Hamilton Niagara Haldimand Brant **LHIN**
RLISS de Hamilton Niagara Haldimand Brant

Chronic Disease Prevention and Management

Diabetes Action Group Report

December, 2008

Ontario
Local Health Integration Network
Réseau local d'intégration des services de santé


wound care
multidisciplinary teams
CDPM management system
coordination
capacity building
self management
incorporate cultural diversity
If we could change one thing....
education
prevention
single point of entry
centralized referral
electronic health records
diabetes collaborative
resource centre
system redesign

Message from the Co-Leads

for Chronic Disease Prevention and Management at the Hamilton Niagara Haldimand Brant LHIN

Earlier this year we met with health and wellness experts from across the Hamilton Niagara Haldimand Brant Local Health Integration Network (the LHIN) to seek their counsel on how we can collaborate to advance chronic disease prevention and management within the LHIN. What we heard was a readiness to work together, consensus to focus on diabetes and that collaborative planning must start small, be focused, build on existing initiatives and show a clear benefit.

Guided by their suggestions the LHIN supported the establishment of the Diabetes Action Group (DAG). The DAG met over the summer of 2008 and identified over 60 priority areas for potential action. This report describes the process the group followed to determine initial priority areas for action. The DAG will reconvene in Spring 2009, to evaluate and discuss progress on these initial priorities and determine next steps.

We would like to thank the members of the DAG for the time they devoted to this important project and their commitment to improving diabetes prevention and management within our LHIN.

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A journey of a thousand miles begins with a single step

- Confucius

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Figure 1

Ontario's Chronic Disease Prevention and Management Framework

Source: Ontario Ministry of Health and Long-Term Care. Preventing and Managing Chronic Disease: Ontario's Framework, May 2007.

Introduction

Chronic disease prevention and management (CDPM) has become a focal point of health care in the 21st century. Illnesses that were once considered fatal have become chronic conditions, they cannot be cured but they can be managed[a]. The healthcare burden associated with chronic health conditions[b] has led many governments, health care planners and providers to explore new ways of providing health care services. In Ontario, the burden of chronic illness has been estimated to account for 55% of direct health care costs[c].

At the same time, reports on the quality of the care provided to individuals with chronic conditions have not been favourable. For the second consecutive year, Ontario's Health Quality Council has reported that Ontario is doing a poor job in managing chronic disease[d]. The conflicting message is that while Ontario is investing heavily in health care resources, the quality of care for individuals with chronic conditions could be improved. Ontario's Quality Council further suggested that improving evidence based care for chronic conditions would benefit the individual and the healthcare system[e].

The challenge presented by CDPM can be attributed to specific characteristics associated with chronic diseases (Table 1) and the necessity for a multidisciplinary approach to effect change. In 2007, the Ontario Ministry of Health and Long-Term Care (MOHLTC) developed a CDPM policy framework (Figure 1) to guide the redesign of health care practices and systems to improve chronic disease prevention and management in Ontario. The model demonstrates the magnitude of the factors that influence chronic illness and the degree of collaboration that needs to occur across all health sectors[f].

The Hamilton Niagara Haldimand Brant Local Health Integration Network (HNHB LHIN) as of 2006, was home to over 1.3 million people. Of these over 200,000 were 65 years or older. Between 2006 and 2016, the LHIN's population is projected to grow by 10%, and the population aged 45-64 years by 18%, an increase of more than 65,000 people aged 45-64 years[g]. (Table 2)

In 2006, the LHIN's Integrated Health Service Plan (IHSP) identified a coordinated CDPM strategy as an emerging priority. During 2007-08 the LHIN engaged health and wellness experts to identify opportunities to advance CDPM within the LHIN. In 2008, at a meeting of healthcare leaders from across the LHIN, it was agreed that collaborative CDPM activities should initially focus on improving care and prevention for diabetes, and developing a process that would be transferable to other chronic conditions. The group advised that any planned action for collaboration in respect to CDPM should:

- be focused
- start small
- be inclusive but simple
- build and promote activities already underway in the LHIN
- if appropriate, be staged.

Table 1: Features Associated with Chronic Health Conditions

- An aging population; in Canada for the most part people are living longer and healthier lives; illnesses that were once considered fatal have become chronic conditions, they cannot be cured but they can be managed.
- Chronic health conditions develop slowly over time, are long lasting and increase with severity.
- Many chronic conditions can be prevented or have their onset delayed.
- Many risk factors that put individuals at risk for developing chronic conditions such as heart disease and diabetes are modifiable and widespread.
- Individuals living with one chronic disease are at a higher risk of developing additional chronic conditions.
- Age is a major risk factor for most chronic conditions – as people age they are more likely to have multiple chronic conditions.
- Social economic factors are thought to contribute to the development of chronic conditions on multiple levels.

Sources: Morgan M, Zamora N, Hindmarsh M. An Inconvenient Truth: A Sustainable Healthcare System Requires Chronic Disease Prevention and Management Transformation. Healthcare Papers. New Models for the New Healthcare. 2007 V7.No 4. 2007

MOHLTC. Chronic conditions in the HNHB LHIN, Health System Intelligence Project, October 2007.

Table 2: Profile of the HNHB LHIN Population & Chronic Conditions

- As of 2006, the HNHB LHIN was home to over 1.3 million people, the third largest population of all 14 LHINs in Ontario. Between 2006 and 2016, the HNHB LHIN population is projected to grow by about 10% to just over 1.5 million people, making it the second largest LHIN.
- As of 2006, the HNHB LHIN was home to over 200,000 seniors aged 65 years and older; the largest number of seniors of all LHINs.
- In the decade 2006 – 2016, the population aged 45-64 years is projected to grow 18% (an increase of more than 65,000 people 45-64 years of age).
- In 2005, 74% of HNHB LHIN residents reported having at least one chronic condition compared to 70% for Ontario.
- The prevalence of chronic conditions differs by age group.
- The prevalence of multiple chronic conditions increases with age.
- Among HNHB LHIN residents aged 65 years and older, 50% had two or more chronic conditions, compared to 46% for Ontario.
- Almost 54% of those aged 18+ reported being either overweight or obese (obesity has been identified as one of the leading causes of diabetes).

Source:
Canadian Community Health Survey, Ontario Share File.
Population Estimates and Population Projections by LHIN, Ontario Ministry of Health and Long-Term Care, Provincial Health Planning Database.

Diabetes Action Group

In June 2008, an HNHB LHIN Diabetes Action Group (DAG) comprised of health care leaders and diabetes experts who provide and/or administer diabetes care (refer to appendix A) was established to identify:

- Priority area(s) for diabetes on which health care providers and stakeholders from across the LHIN could collaboratively work together to improve care and outcomes
- The "actions/interventions" that need to be taken in the priority area to achieve the intended outcomes
- How success would be measured.

Purpose of the Report

The purpose of this report is to describe:

- The process undertaken to identify diabetes priority areas
- The activities undertaken to inform the DAG's final recommendations.

Process and Methodology

The DAG developed a three phase plan to achieve its objectives:

- Identification of priority areas
- Review of data, literature and guidelines to inform recommendations
- Identification of areas/activities for immediate action.

Identification of Diabetes Priority Areas

The process undertaken to inform the deliberations on diabetes priorities involved two surveys.

1) Focused Survey

- Twenty healthcare providers (cross sector clinicians and administrators) were contacted and requested to identify, in their opinion, the five top areas that the LHIN should (or could) work on collaboratively to improve prevention and/or management of diabetes care.
- The survey identified 61 possible areas for action (that were grouped by common themes). Refer to Appendix B for a summary of survey results.

Results

- DAG members collectively reviewed the summary of the priority area's rankings. The group identified two areas for immediate follow-up based on both survey rankings and on the likelihood of achieving a tangible outcome within a reasonable time frame.

Focused Survey Priority Categories

- Best Practice Guidelines
- Collaboration
- Diversity
- Environmental Scan
- Foot Care
- Prevention/Health Promotion
- Multidisciplinary Team
- Provider Education
- Single Point of Entry
- Other
- E-Health

2) LHIN Wide Survey

- A survey on diabetes practices and services gaps targeted at healthcare providers and relevant stakeholders was distributed across the LHIN. The survey was circulated directly to 170 LHIN funded service providers and agencies, and 10 professional networks. Recipients were encouraged to forward the survey to any health care professionals or stakeholders who provide service to individuals with diabetes across the LHIN.

Results

- 157 responses were received (See Table 3 - Key Survey Responses)
- Due to the distribution process used, it was not possible to determine the total survey population.
- The information provided through the survey reaffirmed the need to increase access to foot care. Capacity and cost were identified as barriers.

Table 3 – Key Survey Responses

- 74% of respondents were healthcare providers
- Location of respondents - 48% Hamilton, 38% Niagara, 7% Brant and 7% Haldimand Norfolk
- 72% responded that they do not have a system in place to flag poorly managed diabetic patients
- Top service gap identified - access to foot/wound care (15%)
- Client issues when managing diabetes – one of the 2 top issues – access to affordable foot care
- 56% respondents identified cost as a barrier to accessing foot care
- 20% of respondents report checking feet every visit, 20% report checking feet twice year
- 70% of respondents report wait time to see endocrinologist longer than 6 weeks.

Priority Areas for LHIN Wide Collaborative Action

Priority 1

Inventory and Categorization of Materials/Approaches to Diabetes Care for Health Care Providers

The purpose is to:

- Identify and categorize available material used within the HNHB LHIN.
- Share knowledge.
- Assist persons involved in diabetes care to identify the right tool for the right person.
- Provide support to new provider groups.

Activities for Immediate Action

Collection and categorization of patient education materials that can be provided as a resource kit to health care providers for diabetes care:

- A sub-working group was established to complete an inventory of diabetes materials/tools used within the LHIN.
- Following the inventory a subcommittee of experts categorized the information, conducted a peer-review of the materials and recommended materials for the resource kit.
- The subcommittee submitted its *Patient Education Materials Inventory* to the DAG in March 2009. This inventory is included in this document as an addendum. It is also available separately on the HNHB LHIN website (www.hnhblhin.on.ca)

Note: The group acknowledged the importance of wound care but recognized that it was not limited to individuals with diabetes and that the provision of wound care involved a wider range of expertise. The DAG determined that wound care was beyond the scope of the group's mandate at this time.

Priority 2

To Improve the Access and Quality of Foot Care for Diabetic Patients – Assessment and Intervention

The purpose is to:

- Increase the practice of providing diabetic foot care assessment and intervention that is consistent with best practice across the LHIN.
- Identify a risk categorization and management standard based on review of best practice guidelines.
- Increase capacity of diabetic foot care services for individuals identified as high risk according to risk categorization.

Review of Data, Literature, and Guidelines to Inform Recommendations

The DAG undertook two approaches in its review of foot care:

- Explore opportunities to increase capacity.
- Identify and recommend a minimum LHIN standard for diabetic foot care that is based on best practice guidelines.

To inform their work the DAG completed a:

- Review of hospital and emergency department utilization data for individuals with diabetes and lower limb complications/amputations.
- Systematic review of best practice guidelines and select foot care models.
- Focused literature review on diabetic foot care.

Results of the Review of Hospital Discharge Data

A review of HNHB LHIN hospital data revealed that between 2003/04 and 2007-08:

- 1,838 residents with a main problem of diabetes with lower limb and circulatory related conditions visited an emergency department in the LHIN. Of these, the majority (1,533) were between the age of 45-84 years old. (Refer to Table 4).
- 1,756 lower limb amputations (excluding those residents with a diagnosis of cancer or injury) were reported among residents of the HNHB LHIN. Of these, a diagnosis of diabetes was specified in 1,135 cases (Refer to Table 5). It is possible that the number of amputations among residents with diabetes is under reported.

Table 4: Total Number of Emergency Department Visits among Patients with a Main Problem of Diabetes with Conditions Related to Lower Limb and Circulatory by Age Group, Residents of the HNHB LHIN, 2003-04 to 2007-08

Table 4	Fiscal year					
Age group	2003/04	2004/05	2005/06	2006/07	2007/08	Total
<15	<5	<5	<5	0	0	<5
15-44	27	27	33	38	63	188
45-64	123	100	121	184	220	748
65-74	82	57	48	97	127	411
75-84	44	55	56	104	115	374
85+	13	16	12	31	41	113
Total	290	256	272	454	566	1,838

Source: Ambulatory Visits, Ministry of Health and Long-Term Care, Provincial Health Planning Database.

Table 5: Total number of cases with a lower limb amputation and a diagnosis of diabetes (excluding Cases with a Most Responsible Diagnosis Code of cancer or injury/poisoning) by Age Group, Residents of the HNHB LHIN, 2003-04 to 2007-08

Table 5	Fiscal Year					
Age group	2003/04	2004/05	2005/06	2006/07	2007/08	Total
<15	0	0	0	0	0	0
15-44	10	8	10	5	7	40
45-64	84	82	93	73	93	425
65-74	80	74	57	52	51	314
75-84	61	73	59	46	56	295
85+	11	18	13	14	5	61
Total	**246**	**255**	**232**	**190**	**212**	**1,135**

Source: Inpatient Discharges, Ministry of Health and Long-Term Care, Provincial Health Planning Database.

Review of Literature and Other Foot Care Models

A review of diabetic foot care literature and select programs served as background information on diabetic foot care models. A summary of the review is provided in Appendix C. Overall the review identified that regular foot care screening, education in foot care and self management, along with a foot care expert team, can result in reduced foot ulcers and amputations, and potential system savings through the avoidance of complications.

The literature also suggested that the ability of seniors with diabetes to examine their own feet or cut their toenails is hampered by poor visual acuity and joint flexibility. Seniors with neuropathy (a complication of diabetes) had more limited joint mobility than individuals without neuropathy. The study concluded that seniors may be better served by receiving regular foot care from a health care professional than by intensive education[h].

Review of Best Practice Guidelines

The DAG reviewed 16 best practice cross jurisdictional guidelines (refer to Appendix D). Of these, 7 were specific to foot care. The guidelines were reviewed for areas of greatest consensus. The risk classification and management approach identified by the DAG, based on their review of best practice guidelines is provided below:

Best Practices for Foot Care

	Low Risk	At Risk	High/Very High Risk
Classification of Risk	No loss of sensation, no peripheral arterial disease and no other risk factor(s)	Neuropathy or other single risk factor – (smoking, vascular insufficiency, retinopathy, nephropathy, structural deformities, infections, skin or nail abnormalities, on anticoagulation therapy, cannot see/feel/reach their feet, physical disability)	Peripheral neuropathy, decreased sensation, foot deformities, evidence of peripheral artery disease, boney prominences, current ulcer, planer callus, absent pedal pulses. **Very High Risk:** Previous ulceration or amputation
Recommended Management	Management with education (need to assess clients ability for self management i.e. seniors) Annual comprehensive foot exam	Foot exam every 6 months (by foot care team if available) Inspect both feet Enhanced education Evaluate footwear	Foot exam every 3 – 6 months Inspect both feet Enhanced and appropriate provision of intensified foot care education Evaluate footwear Consider need for vascular assessment and referral

Review of Chiropody

Access to affordable foot care services was reported by HNHB LHIN providers as a barrier to diabetic foot care services[i]. Key findings from the literature review suggested that many individuals with present or past ulceration do not receive chiropodial/podiatric care, debridement of ulcers is associated with reduced foot pressure (demonstrable cause of ulceration)[j] and that chiropody care can reduce the recurrence rate of ulcerations in high risk group[k].

The Chiropody model was introduced into Ontario in the 1980s. Chiropodists and Podiatrists practice under the Chiropody Act 1991 and the Regulated Health Professional Act. The Chiropody Act prohibits the registration of new podiatrists; as such, there have been no new podiatrists registered to practice in Ontario since 1993[l].

Under the Ontario Health Insurance Plan (OHIP) only podiatrists registered with the College of Chiropodists can bill for foot care services (up to a maximum of $165 annually, including $30 for x-rays per person)[l]. Chiropodists cannot bill OHIP for services provided. HNHB residents' access to chiropody services may be impacted by their ability to pay for services, or access select publicly funded chiropody practices (hospitals, primary care practices that include chiropody services).

Chiropody care also includes assessment and fitting of customized shoe inserts (orthotics) to prevent pressure on calluses or bony prominences. Orthotics can assist in the prevention and reoccurrence of ulcerations from friction[m].

In an effort to increase the availability of affordable diabetic foot care services within the LHIN, the DAG submitted two diabetic foot care funding proposals under the HNHB LHIN Aging at Home Year 2 Strategy.

Areas/Activities for Immediate Action

To Improve the Access and Quality of Foot Care for Diabetic Patients – Assessment and Intervention:

- To increase capacity for foot care assessment and interventions, the DAG submitted two proposals for new foot care programs targeted to seniors under HNHB LHIN's Aging at Home Strategy. Both proposals were approved in principle by the HNHB LHIN Board in November 2008.

- That health care providers within the LHIN provide evidence based foot care that is consistent with the risk categorization and management identified in this report.

DAG's Final Recommendations

Priority 1:

Inventory and Categorization of Materials/Approaches to Diabetes Care for Health Care Providers

Recommended Actions:

- That a LHIN wide inventory and categorization of materials/ approaches to diabetes care be completed and made available to providers of diabetes care.
- That the CDPM Collaborative Steering Committee identify a process for:
    - dissemination of the information across the LHIN
    - annual review and update of the information
- That the CDPM Collaborative Committee conduct a survey after 12 months of dissemination to identify uptake of the information
- Upon completion of the resource kit; gaps in the continuum of patient educational materials should be identified and addressed i.e. culturally and linguistically appropriate materials.

Measures of Success:

> 70% of providers surveyed identified that the inventory assisted them in their practice

Priority 2:

To Improve the Access and Quality of Foot Care for Diabetic Patients – Assessment and Intervention

Recommended Actions

- All individuals diagnosed with diabetes in the HNHB LHIN receive an annual foot exam by a regulated health care professional.
- Diabetic foot care services should be available at no additional cost for seniors and individuals who are identified as high risk according to the guidelines contained in this report.
- That health care providers within the LHIN provide evidence based foot care that is consistent with the risk categorization and management identified in this report.

Measures of Success:

- Percent reduction in emergency room visits for individuals with diabetes and lower limb circulatory conditions.
- Percent reduction in in-hospital admissions for individuals with diabetes and lower limb circulatory conditions.
- Percent reduction in lower limb amputations for individuals with diabetes and lower limb circulatory conditions.
- Percent increase in number of residents with diabetes that report annual foot exam.

Appendix A

Diabetes Action Working Group Members

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Ms. Cathy Lanteigne	Manager Diabetes Collaborative, Niagara Health System
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Dr. Nasima Mottiar	Co-Chair & HNHB LHIN CDPM Co-Lead
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Ms. Karen Tribble	Vice President of Clinical Services, Hotel Dieu Shaver Health and Rehabilitation Centre, Niagara
Ms. Terri Young	Public Programs & Services Coordinator, Canadian Diabetes Association
Ex Officio	
Ms. Deanna Bryant	HNHB LHIN, Community Engagement Advisor
Ms. Rosalind Tarrant	HNHB LHIN, Team Lead, Performance and Contract Management
Ms. Stephanie Tatzel*	HNHB LHIN, Performance Contract Assistant and Medical Student

* Joined or left committee in midterm

Best Practice Guidelines

- Evaluate and share benchmarks that may be adopted as "best practice".
- Better utilization of clinical practice guidelines for diabetes.

Collaboration

- Support evolution of diabetes collaborative.
- Work together to improve and standardize education and documentation.
- Work with the evolving new programs such as the Quality Improvement and Innovation Partnership collaborative that are endorsing an inter-professional approach with chronic disease prevention and management tools to achieve better targets.

Diversity

- Incorporate cultural diversity into diabetes education and service provision.

Environmental Scan

- Identify resources for treating diabetes.
- Identify gaps in services and seek collaborative ways to address.
- Provide opportunity to share existing programs, services, educational resources and tools among members.

Foot Care

- Development of a best practice interdisciplinary wound and foot care clinic for individuals with diabetes who are at risk for developing wounds and subsequent amputations.
- Increase availability of foot care and chiropody services for the high-risk individual with diabetes at no cost to client.
- Develop community program for the assessment, education and treatment of basic foot care issues related to diabetes.

Multidisciplinary Team

- Expansion of the Multidisciplinary Diabetes Team.

Prevention/Health Promotion

- Increased emphasis on prevention programs.

Provider Education

- Develop Diabetes Care Reference Guide for health care providers.
- Educate the various health professional teams educated and certified in chronic disease management.

Single Point of Entry

- Investigate possibility of centralized intake and referral system.

Other

- Develop a standardized approach to diabetes care across the LHIN.
- Establish a local "health intelligence unit" to capture processes and outcomes.
- Capacity building to the community health centres and family health teams by the secondary/tertiary referral centres that would support patient transitions to these teams.

E-Health

- Develop an electronic health record, data repository, clinical portal entry and e-referral systems.
- Expand use of CDPM IT systems.

Key Findings about Multidisciplinary Team Approach to Diabetic Foot Care[1]

- Prerequisite for prevention of foot problems is adequate education of 'at risk' patients and of all medical and paramedical staff managing the patients with regular reinforcement.
- Chiropody plays an important role in diabetic foot care:
  - May be possible to prevent ulcer formation by the removal of callus from high pressure areas.
  - Callus removal from around neuropathic ulcer allows for drainage.
- Significant reductions in total and major amputation rates following improvements in foot care services including multidisciplinary team.
- Aim of multidisciplinary approach to care is to coordinate resources and improve standard of health care. Management policy developed jointly by the team ensures patients receives consistent rather than conflicting advice.
- Ensure patient understands need for vigilant foot care and modification of behaviour – or education is unlikely to succeed.
- Multidisciplinary teams help move system of care to a partnership-based integrated care that is driven by performance and focused on patient needs.

Key Findings about Screening for Diabetic Foot Care[2]

- Identifying the at risk patient is probably the most important step in preventing the development of ulceration.
- Patients who develop ulcers are more frequently men, had diabetes for longer duration, had nonpalpable pedal pulses, reduced joint mobility, higher neuropathic disability score (NDS), higher vibration perception threshold and a higher Semmes-Weinstein monofilament (SWF).
- Neuropathic Disability score had the best sensitivity as a single technique.
- Combination of NDS and SWF further improved sensitivity to 99%.
- NDS + SWF could identify all but 1 of 95 ulcerated feet.
- Time required for clinical examination and 10-g SWF does not exceed 5 minutes.
- Primary outcomes – reductions in the number of foot ulcers and lower limb amputations.
- Process outcomes – compliance with screening, number of patients who did not complete the programme, level of patient compliance with the treatment.

Key Findings about Chiropody[1]

- Podiatric debridement of callus tissue is shown to be associated with a significant fall in foot pressure – demonstrable cause of ulceration in susceptible feet.
- Majority of patients with present or past ulceration do not receive chiropodial/podiatric care.
- Chiropodist care – following a structured chiropodist education program for the diabetic foot – can reduce the recurrence rate of ulcerations in a high-risk group of diabetic patients with a history of foot lesions.
- Regular chiropodist visit promote patients' awareness of complications through educational approaches.

Key Findings about Barriers/Enablers for Adapting Clinical Practice Guidelines[3]

- Barriers to implementing care include attitudes and beliefs of doctors, other health care professionals and patients, and structure of health-care systems.
- Lack of understanding may exacerbate the situation – including ignorance of the importance of foot disease, or fear of losing a limb.
- Budgetary restrictions.
- Barriers to guideline compliance include physician knowledge, attitudes, oversight (most frequent reason cited for not performing annual foot exam), conscious decision not to follow 'best practice' or best practice did not apply to patient.
- Patient had more pressing medical problems.
- Patient non-adherence – patient declined to follow indicated practice.
- Diabetic foot team – protocol used with strict delineation of each clinician's task and responsibility and effective record-keeping and communication is essential.
- Greater involvement of local stakeholders in the process of guideline adaptation – greater sense of ownership in resulting guideline and willingness to use it.
- Identify measurable criteria or outcomes to be used in monitoring guideline adherence to ensure the care process reflects guideline recommendations.
- Uptake of guideline can be promoted by designing prompts or reminder systems and modifying the forms for health record or assessment, charting, or test orders to encourage collection of relevant clinical data.

Key Findings about Program Effectiveness[4]

- Attendance at general diabetes education classes was shown to make an important difference between patients who did and did not require an amputation.
- Common Foot Care Education Topics included: Individual risk factors, washing and drying feet, toenail care, footwear, moisturizing feet and reportable foot problems.
- 10-20 minute educational intervention resulted in similar increases of knowledge and self-care practices compared with more intensive education delivered in 2-9 hours.
- Interventions as basic as providing written information can significantly enhance foot care knowledge and self-care practices. Lends support to effectiveness of brief one-to-one education such as with the home healthcare population.
- Patients require repeated reinforcement of appropriate foot care behaviours to impact long-term outcomes.
- Most diabetic patients indicate that their primary care physician does not inspect their feet.

Key Findings about Issues with Diabetic Self-Management[5]

- Examination of feet was unlikely to occur unless the patients socks and shoes were removed prior to consultation.
- First visit to the diabetic clinic – patient should have full examination. If not in one of the 'at-risk' groups, should have no more than general foot care advice.
- More than 95% of diabetes care is done by the patient. Physicians offer instruction, but day-to-day implementation depends on patients themselves, who care for their diabetes within the context of other goals, priorities, health issues, family demands and other personal concerns that make up their lives.
- American Diabetes Association recommendations for diabetes self-care would take a typical patient – 122 minutes/day (exercise or diet account for most of the time)
    - Newly diagnosed diabetics would take 25-30% longer.
    - Older and more infirm patients could require twice as long for most tasks and might require assistance from a caregiver.
    - Foot care is estimated to require 10 minutes/day for a typical patient.
- Biggest obstacle for ineffectively managing diabetes – not enough time (>20%).
- Some tasks are more important for certain patients than others (ex. Foot care is more important for patients with sensory neuropathy than those with normal sensation).

Select Program Review

Foot Care Program, Texas USA[6]
(Describes key components of program. Program operational for 10 years.)

- Protocol driven program; evidence based medicine.
- Program components: hands on screening, risk stratification and prevention.
- Screening program – involves a nurse and podiatrist.
- Most of the education was directed towards the nurses – completed the initial assessment of the patient and determined need for program referral.
- Self-referral program discontinued, minimal response.

Program Particulars

- 1st program visit – 2 hours in length (40 minute screen – to identify high risk patients), family education classes, measuring and provision of shoes and insoles as needed.
- Recall at 6 months for more foot specific education.
- Checklist is provided for every visit.
- Scannable forms entered into a database.
- Patients with ulcers brought in for follow up every 6-8 weeks.
- Monthly to trim calluses.

Target population: Individuals with current or previous ulcers and/or amputations (3-4 times decrease in foot ulcers, number needed to treat = 4 to prevent 1 ulcer).

Team: Multidisciplinary team includes: nurses, podiatrists, vascular surgeons, infectious disease specialists, internists, plastic surgeons.

Outcomes – hospital stays and complications (data individualized to each physician).

Southern Ontario Aboriginal Diabetes Initiative Holistic Foot Care Clinic[7]
Program Particulars

- Foot Care Model has been in place since 2006 (5 year funded program).
- Service providers: Chiropodist, reflexologist, foot care nurses, and SOADI staff (Reflexology: complementary healing).
- Foot care services based on education, screening, care, treatment, support and data collection.
- Foot care clinics are free of charge.

Services provided:

- Minor wound care.
- Prescriptions for custom made orthotics if needed.
- Nail and callous care.

Target population:

- Aboriginal people that are affected by or at risk of diabetes and its complications.

Components of Model:

- Foot care events – outreach and assessment
- Sustainable foot care locations – ongoing self care
- Individual subsidies – access to home visit, ongoing care and support, etc.
- Self-care and prevention resources – self care DVD, diabetic socks, etc.

Typical Foot Care Clinic:

- Foot examination and treatment by a certified chiropodist.
- Sharing circle about diabetes and self foot care.
- SOADI regional Diabetes worker and display board.
- Diabetes resources and educational materials to take home.
- After the typical foot care clinics – chiropodists identify individuals who are at high risk and require regular care.

Diabetic Guidelines Reviewed

1. Canadian Diabetes Association –Clinical Practice Guidelines for the Prevention and Management of Diabetes in Canada, 2008.
2. American Diabetes Association – Standards of Medical Care in Diabetes, 2008.
3. International Diabetes Federation – Global Guideline for Type 2 Diabetes, 2005.
4. The International Working Group on the Diabetic Foot – International Consensus and Practical Guidelines on the Management and the Prevention of the Diabetic Foot, 2000.
5. Registered Nurses' Association of Ontario – Reducing Foot Complications for People with Diabetes (Nursing Best Practice Guideline), 2007.
6. Joslin Diabetes Center & Joslin Clinic – Clinical Guideline for Adults with Diabetes, 2008.
7. New Zealand Guidelines Group – Evidence-Based Best Practice Guideline: Management of Type 2 Diabetes, 2003.
8. Scottish Intercollegiate Guidelines Network – Management of Diabetes: A National Clinical Guideline, 2001.
9. National Institute for Clinical Excellence – Clinical Guidelines for Type 2 Diabetes: Prevention and Management of Foot Problems, 2003.
10. American College of Foot & Ankle Surgeons – Diabetic Foot Disorders: A Clinical Practice Guideline, 2006 revision.
11. American Association of Clinical Endocrinologists – Medical Guidelines for Clinical Practice for the Management of Diabetes Mellitus, 2007.
12. UK National Health System – National Diabetes Support Team Diabetic Foot Guide, 2006.
13. Diabetes Australia – National Evidence Based Guidelines for the Management of Type 2 Diabetes Mellitus: Detection and Prevention of Foot Problems in Type 2 Diabetes, 2005.
14. Wisconsin Department of Health Services – Wisconsin Essential Diabetes Mellitus Care Guidelines, 2003.
15. Massachusetts Department of Public Health – Massachusetts Guidelines for Adult Diabetes Care 2007.
16. Diabetes Quebec – Foot Care Guidelines 2004.

Endnotes

For the Report

a) Morgan M, Zamora N, Hindmarsh M. An Inconvenient Truth: A Sustainable Healthcare System Requires Chronic Disease Prevention and Management Transformation. Healthcare Papers. New Models for the New Healthcare. 2007 V7. No 4. 2007

b) Innovative Care for Chronic Conditions, Building Blocks for Action. WHO 2002

c) Ontario Ministry of Health and Long-Term Care. Preventing and Managing Chronic Disease: Ontario's Framework, May 2007.

d) Ontario Health Quality Council. 2008 & 2007 Report on Ontario's Health Care System. MOHLTC

e) Ontario Health Quality Council. 2008 Report on Ontario's Health Care System. MOHLTC

f) Ontario Ministry of Health and Long-Term Care. Preventing and Managing Chronic Disease: Ontario's Framework, May 2007.

g) Population Estimates and Population Projections by LHIN, Ontario Ministry of Health and Long-Term Care, Provincial Health Planning Database.

h) Thompson, F.J., Masson E.A. (1992) Can elderly diabetic patients co-operate with routine foot care? Age and Aging, 21 (5), 333-38.

i) HNHB LHIN Survey, November 2008

j) Fletton, J.A., et al. (1995). Is community chiropodial/podiatric care appropriately targeted at the 'at-risk' diabetic foot? The Foot, 5, 176-179

k) Plank. J., et al. (2003). Evaluation of the Impact of Chiropodist Care in the Secondary Prevention of Foot Ulcerations in Diabetic Subjects. Diabetes Care, 26(6). 1691-1695

l) Email from MOHLTC. Dated July 31, 2008

m) Interview with Steve Smith, Chiropodist, North Hamilton Community Health Centre. November 13th, 2008

For the Appendices

1) Donohoe, M.E. et al. Improving foot care for people with diabetes mellitus – a randomized controlled trial of an integrated care approach. 2000 Diabetes UK. Diabetic Medicine, 17, 581-87.
Krishnan, S. et al. Reduction in Diabetic Amputations Over 11 Years in a Defined U.K. Population, (2008). Diabetes Care, 31(1), 99-101
Thomson, F.J. et al. (1991). A team approach to diabetic foot care – the Manchester Experience, 1991. The Foot, 2, 75-82.

2) McCabe, C.J., et al. (1998). Evaluation of a Diabetic Foot Screening and Protection Programme. Diabetic Medicine, 15, 80-84
Malgrange, D., et al. (2003). Screening diabetic patients at risk for foot ulceration. A multi-centre hospital-based study in France. Diabetes Metabolism, 29, 261-8
Pham, H., et al. (2000). Screening Techniques to Identify People at High Risk for Diabetic Foot Ulceration. Diabetes Care, 23(5), 606-611

3) van Houtum, W.H. (2005). Barriers to delivery of diabetic foot care – Comment. The Lancet, 366, 1678-79
Mottur-Pilson, C., et al. (2001). Physician Explanations for Failing to Comply with "Best Practices." Effective Clinical Practice, 4, 207-213
Graham, I.D., et al. (2002). Facilitating the Use of Evidence in Practice: Evaluating and Adapting Clinical Practice Guidelines for Local Use by Health Care Organizations. Journal of Obstetric, Gynaecologic and Neonatal Nursing, 31, 599-611

4) Corbett, C.F. (2003). A Randomized Pilot Study of Improving Foot Care in Home Health Patients with Diabetes. The Diabetes Educator, 29(2), 273-282
Lavery, L.A., et al. (2005). Disease management for the diabetic foot: Effectiveness of a diabetic foot prevention program to reduce amputations and hospitalizations. Diabetes Research and Clinical Practice, 70, 31-37

5) Masson, E.A., et al. (1989). Diabetic foot ulcers – do patients know how to protect themselves? Practical Diabetes, 6(1), 22-24
Russell, L.B., et al. (2005). Time requirements for diabetes self-management: Too much for many? The Journal of Family Practice, 54(1), 52-56

6) Dr. Lawrence Lavery, Texas. Phone Interview August 2008.

7) SOADI Holistic Foot Care Clinic, HNHB LHIN Interview August 2008


wound care
multidisciplinary teams
CDPM management system
coordination
capacity building
self management
incorporate cultural diversity
If we could change one thing....
education
prevention
single point of entry
centralized referral
electronic health records
diabetes collaborative
resource centre
system redesign

Chronic Disease Prevention and Management
Addendum to the Diabetes Action Group Report

Patient Education Materials Inventory

This document is the addendum to the December 2008, Diabetes Action Group (DAG) Report and presents the processes, results and findings of the inventory and categorization of diabetes education materials used by Hamilton Niagara Haldimand Brant Local Health Integration Network (HNHB LHIN) diabetes providers and stakeholders in 2009.

The Co-Chairs of the DAG, Dr. Akbar Panju and Dr. Nasima Mottiar acknowledge the diabetes experts, providers and stakeholders from across the HNHB LHIN who created many of the documents identified in the inventory and have willingly shared them for the purposes of this project.

In addition, the Co-Chairs thank the members of the DAG subcommittee who under the leadership of Cathy Lanteigne and Mary Beth Neibert demonstrated their commitment to diabetes prevention and quality care.

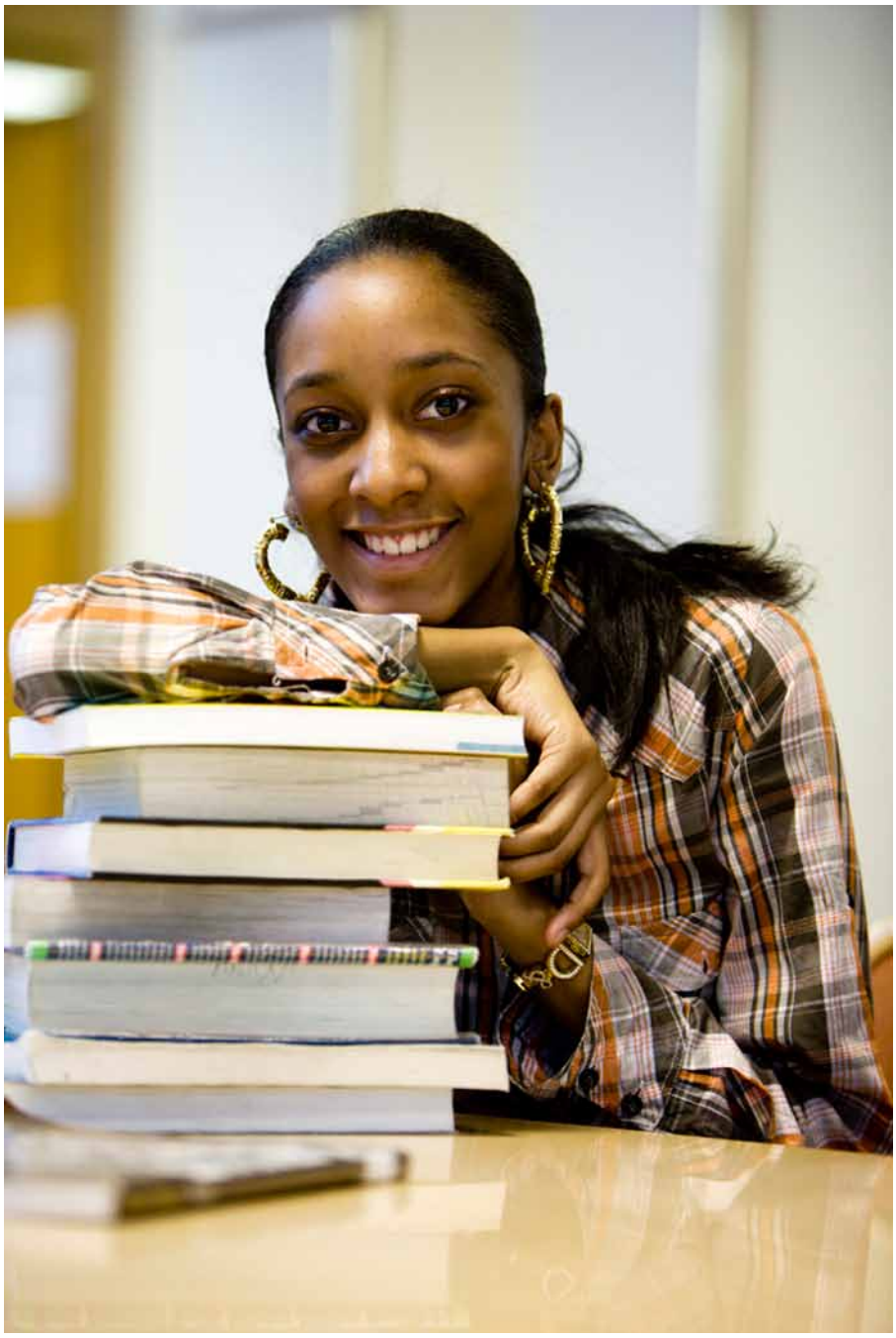
DAG Subcommittee Members:
Cathy Lanteigne, Registered Dietician - Niagara Health System
Mary Beth Neibert, Registered Nurse - St. Joseph's Healthcare, Hamilton
Tracy Gallina, Pharmacist - Joseph Brant Memorial Hospital
Cindy Gekeire, Registered Nurse - Haldimand Norfolk Diabetes Program
Janet MacLeod, Registered Nurse - McMaster Diabetes Care and Research.

An electronic version of the Diabetes Education Material Inventory can be accessed on the HNHB LHIN website - www.hnhblhin.on.ca

Please Note: The inventory was developed from material submitted to the subcommittee for review and inclusion. It does not represent all diabetic material used in the HNHB LHIN.

Opportunities to submit additional material for review and inclusion in the inventory will be available in March 2010 when the inventory is updated.

Table of Contents for the Patient Education Materials Inventory



Introduction

In 2008, the HNHB LHIN Diabetes Action Group identified two priority areas on which health care providers and stakeholders from across the LHIN could collaboratively work together to improve care and outcomes. The two areas identified for immediate action were:

1. To complete an inventory and categorization of materials/ approaches to diabetes care for health care providers

2. To improve the access and quality of foot care for diabetes patients – assessment and intervention.

The process, findings and recommendations related to identifying the priority areas and improving foot care is documented in the DAG Report, December 2008. This addendum report details the objectives, process, and criteria used to compile the inventory, and includes a listing of the materials identified and summary findings.

Objectives

This inventory and categorization is intended for use by health service providers to:

- Advance consistency in patient education throughout the HNHB LHIN.
- Provide evidence based patient education materials which meet accepted standards and literacy criteria.
- Identify and categorize available material used within the HNHB LHIN.
- Share knowledge among health care providers.
- Assist providers involved in diabetes care to identify the right tool for the right person.
- Provide support to new provider groups.
- Identify gaps in available literature for specific areas.

Process

To compile a list of all available education materials used within the HNHB LHIN, the DAG subcommittee invited 47 HNHB LHIN diabetes providers, hospitals and family health teams to submit copies of patient education materials used in the education and delivery of care for patients with diabetes.

Materials received were collated and categorized under the following headings

- Canadian Diabetes Association (CDA) Materials
- Nutrition
- General
- Activity
- Medications
- Highs and Lows
- Complication Prevention
- Foot Care
- Testing Blood Sugars
- Stress Management
- Insulin Delivery Devices
- Driving
- Alcohol
- Sick Days
- Gestational Diabetes
- Insurance/Financial
- First Nations
- Traveling

Over 200 separate documents were received.

To review the material an interdisciplinary working group, comprised of nurses, a dietician, and pharmacist, with experience in diabetic care, was established. The working group reviewed each document against preset criteria.

Preliminary Inclusion Criteria

Materials were reviewed to ensure they met the following inclusion criteria:

- Patient education materials
- Materials dated from 2005 to present
- Information that is consistent with 2008 CDA Clinical Practice Guidelines
- Material has undergone review by
  - a patient education specialist or
  - plain language expert or
  - Diabetes Centre operating committee

Secondary Inclusion Criteria

Once materials met the preliminary inclusion criteria, suitability for inclusion in the inventory was determined based on 10 working criteria from the monograph, Writing Information for Patients and Families by L Winooski, T Harper & T Hutchings, 2008:

1. Does the title clearly identify the topic or content?
2. Does the content reflect current practice guidelines and/or research evidence?
3. Does the content include actions or behaviours (what patients should or can do)?
4. Is the material free from bias and commercial endorsement?
5. Is the material written in familiar, everyday language of patients from the target population?
6. Are medical terms, technical words, acronyms and abbreviations defined?
7. Is the format simple and easy to read?
8. Is the font style simple and easy to read?
9. Do pictures and illustrations show people, activities and objects that are familiar, realistic, age appropriate and positive to patients?
10. Has the material been reviewed by a patient education specialist or plain language expert?

After determination of the materials to be included, the inventory was compiled.

Exclusion Criteria

Material were excluded for the following reasons:

- Centre specific forms, flow sheets and materials that were only relevant to a specific geographic area
- Materials that focused on clinical practice guidelines or other professional education materials rather than on patient education
- Items that were undated or dated prior to 2005
- Branded materials - pharmaceutical or food manufacturer
- Paediatric materials - as this is recognized as a special population

Selected items were not included if they did not meet the agreed upon criteria. No judgement was made about the relevance or suitability of materials not included. Many items not included were current but undated. Some were site specific. While pharmaceutical generated materials may be used successfully in diabetes education, they were also excluded.

Inventory Format

The inventory includes:

- A cover sheet with address, phone number and e mail address of centres who submitted included materials
- Table of content
- Language abbreviation list

The actual inventory is divided up to include:

- The category of the material
- The name of the patient education material
- The source of the material
- Available electronic or hard copy
- Date of material development or review
- Language available

Canadian Diabetes Association Materials

Many centres use materials published by the CDA. The materials included in the inventory are not meant to be an exhaustive listing of all CDA materials. They are the materials that HNHB respondents identified they used.

Benefits of using CDA literature include:

- It is reviewed and revised regularly
- Many are available in various languages
- Most are free of charge

Findings

Following the review process, gaps in diabetes education materials were identified in the following areas of:

- Sexual health
- Shift work
- Pre-diabetes (CDA materials available)
- French language materials
- Materials in other languages
- Certain categories had materials submitted, but were excluded if they did not meet the criteria noted above.

Summary

The committee reviewed over 200 materials. Nearly 130 meet inclusion criteria and are included in this document. The materials have been compiled by Registered Nurses, Registered Dieticians, Pharmacists and Social Workers from all areas of the HNHB LHIN to assist patients in the self management of their diabetes.

The complete Diabetes Action Group Report, including this Addendum to the Report, is available on the HNHB LHIN website. To obtain access to any material listed in the inventory please contact the identified contact for permission to use the material. Contact information is listed in the Addendum.

Next Steps

- The inventory will be located on the HNHB LHIN website at www.hnhblhin.on.ca
- The Chronic Disease Prevention and Management Collaborative Advisory Committee of the HNHB LHIN is tasked with developing a sustainable plan for the distribution and maintenance of inventory.

Abbreviations of Providers

abbrev.	NAME	ADDRESS	EMAIL ADDRESS	TELEPHONE
ADA	American Diabetes Association	1701 North Beauregard St., Alexandria, VA 22311	ADA@diabetes.org	1 800 342 2383
AHC	Aboriginal Health Centre (De Dwa Da Dehs Nye>s)	678 Main St.,E Hamilton, L8M 1K2	www.aborginalhealth-centre.com	905 544 4320
BMC	Beamsville Medical Centre-Family Health Network	4279 Hixon St., Beamsville, L0R 1B0	bmedc@vaxxine.com	905 563 5315
BCHS	Brant Community Healthcare System - Brantford General Site	200 Terrace Hill St., Brantford, N3R 1G9	www.BCHSYS.org	519 751 5544
CDA	Canadian Diabetes Association	1400-522 University Ave., Toronto, M5G 2R5	info@diabetes.ca	1 800 226 8464
CDA-DOC	Canadian Diabetes Association - Dietitians of Canada		www.healthyeatingin-store.ca	N/A
CMG-FHT	Caroline Medical Group Family Health Team	2250 Fairview St., Burlington, L7R 4C7	N/A	905 632 8007
CSCN	Centre de Santé Communautaire	460 Main St. E., Hamilton, L8N 1K4	cscn@iaw.on.ca	905 528 0163
DCHC	Delhi Community Health Centre	105 Main St., Delhi, N4B 2L8	info@dchc.ca	519 582 2323
DH	Diabetes Hamilton	HSC-3E27, McMaster University, 1200 Main St. W., Hamilton, L8N 3Z5	www.diabeteshamil-ton.ca	905 525 9140 ext. 22351
DQ	Diabetes Quebec	8550 boul. Pie-IX, bureau 300, Montreal, Quebec, H1Z 4G2	info@diabetes.qc.ca	1 800 361 3504
GC-FHT	Garden City Family Health Team	147 Carlton St., St. Catharines, L2R 1R5	iholmes@gardencity-fht.com	905 988 9617
HNDP	Haldimand-Norfolk Diabetes Program	365 West St., Simcoe, N3Y 1T7	cgekeire@ngh.on.ca	519 426 0130 ext. 4472
HHS	Hamilton Health Sciences	1200 Main St. W., Hamilton, L8N 3Z5	www.hamiltonhealth.ca	905 521 2100
HUCCHC	Hamilton Urban Core - Community Health Center	71 Rebecca St., Hamilton, L8R 1B6	www.hucchc.com	905 522 3233
HC	Health Canada		www.hc-sc.gc.ca	N/A

Abbreviations of Providers (continued...)

HDS	Hotel Dieu Shaver Health and Rehabilitation Centre	541 Glenridge Ave., St.Catharines, L2T 4C2	www.hoteldieushaver.org	905 685 1381
HFHT	Hamilton Family Health Team	10 George St., Hamilton, L8P 1C8	www.hamiltonfht.ca	905 667 4857
HHC	Halton Health Care	Trafalgar Memorial Hospital, 327 Reynolds St., Oakville, L6J 3L7	www.haltonhealth-care.com	905 845 2571
H & SF	Heart and Stroke Foundation	2300 Yonge Street, Suite 1300, PO Box 2414, Toronto, M4P 1E4	www.heartandstroke.ca	416 489 7111
HNHU	Haldimand Norfolk Health Unit	12 Gilbertson Dr., PO Box 247, Simcoe, N3Y 4L1	www.hnhu.org	905 318 6623
LHSC	London Health Sciences Center, University Hospital	339 Windermere Rd., London, N6A 5A5	N/A	519 646 6005
MS	Markham Stouffville Hospital Adult Diabetes Education Centre	381 Church St., PO Box 1800, Markham, L8P 7P3	myhospital@msh.on.ca	905 472 7527
MtS	Mount Sinai	600 University Ave., Toronto, M5G 1X5	www.mountsinai.on.ca	416 596 4200
NDHN	Northern Diabetes Health Network	1204A Roland St., Thunder Bay, P7B 5M4	thunderbay@ndhn.com	1 800 565 3400
NRDC	Niagara Regional Diabetes Centre	155 Ontario St., St. Catharines, L2R 5K2	clanteigne@niagra-health.on.ca	905 378 4647
SJHH	St.Joseph's Health Care Hamilton - Diabetes Program	2757 King St. E., Hamilton, L8G 5E4	mneibert@stjoes.ca	905 573 4819
SFMC	Smithville Family Medical Centre - (FHT)	230 Canboro St., PO Box 218, Smithville, L0R 2A0	N/A	905 957 3328
SOADI	Southern Ontario Aboriginal Diabetes Initiative	445 Concession St., Hamilton, N0A 1H0	urbanhorsehoe@soadi.ca	905 388 6010
TPH	Toronto Public Health Department			416 338 7600

Abbreviations of Languages

A	Arabic
C	Chinese
E	English
F	French
Fa	Farsi
K	Korean
P	Portuguese
Pu	Punjab
R	Russian
S	Spanish
Ta	Tagalog
Tam	Tamil
U	Urdu

Canadian Diabetes Association Materials

	Name of publication	Available Formats	Revision Date	Language Available
Healthy Eating	Eating Away From Home	E/HC	2007	E, F
	The Glycemic Index	E/HC	2008	E,F
	Beyond The Basics	E/HC	2008	E,F
	Sugars and Sweeteners	E/HC	2008	E
	Sweeteners	E/HC	2008	E
	Just the Basics	E/HC	2007	E
	Alcohol and Diabetes	E/HC	2008	E,F
	Foot Care: A Step Toward Good Health	E/HC	2008	E
	Managing Your Blood Glucose	E/HC	2007	E
	Staying Healthy with Diabetes	E/HC	2009	E
	Lows and Highs: Blood Glucose Levels	E/HC	2006	E
	Physical Activity and Diabetes	E/HC	2006	E
	PERK: Hypoglycemia	E/HC	2006	E
	Diabetes and Shift Work	E/HC	2009	E
	Are You At Risk?	E/HC	2007	E
	Beyond the Basics (Poster)	E/HC	2006	E,F
	Insulin -Things You Should Know	E/HC	2007	E
	Basic Carbohydrate Counting	E/HC	2007	E
	All about Carbohydrates	E/HC	2005	E
	Cholesterol and Diabetes	E/HC	2008	E
Pre-Diabetes	Are You At Risk?	E/HC	2007	E,F
	Pre-Diabetes: A Chance to Change the Future	E/HC	2009	E,F
Francais	Guide Pratique : La planification de repas sains en vue prevenir ou de traiter le diabete	E/HC	2005	F
	Le Diabete	E/HC	2005	F
	Quelques Faits - Le Diabete	E/HC	2006	F
	Prevalence et couts du diabete	E/HC	2005	F
	Methode simplifiee de calcul des glucides	E/HC	2005	F
	Gestion du diabete - L'essentiel sur le diabete de type 1	E/HC	2007	F
	Sucres	E/HC	2005	F
	Guide Pratique : La planification de repas sains en vue prevenir ou de traiter le diabete	E/HC	2005	F
	Sucres et edulcorants	E/HC	2005	F

Patient Education Materials Inventory

	Name of publication	Source	Available Formats	Revision Date	Language Available
Nutrition *Healthy Eating:*	Eating Out	SJHH	E/HC	2009	E
	Extras	NRDC	E/HC	2005	E
	Canada's Food Guide	HC	E/HC	2007	E, F, S, U, A, C, Fa, K, P, R, Tag, Tam
	Eating Healthy	SJHH	HC/E	2006	E
	Step Right Up	DCHC	HC	2007	E
	Healthy Habits Healthy Weight	H&SF	HC	2006	E
	Fast Foods and Eating Out	H&SF	HC	2008	E
	Eating Away From Home: Tips for Making Healthy Choices - Fast Food Websites	NRDC	HC	2007	E
	Meal Planning for Healthy Eating and Diabetes	NRDC	HC	2006	E
	Tips for Healthy Snacks	HFHT	E/HC	2007	E
	Healthy Eating Guidelines	NRDC	HC	2006	E
	Sodium and High Blood Pressure	NRDC	HC	2005	E
	Healthy Lifestyle For South Asians	HHS	HC	2008	E
	Healthy Eating for Diabetes	HHS	HC	2007	E
	Celiac Disease: Gluten-free Recipe Substitutions	HHS	E/HC	2008	E
	Diabetes and Gastro Paresis	HHS	E/HC	2008	E
	Food Labels - How Do I Read Food Labels	HHS	E/HC	2008	E
	Glycemic Index of Food	HHS	E/HC	2007	E
	South Asian Meal Planning	HHS	E/HC	2008	E
Nutrition *Low Fat:*	What's Fat Got To Do With It	NRDC	HC	2006	E
	Heart Healthy Eating To Improve My Cholesterol	NRDC	HC	2006	E
	Dietary Fat and Cholesterol	H&SF	HC	2009	E
Nutrition *Carb Counting:*	Carbohydrate Counting	HHS	E/HC	2008	E
	Insulin: Carbohydrate Ratio	HNDP	E	2007	E
	Carbohydrate Counting	NRDC	E/HC	2006	E
	Counting Carbohydrates at Your Favourite Restaurant	HHS	E/HC	2006	E
	Counting Carbohydrates in Your Favourite Recipes	HHS	E/HC	2007	E
	Restaurant Carb Counting	HNDP	E	2008	E

Patient Education Materials Inventory (continued...)

	Name of publication	Source	Available Formats	Revision Date	Language Available
Nutrition *High Fibre:*	Eating More Fibre	HHS	E/HC	2008	E
	Facts on Flax	NRDC	HC	2005	E
	Facts on Soluable Fibre	NRDC	HC	2008	E
Nutrition *Pregnancy:*	Breastfeeding Your Baby	HHS	E/HC	2008	E

General	Diabetes - Caring for Yourself	SJHH/ HHSC	E/HC	2009	E
	Diabetes - Resources to Help	SJHH/ HHSC	E/HC	2009	E
	Having an Outpatient Test or Procedure?	HNDP	HC	2005	E
	The Diabetes Wellness Guide	HNDP	E/HC	2008	E

Activity	Activity and Exercise	SJHH	E/HC	2005	E
	Exercise and Activity for Type 2 Diabetes	HHS	E/HC	2007	E
	Activity and Type 2 Diabetes	SJHH	E/HC	2009	E
	Chair Exercising and Weight Lifting	SJHH	E/HC	2009	E

Medication	Glyburide - Medication Information	HHS	E/HC	2007	E
	Metformin - Medication Information	HHS	E/HC	2008	E
	Pioglitazone - Medication Information	HHS	E/HC	2007	E
	Repaglinide - Medication Information	HHS	E/HC	2007	E
	Rosiglitazone - Medication Information	HHS	E/HC	2007	E
	Diabetes Pills	BCHS	E/HC	2008	E
	Getting Started With Insulin	HNDP	E/HC	2008	E
	Extended Long Acting Insulin	SJHH	E/HC	2007	E
	Intermediate Acting Insulin	SJHH	E/HC	2007	E
	Fast Acting Insulin	SJHH	E/HC	2007	E
	Action Times of Insulin	BCHS	E/HC	2008	E
	Insulin Injection Sites	BCHS	E/HC	2008	E
	Rapid Acting Insulin	SJHH	E/HC	2007	E

Patient Education Materials Inventory (continued...)

	Name of publication	Source	Available Format	Revision Date	Language Available
High Blood Sugar	High Blood Sugar	SJHH	E/HC	2007	E
	Keto-Acidosis: What Is It?	NRDC	E/HC	2006	E
Low Blood Sugar	Hypoglycemia: Guidelines For Treatment of Low Blood Sugar	BCHS	E/HC	2007	E
	Low Blood Sugar	NRDC	E/HC	2006	E
	Low Blood Sugar	HHS	E/HC	2007	E
	Low Blood Sugar	SJHH	E/HC	2009	E
Complication/ Prevention	Diabetes - Reducing Risks for Problems	SJHH/ HHSC	E/HC	2009	E
	How Do I Lower My Triglycerides?	NRDC	HC	2006	E
	How Do I Increase My HDL?	NRDC	HC	2006	E
	How Do I Lower My LDL?	NRDC	HC	2006	E
	Blood Pressure	SJHH	E/HC	2008	E
Kidney Disease	Managing Blood Sugar, Medication and Insulin after Kidney Transplant	SJHH	E/HC	2008	E
	After Kidney Transplant	SJHH	E/HC	2008	E
Foot Care	Diabetes - Foot Care	SJHH	E/HC	2009	E
Testing blood sugars	How to Get a Blood Sugar Meter	BCHS	HC	2007	E
	Blood Sugar Testing	SJHH/ HHS	E/HC	2009	E
Stress Management	Dealing with Stress	SJHH	E/HC	2008	E
	Stress and Diabetes	SOADI	HC	2008	E

Patient Education Materials Inventory (continued...)

	Name of publication	Source	Available Format	Revision Date	Language Available
Insulin Delivery Devices	Insulin Pump: Are You Ready To Pump?	HHS	E/HC	2005	E
	Luxura Humapen Instructions	BCHS	E/HC	2009	E
	Novolin Pen 4 Instructions	BCHS	E/HC	2009	E
	Lantus Auto-pen Instructions	BCHS	E/HC	2007	E
	Mixing Insulin from Cartridges	BCHS	E/HC	2007	E
	Mixing Insulin from Vials	BCHS	E/HC	2007	E
	Filling the Syringe from a Vial	BCHS	E/HC	2007	E
	Filling the Syringe from a Cartridge	BCHS	E/HC	2007	E
	Insulin Pump Information	NRDC	E/HC	2008	E
License Issues	Driving	SJHH	E/HC	2007	E
	Diabetes and Driving	HNDP	E/HC	2007	E
Alcohol/ Drug use	Diabetes and Alcohol	HHS	E/HC	2007	E
Sick Days	Managing Sick Days for Type 2 Diabetes	SJHH	E/HC	2009	E
	Managing Sick Days for Type 1 Diabetes	SJHH	E/HC	2007	E
	Managing Your Diabetes When You Are Sick	HHS	E/HC	2005	E
Gesta-tional Diabetes	Testing Instructions For Gestational Diabetes	BCHS	E/HC	2007	E
	Learning About: Nutrition and Gestational Diabetes	SJHH	E/HC	2006	E
	Learning About: Gestational Diabetes	SJHH	E/HC	2005	E
	Gestational Diabetes: Nutrition For Gesta-tional Diabetes	HHS	E/HC	2007	E
	Checking Your Blood Sugar When You Have Gestational Diabetes	SJHH	E/HC	2005	E
Insurance/ Financial	The Trillium Drug Program - How to Make it Work For You - The Facts	HNDP	HC	2006	E

Patient Education Materials Inventory (continued...)

	Name of publication	Source	Available Format	Revision Date	Language Available
First Nations	Nutrition and Diabetes	SOADI	HC	2008	E
	Step Up with Footcare DVD	SOADI	DVD	2008	E
	Physical Activity and Diabetes	SOADI	HC	2008	E
	Footcare and Diabetes in the Aboriginal Community	SOADI	HC	2008	E
	Childhood/Youth/Gestational Diabetes	SOADI	HC	2008	E
	Stress and Diabetes	SOADI	HC	2008	E
	What is Diabetes (First Nations)	SOADI	HC	2008	E
	Managing Diabetes	SOADI	DVD	2008	E

Traveling	Traveling with Diabetes	HNDP	E/HC	2007	E


wound care
multidisciplinary teams
CDPM management system
coordination
capacity building
self management
incorporate cultural diversity
If we could change one thing....
education
prevention
single point of entry
centralized referral
electronic health records
diabetes collaborative
resource centre
system redesign

Hamilton Niagara Haldimand Brant **LHIN**
RLISS de Hamilton Niagara Haldimand Brant

Ontario

Local Health Integration Network

Réseau local d'intégration des services de santé