

# Diabetes Care in Nova Scotia



A NEWSLETTER OF THE DIABETES CARE PROGRAM OF NOVA SCOTIA

## State of the Art

### The DCPNS Physical Activity and Exercise Tool-kit

*“This initiative from the DCPNS Best Practice Committee is intended to address the lack of resources available to diabetes educators and other health professionals in promoting and prescribing physical activity and exercise to individuals with diabetes.”*

On Thursday April 10, 2008, the “Physical Activity and Exercise Tool-kit” was officially ‘launched’ at the Diabetes Care Program of Nova Scotia (DCPNS) provincial conference in Halifax. This initiative from the DCPNS Best Practice Committee is intended to address the lack of resources available to diabetes educators and other health professionals in promoting and prescribing physical activity and exercise to individuals with diabetes. Judging by the reception at the workshop and the enthusiasm many displayed toward using the materials, this is a welcome addition to improving quality diabetes practice in the province.

Physical inactivity is identified as the primary preventable cause of insulin resistance producing diabetes.<sup>1</sup> The Canadian Diabetes Association acknowledges that physical activity and exercise are primary interventions to prevent and manage diabetes; however, promoting and establishing regular voluntary activity and exercise patterns for individuals with diabetes has been a challenge for diabetes care providers. Part of this difficulty relates to the complex nature of physical activity promotion and prescription that many health professionals are not necessarily trained for. This initiative aims to provide training and resources, initially to diabetes educators, and later to other providers, so that they are empowered to help their clients in this regard. This two-year project, has recently received funding support from the Lawson Foundation to deliver and evaluate the effectiveness of the tool-kit in promoting physically active behaviours in individuals with diabetes.

There are a number of factors that influence participation in physical activity and exercise. These influences are made more challenging in our technologically advanced society, a society that has designed physical activity OUT of our lives. As a result, everyone now must consciously think about adding physical activity and exercise BACK into our lives to maintain our health. This process is a little easier for some who have the resources; however this process is complicated by the presence of diabetes, both from a physiological and behavioural perspective.

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For individuals with diabetes, physical activity and exercise can be an intimidating proposition – there may be:

- a lack of knowledge about the importance of physical activity
- worries about complications with hypoglycemia and/or cardiovascular concerns
- a lack of competence at being able to do physical activity or exercise
- competing demands to monitor blood glucose, food intake, blood pressure, foot care and other variables to adequately manage diabetes
- limited resources to help individuals take active steps

These challenges may create feelings of anxiety or low confidence toward physical activity and exercise, which is why individuals with diabetes typically have lower participation in physical activity<sup>2,3</sup> and a lower compliance to exercise<sup>3,4</sup> than the general population.

*The Physical Activity and Exercise Tool-kit* identifies the major issues associated with physical inactivity for individuals with diabetes. Factors such as risk assessment, referrals, assessing physical capacity and readiness for physical activity and exercise, are taken into account so that diabetes educators can individualize recommendations to make them meaningful for individual clients. Research shows us that simply advising patients to do more physical activity without more specific assistance and follow-up is ineffective.<sup>5</sup> Additionally, making recommendations individually relevant also increases participation and adherence. With this in mind, the tool-kit is also designed to promote counseling strategies and provides tools that help to support physically active behaviors. Some of these tools

are being modified specifically for the diabetes population and only available in draft form at present. But as regional workshops are delivered and other training opportunities are offered over the summer, these finalized tools will be available.

The plan for the roll-out and evaluation of the tool-kit includes regional workshops that will start during the summer and early fall. This will give everyone a chance to learn more about the practical components of the tool-kit. This will also allow the development of site-specific strategies for incorporating these methods into daily practice. An on-line questionnaire will also be sent to all diabetes educators in the fall, to follow-up on the tool-kit resources that have been provided. Some Diabetes Centres will also be included in the client evaluations of the project that will begin in January 2009. Updates and information regarding this project will be provided in the newsletter and at the DCPNS provincial meetings in 2009 and 2010. Further input to the refinement of the 'Tool-kit' and the dissemination program will be solicited from diabetes educators throughout the project and in the form of focus groups upon completion of the formal evaluation component. The results of the overall

program will help guide future 'best practice' regarding physical activity and exercise interventions in diabetes populations.

This is a very exciting initiative for the DCPNS and for the partners involved at Acadia University at the Canadian Society for Exercise Physiology. The end result of this project will be to increase physically active behaviours and improve diabetes outcomes in individuals with type 2 diabetes. This type of program is relatively novel in Canada, and we hope that what is learned from the project will make it a suitable model for release across Canada to other Diabetes Centres and care providers. It has the potential to be a model for other chronic disease populations that could benefit from physical activity and exercise.

*Jonathon Fowles, PhD, Associate Professor in Exercise Physiology, Acadia University, CSEP-CEP, Tool-kit Project Team Leader. Submitted on behalf of the Tool-kit team: Rene Murphy, PhD, Chris Shields, PhD, Shayne Fryia, BKin, CSEP-CEP, Arlene Perry, BSc-Kin, CSEP-CEP, Carrie Dillman, BKinH (candidate).*

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## PROJECT DESCRIPTION

The “Physical Activity and Exercise Tool-kit” has been developed in collaboration with the Diabetes Care Program of Nova Scotia and the Canadian Society for Exercise Physiology. The ‘Tool-kit’ is designed to empower diabetes educators to facilitate physically active behaviours in individuals with diabetes. The ‘Tool-kit’ has components to assist both the diabetes educator and the individual with diabetes in achieving and maintaining physical activity targets. The resource includes the following:

**Section 1:** Foundational Resources (educational information regarding: physical activity and exercise; evidence-based, patient-centred diabetes management, integrating health risk status; readiness for activity and physical capacity of the individual with diabetes; physical activity and exercise information; action plans and monitoring)



**Section 2:** At-a-Glance Summary Worksheets (decision tree for action, interview guidelines, basic aerobic and resistance training teaching tips)

**Section 3:** Client Handout Packages (information handouts, tools, and programs to support physical activity and exercise in three different levels of participation)

## ATTITUDE MAKES A DIFFERENCE (IN NOVA SCOTIA)

Attitude Makes a Difference is a project of the Public Health Agency of Canada (PHAC) sponsored by the Atlantic Seniors Health Promotion Network (ASHPN).

The objectives of the project are to:

- identify the best practices in diabetes prevention and treatment among seniors
- understand the knowledge and perceptions of those with prediabetes and type 2 diabetes
- identify the key actions needed to enhance prevention, treatment, and support.

Focus groups were held in the four Atlantic Provinces, with the primary purpose of identifying the impact of a diagnosis of prediabetes and type 2 diabetes on seniors—emotionally, socially, financially, and physically.

Four focus groups were held throughout Nova Scotia—Sackville, Digby, Berwick, and Cheticamp. Participants had prediabetes or type 2 diabetes and ranged in age from 55-87 years. Questions for the group focused on what seniors know and want to know about the prevention of and treatment for type 2 diabetes, accessibility of information and support, affordability of medications and supplies, and attitudes towards the disease. The participants commented on the valuable support and information they received from their local Diabetes Center.

The participants reported the following challenges:

- fear of progression of their diabetes
- lack of finances to manage diabetes
- difficulties following through with healthy eating habits
- lack of support
- lack of transportation

The project results will be shared with all project members and partners. Internet sites will be used to share results and continue advocacy work for seniors with diabetes or with prediabetes.

Since contact information for this project was not available at this time, please contact DCPNS - Brenda Cook, for website and other information about this project.

# News from the Care Program

Well, another DCPNS Spring workshop, *Diabetes: Much More Than Glycemia*, has come and gone. We would like to thank all who participated and set the stage for a very successful workshop. (We heard that this was one of the best ever.) We packed a tremendous amount into our two-day program, and welcomed expert speakers from inside and outside the province. We attracted some of the best in the field! We stretched our minds (and our backs too, with the resistance bands), we gained a better appreciation of one of our most vulnerable populations (those with depression and mental health issues), we critically appraised the literature, we learned about new approaches to address the complex issue of obesity, we gained insight into managing gestational diabetes, and we grounded all of this in Nova Scotia's diabetes data with a look at DCPNS current and planned activities. We hope people had a chance to network and share ideas and approaches, as this is what it is all about. A special thank you to our industry partners—we couldn't do it without you, and we look forward to your continued support.

as they move toward improving and finalizing some of the draft tools in the months to come. Diabetes educators are encouraged to start using the counseling process as much as they can, and as they feel comfortable. The regional workshops will help with further understanding, but there is no need for people to wait until fall to start integrating this into their practices.

The final copy of the *Prediabetes Management/Education in Diabetes Centres Guidelines* can now be found on the DCPNS website.

## ***Pediatric to Adult Care Transition Working Group***

### ***Moving On with Diabetes***

Committee Members are busy reviewing draft copies of numerous articles that are to be included in the *Moving On With Diabetes Transition Booklet*. This is a huge project that will serve as a valuable source of information that youth can take with them as they transition from pediatric to adult diabetes care.

With University/College survey results in, gaps in services to students with diabetes who attend these institutions can now be identified. All survey respondents indicated an interest in further discussion to enhance health services for this student population. The University Working Group will reconvene to determine future activities and to address this area of the transition strategy

## **Special Projects**

### ***Emergency Preparedness Handout***

Please take note that the emergency preparedness handout, *Diabetes Care... Planning for an Emergency* has recently been revised. The last comment on the brochure now reads: "If you need emergency medical

## **Diabetes Care Advisory Council**

### ***Strategic Planning Moves Ahead!***

The DCPNS Advisory Council and Program staff met March 27 and 28, 2008 to review materials developed to inform our five-year strategic plan and to draft our strategic priorities. The environmental scan and directed literature review allowed us to look at "system models" and the application of these models in Canadian and other contexts. (What can Nova Scotia take from these?) The feedback from the stakeholder questionnaires provided insight into our strengths and areas for future work. Presentations from other provincial programs and key departments such as the Departments of Health (Primary Health Care) and Health Promotion and Protection, as well as an overview of the PSHOR report, and the implications of this report for provincial programs, ensure that our strategies will have a fit and are grounded in the future of health care in Nova Scotia. Over the coming months, we will refine out strategic

directions and generate specific actions to start us along our future path.

## **Subcommittees/Working Group**

### ***Care of the Elderly with Diabetes Residing in Long-Term Care (LTC) Facilities***

*The DCPNS Guidelines for Treatment of Hypoglycemia and Targets for Glycemic Control* are being revised following the pilot testing in three Long-Term Care Facilities. Education sessions will be planned to explain the tool as well as rationale for the recommended targets and treatments in this special population.

### ***Best Practice Committee***

*The Diabetes Physical Activity and Exercise Tool-kit*, for use by diabetes educators, was rolled-out during the DCPNS Spring 2008 Workshop (see the State of the Art article, this issue). The Tool-kit Project Team, led by Dr. Jonathon Fowles, encourages use of the tools and welcomes feedback

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assistance call 911.” The revised version has been posted on the DCPNS website. Plans are in process to replace those copies distributed to the Diabetes Centres in the province with the revised version.

### ***Nova Scotia Diabetes Statistics, 2008 (report)***

This document is now available, and will be distributed in the coming weeks. Look for a copy on the DCPNS website for easy access. The presentation by Dr. Jennifer Payne on this report and its key findings, as given at the DCPNS Spring 2008 Workshop, can be found on the DCPNS website. Please contact the Program with specific questions.

### ***The Diabetic Foot in Nova Scotia: Challenges and Opportunities***

The Diabetic Foot Working Group held its first meeting on March 19, 2008. Nine multidisciplinary foot care providers from across the province came together to revise the current referral algorithm for healthcare professionals. This addresses the first of two key recommendations from the diabetic foot document, *The Diabetic Foot in Nova Scotia: Challenges and Opportunities*. Draft copies of the *Foot Risk Assessment Form*, the *Foot Risk Stratification Form* and the *Referral Algorithm* were reviewed. The forms will be revised to reflect the expert input from the members.

The mapping project of foot care providers and services is nearing completion. The maps produced with the assistance of the Public Health Agency of Canada (PHAC), provide a good overview of the location of vascular and wound care clinics, podiatrists, pedorthists, VON/We Care services, and other regulated hospital based foot-care services.

### ***DCPNS Diabetes Centre Grants***

We are pleased to announce the recipients of the 2008/09 DCPNS Diabetes Centre Grants. Congratulations! The project titles and home DHA/community are noted as follows:

- Designing and Implementing Diabetes Modules to Increase Client Interaction (DHA 1);
- Facilitating Diabetes Exercise and Education Program (DHA 3);
- Fit as a Fiddle, Postpartum Weight Management Program (IWK Pregnancy and Diabetes Program);
- Living Well With Diabetes: a culturally appropriate diabetes self-management program (Eskasoni).

Please see page 10 for a summary of the project work undertaken by a 2007/08 grant recipient—Step Forward: Delivery System Design in Annapolis Royal (DHA 3).

### **Registry Enhancements**

#### ***Meditech Interface (Phase 2)***

The DCPNS Data Management team has been working hard to implement phase 2 of the interface (transfer of laboratory data) for Diabetes Centres. The architecture is complete and final approval has just been received on the Privacy Impact Assessment.

The DCPNS Registry is pending installation in the Diabetes Centre in St. Anne Community and Nursing Care Centre as well as the remaining Diabetes Centres in Capital Health (DHA 9).

**Peggy Dunbar**  
Coordinator, DCPNS



### **Partnership Projects**

#### ***“Upstream” Screening and Community Intervention for Prediabetes and Undiagnosed Type 2 Diabetes***

It's hard to believe, but we have just passed the halfway point for this project. We have received ethics approval from both pilot sites: Annapolis Valley Health (AVH) and Guysborough Antigonish Strait Health Authority (GASHA) and soon will be distributing the CANRISK Survey to households in Kentville and Antigonish.

The local project teams are working hard to finalize their respective Community-based Prediabetes Lifestyle Program that will be offered to screening participants who are found to have prediabetes.



#### ***Development of Nova Scotia Diabetes Dataset (Repository)***

We are happy to report that this project is in the homestretch. The final organizational requirements for constructing the Nova Scotia Diabetes Repository (NSDR) have been identified and addressed, and we anticipate that the Privacy Impact Assessment for this project will be signed by the time you read this newsletter. Next, we will be focussing our energy on the preparation of the final report and recommendations.

# Pregnancy Focus

## Contraception for Women with Diabetes

Effective contraception is an important consideration for all women with diabetes. Safe and effective contraception methods are essential for women with diabetes to have a planned pregnancy under optimal conditions. The contraceptive guidance before pregnancy, and between each pregnancy, is of the utmost importance and should be given high priority in the counseling of women with diabetes.

When deciding on an appropriate method of contraception, women and their partners should meet with their health care provider to discuss their options. Factors to be considered include, age, smoking status, BMI, and glycemic control, as well as the individual's health history. As the population becomes more obese across all demographic groups, increased attention has been given to the safety and efficacy of various contraceptive methods for obese women.

Combined oral contraception (COC), those containing both estrogen and progesterone, is an appropriate choice for many women. As the estrogen component of COCs increases the risk of blood clots, this method is not recommended for women who smoke, are obese, or have a history of blood clots, and therefore alternative methods should be explored.<sup>1</sup> Some women with increased BMI may experience breakthrough bleeding when using COCs due to the high levels of endogenous estrogen. Several studies have provided evidence that low dose progestin-only and combined hormonal methods may be less effective in obese women.<sup>2</sup> The

risk of pregnancy was found to be 60% higher in women with a BMI greater than 27.3, and 70% higher for women with a BMI greater than 32.2. Although this is an important counseling point, clinicians should remember that the efficacy of COCs remains higher than that of barrier methods for obese women and that weight loss and consistent contraceptive use should be emphasized.<sup>2</sup> A case control study could find no evidence that oral contraceptive use by young women, with insulin-dependent diabetes mellitus, increased the development of retinopathy or nephropathy.<sup>1</sup>

For women who experience estrogen-related side effects, or are at risk for serious complications attributed to estrogenic agents (i.e., blood clots), options may include: progestin-only injectable method (depo-medroxyprogesterone acetate-Depo Provera®), at ~ \$45 per three-month supply, or progesterone only oral contraceptive, at ~ \$25 per month.<sup>3,4</sup>

Other methods of hormonal birth control that can be offered to women with diabetes include the transdermal contraceptive patch, at ~ \$29 per month, and the vaginal contraceptive ring, at ~ \$28 per month. The transdermal patch is ~ 99% effective if used correctly. This involves applying a patch weekly for three weeks, followed by a patch-free week during which time a woman will menstruate. Clinical trials show decreased efficacy in women who weigh over 90 kg. The Evra® contraceptive patch is contraindicated in women with diabetes with vascular involvement.<sup>5</sup> The contraceptive ring (NuvaRing®)



is inserted into the vagina and worn for three consecutive weeks, and removed for one week to allow menstruation. Some women report that the ring may become dislodged during intercourse, and some women discontinue use of the ring due to a heavy vaginal discharge. The contraceptive ring is not recommended for women with retinopathy, vascular disease, or hypertension. Current low dose combination hormonal contraception, including the NuvaRing®, exerts minimal impact on glucose metabolism. Blood glucose levels should be monitored closely while using combination hormonal contraception.<sup>6</sup>

Intrauterine devices (IUD's), at ~ \$160, provide excellent long-acting pregnancy protection in women with diabetes. There is no association between the IUD and an increased risk of pelvic inflammatory disease in women with type 1 or type 2 diabetes.<sup>7,8,9</sup> The Mirena® intrauterine system, at ~ \$380, releases slow acting levonorgestrel (progesterone) into the uterus which prevents pregnancy for up to five years. Noncontraceptive benefits include a decrease in menstrual blood loss and relief of dysmenorrhea.<sup>10</sup>

Barrier methods, such as condoms used with a vaginal spermicide, are an excellent choice for many women with diabetes as they have fewer side effects than hormonal contraceptives. Condoms are readily available without a prescription and are 95% effective if used correctly.<sup>11</sup>

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Having a reliable method of birth control allows women with diabetes to plan a pregnancy at a time that is right for them. Women with diabetes who are ready to plan a pregnancy should talk to their health-care provider about preconception planning to ensure they are ready both physically and emotionally.

**Anne Quigley RN, BScN**  
**Cheryl Shipley RN, BScN**  
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## Practice Point

### ***Can you tell me a bit more about the Disability Tax Credit (DTC) for people with diabetes?***

The Canadian Diabetes Association provided the following information.

Since 2005, insulin is recognized in the Income Tax Act as a life-sustaining therapy. People with diabetes using insulin must meet the following criteria in order to be eligible for the DTC:

The individual MUST dedicate an average of at least 14 hours per week on the following activities related to administering insulin:

- Monitoring blood glucose
- Maintaining a log book of blood glucose readings
- Preparing and administering insulin
- Calibrating necessary equipment

(Note: counting carbohydrates or treating hypoglycemia or any other management activities cannot be included in the "at least" 14 hours per week calculation.)

A physician must certify on the T2201 Disability Tax Certificate (Life sustaining therapy section, page 7 of the T2201) that his or her patient indeed spends this amount of time on only these activities.

The Canada Revenue Agency (CRA) will process the T2201 for a child with type 1 diabetes, 15 years old and younger, without further question because of the amount of time the child's parent or guardian must also invest in these activities in addition to the child's time (i.e., CRA assumes that both child plus adult time meets 14 hours criteria).

When the CRA receives a certified T2201, for anyone >15 years. (i.e., physician has certified his or her patient

spends up to at least 14 hours per week on these activities), a follow-up letter will be sent to that physician requesting further detail about the patient's time spent on each of these activities. If the physician provides supporting information, the CRA may approve the application for the DTC.

For additional information, please contact joan.king@diabetes.ca with questions.

### ***Can I run a report from the DCPNS Registry that gives me the total number of clients in our Diabetes Centre who have had a Foot Assessment done within a specified period of time?***

Yes, this information can be generated through the DCPNS Clinical Indicator Report.

To generate this report simply:

- Select "FT-A" under "IOC Elements"
- Select "< less than" in the "Operator" drop down menu
- Select "9-Done" in the "Value" drop-down menu.

This report will include the most recent foot assessment for each client within the specified time period.

If you choose a category other than "9-Done", the number of foot assessments completed will be much lower than you expect as you will not have captured all of the clients who have received foot assessments.

By choosing other options from the "Value" menu, specific reports such as the number of clients entered as Low Risk, Moderate Risk, or High Risk for foot complications will be generated.

Call DCPNS for a step-by-step guide to running these Registry reports.

# Research to Practice

## Cognitive Function in Older Adults with Type 2 Diabetes

Older adults in Nova Scotia are developing type 2 diabetes and its comorbidities (CVD, decreased vision, decreased hearing, neuropathy) at very alarming rates. The effects of these medical conditions have a tremendous impact on one's ability to undertake essential skills to perform daily diabetes care activities. In the past, there had been much research investigating neuropsychological functions such as short-term memory, episodic memory, semantic memory, and visuospatial ability in relation to type 2 diabetes in older adults. The results of these studies showed many inconsistencies due to diversity in research methods, poorly defined health status of the study subjects, presence of dementia, and uncertainty over the role of diabetes in the progression from normal cognitive function to cognitive dysfunction and dementia.<sup>1</sup> This article reviews more recent, well-controlled population-based studies that reveal consistent, positive associations between cognitive dysfunction and type 2 diabetes, and the negative impact of these associations on diabetes self-management in older adults.

Hassing et al<sup>1</sup> examined neuropsychological test performance in a population-based sample of 274 older participants with type 2 diabetes and 238 participants without diabetes. The primary purpose of the study was to examine whether there was greater cognitive decline in elderly individuals with type 2 diabetes as compared to elderly individuals without diabetes. The second aim of the study was to examine potential effects of diabetes across cognitive domains. The study participants were 80-93 years of age and did

not have dementia. The participants were assessed on four occasions over a six-year period. The neuropsychological tests included the Mini Mental Status Examination (MMSE). This measures general cognitive functioning, and tests for measuring speed, visuospatial ability, short-term memory, semantic memory, and episodic memory. At baseline, there were no significant differences in the neuropsychological test performances between the groups. However, longitudinal analysis showed that diabetes was a significant predictor of accelerating decline in the MMSE and neuropsychological tests that measure episodic memory and speed. Also, diabetes was shown to be a significant risk factor for dementia.

In another study, 60 patients were followed in a geriatric diabetes clinic.<sup>2</sup> The study participants were over the age of 70 years and had type 2 diabetes. Data was collected to identify barriers to successful diabetes management including physical functional disability, cognitive dysfunction, and glycemic control. Participants with an established diagnosis of dementia, memory dysfunction, and severe visual impairment were excluded. The results showed that approximately 35% of study participants were below the mean scores for cognitive function. An inverse relationship was found between cognitive function tests and A1C level. There was a higher incidence of weight loss, hypoglycemic events, and difficulty performing cognitive function tests independently in patients with cognitive dysfunction. Thirty-five per cent (35%) of those who showed cognitive dysfunction lived alone, which placed this vulnerable group at higher risk for complications due to multiple barriers.<sup>2</sup>

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In both of these studies, cognitive and physical dysfunctions were prevalent in the presence of diabetes. Older individuals with diabetes and cognitive dysfunction are at high risk for inability to perform complicated diabetes care activities such as self-testing of blood glucose, multiple medication regimens, and multiple insulin injections. As well, physical dysfunctions reduce capacity and performance of activities of daily living. For example, appropriate meal planning and personal hygiene will be jeopardized. Individuals living alone may not have the benefit of interaction with others or being closely observed in daily activities.

More research is needed, with larger sample sizes, to determine the mechanisms involved in type 2 diabetes and their effects on neuropsychological functions. Diabetes educators must understand the impact of even subtle disruptions in memory and the ability to organize and plan, which may interfere with an older person's ability to perform self-care tasks and to cope with increasing complexities of diabetes treatments.

### Brenda Cook

Diabetes Consultant, DCPNS

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# Educator Sharing

*“When professionals teach, people learn; when lay leaders lead, people do.”*

## Implementing the Stanford Self-Management Program in Nova Scotia

Nova Scotia is planning for and promoting chronic disease management (CDM). As a result, a number of activities are underway including a more integrative focus across provincial programs, the continued development of an electronic health record, and a heightened emphasis on CDM by the DoH Primary Health Care and Acute and Tertiary Care areas. This includes a phased in implementation of the Stanford Self-Management Program.

CDM aims to improve functional, clinical, and health outcomes. This is accomplished through the creation of productive interactions and relationships between informed, activated patients and families, and prepared, proactive practice teams. The Stanford Chronic Disease Self-Management Program (CDSMP) is designed to do just that.

The CDSMP is a lay-led education program developed at Stanford University in California, US. Trained lay (also called peer) leaders, in teams of two, meet with groups of 10-12 persons with chronic diseases for 2-1/2 hours, once each week for six weeks. It is well recognized that although the physical impacts of chronic health conditions may be different, they often cause similar problems related to activities of daily living, interactions with the health care system, communication with family and friends, and dealing with negative

emotions such as fear, anxiety, and depression.

The CDSMP, teaches the following content:

- goal setting, action planning, and problem solving
- the benefits of physical activity and exercise programs and how to get started
- cognitive symptom management (coping skills, relaxation techniques, etc.)
- the benefits of nutrition and healthy eating
- breathing exercises
- communication skills (with family, friends, and health care providers)
- appropriate use of medication
- how to deal with the emotions of chronic illness (anger and depression).

The self-management program does not replace traditional patient education with the physician, nurse practitioner, or other health care professional; it is complementary to and reinforces disease-specific education. In the program, participants obtain new information, learn new skills and abilities, and develop new ways to manage and cope with chronic health conditions. Participants give and receive support from others who are experiencing similar health concerns. As well, they realize they are not alone and that the difficulties they are experiencing are normal.

Sessions are highly interactive, with an emphasis on those strategies designed

to help individuals manage more effectively. Content includes mastery of self-management skills (accomplished through weekly action planning and feedback), modelling (accomplished by lay leaders with chronic conditions), and group problem-solving strategies. The process of CDSMP is what is most important. The repetitive use of action plans and feedback, as well as group and individual problem-solving techniques assists the participant in learning to apply these tools to an array of situations that may arise as part of living with a chronic condition. The use of scripted materials and structured tools by the lay leaders is essential to ensure the integrity of the program.

This CDSMP has been shown to improve healthful behaviors, improve health status, and decrease days in hospital.

Currently a Stanford Self-Management Working Group in Nova Scotia is working to phase-in the CDSMP over a three-year period. Members of this working group include representatives from the health charities, Mental Health Services (DoH), Primary Health Care (DoH), District Health Authorities (DHAs), and Provincial Programs. Each DHA will identify its' time frame for implementation of the program based on its capacity, the support of local health care professionals, and the interest of the target populations.

To date, Nova Scotia has hosted three lay-leader training sessions with the help of Master Trainers from British Columbia. Approximately 65 people have been trained during these four full-day training programs. Most participants have been individuals living with chronic health conditions (chronic pain, respiratory illness, arthritis, heart problems, diabetes, depression and mental health issues

con't

etc.). The others have been health system or leadership (DHA and DoH) personnel wanting to better understand the CDSMP in their role as advocates and champions for change. Already, several DHAs are planning for the delivery of their first participant programs and others are working to inform health care providers and their partners on the importance of the CDSMP and what it will mean to an individual's health.

As diabetes educators and diabetes care providers, our role is two-fold:

- to champion the program and its approach as we recommend it to those individuals living with chronic illness as a means to enhanced self-care,
- to help identify potential peer-leaders.

We encourage you to connect with the Primary Care Manager/Coordinator in your District to learn more about local CDSM programs and the role you can play.

Stay tuned...

**Peggy Dunbar**  
Coordinator, DCPNS

## DCPNS Grant Funding (2007/08)

*Project Summary*

### Step Forward Hypertension Management Project

**Team Members:** Annapolis Community Health Center Diabetes Center (DC) staff, Nurse Practitioner from Family Practice, Physiotherapist, community Pharmacist, and Community Mental Health Worker.

The DCPNS statistical report from 2005-2006 observed that only 28% of reported blood pressures taken and recorded by DC staff were within the recommended target. In response to these statistics,

the DC staff initiated discussion with a multi-disciplinary group of health professionals to develop an education program to address the issue. The team quickly identified this as a worthwhile endeavor and applied for funding through the DCPNS Diabetes Centre Grants 07/08 for quality initiatives.

The team identified two major goals that they hoped to achieve. The first was to provide an education approach based on lifestyle modifications for selected participants. Participants were presented with a series of modules over a five-week period that included stress management, benefits of exercise, physiology of hypertension, healthy eating and lowering sodium intake, as well as medication management. Participants were issued blood pressure monitors, taught self-monitoring of blood pressure, and asked to check and record blood pressures daily. Data such as weight, BMI, waist circumference, BP, and lab values were collected and then repeated at the mid-point and at the end of the program. Participants were also asked to complete pre- and post program knowledge tests, and finally, a satisfaction survey. The second goal was to work together as a multidisciplinary team so that we could evaluate the efficacy of this type of educational approach to be used in ongoing programs and chronic disease management.

### Clinical Results

CLINICAL INDICATOR	PERCENTAGE SHOWING IMPROVEMENT
Knowledge of hypertension	80 %
Weight	80 %
BMI	80 %
Waist Circumference	100 %
Blood pressure	70 %
Triglycerides	40 %
HDL	20 %
A1C	20 % (80 % had A1C at target to start)

A total of 10 people participated start to finish. Eight of the 10 improved their blood pressure, and of these eight, three were at target at the end of the project. It was noted that all the positive changes in indicators resulted from lifestyle intervention alone. Triglyceride levels rose in several participants despite weight loss and a decrease in cholesterol levels. The team wondered if participants had been consuming more alcoholic beverages over the summer months.

The participants were surveyed at the end of the project and they reported that the group was both enjoyable and helpful. The members motivated each other towards changing lifestyle and behaviors. They also reported learning from each other. It was interesting to note that all participants were previous clients of the Diabetes Centre, but they had not been successful in making significant lifestyle changes to improve their health until they went through this program. The group also wanted more attention focused on goal setting skills. The multidisciplinary team decided to incorporate the PACE questionnaire to evaluate and discuss stages of change with future participants. The education regarding stress management was highlighted as being most beneficial by the group.

The multidisciplinary team met to evaluate team dynamics. The team decided to use email more often

correspond as a group and to book dates for presentations well in advance. In the future, the team will strive for more collaboration in program planning, as the process was somewhat hindered during the pilot due to time restrictions. The collaborative culture of the Community Health

Centre provided a strong foundation for the education program.

The multidisciplinary team enjoyed working together, and there was agreement that working collaboratively was both effective and satisfying because we were bringing a comprehensive, participative program to clients who were ready to learn and make changes. The team also learned much from each other, and bringing different perspectives to the planning table made for a better program.

The program was repeated in February and March 2008, implementing what we learned from the pilot project. The Diabetes Centre staff and colleagues feel we can sustain this program by offering it two to three times per year to people targeted with hypertension, but not necessarily clients of the Diabetes Centre. This education model can easily be adapted to other aspects of chronic disease management such as CHF, and dyslipidemia because of the common lifestyle interventions involved. The use of the small groups to leverage motivation to make healthy changes has been exciting, and will be a central theme in the planning of future programs.

For more information contact Terri Delisle or Nancy Price, Annapolis Community Health Centre, Diabetes Centre, 902.523.2113.

## Mark Your Calendars !

**Recreation Nova Scotia  
10th Anniversary Luncheon  
Pier 21, Halifax  
June 9th - 11:30-1:30**

**Topic:** Connecting with our Kids-Social Marketing and Youth

**Tickets:** \$45/person, \$450/Table of 10

**Contact:** Nicole MacDonald, 425.1128

nmacdonald@recreation.ns.ca or  
www.recreationns.ns.ca

# News From Around the Province

## New Faces

### *Welcome to:*

**Jada Patey, Pdt.** Jada joins the staff of the Eastern Memorial Hospital Diabetes Centre (Canso). **Lynn Thorne, RN.** Lynne joins the staff of the Strait-Richmond Hospital Diabetes Centre. **Brenda Sutherland, RN.** Brenda joins the staff of the Aberdeen Hospital Diabetes Centre. **Nancy Verge, RN.** Nancy joins the staffs of the Aberdeen Hospital and Sutherland Harris Memorial Diabetes Centres.

Please join us in acknowledging and thanking **Viviane Wright RN CDE**, Strait Richmond Hospital Diabetes Centre, for her commitment to diabetes care in Nova Scotia. Viviane retired in February and we wish her well in all future activities.

*Please remember if you have a change in any staff (professional or clerical) to let the DCPNS office know ASAP to ensure our contact list remains current. Thanks!*

## What's New at the Canadian Diabetes Association

### *Community Mobilization*

The Programs and Services Department has been supporting the communities we serve by expanding our capacity to deliver services that will assist people in adopting healthier lifestyles. Through regular presentations known as "Coffee with the Experts" the Association has hosted great sessions throughout the province. Recently Dr. Thomas Ransom presented to an enthusiastic group in Truro about the latest in diabetes research. Further plans include sessions in Digby, Yarmouth, and Amherst. Through this community mobilization strategy, the Canadian Diabetes Association strives to be a collaborative partner by supporting the development and implementation of community initiatives.

### *Summer Camp – Health Professionals Wanted!*

The camp healthcare team, an integral part of the camping experience, includes endocrinologists, dietitians, nurses, and physicians. These professionals interact with campers in a non-clinical setting while helping campers learn how to live well with diabetes. Summer camps provide children and youth with the opportunity to develop life long skills, make new friends, and become experts in self-managing their diabetes. Camp Lion Maxwell offers a traditional camping experience to children ages 7-12. Camp Morton, the only outdoor adventure style camping experience offered by the Canadian Diabetes Association in the country, is for youth ages 13 and 14.

The **Eastlink Leadership Training** program provides participants with the skills and knowledge required to work effectively with children in a camping environment and to be leaders in their communities.

*Dates:*

**Camp Lion Maxwell** – August 24th – August 29th, 2008

**Camp Morton** – July 15th – July 20th, 2008

For more information on our summer camping program call 453-4232 ext. 0, or 1-800-326-7712. Visit our website at [www.diabetes.ca](http://www.diabetes.ca).

**DIABETES**  
CARE PROGRAM  
OF NOVA SCOTIA

**Diabetes Care Program of Nova Scotia**

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