

Diabetes Care in Nova Scotia

a newsletter of the Diabetes Care Program of Nova Scotia

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State of the Art

Introducing the Nova Scotia Diabetes Assistance Program

We are very pleased to announce that the Nova Scotia Diabetes Assistance Program (NSDAP) is now operational. As of December 9, 2005, registration forms for this program have been widely available across Nova Scotia. The start date of the program is January 1, 2006.

This article is intended to provide an overview of the NSDAP as a supplement to information that can be found on the government of Nova Scotia website (www.gov.ns.ca/health/pharmacare). Additional information can also be found on page 12 of this newsletter.

Who is eligible?

The NSDAP is available to all Nova Scotians under the age of 65 who have a diagnosis of diabetes and do not have private drug insurance coverage for diabetes medications. The amount of financial assistance people receive will depend on their family size and annual family income.

What does the Diabetes Assistance Program cover?

The program helps enrollees pay for their insulin, oral antihyperglycemic medications, needles, syringes, lancets, and blood glucose test strips. The specific items that are covered by the NSDAP are listed in the

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Provincial Pharmacare Formulary under the Therapeutic Main Group A10 and in the Diabetic Supplies Benefit List. The Formulary is available in electronic format by clicking on "Nova Scotia Formulary" on the same website as the NSDAP (as above). Pharmacists can also provide additional information on the Formulary.

Items not covered by the NSDAP include blood glucose monitors, insulin pumps and pump supplies, and medications specific to other medical conditions such as hypertension, dyslipidemia, and cardiovascular disease.

Cost-sharing Details

Through the NSDAP, the Department of Health (DoH) is working to reduce inequities among Nova Scotians living with diabetes. A cost-sharing plan has been designed to make the program sustainable in the long-term and to provide the greatest amount of benefit to the people who need it the most. For these reasons, there are two aspects to the cost-sharing plan.

- The first is the co-payment. This requires that persons with diabetes be responsible for approximately 20% of the cost of covered items. Pharmacare reimburses these people for the remaining 80% of the cost of covered items. This helps to ensure the program's long-term sustainability.
- The second is the deductible. The deductible is calculated by Pharmacare for each family that enrolls in the NSDAP. The deductible is a percentage of the annual income of all earning

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family members, minus \$3,000 for one spouse and each dependent under the age of 18 within each family. This means that families that have lower income and greater family size receive greater benefits than those with higher incomes and smaller family size. A calculator on the DoH website (www.gov.ns.ca/health/pharmacare/dap/calculator.htm) allows individuals to determine the deductible that they will be required to pay before the 20% co-pay is applied.

The deductible must be paid in full before people start to receive the 80% reimbursement from Pharmacare. This means that some people (those with lower income and greater family size) may see benefits quickly after enrollment, and others may wait for some time before the co-payment plan provides them with financial assistance.

Collaboration of Government and Non-government Organizations

The DoH recognized the value of collaboration when planning the program. The DCPNS and the Canadian Diabetes Association were identified as valuable partners in the development of the NSDAP. Both organizations have provided a venue for the voices of persons with diabetes to be heard by the NSDAP planners. These two groups have also increased the exposure of the NSDAP to the people who most need to access it.

Investment in Chronic Disease Management

The NSDAP, in keeping with the provincial focus on chronic disease management, is aimed at lowering the incidence of serious complications arising from diabetes. To do this, the program provides two different kinds of benefits to assist Nova Scotians with diabetes in the management of their condition.

- *Financial benefits in the form of assistance with the cost of the diabetes medications and supplies.* These financial benefits will result in improved use of diabetes-specific medication. This alone, for some people, will improve short-term health and reduce the risk of long-term complications. The provision of glucose testing strips will promote and reinforce the value of this self-assessment tool in the daily management of diabetes.
- *Educational benefits in the form of a series of four patient-focused materials.* These materials are aimed at promoting and enhancing self-care and

healthy, active living. They are intended to reinforce key messages and promote actions that will assist with living well with diabetes.

Self-care Materials

The four self-care materials that accompany the NSDAP are unique to this province. When living with a chronic disease such as diabetes, individuals must take an active and informed role in its management. The materials promote these concepts. They have been developed with the assistance of an expert committee consisting of health care professionals and persons with diabetes. These materials have also been reviewed and revised based on comments and suggestions from others who have diabetes. They are not intended to replace information or interactions with health care professionals, but to reinforce key messages and introduce new concepts that will assist with daily management. Material topics include Healthy Living and Self-Care, Self-Monitoring of Blood Glucose, Making the Most of Your Medications, and Accessing Health and Community Supports.

Program Evaluation

The benefits of the NSDAP, in particular the self-care educational pieces and the degree of financial coverage, are considered to be very progressive. Nova Scotia is pleased to be taking the lead in these areas. The NSDAP has presented an opportunity to evaluate the effectiveness of introducing such a program. The DCPNS and DoH are working in partnership with Michael Vallis, PhD, to evaluate the program. It is hoped that our research findings will help to further enhance Nova Scotia's program and may be useful to other provinces and internationally. The evaluation of the NSDAP will look at the impact of the benefits on the self-reported health status of enrollees. Two separate telephone interviews will be held with consenting enrollees - once before they begin receiving benefits and then 12 months later.

In Conclusion

The NSDAP is a new and exciting program that is providing real benefits to Nova Scotians living with diabetes. What we learn as the program progresses will be of benefit to the greater health services community.*

Lisa Tay, Project Manager
Nova Scotia Diabetes Assistance Program

News From the Care Program

As I write this brief editorial, the sun is shining and it is minus 9 degrees Celsius. These are the last working days prior to the holidays for most of the DCPNS staff. As I reflect on the last year, to say we have been busy, would be an understatement. Like you, working in diabetes can take us in many directions with a minute's notice.

I would like to take this opportunity to acknowledge the efforts of all DCPNS staff, students, and volunteers for the work they do to ensure projects are completed and deadlines are met.

We have worked hard to produce key reports and documents to assist the Diabetes Centres (DCs) and the District Health Authorities (DHAs) in better understanding diabetes within their local context. We continue to develop and enhance DCPNS Registry features, including reports that allow better on-site use of the data. We have devoted additional resources to exploring the development of a Nova Scotia Diabetes Dataset and to also better understand the issues that contribute to foot problems in Nova Scotia's diabetes population. In addition, our subcommittees are addressing areas of key interest for special populations. We could not do all of this without the many people who support this Program—our committee/working group members, DCPNS Board members, Medical Advisors, DC staff, and people with diabetes. To all who lend their expertise to the work we do, thank you! We wish you all a healthy, happy, and prosperous New Year.

In this issue of the newsletter, we are pleased to include information from the two Nova Scotia projects that was presented at the *Calgary Global Conference on Chronic Disease Management in September 2005*—“Managing Stroke in a Rural Area” and “Following Through with the PACE Program, Colchester East Hants Health Authority Primary Health Care Diabetes Initiative.” These two projects profile the value of community partnerships and demonstrate, in practical ways, what chronic disease management is all about.

Subcommittees

Care of the Elderly with Diabetes Residing in Long-Term Care Facilities:

This committee will pull together early in the New Year to continue their very important work. Draft sections are complete and will be formatted for discussion and then reviewed by outside individuals/organizations.



Best Practice Committee:

The second draft of *Guidelines for Dyslipidemia Management* was reviewed with the Best Practice Committee members during its November meeting. Committee members are continuing discussion on three key areas at the DHA level to determine how to proceed in these areas. The dyslipidemia patient education module is entering its pilot phase with the help of the QEII Diabetes Management Centre.

Pregnancy and Diabetes Subcommittee:

Three revised sections of the manual will be posted on the DCPNS website in January.

Nova Scotia Diabetes Assistance Program (NSDAP) for Uninsured Nova Scotians with Diabetes

Please see the articles by Lisa Tay, Project Manager, on pages 1 and 12. With registration forms available through physician offices, DCs, pharmacies, and the Canadian Diabetes Association as of December 9, 2005, the program is now well under way. The DCPNS is pleased to be taking the lead in the development and evaluation of the self-care materials that will be provided to all program participants.

Privacy Policy and Related Materials

The Department of Health (DoH) continues to work very closely with the Provincial Programs to develop program-specific privacy policies. The DCPNS Privacy Policy will be placed on the DCPNS website early in the New Year. The privacy brochure has been finalized and is being reviewed by Communications Nova Scotia. This will also be placed on the website of each provincial program. All DC staff will be provided with a copy of the brochure for information purposes.

Canadian Diabetes Association (CDA) Diabetes Report 2005

The CDA Report was launched December 7, 2005. This report was accompanied by a special Nova Scotia supplement that profiled the Nova Scotia Diabetes Assistance Program (NSDAP) and Nova Scotia's “legacy in innovation” as led by the province's DCPNS. Provincial and Territorial best practices related to diabetes strategies, programs, and services are highlighted under each of the seven recommendations as identified in the first 2001 report. Nova Scotia, through the work of the DCPNS, was highlighted with best practice features in six of the recommended areas.

Nova Scotia should be proud of its efforts focused on diabetes. Work will continue to address the needs of individuals living with or at risk of developing diabetes through the NSDAP, the DCPNS, and Health Promotion Nova Scotia.

Diabetes Report 2005, in its entirety, can be accessed from the CDA website (www.diabetes.ca/section_advocacy/index.asp).

Delegated Medical Function (Insulin Dose Adjustment)

The revision of this document is now complete. Although the algorithms did not change, the guidelines now reflect more current references. Copies of the revised manual will be made available to all DCs early in 2006.

Diabetes Foot Care

Our writer has completed the first draft of this report for the DCPNS. This report, along with identification of issues and potential solutions, will include the most recent lower extremity amputation data (including 2004).

Wait Lists and Triage

The report, prepared with findings from the impact assessment, will be further refined to include a better description of the current gap in services by District. We will be using responses from the Diabetes Centre Practices Questionnaire that was distributed this past summer (2005) to help complete this piece. We may need to speak to a few DCs to ascertain complete data. The good news is that a number of DCs have already made a concerted effort to ensure all newly diagnosed cases meet the initial referral criteria.

Barriers to Blood Pressure Management (Qualitative Research with Peter Twohig)

The advisory group for this research project met in November for an update on the progress to date. Work is complete in 3 of the 4 proposed community sites with the 4th community to be approached in January 2006. We expect some preliminary results later this spring.

DCPNS Registry Enhancements

Internal (DCPNS) testing of the newest version of the Registry continues with work focused on reports. DCPNS IT staff have been working directly with Meditech personnel at the DoH. This has resulted in very favorable results with regards to interface possibilities between the DCPNS Registry and this provincial system.

A quality indicator report for use in DCs has been drafted and was pilot tested at 3 DC sites during

November. We plan to have this report available for use by all Registry users in the coming months.

The website now hosts the most recent DC data (2004/05), incident data for children and youth under the age of 19 years, and the DCPNS annual report.

Creatinine Clearance Algorithm for Interpretation and Action (estimated using the Cockcroft-Gault Formula)

This tool, developed in conjunction with Dr. Steven Soroka, Nephrologist, was released province-wide early in November. Feedback has been extremely positive. Extra copies of the algorithm and the FAQ sheet are available from the DCPNS for DCs to share with referring physicians. A PDF version of the algorithm and the FAQ sheet are available on the DCPNS website.

Forms Revision and Printing

The DCPNS will be "blitzing" the revision of some outstanding forms during January and February 2006. DCs are asked to forward any suggestions as early in the New Year as possible. Any individuals/DCs interested in reviewing the revised forms are asked to contact the office.

NDSS District/Provincial Reports

The second annual NDSS reports for each of the 9 Districts and the DoH were released in late November. This was a HUGE project, but we are very pleased with the results. This year's report includes an executive summary for the province as well as individualized executive summaries for each of the 9 DHAs, a table that allows comparison by DHA on each of the 18 report indicators, a conclusion, and new prevalence data by gender and age group. The DCPNS will follow these reports with focused presentations to the Districts that will allow a review and discussion of local data.

DCPNS Spring 2006 Workshop (Partnership with CDA)

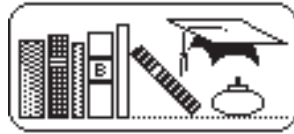
The DCPNS, in partnership with Cardiovascular Health Nova Scotia, will plan and deliver a one-day self-management workshop on April 20, 2006. This workshop will be grounded in the chronic care model with a focus on this key component—self-care. Our guest speakers will include Dr. Patrick McGowan from Victoria, BC. This one-day workshop will precede the DCPNS provincial workshop to be held on the evening of April 20th and until 3:00 p.m. on the 21st. Mark your calendars!

The DCPNS has been working with CDA as they plan for the CDA Expo (April 29, 2006). This will be a

fabulous event for people with diabetes. The program has been designed to meet individual needs.*

Peggy Dunbar
Coordinator, DCPNS

New Resources



These resources are available from the DCPNS for loan across Nova Scotia. Please call (902) 473-3219 for borrowing information.

Books

- *A Step-by-Step Guide for Quality Improvement in Diabetes Education* (2005).
- *Dietary Reference Intakes for Energy, Carbohydrate, Fiber, Fat, Fatty Acids, Cholesterol, Protein, and Amino Acids* (2005).

Multimedia

- *Roadmaps for Clinical Practice - Assessment and Management of Adult Obesity: A Primer for Physicians* (2003).
- *Highlights from the American Diabetes Association's 64th Scientific Sessions* (2004).
- *Live Long and Prosper: Improving Diabetes Management in Long-Term Care* (2004).
- *Diabetes and Feet* (CDA Conference - 2005).
- *Why Do Patients Resist Taking Insulin* (CDA Conference - 2005).
- *Insulin Pump Therapy in Adults* (CDA Conference - 2005).
- *Early Use of Insulin in Type 2 Diabetes* (CDA Conference - 2005).
- *Treatment of First Nations People* (CDA Conference - 2005).*

Recognize the Signs of Stroke When You See Them!

The Heart and Stroke Foundation has developed stroke awareness resource kits that contain helpful resources and information to increase Nova Scotians' awareness of the warning signs of stroke. To obtain a free kit, call 1-800-423-4432 or (902) 423-7530.

Pregnancy Focus



GDM NEWS!

As a Diabetes Nurse Educator working at the IWK Health Centre Pregnancy and Diabetes Program, I was fortunate to attend the 5th International Workshop Conference on Gestational Diabetes (GDM) held this past November (2005) in Chicago. This series of workshops started in 1979 as a means of bringing together a truly international group of health care professionals with an interest in GDM. These meetings have provided a forum to present current knowledge on the subject of GDM and to then make recommendations. Previous conferences in this series have given us a definition for GDM, screening targets and procedures, and management guidelines. They have also identified and stressed the need for further, focused research.

The last conference (1997) was the springboard for an international study called "Hyperglycemia Affects on Pregnancy Outcomes (HAPO)." This study includes a total of 25,000 participants and is challenged to determine the target glycemic values that will reduce the risks common to pregnancies complicated by GDM. This study will complete recruitment in 2006. There was a lot of excited anticipation about this study during the meetings in Chicago; however, its ongoing status limited the ability to discuss and make recommendations from its findings. It is hoped that the results of the study will be available in 2007.

After the presentations at the conference, the "work" began. Participants joined 1 of 4 discussion groups, depending on their interest. I joined the management group. The discussion groups then developed recommendations from the information that was presented. Until the full recommendations from these four groups are published, this article will provide an overview of what was discussed regarding the management of GDM. Remember, this is just an overview and not intended to influence your practice.

Blood Glucose Targets:

Evidence from the non-diabetes population suggests that the present glucose target values for women with GDM are set too high. Studies showed the peak postprandial glucose to be 70-90 minutes after the beginning of the meal. Future consideration may be given to how long it takes to eat the meal, and then to recommend a delay in the postprandial testing

accordingly. Some programs, including the IWK, time this test 60 minutes from the end of the meal and will continue this practice as it appears to cover the range indicated above.

Nutritional Management:

Diet management did not appear to change significantly.

- The practice of reducing the carbohydrate intake at breakfast may appear to be beneficial.
- Healthy food choices with a reduction in saturated fat should be encouraged.
- Individual response to specific foods may help to further refine the meal plan.
- Carbohydrate counting may be useful but was not felt to be necessary for all women with GDM.
- Appropriate weight gain should be guided using the BMI weight grids.

Activity:

Unfortunately, there was no new information on activity recommendations specific to the GDM population.

Blood Glucose Monitoring:

We may see stronger statements regarding blood glucose monitoring in the population managed with diet and exercise.

- There was agreement that home glucose monitoring should continue on a regular basis throughout GDM pregnancies, but the frequency was not specified.
- We were reminded that the results of monitoring and other indicators have two purposes - to prevent large-for-gestational-age infants and to prevent infants from being small for gestational age.
- Alternate site testing with meters should be limited to pre-meal tests due to the lag time between capillary finger test results and interstitial fluid results.

Birth Weight:

Some of the evidence presented indicated that the birth weight of a woman's first child is frequently a reflection of the mother's own birth weight. This may be a useful question to add to the list of criteria for identifying women at low risk for GDM. An increased birth weight in the mother would be an indication to screen her for GDM.

Fetal Measurements:

Measuring fetal abdominal circumference by ultrasound (especially between 29-33 weeks gestation) may be a useful tool in determining the need for insulin therapy. An increased abdominal circumference could be an indication for adding insulin to the woman's management to prevent macrosomia. No specific measurement was discussed, but this may be made clearer in the published document.

Oral Antihyperglycemic Agents:

Glyburide. I would have to say that the hottest topic at the conference was around the use of glyburide in managing GDM. The Langer study (2000) was presented as level "A" evidence for using glyburide as an option to insulin.¹ Many felt that the power of that study was not high enough to make this a recommended statement. A show of participant hands indicated that approximately 35% of the 200 or so in the management group were against making this a recommended treatment option. Limited experience with glyburide in GDM outside the USA was felt to contribute to this discrepancy. Concern was also raised about patients being placed on glyburide by physicians who may not monitor these pregnant women any differently than their non-pregnant type 2 population. Other concerns raised were about its benefit in the obese population and/or those with significant hyperglycemia. Insulin was stated to be the gold standard of treatment.

Metformin. There was no clear evidence presented to support the use of metformin in pregnancy. This drug is known to cross the placenta. It is being used for the treatment of polycystic ovarian syndrome and often results in pregnancy in this population. The use of metformin in pregnancy is being studied in Australia with a trial that should finish recruitment in 2007.

Extended Long-Acting Insulin Analogues:

There have only been a few published cases of glargine use in pregnancy. It is currently not recommended for use in pregnancy. NPH, Humulin N, Novorapid, and Humalog are the most commonly used insulins for GDM at this time.

Obstetrical Management:

Recommendations will most likely include the use of fetal surveillance with fetal movement monitoring and biophysical profiles for women treated with insulin or glyburide. It was recognized that there is a problem in estimating fetal weights. As a result, it may be recommended that an ultrasound be done prior to a planned vaginal delivery. Increased Caesarean section

rates in the GDM population garnered little discussion as there is a concomitant increase in elective Caesarean sections in the non-diabetes population.

Publication of the recommendations from this 5th International Conference is anticipated by the summer of 2006. I would recommend that you wait for these published recommendations before modifying your practice. My observations should be considered just that, and possibly interesting points for internal discussion.*

Lois Ferguson, RN CDE
Pregnancy and Diabetes Program
IWK Health Centre

Reference:

1. Langer O, Conway DL, Berkus BD, Xenikas EM-J, Gonzales O. A comparison of glyburide and insulin in gestational diabetes mellitus. *N Engl J Med.* 2000;343:1134-1138.

Diabetes Family Night!

The IWK Children and Adolescents with Diabetes Program is offering a Diabetes Family Night. This session will provide the opportunity to meet other families living with diabetes, learn coping strategies, and learn what's new in diabetes. There will be special interactive sessions for children & teens. The guest speaker will be Chris Jarvis.



When: January 19, 2006
Where: IWK – Parker Reception Room
Time: 4:00 to 7:30 p.m.

Sessions: 4:00 to 4:15 (Registration)

4:30 to 5:30 p.m. (Separate group sessions for children, teens, and parents/caregivers)

5:30 to 6:15 p.m. (Supper to be provided - bring own insulin, meters, and log books)

6:30 to 7:30 p.m. (Guest speaker Chris Jarvis)

You must register for this session. Contact the IWK Children and Adolescents with Diabetes Program at (902) 470-8340.

Research to Practice

HYPERTENSION TIDBITS

In February 2005, the DCPNS released *Guidelines for Blood Pressure Monitoring and Education through Nova Scotia Diabetes Centres*. These guidelines included the Diabetes Centre (DC) Action Algorithm for Hypertension. The algorithm describes what should occur if a patient's/client's blood pressure (BP) falls into one of three categories, including > 180/110 without symptoms. The DCPNS Guidelines recommend that the results be phoned or faxed to the family physician for measurements that fall within this category. This is not an incorrect approach; but of greater concern, are the educator's response and how the patient is informed about this value and the necessary next steps.

While there is clear evidence in the literature to support immediate assessment of a patient/client with a BP > 180/110 **with symptoms**, there is some controversy over how to proceed with a patient whose BP is >180/110 **in the absence of symptoms**.

Why all the disagreement? There is ample evidence to suggest that **chronic hypertension** does dramatically increase the risk of vascular complications over time. The evidence that **acute hypertension** carries the same risk is lacking. In fact, in the Veterans Cooperative Study, patients/clients with diastolic BP from 115-129 were randomized to placebo vs. treatment for three months.¹ There were no adverse outcomes in either group. Some would suggest that the terminology "hypertensive urgency" be changed to "severe uncontrolled hypertension."² This change in terminology emphasizes the need for further follow-up and assessment but de-emphasizes the need for urgent action/intervention.

How is that possible? Human physiology has a tremendous capacity to cope over a range of BP. The autoregulation of the cerebral blood flow can be used as an example of this. The cerebral blood flow is maintained at a constant level over mean arterial pressures from 60-150 in a normotensive individual. (Mean Arterial Pressure [MAP] = SBP + 2(DBP)/3). In a hypertensive individual, this curve is shifted to the left allowing for maintenance of blood flow over an even higher range of mean arterial pressures. As an example, in a patient whose BP is 180/120, the MAP is 140 and the cerebral blood flow is the same as someone whose BP is 120/80.

So, what to do? It is critical to arrange for follow up and assessment for any patient whose BP is > 180/110; however, immediate /urgent treatment (within 24 hours) is not necessary. In fact, a single reading of this magnitude in a patient not known to be hypertensive is not sufficient to diagnose hypertension. The Canadian Hypertension Education Program (CHEP) has developed guidelines for management of hypertension including diagnosis and assessment of hypertension.³ Patients who have a single elevated reading of >180/110 are to be assessed in the office (a one week time frame is sufficient).³ The patient then requires routine bloodwork and should be reassessed within a month. If at the next visit the BP continues to be >180/110, the diagnosis of hypertension is made. If the BP is 140-179/90-109, three additional assessments over a maximum of 6 months may be required to confirm the diagnosis of hypertension.³

The CHEP guidelines do make an exception to this approach which is important for all who care for patients with diabetes. If the patient has diabetes, chronic kidney disease, evidence of vascular disease, or end organ damage, the diagnosis of hypertension is made at the second hypertension visit in the office; and treatment is initiated. In this group of patients, the diagnosis of hypertension is made over a period of 4-6 weeks as opposed to 6 months in a patient without associated risk factors. This approach recognizes the dramatic increase in risk for vascular disease in this group of patients.

What is the take home message? It is essential for DCs to monitor BP and to ensure appropriate follow up for patients with hypertensive BP readings with his/her family doctor. Assessment, diagnosis, and management are the physician's responsibility. In cases where the BP is > 180/110, phoning or faxing of results is still appropriate; but there is no need to alarm the patient. A simple message such as "the doctor will most likely see you within the week" would be appropriate. In these cases, follow up should be within weeks, as opposed to hours. Hypertensive emergencies (< 1% of all cases of hypertension) must have immediate assessment as per the DCPNS guidelines. Severe uncontrolled hypertension **must** be assessed by the family doctor in a timely fashion to ensure appropriate diagnosis and treatment.*

Lynne Harrigan, MD FRCPC
DCPNS Medical Advisor

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diastolic blood pressures averaging 115 through 129 mmHg. *JAMA*. 1967;200:1028-1034.

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GROUP EDUCATION IN DIABETES CARE



Group diabetes education has been a valuable service since the early 1960's. Initially it was offered as an inpatient service, but its popularity and efficiency resulted in the service being offered on an outpatient basis. Since that time, group education has evolved from a didactic lecture style class setting to a more dynamic, interactive group learning session. The person with diabetes and their supports (family, friends, and others in their social network) are actively engaged in sharing their experiences managing their diabetes and learning from each other as well as from a team of health care professionals. Active group teaching involves a major shift in the delivery of information and skills required to manage diabetes. Health care professionals must strengthen and expand their capacity to be group leaders. This article explores group education research, dynamics of group learning, and strengths and weaknesses of group learning.

Although the literature contains many studies and meta-analyses on the effectiveness of self-management education, the effectiveness of group versus individual education is more difficult to address.¹ In many studies, there is little information describing the educational interventions being evaluated, so it is difficult to determine which intervention characteristics contributed to the outcomes. Studies often examine different outcomes such as patient-centered values for individual programs and cost or utilization for group programs; thus making comparisons difficult. The degree of individual active participation also varies in the group interventions. Some group interventions may involve passive participation such as a lecture-style presentation. While other group programs actively engage the participants in the learning process to develop collaborative relationships among the group members and the group leader(s).¹ Norris et al¹ concluded that the literature in diabetes education is divided when it comes

to the value of group education versus individual education. Most studies have demonstrated that group programs are more positive in the short term (< 6 months) than individual approaches for glycemic control, weight, and lipids. As well, group education interventions may be encouraged because of their efficiencies.

Both diabetes educators as well as people with diabetes and their support systems are constantly challenged in the process of diabetes self-management education. New educational approaches, new technology, new and complex treatment regimens, and financial constraints impose many challenges. As more Diabetes Centres are leaning towards group education sessions in order to improve operational efficiencies, diabetes educators are faced with the challenges of learning or expanding group facilitation skills. People with diabetes have additional challenges with their own adjustment and comfort in participating in groups.²

Groups are a natural phenomenon of daily living such as family life, work setting, recreation, and volunteer work. The advantages of group learning include:

- Mutual support offered by group members.
- Learning from experiences and insights of others.
- Decreased sense of isolation.

Disadvantages of group learning include:

- Confidentiality may be compromised. It is important for the group leader to maintain participant confidentiality, but it is reasonable for the participants to share their own personal information if desired.
- Participants may feel that they get less exclusive time and attention to discuss their own uniqueness, but this perception may be overcome in an individual assessment appointment pre or post group instruction with the diabetes educators.

In general, most participants can work well in a group. It is important for the diabetes educator to create effective learning group processes.³

When leading a group, the diabetes educator becomes a facilitator or leader of a learning process. Instead of emphasizing how knowledge and skills are transmitted to the learner (content), the emphasis is placed on how the knowledge and skills are acquired by the learner (process). Some steps to create the learning process include:^{2,3}

1. **Preparation:** Provide a suitable physical environment (comfortable seating, room arrangement, and temperature and adequate lighting). Provide adequate time to allow for individual introductions and identification of learning needs. Choose from a variety of delivery options including short lectures,

group discussions, share experiences, questions and answers, videos and visual tools, role playing, demonstrations, small group activities, age-specific games, problem-solving strategies, and behavior change plan development. Encourage group interaction and collaboration among participants and with the facilitator.

2. **Basic Ground Rules:** Start and end the sessions on time; review with the participants the importance of respect for each others' opportunities to share experiences, and to offer their insight and perspectives on living with diabetes.
3. **Evaluation:** Invite feedback to the sessions from the participants in order to continually improve the learning process. Review the educational design with other colleagues, internal and external, who have experience with group leadership, in order to learn innovative and empowering education delivery methods.
4. **Documentation:** Allow appropriate and timely documentation which includes the behavior change plan to be reviewed in follow-up sessions with the diabetes care team. The team will assess progress in achieving goals and make changes in the plan, if necessary.

Educational interventions are now moving towards a collaborative approach in which participants are actively engaged in the learning process. Group education offers diabetes educators opportunities to develop and advance their skills in many creative instructional strategies and delivery methods. "Education in the group setting is more about the group process of engaging and empowering learners to determine their own behavior change."² More research is required to determine if group education can achieve sustained positive outcomes in the long term, characteristics of group education methods that contribute to positive outcomes, optimal group size and efficient use of staff and resources, and cost effectiveness.*

Brenda Cook
Diabetes Consultant, DCPNS

References:

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DIABETES CENTRE (DC) PRACTICES QUESTIONNAIRE (2005)

As with any surveys that are done by mail/fax, we had some difficulty getting the responses to this questionnaire returned for compilation purposes. Because of this delay in compiling (the questionnaire was to be completed and returned by July 1, 2005), we are less confident that the data, in some areas, is as current as it should be. We also know that due to the length of the questionnaire and differences in interpretation for some questions, some data is incomplete or missing for a few DCs. For the areas that are currently of greatest interest, we will be following up with a phone interview to ensure our information is accurate. To November, a total of 36 of 39 DCs responded; however, there was missing information for some programs on specific questions.

For the purposes of this article, we will highlight the findings as they relate to the newly released DCPNS Hypertension Guidelines (February 2005).



We reported this data in a poster presentation at the CDA national conference and meetings in Edmonton, 2005). We excluded data from the specialty pediatric and pregnancy diabetes programs for this analysis (respondents for this question, 34).

- 31 (91.2%) DCs measure BP according to the new DCPNS guidelines.
- 32 (94.1%) DCs report BP according to the new DCPNS guidelines.
- 22 (64.7%) DCs are using or plan to use the *DCPNS Managing Hypertension Patient Education Module* in the next 6 months.
- 8 (23.5%) DCs are currently using an electronic BP monitor.
- 15 (44.1%) DCs report that the DCPNS guidelines have resulted in a change in practice.

Some DCs provided additional comments on how the guidelines helped to change their practice:

- Purchased electronic monitor.
- Increased focus on teaching the importance of BP control; ensure that everyone has his or her BP measured.
- More time educating clients re: strategies to decrease BP, targets, goals, etc.
- More attention to positioning of the patient and the cuff.

- Planning program changes for the fall of 2005.
- Everyone is now aware of the targets; patients encouraged to take ownership of their BP; clearer guidelines on when to intervene.
- Developed poster board displays on hypertension, and address the DASH diet with every initial assessment.

The DCPNS Best Practice Committee will continue to discuss these guidelines and ways we can assist individual DCs in their adoption/implementation. We will encourage adoption of the hypertension education module and eventual use of electronic BP monitors. Management of BP continues to be of great interest to the DCPNS.*

Peggy Dunbar
Coordinator, DCPNS

Educator Sharing

In the October issue of the DCPNS newsletter, we highlighted the *Calgary Global Conference on Chronic Disease Management* and the fact that two Nova Scotia Projects were part of the program. The work of these two projects was profiled within the context of chronic disease management. We are pleased to have their submissions for this issue of the newsletter.

MANAGING STROKE IN A RURAL AREA

The Yarmouth Stroke Project is a CIHR-funded research and development project concerned with how to improve services for individuals living with stroke in rural areas. As part of that work, we interviewed 70 individuals with stroke and 40 caregivers (there were some individuals who did not have a caregiver). At the *Calgary Global Conference on Chronic Disease Management* in September 2005, our presentation looked at the role of caregivers in stroke management.

We found important differences between those who had a caregiver and those who did not. Surprisingly, we found no overall differences in self-reported effect of stroke on daily activities between these two groups using a standard measure of functional impairment. However, we did find significant differences in particular aspects of coping with stroke:

- Those without a caregiver were less hopeful for the future.

- Those without a caregiver identified more day-to-day health problems (lack of sleep, weight changes).
- Those without a caregiver said they had more difficulties meeting day-to-day needs such as meal preparation and shopping.

Among caregivers, we found that the greatest difficulty they said they faced was not lack of time, but lack of information. They were concerned, as were those with stroke, about what they needed to do to prevent further strokes; but they lacked an understanding of how strokes occurred. Certainly, many of the caregivers found coping with stroke physically challenging. Two thirds of the people with stroke we interviewed were over 65 and 1/3 over 75. Even male caregivers (50% of those with stroke were female) at that age had difficulty managing transfers and other physical aspects of care.

The Yarmouth Stroke Project worked with the community to develop a number of new services to meet these self-management needs.

- Working with those living with stroke and a local service club, the Project nurtured a biweekly stroke club. This club provides information and respite for persons with stroke and their caregivers. The Club has prospered and is currently working to foster additional clubs in the area.
- The Project developed a Resource Guide for the Tri-Counties (Digby, Yarmouth, Shelburne) that organizes information about community services and resources useful for those living with stroke.
- In cooperation with the Tri-County VON, the Project developed an In-Home Stroke Support Program which trained volunteers to provide information and social support for caregivers (some of whom took the training themselves) and persons with stroke.

As the Yarmouth Stroke Project nears the end of its five-year mandate, we are excited that the South West Nova District Health Authority has become the site for the first provincially funded integrated stroke program. This follows from the Nova Scotia Integrated Stroke Strategy developed by the Heart and Stroke Foundation of Nova Scotia.

For more information, please contact Stan Jones via e-mail stroke2@swndha.nshealth.ca.*

Stan Jones
Yarmouth Stroke Project - Yarmouth, NS

**FOLLOWING THROUGH WITH THE
PACE PROGRAM
COLCHESTER EAST HANTS HEALTH AUTHORITY
PRIMARY HEALTH CARE
DIABETES INITIATIVE**

Chronic Disease has been identified as a focal area for primary health renewal in Colchester East Hants Health Authority (CEHHA). The district is developing a strategy that involves an integrated approach to chronic disease management and prevention that will support providers to work collaboratively along the continuum of care to effectively serve our population.

In keeping with the long-term vision for primary health care renewal, CEHHA is taking incremental steps in implementing the strategy. The Diabetes Centre (DC) located at the Colchester Regional Hospital is recognized as a well-established model and served as a logical starting point for the advancement of the integrated chronic disease strategy.

An initiative was developed involving the implementation of a physical activity counseling program. The program was integrated into the existing DC. It was based on the Physician-based Assessment and Counseling for Exercise (PACE) Program. The DC's registered nurse or clinical dietitian assesses patient activity levels and stages of readiness. Counseling is provided on new recommended levels of activity. The patient is then referred to a public health educator who provides phone follow up to support the patient in accessing community-based physical and recreational activities. The DC staff conduct follow-up assessments and provide ongoing counseling to support continued physical activity as outlined in the PACE program.

The initiative is comprised of the following components:

- **Role Definition:** Clear statement of responsibilities for registered nurse and dietitian, family physician, Public Health health educator, and the patient.
- **Referral Process:** Referral list, progress recording forms, patient consent, and physician approval.
- **Staff Training:** In-services for DC staff on the purpose of PACE, specific application procedures, and processes for monitoring and evaluation.
- **Physician Communication:**
 - a) General communication regarding implementation and purpose of the program and relevant procedures.

b) Ongoing communication with the family physician regarding patient participation in the program.

- **Recording:** Use of Diabetes Care Program of Nova Scotia (DCPNS) flow sheets for collecting information from the PACE materials and other relevant data.
- **Monitoring and evaluation:** Definition of indicators for evaluating patient-specific results and the overall program success. Definition of data elements required for retrieval from the DCPNS registry.

The initiative is still in the implementation phase; however, early anecdotal evidence indicates great satisfaction with DC staff and patients. The first series of data will be available in January 2006. Some of the anticipated outcomes for the initiative include:

- Staff is properly informed to assess the need for physical activity.
- Patients make an effort to increase activity or to acquire resources to help them.
- Patients access community resources and increase or maintain activity levels.
- Patients demonstrate individual success in increasing or maintaining activity.
- Success of PACE program is demonstrated.

Once the data is reviewed, the project team will begin planning the next phase of the initiative.

This initiative was presented at the Global Perspectives on Chronic Disease Management Conference in September 2005. For further information, you may contact Tracey Martin, Manager Primary Health Care, at tracey.martin@cehha.nshealth.ca.*

Tracey Martin
Manager, Primary Health Care
Colchester East Hants Health Authority



STRAIGHT TALK ON THE DIABETES ASSISTANCE PROGRAM

By now, most have heard all about the Nova Scotia Diabetes Assistance Program (NSDAP). This new Pharmacare program is designed to assist uninsured Nova Scotians with the cost of diabetes medications and supplies. Information on program eligibility and registration can be obtained by calling Pharmacare at 429-6565 (Metro Halifax) or 1-800-305-5026 (toll free).

The NSDAP web page on the Pharmacare website (www.gov.ns.ca/health/pharmacare) also provides detailed information.

This article is intended to address two key areas that people have expressed concern with since the release of the NSDAP. Remember that this is a new program, and like all new programs it may not be perfect, and it will experience growing pains.

There are many positive features to the NSDAP. When originally designed, it was only going to help people with the cost of blood glucose testing strips. Early in 2005, the Minister of Health and the program planners decided to expand the program to include financial assistance for all diabetes-specific items as found on the Nova Scotia Pharmacare Formulary. (The Formulary is available online at the Pharmacare website provided above). The program was expanded with the expressed intention of providing more help, and better help, to Nova Scotians living with diabetes.

Now that the program is operational, some problems earlier anticipated by the planners are now in the public domain. People have pointed out that in order for the program to be most helpful, it needs to be automated. This means rather than collecting and submitting receipts for reimbursement (as is the situation now), people would be automatically entered into the system, their costs tracked, and the co-pay paid on receipt of items at the pharmacy. With an automated program, people would have a special card that identifies them as being registered in the program regardless of where they access their supplies.

Because computers are everywhere, one would think it would be easy to set up an automated system for the NSDAP. However, this is not the case. In fact, there are literally teams of people working on this issue as we speak.

Waiting for the NSDAP to be automated before rolling it out would have resulted in a far greater delay. The exact time needed to implement a fully automated system for the NSDAP is not known at present.

Although not automated, the good news is we have a program! Having people pay upfront and wait for reimbursement is less than ideal. However, it is important to remember that those people who can least afford to pay upfront (with an income of less than \$15,000 per year) will pay little to no deductible

and their co-pay will be significantly less than they paid previously for supplies.

The second issue relates to the inability of the NSDAP to cover insulin pumps and pump supplies. As these items are not currently on the Pharmacare Formulary, they are not part of the NSDAP. In the future, if these items are added to the formulary, they will then become part of the NSDAP.

If you have specific questions, observations, or good news stories, please feel free to contact me by phone, mail, or email.*

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Nova Scotia Diabetes Assistance Program
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New Faces

Welcome to:

- **Ann Lohnes, PDt.** Ann joins the staff of the Valley Regional Hospital Diabetes Centre on a permanent part-time basis.
- **Janet Lowe, RN.** Janet joins the staff at Hants Community Hospital DC.
- Best wishes to **Barb Fraser, PDt,** Aberdeen Hospital Diabetes Centre on her retirement at the end of January 2006. All the best, Barb!

**Canadian Diabetes Association (CDA)
Nova Scotia Division News**

Diabetes Month:

In November 2005, the CDA kicked off Diabetes Awareness Month with its first-ever nationwide campaign: *Diabetes. Get Serious.* In addition to several education events & an MLA Reception held during the month, all regional offices from coast-to-coast hosted a "Blitz Day" where volunteers and employees handed

out a small *Get Serious* card to the general public. We have received a tremendously positive response to our Nova Scotia "Blitz Day" and look forward to an even better one in 2006!

Health Professionals Required for Summer Camps:

Once again, the CDA needs health professionals for our summer camps. This is a great "hands on" learning experience, as well as an opportunity to help children with diabetes have a special week at camp. If you would like more information, please contact Marie Brown at (902) 454-4232, or toll free at 1-800- 326-7712, ext 226.

Family Sleigh Ride:

The CDA is offering a free winter sleigh ride for families of children 14 and under with diabetes. The sleigh ride will be held on Saturday, February 18, 2006 at 12:15 p.m. at Hatfield Farms, 15 minutes outside of Halifax. For more information about this event, call (902) 453-4232.

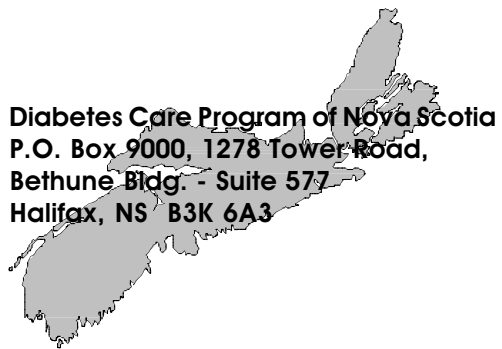
Diabetes Expo:

We are very excited about the enthusiasm we have received for our upcoming Diabetes Expo on April 29, 2006 at the World Trade & Convention Centre. We already have a list of people who are waiting to receive a brochure, which will be distributed by the end of January. I would like to thank everyone who has offered to be involved in the Diabetes Expo. We are still looking for diabetes educators to man the "Ask the Expert" booths. If you are interested, please contact the CDA at 1-800-326-1722.*



Trudy Murphy, Sanofi-Aventis, is pleased to announce the approval of pediatric indication of Lantus®. The November 2, 2005 monograph states "...safety and effectiveness of Lantus® has been established in children over 6 years of age with type 1 diabetes mellitus." Should you have any questions, Trudy may be contacted at 1 (800) 589-3383, ext. 6533.

***This information has been brought to our attention to share with educators around the province. Endorsement is not implied by appearance in the newsletter.*



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