WATERLOO-WELLINGTON DIABETES REGIONAL COORDINATION CENTRE

Inventory of Diabetes Services Report

Report to the MOHLTC Implementation Branch

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4/30/2011

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Executive Summary

The Waterloo-Wellington LHIN region is subdivided into 3 nodes for health service planning:

North/Centre Wellington
Guelph/East Wellington
Kitchener/Waterloo/Cambridge region.

Throughout the LHIN, there are currently 13 structured diabetes education programs and 7 other diabetes clinics offered through a variety of funding models. 5 programs are solely ministry funded community programs; 1 is jointly funded community and hospital funded; 4 are hospital global funded programs, and a number are Family Health Teams (FHT) funded through their primary care global funding. As well, there is 1 pharmacy that provides a structured diabetes education program and 1 complex diabetes management program that is supported through industry funding.

7 Family Health Teams (FHT) and 1 Community Health Centre (CHC) include different health professionals such as registered nurse, registered dietitian, nurse practitioner, and physician who provide diabetes care to patients with diabetes with a strong emphasis on prevention and health promotion (Level 1).

3 Community Health Centres[1], 2 FHTs, 1 Hospital-based Team and 1 Pharmacy provide structured diabetes education programs that include basic to intermediate level diabetes education and management with emphasis on counselling and self-management support, engagement of people with diabetes in shared decision making, planned interactions and active follow-up (Level 2). They are currently servicing 3341 clients with diabetes, with a capacity for an additional 10,000 clients, based on the established benchmark of 1 team/1000 clients.

Five hospital-based diabetes education centres provide access to specialist expertise for the most complex patients with diabetes (Level 3). They are currently servicing 6,558 clients, with a capacity to see an additional 507 clients, based on the established benchmark of 1 team/750 clients.

There was 100% response rate from the inventory of services, although many programs were unable to provide accurate statistics with respect to the volume of clients they are serving. The following key findings were identified:

Need for:

- common data collection
- improved navigation of system
- role definition of programs
- improved distribution of patient load

[1] Discrepancies were identified between qualitative and quantitative findings. Information was gathered through site visits.

- monitoring of wait-times
- increased awareness/marketing of diabetes education program
- need for community programs to expand programs to include insulin starts for Type 2 diabetes
- need for extended hours; after hours support/on-call support

The inventory of services provided valuable insight to the Regional Coordination Centre (RCC) for identifying priorities in system planning for diabetes care in the region.

Purpose of Inventory

Aligned with the Ontario Diabetes Strategy, the goal of the inventory was to determine the current state of diabetes resources and scope of practice, and to identify gaps and redundancies in services provided to people living with diabetes in the Waterloo Wellington Local Health Integration Network (WW LHIN).

Methodology

Mixed methodology was used including qualitative (interview) and quantitative design.

Instrument design

The questions were developed by a number of RCC leads. Questionnaire content was reviewed by Waterloo Wellington RCC staff. The final survey version was available in December 2010.

The survey content included questions about (1) program structure: contact information, organization type, funding sources; (2) program/services description; (3) access, barriers, referral, follow-up monitoring; (4) outreach services; (5) partnerships; (6) information management; (7) research capacity; (8) potential challenges/gaps and, (9) strengths, innovations & successes.

Sample and data collection

A sample of 20 organizations that are currently providing diabetes education and care to people with diabetes in the Waterloo Wellington area were selected. It includes Family Health Team (FHT) (n=9), Acute Care Hospital-based (n=6), Community Health Centres (n=4) and Pharmacy (n=1). In December 2010 survey packages were mailed to the diabetes program administrator of each of the 20 organizations with a cover letter from the Diabetes Regional Coordination Centre and a glossary of terms. A self-addressed stamped envelope for returning the completed surveys was included. To facilitate response to the survey, respondents also received an e-mail invitation including the link to complete survey on-line (Survey Monkey).

Data analysis

Data was entered into a database and analyzed using IBM SPSS Statistics version 19.0.
Descriptive analysis was conducted using the three level population stratification pyramid, for diabetes care:

- Level 1: Primary care focusing on health promotion and disease prevention
- Level 2: Intermediate care focusing on diabetes education and management for Type 2 diabetes
- Level 3: Complex diabetes care and management

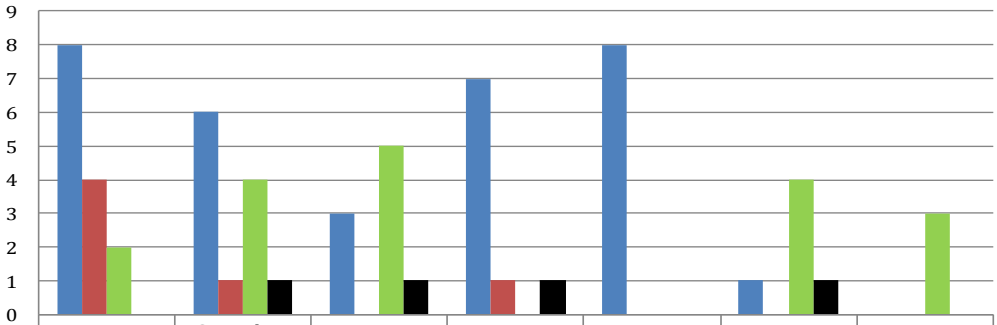
Response rate

The overall response rate was 100% (20/20). Of these 20 organizations, 18 were fully completed surveys. The remaining 2 were returned partially completed. Only completed (18) surveys were included in the analysis.

Description of Services Provided

In the WW LHIN, all program/services are multifaceted in nature, involving at least 3-4 interventional components in various combinations. In smaller communities, there is a more defined role for diabetes education programs, but in larger communities, the roles of each program are not well defined.

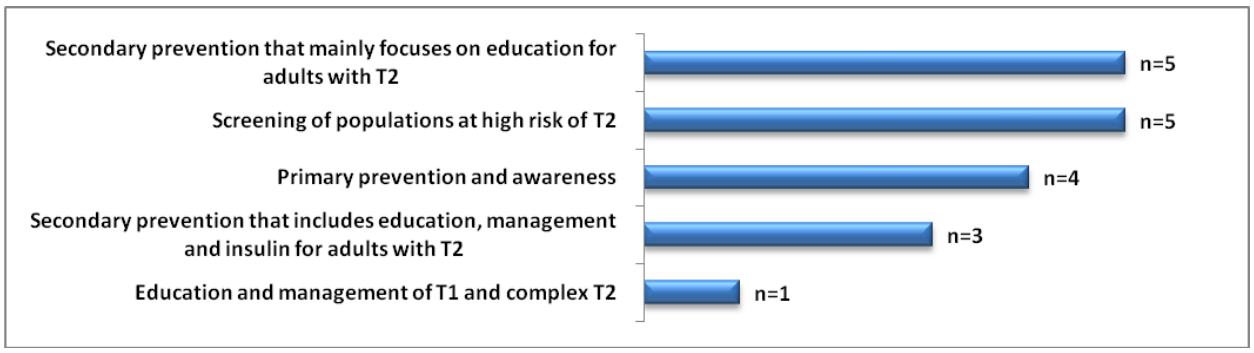
The following chart demonstrates the type of diabetes care provided as identified by each organization:



	Secondary prevention that mainly focuses on education for adults with T2 diabetes	Secondary prevention that includes education, management and insulin for adults with T2 diabetes	Education and management of T1 and complex T2 diabetes	Primary prevention and awareness (general population	Screening of populations at high risk of T2 diabetes	Education and management of gestational diabetes	Education and management of T1 and T2 diabetes with pregnancy
FHT	8	6	3	7	8	1	0
CHC	4	1	0	1	0	0	0
Acute care/hospital based	2	4	5	0	0	4	3
Pharmacy	0	1	1	1	0	1	0

LEVEL 1: Primary Care: Health promotion/prevention

Key service components provided by diabetes educators of the family health teams include:

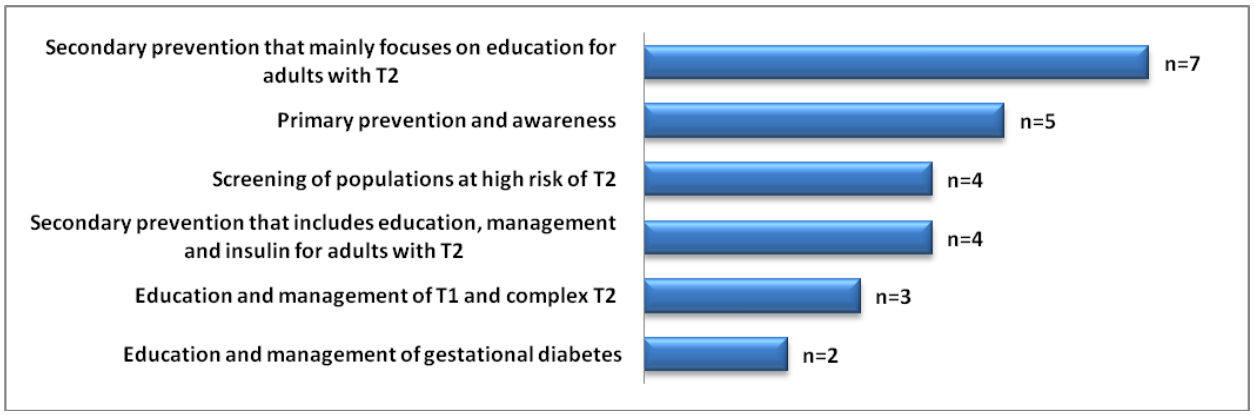


LEVEL 2: Intermediate diabetes care/management

Diabetes programs currently provide service (Level 2) to approximately 3,341 people with diabetes. Secondary level services are provided by a nurse/dietitian team through group and individual approaches. The majority of programs offer group classes as well as individual counselling to people at high risk of type 2 diabetes, pre-diabetes, type 2 diabetes on lifestyle management, and type 2 diabetes on insulin and/or oral medication.

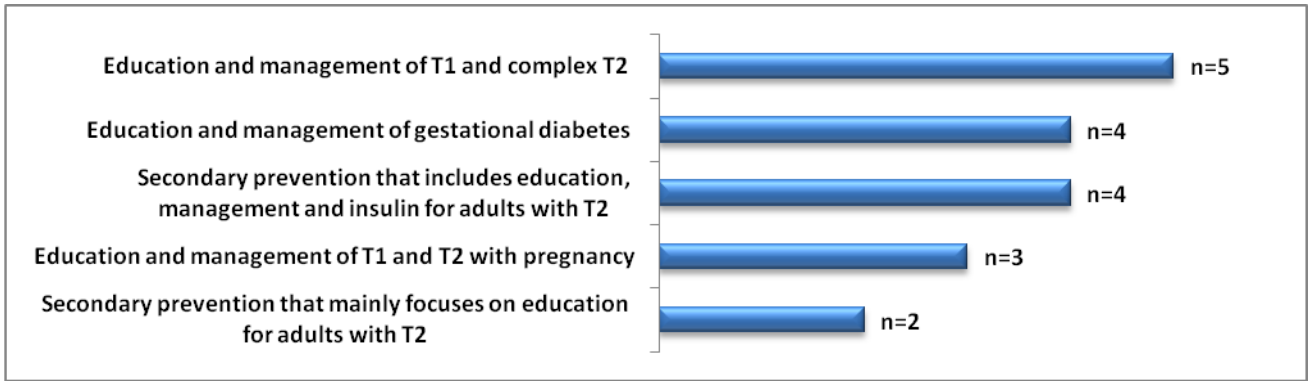
There are 4 programs (50%) which provide services to clients with type 2 diabetes who require insulin initiation. Also four programs (50%) offer individual and group sessions to clients with steroid induced diabetes and type 1 diabetes. There are two programs which provide services to clients with gestational diabetes and one program that offer education to clients with type 1 diabetes on insulin pump therapy , type 1 and type 2 with pregnancy, and who require pre-conception care as individual counselling.

The following figure shows the distribution of services provided by the intermediate diabetes care/management teams, Level 2:



LEVEL 3: Complex diabetes care

There are five diabetes hospital-based education centres that provide intermediate as well as complex diabetes care. The key components of the services include:



Access to service

Referral system: Each diabetes program has its own referral form and 50% of programs identified that they will accept self-referral. In the Kitchener/Cambridge area, there is a triage system that is followed by the hospital programs and the ministry funded community programs where the referrals are funnelled through the hospital programs, and for those patient with an A1C <8%, or newly diagnosed, their referrals are sent to the community programs. The community programs in this region send all their referrals with pre-diabetes to the CDA to provide education. In Centre/North Wellington, all referrals are sent to the Diabetes Education Centre for initial teaching. They are referred back to the FHTs for follow-up based on triage criteria. In Guelph, referrals are directed to either the Diabetes program at the FHT, or the Endocrinologist/specialist office. Guelph hospital continues to see gestational diabetes and inpatients.

Wait times: On average, non-urgent clients had a 24-day waiting period for their first appointment with a diabetes educator (range = 0 to 185 days). Waiting period for recent treatment for DKA/nonketotic hyper-osmolar hyperglycemia or severe hypoglycemia was 6 days with maximum of 28 days. Based on twelve responses, the average number of days clients with uncontrolled diabetes (BG>20mmol/l) spent waiting to access program was 5 days (range=0 to 30 days), 3 days for clients who were in crisis that affects the client's ability to manage their diabetes and 4 days for women with gestational diabetes.

Extended hours: All programs have regular Monday to Friday hours with some evening hours. Aside from one program (Pharmacy based) that has after-hours access, there are no services on weekend and statutory holidays. Eighty nine percent (16/18) of programs provide follow-up services via phone or internet, mostly during regular business work hours. Two programs reported having telephone support after regular hours.

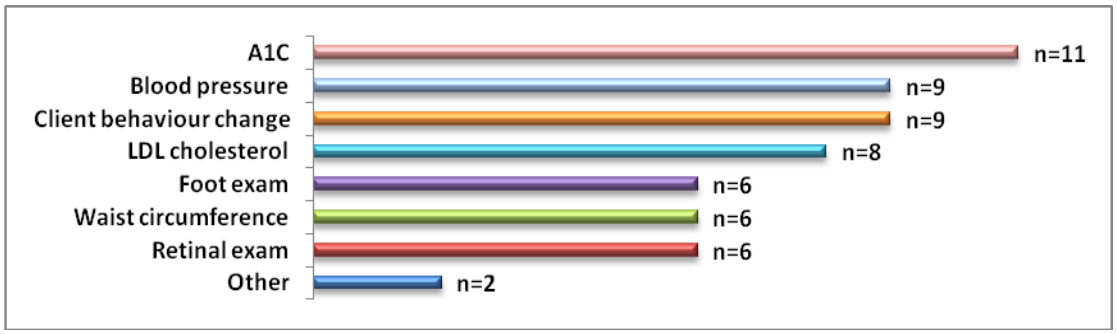
Parking/Transportation: All diabetes program/services in the Waterloo-Wellington LHIN have parking available for their clients: 83% (15/18) of programs have free parking, 89% (16/18) wheelchair transit and 78% (14/18) are accessible by public transit.

Capacity

The most common diabetes teams consist of a nurse and dietitian who are responsible for providing diabetes education and management to approximately 11,000 people with diabetes. With the established benchmark for staffing of 1 team: 1000 clients for community programs and 1 team: 750 clients for complex programs, there is currently capacity for an additional 11,000 clients, based on the results of this survey. There is no consistency in data-collection, so this capacity is an approximate calculation based on the information provided.

Clinical indicators used for evaluation

Overall, sixty seven percent (12/18) of respondents reported that they evaluate their performance using clinical indicators. The main ones are listed below.



Outreach

Six out of 12 programs indicated providing outreach services to the communities. Most of these services are activities in senior's centres and retirement homes on a scheduled or occasional basis. Staffs travel to a variety of rural communities to provide the outreach service.

The frequency of outreach service delivery ranges from once a week to once every other month as described in the following table:

Organization	Frequency	Response Percent	Response Count
Community DEP	About once a week	16.7%	1
FHT Team	About once a month	33.3%	2
FHT Team	About twice a month or more	16.7%	1
FHT Team	About once every other month	33.3%	2
		answered question	**6**
		skipped question	**12**

Partnerships

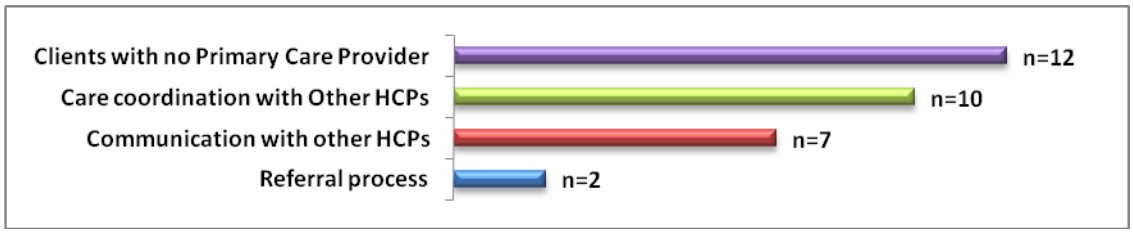
Approximately 94% (17/18) programs have developed partnerships and collaborations with other community programs. A few examples of initiatives include partnerships with the CDA; OTN; YWCA Exercise Initiative, Cambridge Cardiac Rehabilitation, Fairview Mennonite Retirement Home.

EMR

Some diabetes program/services already have, or are in process of developing, electronic medical systems. Amongst those who participated in the inventory, 72.2% (13/18) reported having an EMR in place. As illustrated through the inventory, varying data collection methods and computerised software make it difficult to make comparisons between diabetes program/services. The majority of FHTs (8/13) use Practice Solutions EMR software whereas the remaining programs use other systems such as Purkinje, Meditech, McKesson and Jonoke Med.

Barriers

The following chart demonstrates barriers identified by all programs:



Summary of findings

Diabetes education programs are geographically dispersed well amongst the region, with outreach to rural communities allowing for good access to programs. Based on the benchmark for staffing, there is ample capacity for programs to increase their volume of patients, yet there are considerable wait times at some programs.

There is not a clear understanding of the roles for each diabetes program, with the hospital programs continuing to see the bulk of the diabetes population. There are 14 FTE teams with the community funded programs, compared to 9.9 FTE teams with the hospital programs, yet the community programs are only seeing 34% of the client volume. 50% of the community diabetes programs are not initiating insulin for Type 2 diabetes.

Data collection, such as # of clients served, # of visits, # of incoming referrals, was very difficult to capture, as there is no consistency with processes or systems.

Up to 86% (12/14) of respondents identified that they have challenges with clients that have no primary care provider, and 64.3% (9/14) identified that care coordination with other health care providers is a challenge.

Future plans

Additional surveys are in progress for pharmacists, primary care physicians, foot care specialists, ophthalmologists/optometrists and dentists, to capture additional information regarding diabetes services in the region. Focus groups of patients are also planned.

The results of this inventory have already identified key priorities for system planning for the region. A task force is underway to develop a common referral form with central intake to streamline the referral system. Triage criteria is being developed along with standards for wait-times based on the CDA *Standards of Care for Diabetes Education Centres*. Roles for each diabetes program are being defined to evenly distribute the patient load. A common data-collection tool is being created for all programs to collect data consistently. Marketing of diabetes education programs will be a focus along with the launch of the central intake to increase access to programs.

Opportunities for education and mentoring are being planned to support the community programs in enhancing their knowledge base around insulin initiation and management. Additional outreach support is being planned to extend diabetes services to a broader population.