

Families from the following communities: Chinese, Vietnamese, Spanish-speaking, Korean, Filipino, South Asian, former Yugoslavia, Eritrea and Ethiopia.

**Communities**

Edmonton, Alberta

**"Plan it with them [community members] or at least talk to some of them. There's value in being able to connect with them, even though there is not a lot of time during proposal development."**

*Project Coordinator*

## BACKGROUND

A growing body of evidence suggests that people of South Asian, Asian, Latin American and African origin have an increased risk of developing type 2 diabetes compared with the general population. Edmonton has the sixth-largest share of Canada's settled immigrants, according to the 2006 Census. Most of the newcomers to Edmonton were born in Asia and the Middle East, including the Philippines, India, and the People's Republic of China. Culturally and linguistically appropriate care is crucial to diabetes prevention and management for immigrant communities. The Multicultural Health Brokers Co-operative employs "multicultural health brokers" (MHBs) who are part of the target communities in order to provide linguistic interpretation; help individuals access services and resources; and support community development. MHBs provide support in the full range of continuum of care: health promotion, the social determinants of health, and chronic disease management. Their practice is holistic, and they use a family approach.

## IMPLEMENTATION

### *Screening*

- Participants included individuals and their family members who had previously used the MHB's services and met the following criteria: have either diabetes or pre-diabetes; are overweight or obese; are over the age of 40; have high blood pressure and/or cholesterol; have a family history of diabetes; have given birth to a baby weighing more than nine pounds.
- Information was collected on family history, nutrition and physical activity habits, breastfeeding history and birth weight.

### *Intervention*

- **One-on-One Education and Support**—The MHBs worked with individuals and family members to carry out culturally appropriate management plans. For example, MHBs worked with family members to plan and prepare healthy ethnic meals.
- **Small Group Activities**—The MHBs planned and organized group activities with community participants, such as group classes on diabetes management for immigrant seniors and gestational diabetes prevention and management for pregnant women and new mothers.
- **Seed Funding**—Small amounts of funding were set aside for communities to plan their own activities (e.g. hiring a tai chi instructor, asking a dietitian to help prepare healthy lunches). At the end of the program, a large fair was held to give the communities an opportunity to showcase the projects they undertook.

## EVALUATION

The evaluation approach consisted of a combination of qualitative methods carried out upon project completion. These included interviews and surveys with clients and MHBs, and document reviews were conducted.

## RESULTS

Highlights of the evaluation results include the following:

- The MHBs exceeded their participation estimates in both home visits and group activities for this program.
- Clients perceived MHBs as a leading source of credible, culturally and linguistically accessible information.
- Clients indicated that a key element of family support was the emotional support provided by MHBs to clients and their families.
- A knowledge survey indicated that the MHBs were quite knowledgeable about general diabetes and healthy eating but less so about information related to physical activity.

## REACHING THE POPULATION

MHBs are members of the communities of interest, and provide culturally and linguistically sensitive care for immigrants and refugees. In their work, the MHBs strived to develop a shared understanding of clients' issues and concerns rooted in core health promotion values.

**"A lot of immigrants prefer in-home support—whether it's prevention, education or management. It's best to see the home—measuring cups are different across cultures!"**

*Project Coordinator*

## LESSONS LEARNED

- There were some challenges around sustaining partnerships with the local regional health authority. For future projects, more time will be taken to understand organizational structures of partnering organizations, and engaging leaders within the programs who share the same philosophical commitment to health promotion principles as the Multicultural Health Brokers Co-operative.
- The lasting component of the program is the training and experience that the MHBs have gained working with families, older adults and children.
- Some of the activities initiated by this project have been integrated into regular programming; information about gestational diabetes has been incorporated into multilingual prenatal classes in nine communities.
- A partnership was developed with the City of Edmonton Community Services to increase the number of immigrant seniors participating in the City's recreation programs and events.

## RESOURCES

The following resources were developed in various languages:

- Diabetes fact sheets (in three languages); and
- Diabetes bingo (multilingual).

For additional information:
Lucenia Ortiz E-mail: lucenia@shaw.ca

# CASE STUDY 3

# LiveWell™ WITH CHRONIC CONDITIONS FOR ABORIGINAL PEOPLE:

## ADAPTING AND PROMOTING SELF-MANAGEMENT APPROACH THROUGH STORYTELLING

### Lead Organization

Saskatoon Health Region

### Key Partners

Saskatoon Health Clinic

Sunrise Health Region

Yorkton Friendship Centre

Yorkton Tribal Council

Community Diabetes Outreach Program

### Funder

Public Health Agency of Canada

### Target Group

Aboriginal adults at high risk of or living with chronic diseases

### Communities

Saskatoon and Yorkton area communities, Saskatchewan

## BACKGROUND

Learning to live fully despite the drawbacks of a chronic illness is a major life challenge. Aboriginal people in Saskatchewan are more likely than the general population to develop a chronic condition, and many elderly have more than one chronic illness. Diabetes rates there are at least three times the national average. In addition, Aboriginal persons deal with many other social, economic and health challenges. Despite these challenges, Aboriginal persons are under-represented in prevention and management programs.

The Stanford Chronic Disease Self-Management Program uses pairs of trained volunteers who have personal or professional experience with chronic disease. These volunteers facilitate small groups that meet weekly, following a scripted manual that promotes self-care.

This program does not replace, but is complementary to traditional health care interactions. This intervention has been evaluated and has been shown to be effective in promoting self-management and a sense of well-being and in reducing health care use.

In Saskatchewan, the Stanford model had been piloted under the name "LiveWell™ With Chronic Conditions" (LWCC). This project looked at whether this model would work well with Aboriginal populations.

## IMPLEMENTATION

The project started in early 2007 with an assessment of the LWCC manual by elders to see whether content adaptations were needed for Aboriginal participants. As a result, an introduction using the Medicine Wheel was developed, approved by the Stanford licensing body, and was added to the manual. Since then, it has been added to all LiveWell™ manuals used in Saskatchewan.

Lay Aboriginal peer leaders were trained through a four-day training workshop. The LWCC groups were promoted through and linked with existing diabetes prevention and management programs used by the target populations. The groups met once a week for six weeks in familiar venues in two health regions.

During the study period, 19 Aboriginal leaders were trained and 37 participants attended the self-care groups.

Trained Aboriginal leaders participated in a photography session that resulted in 13 promotional posters, each featuring a sentence about how the LWCC program has affected that person. These posters form part of an ongoing dissemination strategy, as they are displayed in Aboriginal facilities throughout the province.

The LWCC program has now spread into all areas of the province, using the modified LWCC manual (with the Medicine Wheel introduction). Many of the activities initiated by this project have continued with funding from other sources.

**"[The digital stories] are without a doubt the most powerful way to advocate for the LWCC program."**

*Project Coordinator*

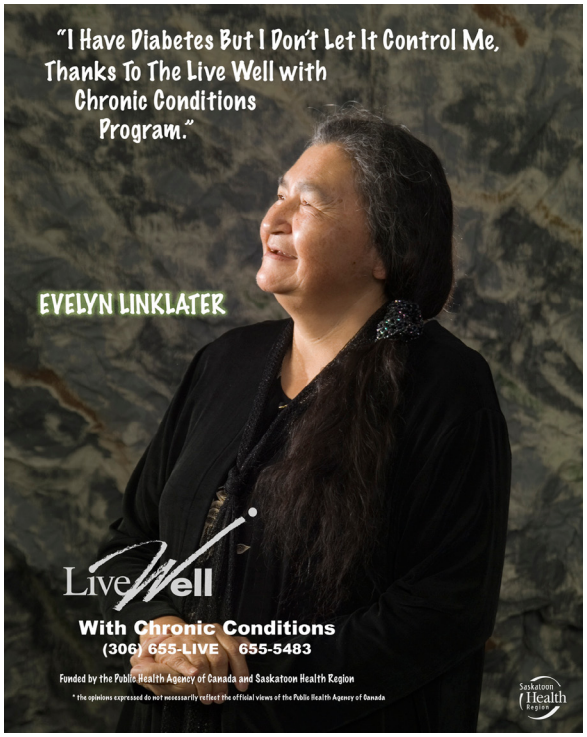
## EVALUATION

The Stanford model has been extensively evaluated. However, additional evaluation funding allowed for a qualitative evaluation using digital storytelling to capture the Aboriginal leaders' perceived impact of the LWCC program, including how they saw this program contributing to their community.

The method and approach to storytelling were adapted from those developed by the California-based Center for Digital Storytelling. Consultants were hired and led a workshop with the trained Aboriginal peer leaders. Ten short (2- to 4-minute) stories were created that reveal aspects of the storyteller's life and how the LWCC program is helping them. The stories themselves serve as the evaluation, but the stories also form a stand-alone product that has had a synergistic effect on the project as a whole.

## REACHING THE POPULATION

- The LWCC worked well for the Aboriginal population, many of whom are struggling with diabetes, as well as other chronic conditions.
- Linking this program with other programs that connect with Aboriginal people ensured success in reaching this population, as well as in providing venues and structured opportunities for LWCC actions to take place.
- There was a need to culturally adapt the approach to delivering the LWCC program in different Aboriginal communities.
- In some places, the Aboriginal leaders used informal opportunities to introduce the material, scheduling formal groups later on.




- The digital storytelling technique is a perfect fit for this population, as it respects the oral tradition of Aboriginal culture.

## LESSONS LEARNED

- Originally intended as an evaluation tool, digital storytelling was found to be important for evaluation, dissemination and promotion. It is being used as a powerful vehicle to reach the target group in a culturally meaningful way. However, it is an expensive approach and may present some technological challenges.
- In some places, Aboriginal leaders delayed the scheduling of formal groups, choosing to introduce materials on an informal basis first. With this approach, it took awhile to build momentum. This will need to be considered in future programs.
- The LWCC program is still challenged to be accepted by health care professionals who are slow to refer patients or are not aware that their patients are participating in the program.

**"I am diabetic and learning to live well with my chronic condition. All of my elders and my parents and even some younger people have died of chronic conditions. It is hard; some people turn to drugs and alcohol—they can't cope. The LWCC helped me to cope."**

*Participant/Aboriginal Leader*

## RESOURCES

- A Medicine Wheel introduction was developed for the LWCC manual.
- A series of promotional posters was produced.
- A digital storytelling DVD was created and the stories were also posted to the Internet (http://www.patient-voices.org.uk/sask.htm).

For additional information:
Suzanne Sheppard
E-mail: suzanne.sheppard@saskatoonhealthregion.ca

# CASE STUDY 4

# PUTTING THE BREAKS ON DIABETES:

## PREVENTING, DETECTING AND MANAGING DIABETES IN THE WORKPLACE

A Unique Joint Public Sector, Union, and Private Sector Initiative

**Lead Organization:**

Windsor-Essex County Health Unit

**Key Partners:**

Chrysler Canada Inc.
Canadian Auto Worker's Union
Sheppel-fgi

**Fundraisers:**

Public Health Agency of Canada
Chrysler Canada

**Target Group:**

Autoworkers, retired autoworkers and their families

**Communities:**

Windsor-Essex region and other Chrysler Canada locations across the country

## BACKGROUND

Diabetes onset often occurs several years before the condition is medically diagnosed. It is estimated that as many as one-third of adults living with the condition are unaware that they have diabetes. Early lifestyle or medical intervention may prevent 30–60% of type 2 diabetes.

Chrysler Canada Inc. and the Windsor–Essex County Health Unit partnered to deliver a comprehensive program to prevent, detect and manage diabetes in employees, retirees and family members. It was integrated into an existing workplace wellness program.

The diabetes program aimed to increase awareness of diabetes risk factors and prevention; to promote the adoption of healthy eating, active living and type 2 diabetes prevention behaviours; and to identify, educate, refer and support individuals at high risk for developing diabetes, as well as those living with undiagnosed and diagnosed diabetes.

## IMPLEMENTATION

Between September 2007 and April 2008, 2,856 employees, retirees and family members participated in diabetes clinics, and an additional 3,500 received information mailed to their home. The program consisted of three main components:

***Health Information:***
Information was provided through Working Towards Wellness newsletters, a diabetes-specific brochure, diabetes-specific content on the Working Towards Wellness website, posters in key locations and presentations during two diabetes mini-expos.

***Health Assessment, Screening and Referral:***
Diabetes Screening and Wellness clinics were held at Chrysler facilities and selected community locations. Clinic participants completed a confidential diabetes risk questionnaire, had biometric screening and met with a health educator. All participants also received one of three health education packages: Healthy Living; Diabetes Prevention; or Living With Diabetes.

***Diabetes Education:***
Employees, retirees and family members living with diabetes who did not attend the expos or a clinic were mailed the Living With Diabetes health education package.

**"So many people didn't know where they stood health wise – no clue that they're ripe for a heart attack"**

*Participating Health Provider*

## EVALUATION

Chrysler Canada and the Windsor–Essex County Health Unit partnered with Sheppell-fgi to design and implement the evaluation. The evaluation strategy included the use of five data collection tools: a feedback survey for clinic participants; a follow-up survey for clinic participants; a home mail-out for recipient feedback; target audience focus groups; and a health care provider feedback survey.

## RESULTS

*Program Acceptability*

- 66% agreed or strongly agreed that the program provided them with information they would not have received elsewhere.
- 73% agreed or strongly agreed that the program had a positive impact on their health.

*Early Detection/Screening*

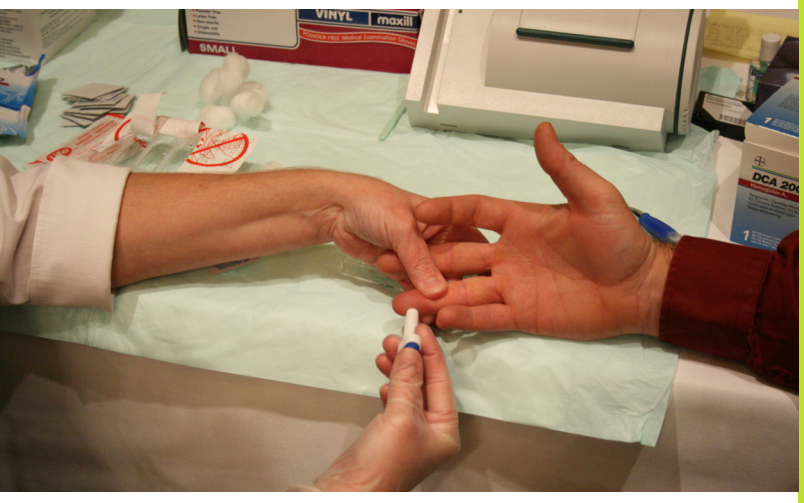
- 8% of participants were newly diagnosed with diabetes, 9% with high blood sugar, 16% with high cholesterol and 14.3% with high blood pressure.
- 46% of participants reported that it was unlikely or not at all likely that they would have received diabetes screening elsewhere that year.

*Healthy Behaviours*

- 82% reported that they ate healthier foods.
- 76% increased their level of physical activity.
- 62.5% tried to lose weight as a result of participating.

*Diabetes Management*

- There was a 16% increase in the number of participants who perceived their knowledge of diabetic control as good to excellent following participation.
- A lower-than-expected proportion of respondents participated in recommended diabetes management activities (e.g. formal diabetes education, having their feet checked, having a dilated eye exam) at follow-up.
- The proportion of participants taking their oral medication increased from 43% to 92% following their visit to the clinic.




**"Participants reported that while getting people off the line was a major barrier to participation, many were able to get time with their supervisors help"**

*Summary From Employee Feedback Survey*

## REACHING THE TARGET POPULATION

The uptake for this program was greater than the organizers had anticipated. Several factors may have contributed to this, including the following:

- The convenience of attending the clinic (Chrysler staff attended the clinic during work hours or at the beginning or end of their shift);
- The incentives provided (t-shirts);
- Participant involvement in program planning and design; and
- Staff involvement in promoting the program.

## LESSONS LEARNED

- Although this program achieved many positive changes in terms of health behaviours, it did not have an impact on certain diabetes management behaviours, such as having feet checked. Information on foot care must be emphasized in future programs.
- Taking staff work time to access the clinic is an issue, especially in an assembly-line setting. Management support is critical to ensure equal access.
- It is critical to develop a flexible plan that can accommodate industry needs (e.g. plant shut-down, summer schedule).

## RESOURCES

This program relied on existing resources such as Working Towards Wellness program resources, fact sheets on diabetes, Canada's Physical Activity Guide and Diabetes for Dummies, 3rd edition.

For additional information:
Neil MacKenzie
Windsor-Essex County Health Unit
E-mail: nmackenzie@wechealthunit.org
www.wechealthunit.org

CASE STUDY 5

# ADDRESSING CHILDHOOD OBESITY THROUGH A COMMUNITY-BASED STRATEGY TO SCREEN AND ENGAGE HIGH-RISK MIGRANT FAMILIES

## Families in Action: A Global Village Pediatric Diabetes Prevention Resource

### Lead Organization

Middlesex–London Health Unit

### Key Partners

Brescia University College
Children's Hospital of Western Ontario
London Health Sciences Centre
Schulich School of Medicine and Dentistry
St. Joseph's Health Care Primary Care Diabetes Support Program
The University of Western Ontario
The YMCA of London

### Funders

Canadian Diabetes Association
Public Health Agency of Canada
Lawson Foundation

### Target Group

Latin American children and their families

### Communities

London, Ontario (expanded to sites in Toronto and Ottawa)

## BACKGROUND

London is home to one of the fastest-growing Latin American communities in Ontario. It is estimated that 35% of Latin American children in London are overweight and 24% are obese—more than double the proportions of children from the general population in London. The prevention of obesity is recognized as a critical step in the prevention of type 2 diabetes. Compared with the general population's rate of type 2 diabetes, the rate for Latin American adults is three to four times higher. It is estimated that children with parents who have diabetes are twice as likely to get diabetes as those whose parents do not have the disease.

The Families in Action (FIA) Program was designed to address the needs of the Latino population in London by identifying those children at greatest risk of developing obesity-related health consequences, such as diabetes.

## IMPLEMENTATION

The program included both a screening component and a six-month intervention component for children and families identified as high risk.

***Screening***

Recruitment and diabetes screening events were held in local community centres and churches. Children's height and weight were measured and used to calculate body mass index (BMI). Those with a BMI above the 85th percentile for their age and gender were invited to participate in the intervention. Information was collected on family history, nutrition and physical activity habits, breastfeeding history and birth weight.

- A total of 178 children between the ages of 6 and 12 were screened.
- Of these, 71 (40%) were identified as overweight or obese.
- All 71 children enrolled in the program.

***Intensive Six-Month Intervention***

Children and their families attended hour-long intervention sessions monthly for six months. They were asked to fill out a survey about basic information such as level of physical activity and screen time. Children were measured for weight, height and waist circumference, and participated in a fitness shuttle run.

Children and their families met with the case manager to develop one or two main goals for the family that month (e.g. reduce the number of sugary drinks consumed). Case managers provided coaching and support to help the families meet their goals. Subsequently, the children were invited to participate in a nutrition program. Children were taught to make a healthy snack and were provided with the recipe for the snack. Parents had the opportunity to ask questions of the dietitians.

## EVALUATION

The evaluation of the project was a partnership between the public health unit, the community and academic institutions. Participant measurements (e.g. weight, height, physical fitness, eating habits) were taken prior to entry in the program and changes were tracked over a 12 month time period. Information on sociodemographics and food security was collected prior to entry in the program through in person interviews. Focus groups were also conducted to examine the utility of the training resource and the adaptability of the FIA model.

## RESULTS

After the six-month intervention, the following improvements were noted:

- Physical activity had increased by 46 minutes a day;*
- Screen time was reduced by 55 minutes a day;*
- Fruit and vegetable intake had increased by 1.1 servings a day;*
- Junk food consumption was reduced by 3.3 times a week;* and
- BMI had declined.*

(*Statistically significant $P<0.05$)

## REACHING THE POPULATION

- FIA presentations were conducted at community meetings, churches and community health forums, in local Spanish newsletters and in radio interviews in Spanish.
- Caseworkers were respected members of the community, which helped with acceptance of the program.
- In order to overcome barriers to completing the program, families were provided with a complimentary YMCA pass for the first three months of the program and a subsidized rate thereafter ($35/family/month). In addition, the families received free public transit tickets to attend sessions and vouchers to purchase fruits and vegetables.
- These incentives (e.g. YMCA membership, grocery vouchers, transit costs) encouraged both participation and healthy behaviours.

## LESSONS LEARNED

- The barriers to healthy behaviours in the target population went beyond the health sector. They included settlement, housing and employment issues. Information was provided in the Resource Manual developed for caseworkers in order to help address these barriers.
- Lessons learned from this pilot program in London were used to adapt the program to three new sites: elsewhere in London, in Ottawa and in Toronto. These sites served South Asian, Latin American and African populations. Using the FIA Resource Manual and a small operating grant, each site adapted the program to meet the needs of its target population. The adaptability and effectiveness of the FIA model is being evaluated in these new sites for use with other ethnocultural communities and in other urban settings.

**"There is a need to approach the issue of childhood obesity from a family perspective in order to have the greatest impact."**

*FIA Program Coordinator*

## RESOURCES

A Families in Action Resource Manual was created with step-by-step instructions to introduce a culturally appropriate diabetes prevention program in the community. The manual is designed for use by community agencies that serve newcomers to communities or by those who are mandated to address diabetes prevention.

Download the complete manual and additional resources at www.gvfia.com.

For additional information:
Gillian Mandich, Project Co-ordinator
E-mail: gmandich@uwo.ca

# CASE STUDY 6

# DIABETES INTERVENTION STRATEGY FOR QUEBEC MINORITY ENGLISH SPEAKING COMMUNITIES:

## INCREASING ACCESS TO HEALTH INFORMATION FOR RURAL AND ISOLATED REGIONS

### Lead Organization

Servizi Comunitari Italo-Canadesi del Quebec

### Key Partners

Committee for Anglophone Social Action —New Carlisle

Council for Anglophone Magdalen Islander

East Island Montréal

Lower North Shore Coalition for Health

Outaouais Health and Social Services Network

Townshippers' Association—Cowansville and Estrie

Vision Gaspé—Percé Now

### Funder

Public Health Agency of Canada

### Target Group

English-speaking youth, adults and seniors

### Communities

Throughout Quebec

## BACKGROUND

The prevention of obesity in children and older adults is key to the prevention of type 2 diabetes and several other chronic diseases. Access to health information and diabetes services is limited for certain English-speaking communities in Quebec, particularly those in isolated or rural regions.

This program aimed to increase awareness of the benefits of healthy eating and physical activity among high-risk populations and among decision-makers within the English-speaking minority communities. In addition, it sought to develop partnerships between community organizations and the health and social services centres (the "CSSS").

## IMPLEMENTATION

The regional English-speaking communities partnered with local health institutions to carry out various activities related to prevention and self-management, including:

- Presentations in elementary schools;
- Travelling kiosks on diabetes prevention;
- Diabetes screening and testing by nurses at all-ages festivals;
- Distribution of "survival bags" for individuals with type 2 diabetes;
- A cooking class for children on how to prepare cookies that are appropriate for diabetic diets, with proceeds donated to a local homeless shelter.

## EVALUATION

Process evaluation measures included maintaining a program diary; qualitative surveys of seniors and steering committee members, and pre- and post-surveys of knowledge, awareness and behaviour.

Age-appropriate pre- and post-test questionnaires and satisfaction forms were administered to high school students and seniors. In addition, focus groups were held with seniors and youth in two of the target communities. Seniors and youth were the main focus of the evaluation, as most of the project activities were aimed at these two populations.

## RESULTS

Results indicated that knowledge and awareness of diabetes increased among participants, but it was difficult to assess whether any changes had been made to dietary or physical activity practices. The evaluation also confirmed that important partnerships were established between the project partners (community organizations) and the public health system.

Comments on the evaluations centred on three points:

- The importance of follow-up, particularly for seniors (who do not have the benefit of being in a continuous learning environment like a school);
- The need to use individualized approaches when teaching about healthy lifestyles, such as providing personal attention during presentations, and group support; and
- Targeting seniors caregivers' in future program activities, as they play a significant role in the nutrition and physical activity practices of seniors.

## REACHING THE POPULATION

- Program activities were carried out in regions with a high proportion of English-speaking residents.
- To reach the general public, activities were carried out in shopping centres, grocery stores and at public events.
- To reach students, activities related to diabetes prevention were conducted at day camps and elementary schools.
- To reach seniors, the program team travelled to medical clinics and seniors' centres.

## LESSONS LEARNED

- It was initially more challenging to reach seniors than youth because they cannot all be reached at a single institution (i.e. a school); however, it was easier to collaborate with seniors' committees than school committees, as their decision-making processes were simpler than those in the school system.
- The presence of government health officials at English events was a success, as it helped to increase understanding between English minority communities and government decision-makers.
- In response to shifting priorities at the provincial and federal government levels, the lead organization and partnership communities are focusing on chronic disease care management in patients with type 2 diabetes. They are currently working on a distance telemonitoring project involving community networks across Quebec and local health centres, whereby patients transmit their blood glucose levels to nurses and project coordinators via handheld devices, such as the Blackberry. Dietitians are hired to answer questions and present information sessions via videoconference. The acquisition of self-monitoring skills among patients will be measured to determine the feasibility of using this technology.

**"The public sector is beginning to realize the value of community groups. It was skeptical at first, but now it values them as partners and sees how far the little funds they [community groups] receive can go."**

*Project Coordinator*

## RESOURCES

A number of resources were developed for this program:

- Training kits for youth on healthy eating and diabetes;
- Curriculum modules for elementary school children;
- Pamphlets for all age groups;
- Healthy recipe guides; and
- A rap DVD on healthy eating and diabetes prevention (YouTube site: http://bit.ly/oKdZ).

For additional information:
Maria Maiolo
E-mail: mmaiolo@scciq.com

# CASE STUDY 7

# STRATEGIC ENGAGEMENT OF YOUTH IN ETHNOCULTURAL COMMUNITIES ON DIABETES AWARENESS

Youth Involvement to Increase Diabetes Awareness Within the Community

**Lead Organization**
Canadian Ethnocultural Council (CEC)

**Key Partners**
Projenesis Iberoamerican Organization Ottawa
National Council of Jamaicans and Supportive Organizations in Canada
Chinese Canadian National Council
Ottawa Community Housing Corporation South District
Association for Canadian Studies
Christian Cultural Association of South Asians
The Canadian Diabetes Association
The Canadian Ethnic Media Association

**Funder**
Public Health Agency of Canada

**Target Group**
Asian (Chinese, Filipino, South Asian, Vietnamese), Black (including Caribbean) and Hispanic (Spanish-speaking from South and Central America) youth aged 15–24; families of these youth; and their health providers

**Communities**
Communities across Canada

## BACKGROUND

Today, more children and youth than ever before are being diagnosed with type 2 diabetes and facing long-term problems associated with the disease. Results from a study carried out by the Hospital for Sick Children in Toronto showed a steady increase of type 2 diabetes among children 18 years and younger between 1994 and 2002, with an over-representation of African-Canadian and Southeast Asian children. Unfortunately, there are limited diabetes programs available to meet the needs of this population.

Through this project, the Canadian Ethnocultural Council worked to improve awareness of type 2 diabetes among ethnic youth, their families and their communities. Specifically, "Strategic Engagement of Youth in Ethnocultural Communities on Diabetes Awareness" focused on primary prevention of type 2 diabetes in youth from ethnocultural communities at high risk of diabetes (African, Asian and Hispanic descent).

## IMPLEMENTATION

During the course of one year, youth and those working with youth from various ethnocultural communities participated in three main activities:

- Local Focus Group Consultations—to assess community awareness of type 2 diabetes in youth. Focus groups were carried out in five Canadian provinces, with the participation of 234 individuals;
- A National Symposium—to provide background data on type 2 diabetes in youth and strategies for prevention gained from experts in the fields of medicine, dietetics and sports (66 participants); and
- A One-Day National Community Briefing—provided the opportunity to share information from consultations with youth, communities, health practitioners and ethnic media. It also provided a venue to develop appropriate strategies for distribution and dissemination of the three resources developed based on input from consultations and the symposium (see Resources section, below).

The project provided youth with information required to educate members of their communities and families about diabetes and diabetes prevention. Prior to attending, participants were clearly advised of the expectations to take action after the symposium. The approach each participant took was unique.

## EVALUATION

Individual program participants and organizations provided input through a detailed evaluation survey. A total of 50 surveys were completed. Telephone interviews were also conducted with 6 key informants.

## RESULTS

- 88% of respondents indicated that their awareness of type 2 diabetes had increased as a result of the information they received from the three resources (see below).
- 62% of respondents stated that the project findings have motivated them to increase their physical activity level.
- 64% of respondents stated that due to participation in the program, they have reduced their consumption of foods containing sugar, fat and salt.
- At the time of the survey, the information from the resources had already been shared with 576 youth and 1,723 adults.
- 76% of respondents stated that the project had a positive effect on their communities as well as on family and friends.

## REACHING THE POPULATION

- This program relied in part on a network of existing partners and organizations working with ethnic youth. Youth participants were identified through these partners and organizations. Youth selected to attend were expected to communicate diabetes information learned to their respective communities.
- By using age-appropriate methods, such as YouTube, and by engaging youth to develop diabetes messaging, this program was able to reach a substantial number of youth.

## LESSONS LEARNED

- In order to maintain momentum and keep youth interested, there is a need for frequent and timely follow-up. This program was limited by time and resources, making the sustainability of the network difficult. Innovative strategies to ensure network sustainability are required.
- Participation in the follow-up survey was lower than anticipated. Two factors may have contributed to low participation:
  - Community organizations involved in this program relied on volunteers and/or limited staff, making it difficult to fulfill the time demand required to carry out the follow-up evaluation.
  - Many organizations were not active in the summer, when the work was carried out.

In future, the timing and length of the evaluation, as well as the time given to participants to complete the evaluation, need careful attention.

**"Identify appropriate leaders and individuals in the community or within community organizations to support your project."**

*Project Coordinator*

## RESOURCES

CEC developed four key resources:

- Community Awareness Report;
- Demographic Analysis; and
- Resource Guide.; and
- A YouTube video.

Focused on youth, these resources provide information on minimizing modifiable risk factors for developing diabetes, primary prevention strategies, and details about ways to meet the challenges of primary prevention. In addition, the resources contain a listing of cookbooks, meal planning guides, a glossary that defines common terms in the area of type 2 diabetes prevention, and a list of useful and reliable websites.

YouTube video:


The resources and video can be accessed at:
http://www.ethnocultural.ca/projects/none/diabetes

For additional information:
Canadian Ethnocultural Council
E-mail : cec@web.ca

# REFLECTIONS

Diabetes is a complex health problem that cannot be addressed effectively by any single intervention or sector. It is increasingly recognized that social determinants of health—the living conditions Canadians experience—are important factors shaping the incidence of type 2 diabetes and its successful management. The case studies highlighted in this report each provide important lessons learned from community-based diabetes programming that take into account people's living circumstances, including income, social support networks, personal health practices, working conditions and culture.

The majority of projects described in this report were participatory in nature, meaning that representatives of the target population were actively involved in the planning, delivery or evaluation of the projects (for instance, through participation on project advisory or steering committees). The use of these participatory approaches assisted the organizations in effectively reaching communities of interest (specific cultural and age groups) and in delivering appropriate health education activities.

Most of the case studies in this report were funded for one year, and evaluations conducted were primarily process evaluations (documenting and analyzing the early development and actual implementation of the project, assessing whether strategies were implemented as planned). Therefore, any outcomes highlighted were early outcomes. A variety of evaluation methods were used (including qualitative, quantitative and mixed methods). Some of the evaluations had methodological challenges, which may have been due to a lack of resources or capacity available within the organization to conduct a robust evaluation.

The evaluation results reflect both the successes and challenges faced by organizations delivering programs at the community level. Nonetheless, it is anticipated that sharing the early lessons gleaned from these projects and the evaluation approaches used will be helpful to and adapted by other community organizations working to prevent and manage diabetes and other chronic conditions in Canada.

## Additional Resources

*Canadian Diabetes Strategy:*
http://www.phac-aspc.gc.ca/cd-mc/diabetes-diabete/index-eng.php
*Report from the National Diabetes Surveillance System: Diabetes in Canada, 2009*
http://www.ndss.gc.ca
*Canadian Diabetes Association: Best and Promising Practices*
http://www.diabetes.ca/bestpractices
*Towards Evidence-Informed Practice (TEIP) Learning Module 3 - Planning for Successful Evaluation*
http://teip.hhrc.net/tools/learning/module_3/index.html

[1]D. Raphael, S. Anstice, K. Raine, et al. (2003), "The Social Determinants of the Incidence and Management of Type 2 Diabetes Mellitus: Are We Prepared to Rethink Our Questions and Redirect Our Research Activities?" Leadership in Health Services 16:10–20.

**"To promote and protect the health of Canadians through leadership, partnership, innovation and action in public health."**

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