Toronto Central Referral Service (TCRS) Evaluation

April 1, 2014 – March 31, 2015

Prepared by Carla Palmer Consulting
With the support of Lori Sutton & Shannon Wiens, SRCHC

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Toronto Central LHIN Diabetes Program

Hosted by

South Riverdale COMMUNITY HEALTH CENTRE

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Introduction and Background

In the spring of 2015, the Toronto Central Diabetes Program reflected on the work of the Toronto Central Referral Service (TCRS)[1] and its progress over the past few years. Given the changes in the service, a decision was made that it was time to evaluate its challenges and successes to date. As a result, South Riverdale Community Health Centre (SRCHC) as the host agency embarked on an evaluation process.

The objectives of the evaluation of the TCRS are to describe the use of the service from April 1, 2013 to March 31, 2015, to measure satisfaction of service users, and to obtain feedback to inform future development and expansion.

The responsibilities for regional coordination of diabetes services were transferred to the Local Health Integration Networks (LHINs) February 1, 2013. In the Toronto Central LHIN, this included funding to SRCHC to host and maintain the TCRS.

The TCRS's objective is to increase access to team-based care by simplifying a person's ability to find the right diabetes program to meet their individual needs considering type of diabetes, location, culture, and language.

According to the 2011 Shadow Central Referral System Report, prior to the implementation of the Shadow Central Referral System on June 1, 2011, the process to refer to a Diabetes Education Program (DEP) was quite complicated. The lack of a central referral process left primary care providers confused as to where and how to refer individuals. In addition, the report noted that there was a general lack of provider awareness regarding the scope of practice of the various DEPs and the option to access programs in the location, culture or language of choice to best meet the clients' needs.

The Toronto Central Referral Service provides a processs to support Primary Care Providers who don't know where to send patients for appropriate diabetes education, while still supporting the essential partnerships already established and working between Primary Care Providers and programs to which they refer directly.

The facilitation and growth in self-referral is also a goal.

The TCRS was presented as a solution to support Primary Care Providers who did not know where to send patients for appropriate diabetes education, while still supporting the ongoing, effective partnerships between Primary Care Providers and programs to which they refer directly. An outreach function was added to support the facilitation of and growth in referrals from other healthcare professionals, community organizations, and people with or at risk of Type 2 Diabetes. The TCRS continues to co-exist alongside the option for providers to refer directly to DEPs.

[1] The Toronto Central Referral Service has previously been referred to as the Toronto Central Diabetes Referral Service and the Shadow Centralized Referral System.

Despite clear recommendations from the Canadian Diabetes Association (CDA) Clinical Practice Guidelines for all individuals with diabetes to receive inter-professional team-based care (Clements et al., 2013), and the creation of the TCRS, many individuals with Type 2 Diabetes are still not accessing diabetes education programs. A recent study published in BMC Public Health (Cauch-Dudek et al., 2013) shows that only 1 in 5 people with diabetes in Ontario attend DEPs. In order to help TCRS support DEP utilization a number of quality improvement initiatives have been implemented since the fall of 2012 including:

1. Development and implementation of outreach initiatives to increase provider and client awareness of both diabetes programs and the TCRS. In summary, 45 initiatives reached over 3,000 health care providers:
    - 2,198 physicians were mailed information about central referral services, and 141 were reached at workshops or other presentations; and,
    - 1,129 other health care providers were reached at various continuing education events.

    Other initiatives to increase referrals included developing referral pads for primary care providers and linking the TCRS website with those of other organizations (e.g. Toronto Public Health).

2. Service changes to support access to the right type of diabetes related care, in the right place and in the right language and cultural context which included:
    - Expansion of the services supported by the central referral service to include:
        - Diabetes Prevention Programs;
        - Tele-ophthalmology Screening; and,
        - Diabetes Education Programs.
    - Addition of new referral sources such as Eat Right Ontario and Toronto Public Health.

3. Referral form and process changes to:
    - Increase the ease of use for all referral sources including clients who self-referral, health care providers and community organizations;
    - Include online access and referral forms that could be uploaded into electronic medical records; and,
    - Include an insulin order set to support the care of clients requiring insulin management.

4. Database revisions to improve efficiency of the referral process and the extraction of data to support both collaborative outreach and quality improvement.

These initiatives and service changes are detailed in Appendix 1. The timing of these initiatives in relation to the number of referrals and the number of referral sources is illustrated in Figure 1 and in relation to the use of online referral in Figure 6.

Referrals to Diabetes Prevention Programs (DPPs) started in October 2014. Only three referrals were received in the first six months. An objective for the 2015-2016 fiscal year is to increase these referrals through planned outreach activity involving the public and continued improvements to the DPP referral process (e.g. online referral).

Evaluation Process and Methodology

The TCRS evaluation covers the period from April 1, 2013 to March 31, 2015. This evaluation set out to:

- Describe the use of the central referral service by the volume of referrals, type of referral, type of referral source, and level of satisfaction with the referral process of primary care providers and other individuals using the service;
- Measure the impact of the quality improvement focused activities mentioned above;
- Identify changes that are needed to improve access, usability and satisfaction, and to better meet the needs of individuals living with or at risk of Type 2 Diabetes;
- Identify changes that could increase the efficiency of the TCRS; and
- Engage stakeholders in the evaluation process and thereby increase the awareness of potential referrers regarding both the TCRS and the services it supports. This engagement process is described below in the section on Service User Experience and Satisfaction.

The overall purpose of the TCRS evaluation was to describe the utilization of the Central Referral Service, and to get feedback and suggestions for its improvement. The methodology was developed to ensure that the indicators and measures aligned with the aims and objectives of the service. Indicators and measures for user satisfaction are new and assumptions about factors affecting satisfaction were developed for providers as stated in the evaluation framework, and for clients as stated in algorithms, which are available in Appendix 2.

It is important to note that participation in this evaluation was voluntary and therefore the sample of respondents was not representative of all service users. As a result, the feedback collected, although useful to help inform future discussions and improvements, cannot be generalized to all stakeholders.

Evaluation Goals:

1. To determine to what degree the service objectives are being met as measured by a description of volume and type of referrals and by overall usability and satisfaction of referring sources with the website/referral process, referral form and insulin order set.
2. To identify changes that are needed to improve access, usability and satisfaction.
3. To identify changes that could streamline the referral process.

Evaluation Components:

1. Service User Experience/Satisfaction

Survey questions were developed based on the evaluation framework and algorithms that were drafted to explore the perceived decision-making and subsequent action required by referral service users or potential users in order to refer to diabetes programs.

Clients

- Those who self-referred were called and interviewed by phone.
- A sample of those who had been referred to the Diabetes Education Program by someone else participated in one of three focus groups.

Health Care Providers

- Physicians, nurse practitioners and pharmacists, were targeted for their potential to refer high numbers of clients and to provide feedback on the insulin order set.
- Additionally, key community organizations were included for their potential to connect clients to DEPs. Specifically, the individuals listed below were reached through their associations and organizations who were asked to e-mail the evaluation survey to the providers associated with them included:
    - Nurse Practitioners (NPs) in the Toronto area through the Nurse Practitioner Association of Ontario;
    - Providers associated with Eat Right Ontario (ERO), Toronto Public Health (TPH), Canadian Diabetes Association (CDA), the Toronto Community Care Access Centre (TCCAC), and Woodgreen Community Centre;
    - Providers working in Diabetes Education Programs, Diabetes Education Centres (DECs) and Diabetes Prevention Programs (DPPs);
    - 3 pharmacists were contacted and asked to forward the evaluation to their peers; and,
    - Physicians at Community Health Centres (CHCs), Family Health Teams (FHTs) and those registered in the Access Alliance Solo Practitioners in Need (SPiN) program.

  The numbers reached or who viewed the e-mail are unknown.

2. Service Statistics Review

The service statistics cover the period April 1, 2013 – March 31, 2015 which reflects the period of time since the TC LHIN Diabetes Program assumed funding responsibility for the Centralized Referral Service.

A framework was developed to align indicators with measures, and to describe the method of acquiring the data.

Table 1. Evaluation Framework for Service Utilization Statistics

Indicator and Rationale	Measure and Rationale	Methodology
Provider awareness, access and usability	a) # of total referrals (increase indicates positive experience) b) # of providers who have discontinued using the service (increase may indicate negative experience) c) increase in # of unique referral sources d) new referral source types (e.g. TPH, ERO)	a), c) and d) - pull numbers, describe by type of provider, area of TC LHIN, type of org practice b) pull numbers, assess if can eliminate any decrease due to beginning direct referral, moving or ceasing practice
Client access to care	a) percent referrals from other LHINs b) percent referrals that are insulin-related c) number of clients without a family doctor	a), b), and c) – pull numbers and describe accordingly
Population health through equitable access	a) number referrals for francophone and aboriginal populations	a) pull numbers
Referral process in website provides access to referral information and tools, and is easy to use	a) number of website hits, b) average number of pages reviewed, c) average length of time of visit	a), b), and c) pull numbers from website analytics

Evaluation Results: Service Statistics

Referral Volume - Diabetes Education Programs

Between April 1, 2013 and March 31, 2015, 513 unique referral sources sent a total of 3,357 referrals to DEPs through the TCRS. There was a 61% increase in the number of referrals in the final quarter of 2014-15 (519) compared to the first quarter of 2013-14 (322)[2]. Compared to the Shadow System Evaluation in December 16, 2011, this is a six fold increase in number of referrals, from 472, and a threefold increase in the referral sources, from 129.

In the past 2 years, the Toronto Central Diabetes Central Referral System processed 3,357 referrals from 513 unique referring sources. This is a six fold increase in referrals and threefold increase in referral sources since the Shadow Referral System Evaluation, Dec 16, 2011.

Self-referral was first enabled in August 2013 through adding mail-in, online and telephone options for individuals living with diabetes. A total of 37 individual clients have self-referred to DEPs through the TCRS from August 2013-March 2015, most occurring in 2014/15.

Changes in the referral volume and number of referral sources between April 1, 2013 and March 31, 2015 are detailed in Figure 1 on the next page. This chart also shows the progression of referrals and referral sources in relation to the initiatives to engage stakeholders and to improve the referral service.

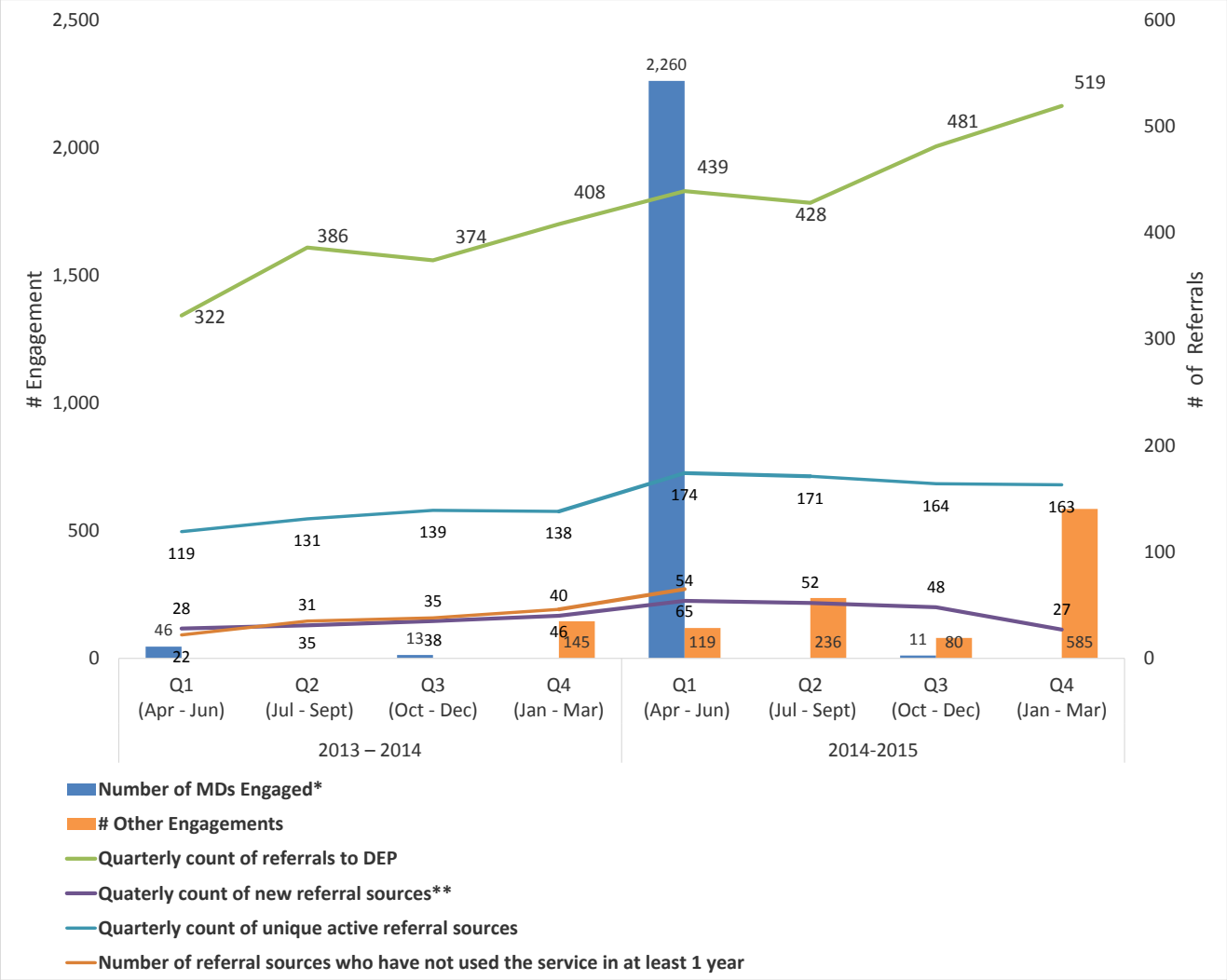
There has been an overall steady and significant increase in usage of the service with apparent surges at the start-up of the TCRS in the first quarter of 2013-2014 fiscal year (20%) and after process improvements in the second quarter of the 2014-2015 fiscal year (12%).

From April 1, 2013 to March 31, 2014, 206 physicians who previously used the TCRS had not made a referral within the last year; 65 of those had referred 10 or more patients over that period. Feedback from some of these physicians is detailed later in this report.

[2] Figure 1 shows the number of referrals per quarter highlighting previous outreach initiatives and serviced changes.

Figure 1. Number of Referrals and Referral Sources *(Apr 1/13 – Mar 31/15)*

Highlighting Outreach Initiatives and Service Changes



*** This activity involved sending a mailing to over 2,000 physicians that included information about the DEP and the central referral too**
**** The new referral source types include Diabetes Prevention Program, CCAC, Eat Right Ontario, Toronto Public Health, and the Canadian Diabetes Association Virtual Branch**

CRS Service Changes:

1	**Q2: Jul-Sep 2014**	**On-line form launched (DEP)** **Tele-ophthalmology form added** **DPP referral centralized**
2	**Q3: Oct-Dec 2014**	**DECs included using CRS to connect individuals to T2DM/Prediabetes/DM Prevention support in the DEC cor**
3	**Q4: Jan-Mar 2015**	**Website revised (including on-line forms)** **Process revised to include standard process for selection of destination DEPs in other LHINs**

For details of DEP referrals processed by TCRS, by gender, age and diagnosis see figures 2, 3, and 4 respectively.

Interestingly 54% of all DEP referrals were females compared to 45% males. In figure 3, over 50% of referrals are for individuals between the ages of 50-69, in relation to the reported prevalence of diabetes in this age group at 58% (PHAC, July 2011, using 2008/09 data).

Figure 2. DEP Referrals by Gender *(Apr 1/13 - Mar 31/15)*

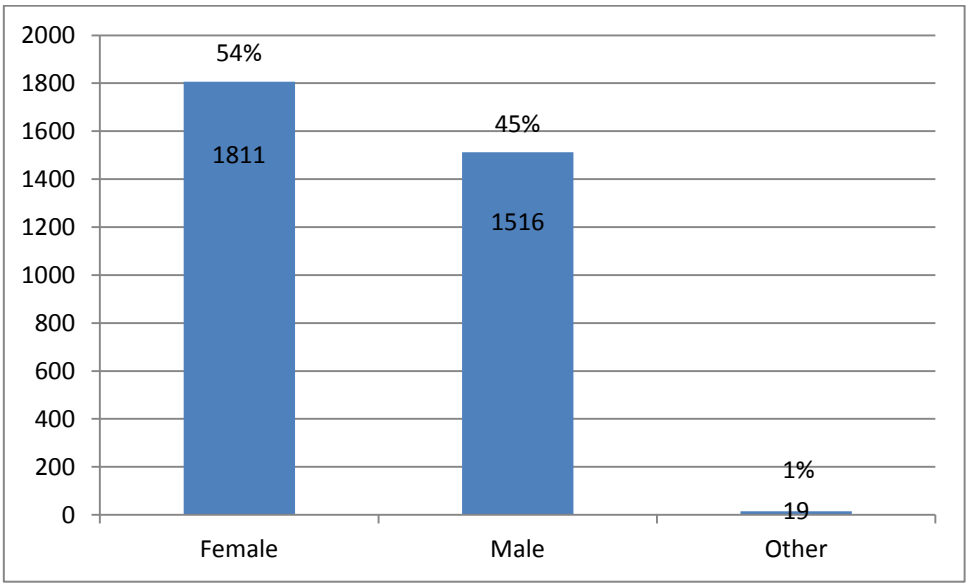
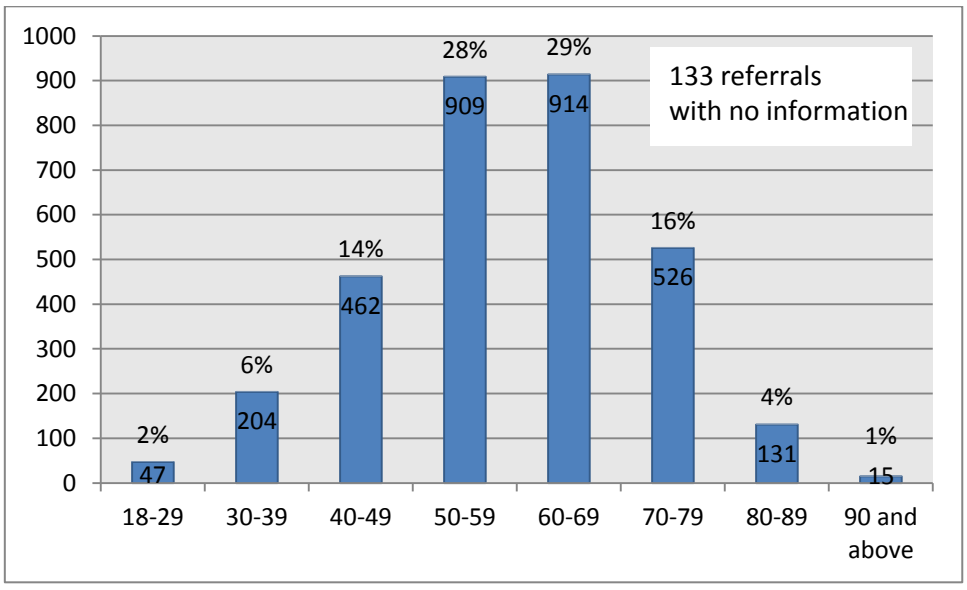


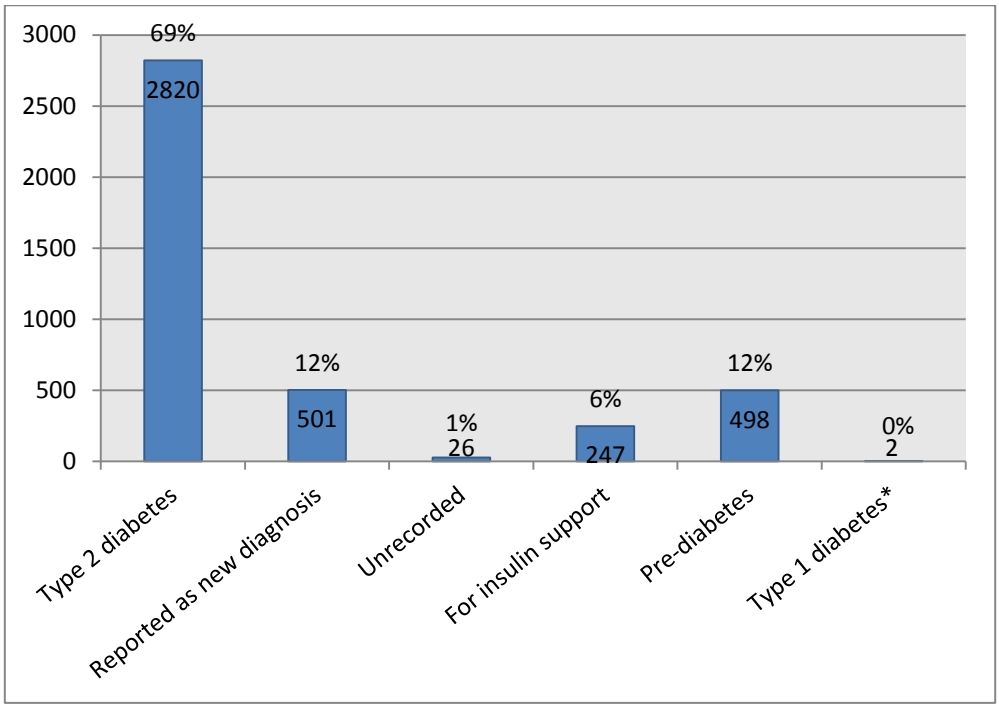
Figure 3. DEP Referrals by Age *(Apr 1/13 - Mar 31/15)*



In figure 4, as per the primary care provider selection on the referral form 69% of DEP referrals are for Type 2 Diabetes, 12% for new diagnosis, 6% were insulin support and 12% were for Pre-diabetes. Given the focus of DEPs is Type 2 Diabetes and Pre-diabetes, these trends make sense.

Figure 4. DEP Referrals by Diagnosis as Per Referral From Selection

(Apr 1/13 – Mar 31/15)



∗ TCRS is designed for referral of Type 2 Diabetes. Referrals for Type 1 Diabetes are uncommon but are referred to an appropriate specialist.

Destination of Diabetes Education Program (DEP) Referrals by LHIN

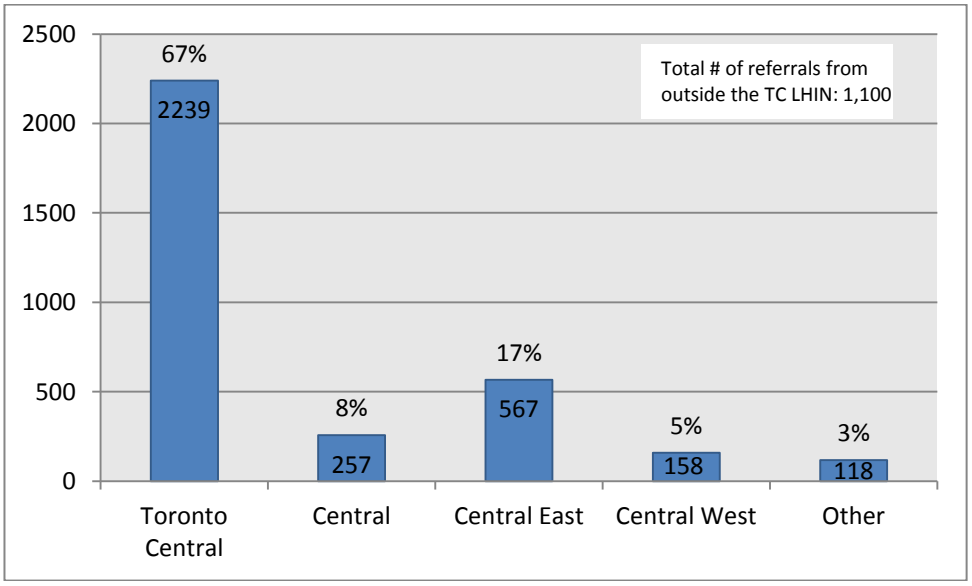
The majority of DEP referrals processed by the TCRS (67%) are directed to DEPs in the TC LHIN. However, a third (33%) are directed to DEPs in other LHINs (see Figure 5).

Between April 1, 2013 and March 31, 2015, referrals were directed to 20 DEP sites inside the TC LHIN and 60 DEP sites outside the TC LHIN, as shown in Figure 5. The number of DEPs exceeds the number of organizations providing diabetes education programs since some organization have multiple DEP sites. See Figure 5 for referrals by LHIN; and Appendix 3 for details by LHIN and DEP).

The experience of cross-LHIN referrals is a good example of LHIN boundaries not affecting the quality of care provided to clients who need to access programs closer to their area of home or work.

Referrals directed to DEPs in other LHINs were processed using the central referral service in the appropriate LHIN when available and known to the TCRS (e.g. Central East, Champlain, Mississauga Halton, and Waterloo Wellington LHINs).

Figure 5. Destination LHIN of TCRS`DEP Referrals (Mar 1/13 – Apr 30/15)



Access to Service Challenges Indicated on TCRS DEP Referral Form

On the referral form, referrers have the option to indicate any client access challenges of which they are aware. Access to service challenges were identified in 316 of the 3,346 referrals, a total of 9.4%. In some cases, more than one issue was identified. These challenges are listed in Table 2. It is interesting to note that almost 40% of clients for whom service challenges were indicated had mental health challenges and 25% had mobility issues.

While TCRS tracks these statistics it is not known how reliably they are reflecting the access challenges of the population. It is likely these numbers under-represent the access to service challenges since this section of the referral form is often not completed, and the TCRS is not capturing data related to those clients who are referred directly to DEPs by primary care providers. Also, access to service challenges is not included on the DPP referral form at this time.

The collaborative outreach component of the TCRS plays an important role in working with diabetes and community programs to reduce the barriers to access. For example, staff at various community programs informed a number of clients about the diabetes programs and assisted them to complete the self-referral form.

The outreach component of the TCRS aims to build relationships with the providers and community programs to help reduce barriers to access.

Table 2. Access to Service Challenges Selected on the DEP Referral Form *(Apr 1/15 – Mar 31/15)*

Access to Service Challenges	# clients	% of service access challenges by type
Mental health challenges	118	37
Mobility issue	81	26
No primary care provider	35	11
Non insured	34	11
Substance use	19	6
Homelessness/housing issue	17	5
Developmental challenges	12	4
Total	**316**	

Diabetes Education Program (DEP) Referral Sources

In the period between April 1, 2013 and March 31, 2015, 513 unique health care providers made referrals and 37 individuals self-referred through the TCRS as shown below.

Of the 37 clients who self-referred through the central referral service,

- 21 (57%) were female;
- 29 (78%) had Type 2 Diabetes;
- 8 (22%) had pre-diabetes;
- 35 (95%) spoke English;
- 22 (59%) had addresses in the Toronto Central LHIN;
- 12 (32%) had addresses in the Central East LHIN; and
- 1 each was from the Central, Central West and Mississauga Halton LHINs.

The greatest number of referrals came from primary care providers (359 or 70%) and hospitals, including Diabetes Education Centres (DECs) (109 or 21%). Other referrals came from a number of other sources as listed in Table 3, on the next page.

Of the 359 referrals from primary care providers: 351 (98%) were physicians with specialty unspecified; 3 (0.8%) were endocrinologists; 3 (0.8%) were registered nurses; and 2 (0.6%) were registered dietitians.

Of the 109 referrals from Hospital/DEC: 65 (60%) were physicians (42 with specialty unspecified, 20 endocrinologists, 2 nephrologist, and 1 gastroenterologist); 20 (18%) were registered nurses; five (5%) were registered dietitians; one (1%) was a pharmacist, and 18 (17%) were unspecified.

Table 3. DEP Referral Source Type *(April 1/13 – March 31/15)*

Referrals Source Type	**#**	**%**
Primary care	359	70
Hospital/DEC	109	21
DEP	7	1.4
DPP	7	1.4
Pharmacy	4	0.8
Other: Eat Right Ontario Canadian Diabetes Association Toronto Public Health	17	3.3
CCAC Case Manager	5	1
Other LHIN Central Intake/Referral Services - CECCAC Central Intake (2) - Mississauga Halton (1)	3	0.6
Unknown	2	0.4
Total :Provider Referral Sources	**513**	93
Total: Client Self-referral	**37**	7
Total	**550**	

Referral Processing Efficiency

The average time per referral for administrative processing is now 4 minutes, compared to 8 - 12 minutes per referral stated in the 2011 report. The referrals are processed in dedicated blocks of time each day.

The database and referral processing were made more efficient in Q2 2014-15 by referrals being entered into the database right away. From the database, the letter to the DEP and the confirmation letter to the referral source are populated automatically. The cover letters are then printed and faxed with the referral. Ongoing efforts will focus on continuing to streamline the referral process and will include further revisions to the database as required.

Typically, it currently takes 1 business day from the time of receipt of the referral to the transmission of the referral to the DEP. The program standard is for referrals to be made to the DEP in no more than 2 business days following receipt.

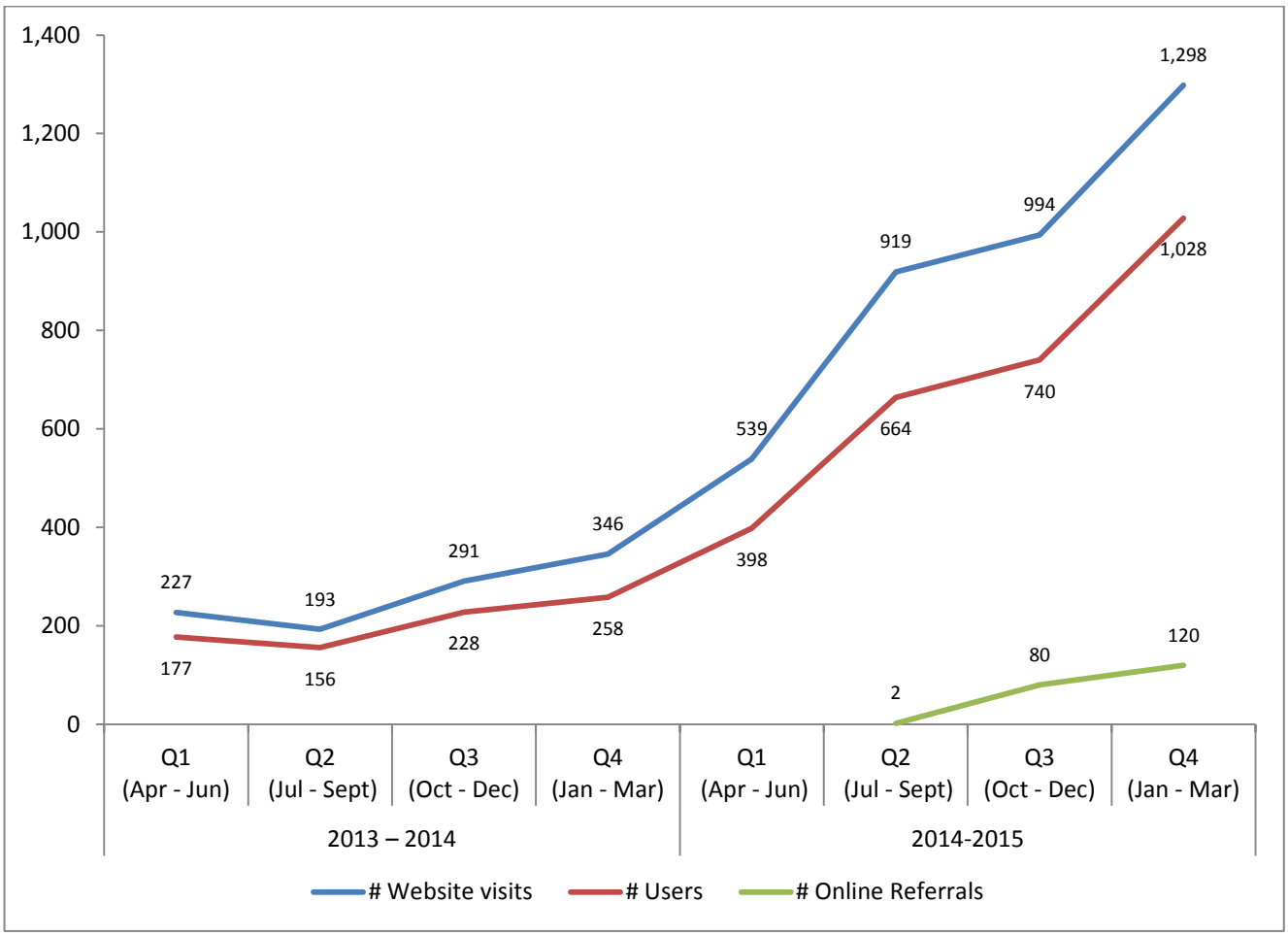
The steps of the central referral process for clients referred to DEPs in the Toronto Central LHIN, from the receipt of the referral to the transmission of the referral to the appropriate DEP are outlined in Appendix 4.

A main focus for improving referral efficiency was website improvement and development of an on-line referral option. These changes appear to have had a significant effect on the visits to the website and the use of the online referral form as indicated below in Figure 6. The website drew the attention of a significant number of users, resulting in a total of 4,807 visits by 3,649 unique URL addresses over the 2 year evaluation period[3]. Over this same time period, the number of visits per quarter had increased from 227 to 1,298 (a 572% increase) and the number of users per quarter had increased from 177 to 1,028 (a 581% increase). There were no website usage statistics in the 2011 Shadow Report for comparison purposes.

Website improvement and development of an on-line referral option had a significant effect on access to on-line referral: the number of visits per quarter increased by 572%; and the number of users per quarter increased by 581%

[3] In some cases one individual may use more than one address, or a number of people may use one address.

Figure 6. Website Statistics and Online Referrals per Quarter *(Apr 1/13 – Mar 31/15)*



CRS Service Changes:

1	Q2: Jul-Sep 2014	On-line form launched (DEP) Tele-ophthalmology form added DPP referral centralized
2	Q3: Oct-Dec 2014	DECs included using CRS to connect individuals to T2DM/Prediabetes/DM
3	Q4: Jan-Mar 2015	Prevention support in the DEC common work plan Website revised (including on-line forms) Process revised to include standard process for selection of destination DEPs in other LHINs

In July 2014 the online DEP referral form was launched. In November 2014 and January 2015 respectively the Canadian Diabetes Association (CDA) and Eat Right Ontario (ERO) began using the referral form. From January to March 2015, improvements were made to the website and by the end of the evaluation period 202 on-line referrals had been submitted with 120 of those in the last quarter (January 1, 2015 to March 31, 2015).

Evaluation Results: Stakeholder Feedback

Feedback was sought from the clients, the providers who use the TCRS, the providers who do not use the service, and the providers who stopped using the service over the preceding 12 month period.

Feedback from People who Self-referred to Diabetes Programs

12 of the 37 individuals who self-referred were interviewed by telephone to get their feedback. Of those:

- 9 of the 12 remembered on whose suggestion they used the service. Of those 5 (56%) used the TCRS based on a suggestion by a professional care provider. The others reported hearing about the service from family, friend or hospital. The following were cited specifically: family doctor; a dietitian from Toronto Public Health; a public chat on TPH website, the Women's Health in Women's Hand DEP; the Parkdale DEP; Eat Right Ontario; the Black Diabetes Expo; and, the Unison DPP.
- 10 of the 12 remembered how they accessed the service and completed the form. Of these, 6 used the phone and 4 used the on-line referral form with help from a third party. Therefore all had assistance of some kind.

Feedback from People Referred to Diabetes Programs by a Third Party

Twenty people were interviewed across three focus groups to assess feedback from clients who were referred to diabetes programs through a third party. Only 14 of the 20 interviewed remembered how they were referred to Diabetes Programs:

- 4 (20%) were referred by doctors (1 from MD at hospital);
- 4 (20%) were referred by a community health professional (RN, dietitian);
- 5 (25%) were told about the program by a friend and self-referred; and
- 1 was referred by their worker.

Comments made about their experience when arranging appointments with the diabetes program included:

- They are very nice;
- I knew why they were calling;
- They always tell me who they are and why they are calling;
- I was happy I was referred to a place close to my home so I could bike after coming home from work;
- Thought I was being referred to a hospital but came here;
- Referral was confusing; played telephone tag – would have helped to have had a letter; and,
- 1 person reported that while he waited to get connected he was provided with program information (e.g. what workshops would be included and what topics would be covered in the workshops).

Comments regarding the diabetes program they were referred to included:

- It gives me the information I need;
- Information on managing my diabetes, eating healthy on a budget;
- Would be good to be able to go to a website to do some homework before starting the program; and,
- Make program longer and fewer days – hard to get time off work.

Suggestions about how to let others know about diabetes education programs and the TCRS:

- "Problem is that doctors should refer to this program but a lot are not - once they go to St. Joe's for ER then they sent me to you";
- Every private doctor should have this information so they can send their patients; and,
- Information should be at:

• Parc • St. Francis Table • Sistering • Food banks • Lobby of CHC • Public library • Free newspapers • Community centres • Senior residences	• Group homes • Lobbies of residential buildings (including private buildings) • Functions/gatherings at the clinic • Word of mouth from friends. • Pharmacies

Feedback from Health Care Providers

Evaluations surveys were sent by fax in April 2015 to 2,027 physician offices. Of these:

- 1,559 physicians were not in the TCRS data base and therefore had not used the service; and,
- 419 physicians were in the TCRS data base and therefore had used the service. Of the 419,
    - 393 were general practitioners; and,
    - 26 were specialists (23 endocrinologists, 2 nephrologists and 1 gastroenterologist).

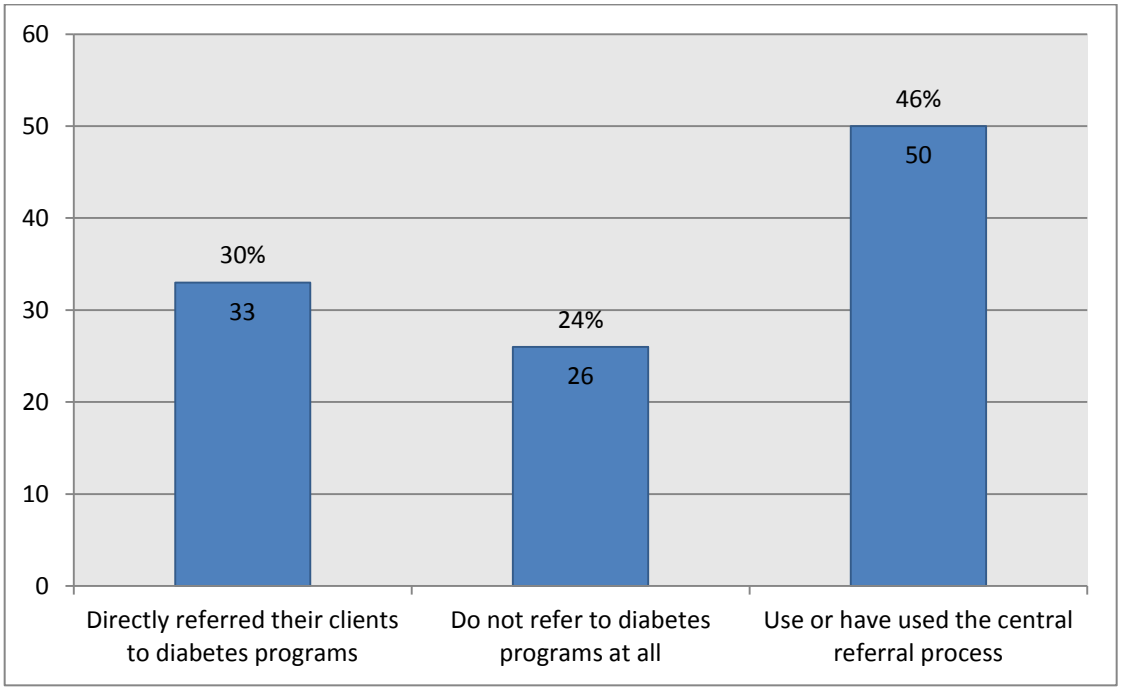
Surveys were also sent to other providers such as pharmacists, DEPs, CHCs, and case managers.

Evaluation surveys were sent by email to a number of health care providers.

The number who actually viewed the evaluation survey is unknown since in addition to direct communication there was a reliance on various organizations to forward the survey to members of their association or teams. It is therefore very difficult to calculate a response rate. What we do know is that 109 providers (including 42 physicians) responded to the survey.

- 50 (46%) providers stated they use or have used the TCRS.
- 33 (30%) providers stated they refer directly to diabetes programs.
- 26 (24%) providers stated they do not refer to diabetes programs at all.

Figure 7. Providers' Answer to the Question of whether they use TCRS



Feedback from Providers who refer using the Central Referral Process

The following is a summary of the responses of the 50 survey responders who stated they use or have used the central referral process, choosing all that apply:

- 39% use the service more than once/month;
- 80% agree or strongly agree that central referral is easy to find;
- 89% agree or strongly agree it is easy to use;
- 82% agree or strongly agree it helps to match their client with the most appropriate program;
- 82% agree or strongly agree their overall experience with central referral is positive; and,
- 20% use or have used the Insulin Order and Prescription Form.

"There are many valuable features: Online referral process – very easy to fill information and fastest, referring client to nearest residing area. Fax coming in on time and any issues get resolved ASAP. Referral form has all important sections to identify issues (sic)." *Sent via evaluation survey from a dietitian*

Feedback from Providers who have stopped using TCRS

Surveys were faxed to the 65 physicians identified in the service utilization statistics who had not made a referral since Q1 2014-15 to find out why they had stopped; concerned this might be due to negative experience. Other possible reasons for stopping use may include,

- Are they now making direct referrals to DEPs?
- Are they still practicing? If so, do they have any feedback?

Of the 65 referees who had stopped referring, 7 were excluded due to an inability to find a fax number or to identify the individual referrer (e.g. referral from a hospital with no provider specified) and in 5 cases the organization contacted reported that the physician was no longer working at the location. As a result only 53 referees who had stopped referring were reachable. Responses were received from 10 (19%) physicians. Their feedback included:

- One of the respondents stated they refer only occasionally citing their practice is specifically for wound care;
- 1 stated that patients want to know where they will be going. This indicates the need for a patient brochure, possibly with a map and contact # for CRS, and consideration for the patient to be contacted with referral process update as part of the CRS process;
- 3 (30%) stated they forgot about or did not know about the service with 1 responder stating they intend to use service;
- 8 stated (80%) they wish to be contacted to find out more about the service; and,
- 1 stated they found the process complicated, though this feedback relates to experience prior to the changes made in Q2 2014-15 to put the form online.

Feedback from Providers who refer directly to DEPs

Of the 109 survey respondents, 33 providers (30% of respondents) indicated they refer directly to the DEPs.

28 of the 33 (85%) indicated they are satisfied with directly referring to DEPs. More than one reason for their satisfaction may have been specified, including:

- Convenience of location proximity to office;
- We are referring to a DEP within our CHC;
- Easy to refer via fax;
- Easy to book appointment;
- Know most of the local ones;
- We have a FHT diabetes team;
- Easy to do and DEP nurse are readily accessible and available;
- I have referred clients from one program to another program by giving them the phone number of the DEP closest to them, not filling out the form; and,
- Fast, professional.

8 of the 33 (24%) who refer directly to the DEPs indicated they were not satisfied (total responses exceed 100% since 3 providers answered that they were both satisfied and not satisfied with referring directly to DEPs).
More than one reason may have been specified for their lack of satisfaction. Reasons indicated include:

- There is a long delay;
- I usually will ask the client to go to the MD to refer them but often patients are not interested and/or MDs don't feel it is necessary for some reason;
- Patients are confused when the caller from the programs fails to offer context that would orient and engage patient to a stranger over the phone. Program caller ought to be saying: "At your last doctor's appointment/recent hospital visit Dr. So-and-so referred you our way for up-to-date diabetes information and support. . . ." Lack of awareness about how long it will take to be see, what will be covered;
- Advertised location not available; and,
- Not always culturally appropriate.

Feedback from Providers who do not refer to DEPs at all

26 of 109 (24%) providers responding to the survey said they do not refer to DEPs at all.

Table 4 shows the breakdown of reasons stated.

Table 4. Breakdown of reasons stated for not referring to DEPs

If you do not refer your clients to diabetes education programs, please check all that apply to indicate why	# of Providers	% of 26
Don't know how to refer	13	50
Didn't know I could	11	42
I refer my clients with diabetes to a specialist	10	38
I am confident in managing my clients' diabetes through my own practice	8	31
Poor experience with the referral process	5	19
Poor experience with a DEP program	3	12
Other	13	50
Total Responses (some answered more than one)	63	

A number of reasons for not referring were specified under 'other' including the following examples: "difficult to find service in my client's language"; "client has serious mental illness and does not relate well to other providers"; and, "I defer referral to others in the office".

Forty two providers, including 20 physicians indicated that they would like to learn more about diabetes programs and Diabetes Central Referral and provided their contact information.

42 of 63 providers (67 %), including 20 physicians, answered that they would like to learn more about diabetes programs and Diabetes Central Referral. All provided their contact information.

Informal Feedback from Users of TCRS

Informal feedback from stakeholders was welcomed and received from 4 – 6 individuals over the two year evaluation period. This included the following:

- Difficulties getting people with diabetes (identified at a screening event) connected to DEPs in other LHINs because there is no lab work or OHIP available;
- Challenges with the DEP not connecting with an individual with a language barrier (e.g. DEP may call but client doesn't seem to understand and doesn't end up making an appointment);
- People with diabetes (or pre-diabetes) who have attended a group education session with the DPP get referred to a DEP for more individualized support (e.g. individual counselling) but end up only being offered the option to attend another group;
- Create a handout/fax cover to inform destination DEPs that individual is self-referring (with the recommendation of a screening program (i.e. DPP/TPH) or other organization (i.e. ERO). Therefore no- lab work, OHIP, medical history is available and will have to be obtained after the connection is made with the individual;
- French language requirements for website need to be addressed; and,
- Ensure form aligns with data required for TC LHIN quarterly reporting and CDA Standards Recognition Program.

Suggestions for Improvement by Theme

The survey responses are summarized below and grouped together by theme.

Referral Form

- The lab values section has date mentioned in the title, but not as a table. There are chances that entering the data could be missed by the referring period.
- Have a place on the online form to enter the patient's postal code to assist with location
- Need more space to make comments
- Have a section to check off if someone is high risk, including high risk participants who may get Type 2 Diabetes later in their life
- Have separate sections for modifiable and non-modifiable risk factors
- Add a place to indicate if there is a preference for evening or weekend appointments
- Add separate cover letter for referrals from DPP to DEP, mention if no lab work is available

Communication

- Status of when appointment has been made for the patient
- Specify which doctor referred on information going to the physicians' office
- Patients want to speak with someone as soon as possible; they seem uneasy when they are asked to wait to hear back
- No specific suggestion offered but telephone tag with the DEP is an issue
- Provide initial resources for clients to read while they are waiting for their appointment

Range of Services

- Add podiatry/chiropody
- Clarify role and skills of DEP staff and the choice of the Insulin Order Form/Protocol being used regarding insulin starts
- Add individual counselling and screening for barriers for clients who are at risk
- Extend hours for access to patients who work during the day

Summary

Growth

The TCRS experienced significant growth over the evaluation period. Both the number of referrals made and the number of referral sources showed a significant increase of over 600% and 300% respectively since the Shadow Referral System Evaluation in December 2011. In addition, the services accessible through TCRS and the options available for making referrals were expanded. Lastly, processes were implemented to support the increase in and smooth flow of referrals across LHIN boundaries.

Barriers to future growth may include limited resources to operate the central referral service within standard times of response and turnaround; providers still opting for direct referral to DEPs with which they are familiar when there may be more appropriate options for their clients in other locations by other DEPs; and, a lag in acceptance of the chronic care model for chronic conditions including team-based approaches to diabetes education and management.

Future efforts in engagement and outreach to support continued growth will target LHIN-identified priority neighborhoods, physicians in solo practice, pharmacists, and clients to self-refer. An ongoing focus on improving TCRS efficiency will help to support growth.

Quality

While the feedback about the use of the central referral service was positive for more than 80% of providers who responded to the survey, there was also feedback about what improvements could make the experience even better, as well as, suggestions to further promote this service. Examples include: client requests for information about diabetes and programming while they are waiting for their appointment; suggestions from the providers about the content and format of the form; and, suggestions about connecting the central referral process for diabetes to other services such as tele-ophthalmology.

Outreach and Collaboration

The TCRS will be supported and shaped by ongoing collaboration among all stakeholders including people living with or at risk of diabetes, community support services, primary care, diabetes programs, and tertiary care centres. Collaborative outreach strategies will be developed using Health Quality Ontario's Quality Improvement Framework in order to increase awareness of and connection to inter-professional team-based care for those living with and at risk of Type 2 Diabetes.

The experience of cross-LHIN referrals is a good example of LHIN boundaries not affecting the quality of care provided to clients who need to access care closer to their area of home or work.

Moving forward, TCRS service statistics will be shared with all stakeholders on a quarterly basis to support this outreach and collaboration.

Recommendations

The following recommendations are put forward for the consideration of the stakeholders engaged in the central referral process to increase the access to diabetes prevention and management programs. The implementation of these recommendations will require a collaborative approach and the commitment of all stakeholders in diabetes prevention and management. Responsibility for leading future exploration and implementation of these recommendations has been assigned to the Toronto Central LHIN Diabetes Program, TCRS, or Toronto Central LHIN as outlined below.

Toronto Central LHIN Diabetes Program

1. Ensure that the TCRS continues as a significant access pathway for clients to gain access to the myriad of diabetes prevention and management services in a conveniently located setting that offers accessible programming considering their language, culture and other health and social needs.

2. Continue to support collaborative outreach among key stakeholders in the region with a focus on ensuring equitable access to all individuals, including those most marginalized, and those who are living with or at risk of Type 2 Diabetes. This will include thoughtful planning to ensure strong relationships are maintained between DECs, DEPs, DPPs, healthcare providers, and community organizations.

3. Continue to collaborate across the LHINs to support the smooth flow of referrals both within the TC LHIN and across LHIN boundaries, supported by ongoing linkages with central referral services and/or diabetes programs across the province.

4. Continue to build TCRS as a key aspect of a continuum of services for chronic disease management and prevention.

Toronto Central Referral Service (Hosted by South Riverdale Community Health Centre)

5. Continue to encourage self-referral including outreach, engagement of clients, and translation of resources into French.

6. Expand outreach efforts and links to physicians and physician networks to increase awareness of the availability of diabetes programming and the role of the TCRS.

7. Explore partnerships with other organizations and programs supporting diabetes management and prevention to support their public and provider education and the referral of clients.

8. Increase connections/linkages to other programs supporting diabetes management & prevention (e.g. Tele-ophthalmology, Toronto Central Self-Management Program, Toronto

Public Heath, Eat Right Ontario, and Canadian Diabetes Association). This will require further determination of additional ways to identify prospective clients, provide them with the information they need, and connect them to the services they need.

9. Regularly engage the stakeholders in a review of TCRS reports and information to engage them in system planning, implementation and evaluation:
    a. Both the TCRS Evaluation Report and ongoing TCRS Quarterly Reports (starting Q1 2015/16) will be shared with all stakeholders; and,
    b. Efforts will be made to ensure TCRS data collection, management, & extraction support collaboration and outreach.

TC LHIN

10. Ensure TCRS is an integral element of the TC LHIN Chronic Disease Presentation and Management Strategies.

11. Review proposals regarding expansion as required, supported by documentation about client and provider utilization of TCRS and their experience, as well as, referral process efficiency and effectiveness.

The willingness of the providers, DEP program staff, partner organizations and clients to participate in the evaluation of the TCRS was greatly appreciated and appeared indicative of their interest and commitment to support and improve the service. The goal is to develop an ongoing evaluation process and incorporate it into a continuous quality improvement framework for the TCRS. Efforts will continue to engage service users who support marginalized clients, who are not aware of diabetes program options and who have stopped using the service.

We began this report with a reflection on the finding in the Cauch-Dudek, K., Victor, J.C, Sigmond, M., and Shah, R. Report in 2013 that only 1 in 5 people with diabetes in Ontario have access to inter-professional care as recommended by the CDA best practice guidelines. Through the report we have documented the significant growth in utilization of the TCRS, the significant amount and varied ways of community outreach and engagement to increase provider and client awareness, the continued expansion of technology for an easier and more efficient referral process, and the avid feedback from clients and providers on the benefits of central referral and suggestions for improvements.

In conclusion, we hope that with continued improvements in client and provider outreach embedded in the recommendations, we will significantly move toward improved access and quality of care consistent with best practice.

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Cauch-Dudek, K., Victor, J.C, Sigmond, M., and Shah, R. (2013). *Disparities in Attendance at Diabetes Self-Management Education Programs after Diagnosis in Ontario, Canada: A Cohort Study*. BMC Public Health, http://www.biomedcentral.com/1471-2458/13/85.

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Clement M, Harvey, B., Rabi, D., Roscoe, R., and Sherifali, D. (2013). *Canadian Diabetes Association 2013 Clinical Practice Guidelines for the Prevention and Management of Diabetes in Canada: Organization of Diabetes Care*. Can J Diabetes 2013; 37(suppl 1):S20-S25.

Hollahan, Debbie, Christlaw, Sarah and Oreschina, Elena (Undated Draft). *Waterloo-Wellington Diabetes Regional Co-Ordination Centre Central Intake Process Report.*

Toronto Central Diabetes Regional Co-ordination Centre December 2011. *Shadow Central Referral System Report.*

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Appendix 1: Outreach Initiatives & Central Diabetes Referral Service Changes

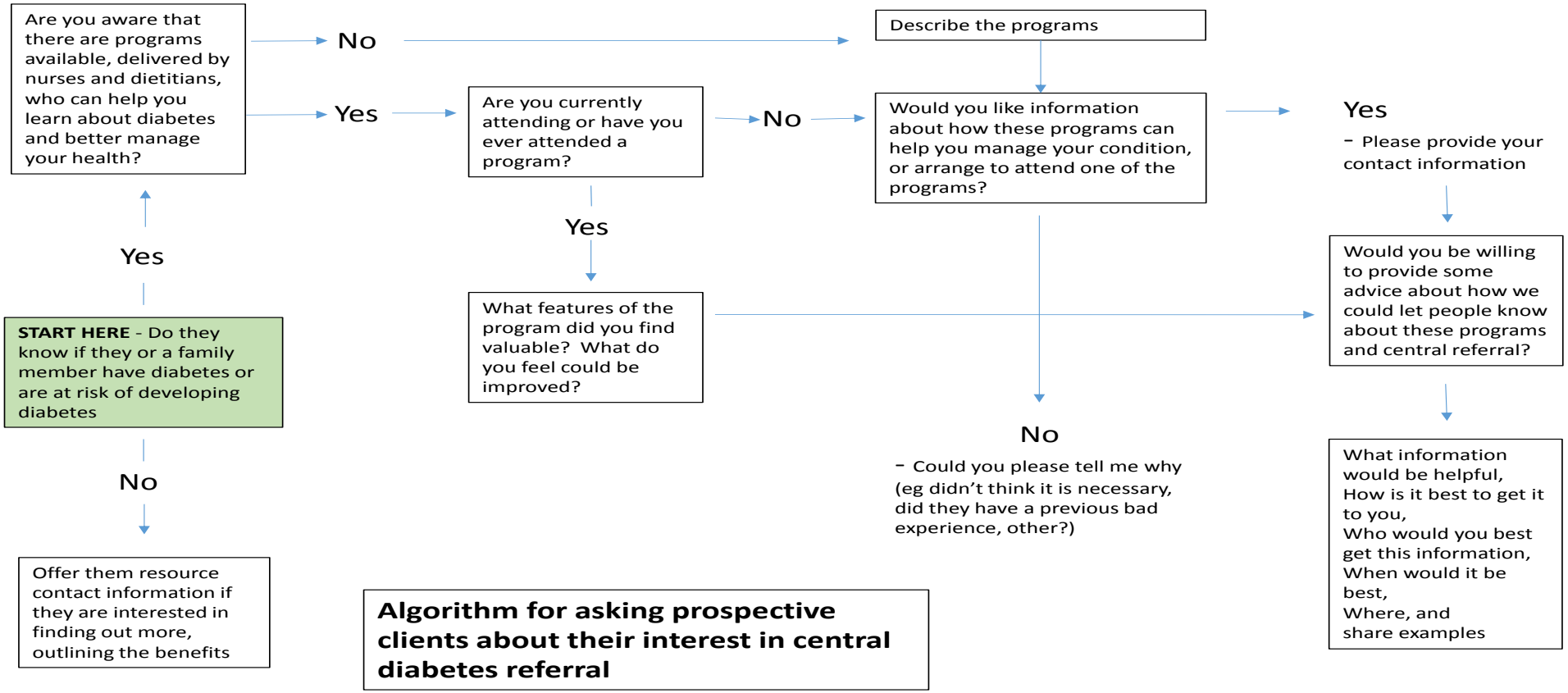
Outreach Initiatives Undertaken from April 2013 to March 2015

Fiscal Year - Quarter	Activity promoting CRS/IPC for Diabetes	Numbers engaged
2013/14: Q1	CRS Promotion: Referral pads provided to MDs in DVGHL	33 MDs
	Talks/Workshops: Insulin Workshop for TEGH family practice	13 MDs
2013/14: Q2	CRS Promotion: CRS website added to Outreach Facilitator email signature	unknown
2013/14: Q3	Events:	
	- DCFM	5 MDs
	- TEGH family medicine	8 MDs
2013/14: Q4	Talks/Workshops:	
	- IPC presentation @ AOHC	100 HCPs
	- St. Joseph's Family Medicine Group	45 HCPs
2014/15:Q1	CRS Promotion:	2198 MDs
	- Mail out to TC LHIN primary care physicians (new referral form/insulin order, tele-ophthalmology referral, DPP referral)	
	- Link to CRS website on TPH Health Matters for Diabetes	unknown
	Events:	
	- BBDC Primary Care Update	30 MDs
	- TEGH Family Medicine Day	47 PCPs
	- DCFM Conference	25 MDs
	- West-end MD meeting (Merek/Dr. Cheng)	7 MDs
	Talks/Workshops:	s (9 MDs, 1 NP)
	- IPC for DM at TEGH family practice event	47 HCPs
	- Q&A with Endo (CDENT)	15 HCPs
	- Q&A with Endo (Unison)	
2014/15:Q2	CRS Service Changes:	
	- On-line form launched (DEP)	
	- Tele-ophthalmology form added	
	- DPP referral centralized	
	CRS Promotion:	unknown
2014/15:Q2	- Email blast (NPs, DECs, DEPs, DPPs, CHCs)	
	- SRCHC twitter/Facebook	
	Events: BBDC Inaugural Diabetes Summit	150 HCPs
	Talks/Workshops:	
	- TC CCAC Endocrinology Session	19 HCPs
	- Q&A with Endo (Flemingdon)	37 HCPs
	- Ryerson CDA Endo Session	30 students
2014/15:Q3	CRS Utilization Changes: DECs included using CRS to connect individuals to T2DM/Prediabetes/DM Prevention support in the DEC common work plan	
	Events: CAWC	80 HCPs
	Talks/Workshops: Endo session TC CCAC	19 HCPs
2014/15:Q4	CRS Utilization Changes: ERO & CDA began using CRS	
	CRS Service Changes:	
	- Website revised (including on-line forms)	
	- Process revised to include standard process for selection of destination DEPs in other LHINs	
	CRS Promotion: CRS promoted to TC CCAC during Knowledge Translation (implementing CDA cpgs)	
	Events:	
	- BBDC Diabetes Update	500 HCPs
	- West Toronto Health Link MD event	39 HCPs
	Talks/Workshops:	
	- St. Joseph's Medical Residents	11 MDs
	- CDA/IPC Workshop (Scarborough)	30 HCPs

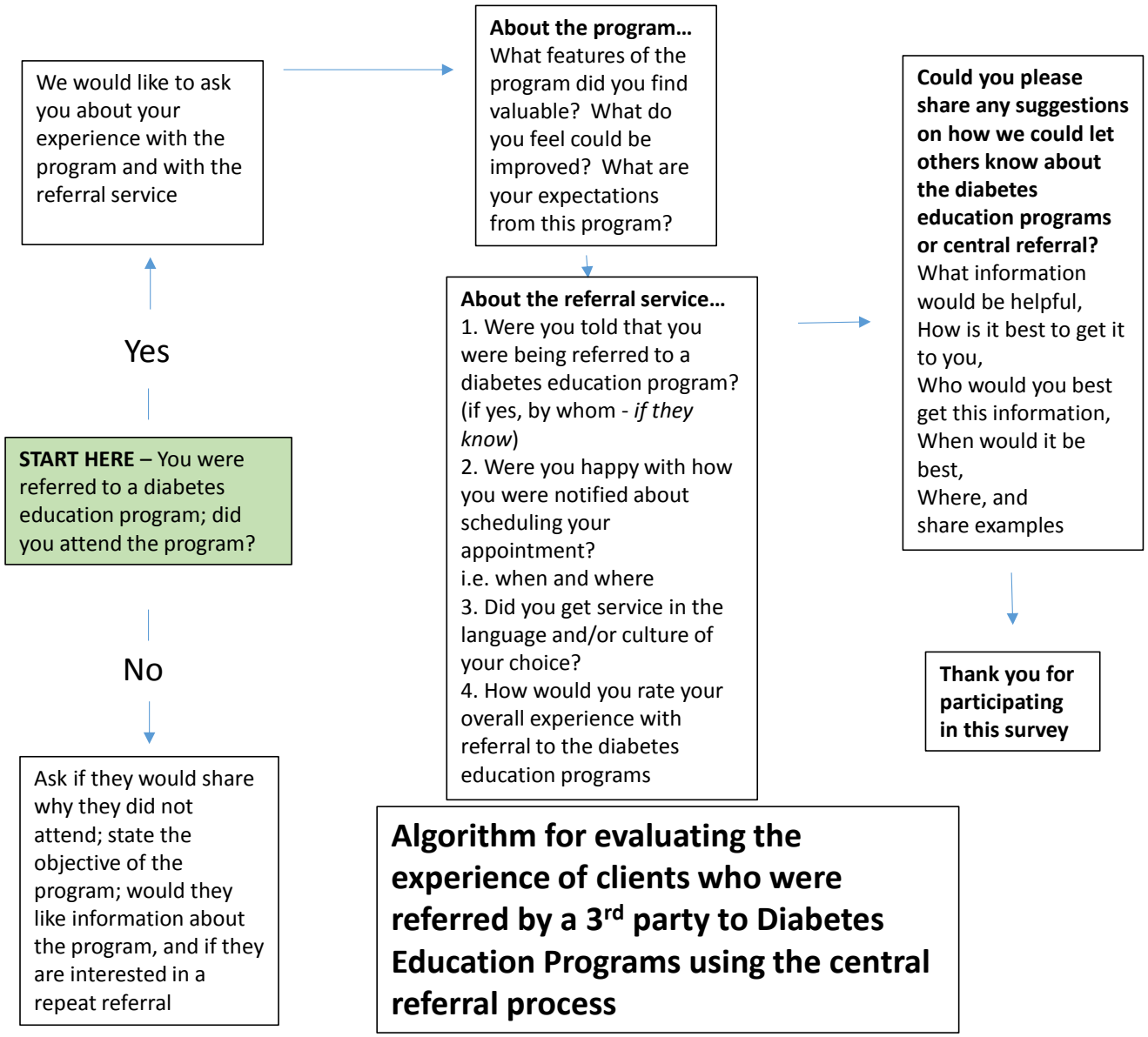
Central Diabetes Referral Service & Stakeholder Changes

Date	Service Change
March 2014	• Toronto Central Diabetes Program Referral Form for Type 2 Diabetes and Prediabetes revised which includes an Insulin Order Set • Fillable PDF of referral form created to support uploading into electronic medical records
Jul-Sep 2014	• On-line form launched for the Diabetes Education Program (DEP) • Tele-ophthalmology form added • Diabetes Prevention Program (DPP) referral was centralized
Nov-Dec 2014	• Diabetes Education Centres (DECs) draft joint work plan includes using the Central Referral Service (CRS) to connect individuals to Type 2 Diabetes, Pre-diabetes and Diabetes Prevention Programs
Jan-Mar 2015	• Website revised (including on-line forms) • Process revised to include standard process for selection of destination DEPs in other LHINs • Central Diabetes Referral Service Database revised
	Stakeholder Change
Nov 2014	• Canadian Diabetes Association (CDA) began using the TCRS to connect callers wishing to access diabetes programs in the TC LHIN
Jan 2014	• Eat Right Ontario (ERO) began using the TCRS to connect all callers wishing to access diabetes programs

Appendix 2: Algorithms for Client Experience of Referral to Diabetes Programming



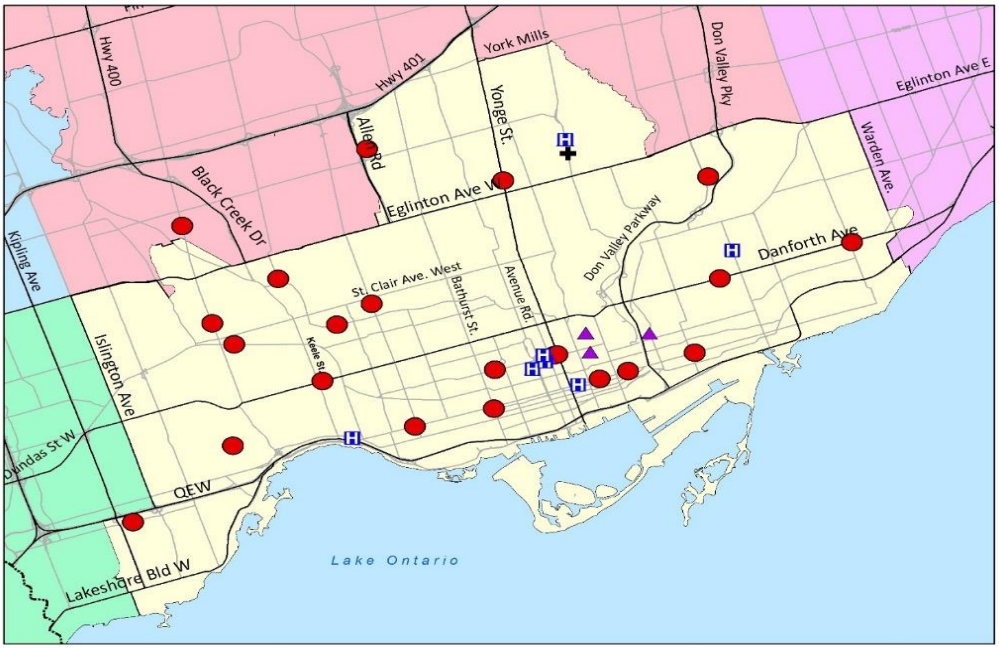
Algorithm for asking prospective clients about their interest in central diabetes referral



Algorithm for evaluating the experience of clients who were referred by a 3rd party to Diabetes Education Programs using the central referral process

Appendix 3: Destination DEPs

Location of the Diabetes Programs in the Toronto Central LHIN



Red dots are Community Health Centre sites

Purple triangles are Family Health Team sites

Squares with an "H" are hospital-based sites

+ signifies LMC Endocrinology Centre

Referrals and # for insulin by destination DEP sites in the TC LHIN (N = 20)

DEP Name	# of Referrals (%), # for Insulin							
	2013-2014				2014-2015			
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
Anishnawbe Health DEP	1 (0.4%), 1	0	0	1 (0.4%), 0	0	2 (0.7%), 0	1 (0.3%), 0	0
Anne Johnston Health Station DEP	12 (4.7%), 0	8 (2.7%), 0	18 (7%), 0	13 (5.3%), 0	10 (3.4%), 0	9 (3.3%), 0	5 (1.6%), 0	12 (3.8%), 0
Bridgepoint FHT DEP	9 (3.5%), 0	18 (6.1%), 2	10 (3.9%), 0	5 (2%), 2	8 (2.7%), 0	3 (1.1%), 0	5 (1.6%), 0	5 (1.6%), 0
Central Toronto DEP	8 (3.1%), 1	12 (4.1%), 2	2 (0.8%), 1	10 (4.1%), 1	11 (3.7%), 0	8 (2.9%), 1	7 (2.3%), 0	12 (3.8%), 1
DECNET	78 (30.7%), 16	73 (24.7%), 12	63 (24.6%), 9	45 (18.4%), 10	47 (16%), 5	48 (17.5%), 2	70 (22.6%), 3	73 (22.8%), 7
Don Mills DEP - Fairview Community Health	9 (3.5%), 2	11 (3.7%), 3	10 (3.9%), 1	5 (2%), 0	11 (3.7%), 0	7 (2.5%), 0	11 (3.5%), 1	7 (2.2%), 0
Don Mills DEP - Flemingdon Health Centre	35 (13.8%), 1	25 (8.5%), 0	27 (10.5%), 2	45 (18.4%), 1	32 (10.9%), 5	28 (10.2%), 2	26 (8.4%), 0	24 (7.5%), 4
Le Centre Franchophone de Toronto	1 (0.4%), 0	0	0	0	0	1 (0.4%), 0	1 (0.3%), 0	0
LMC Endocrinology Centres (Bayview)	1 (0.4%), 1	0	0	1 (0.4%), 0	0	0	1 (0.3%), 0	1 (0.3%), 0
Mount Sinai Academic FHT	12 (4.7%), 1	10 (3.4%), 1	7 (2.7%), 2	14 (5.7%), 0	8 (2.7%), 2	10 (3.6%), 0	9 (2.9%), 0	12 (3.8%), 0
Parkdale CHC Diabetes Management Program	5 (2%), 0	3 (1%), 0	5 (2%), 1	4 (1.6%), 0	12 (4.1%), 1	6 (2.2%), 0	8 (2.6%), 1	8 (2.5%), 0
Regent Park CHC DEP	9 (3.5%), 0	10 (3.4%), 4	5 (2%), 2	8 (3.3%), 0	10 (3.4%), 1	17 (6.2%), 1	16 (5.2%), 0	9 (2.8%), 0
Sherbourne Health Centre DEP	7 (2.8%), 0	15 (5.1%), 2	11 (4.3%), 0	11 (4.5%), 1	22 (7.5%), 0	21 (7.6%), 0	17 (5.5%) 0	16 (5%), 0
St. Michael's Hospital - Diabetes Care Centre	1 (0.4%), 0	1 (0.3%), 0	0	0	0	0	2 (0.6%), 0	1 (0.3%), 0
Sunnybrook DEP	3 (1.2%), 2	6 (2%), 2	2 (0.8%), 1	3 (1.2%), 1	7 (2.4%), 0	2 (0.7%), 0	5 (1.6%), 0	7 (2.2%), 0
Taddle Creek FHT DEP	7 (2.8%), 0	21 (7.1%), 0	6 (2.3%), 1	10 (4.1%), 0	10 (3.4%), 0	15 (5.5%), 1	7 (2.3%), 1	12 (3.8%), 0
Unison Health DEP	28 (11%), 1	52 (17.6%), 1	49 (19.1%), 2	38 (15.5%), 1	75 (25.5%), 9	59 (21.5%), 1	70 (22.6%), 2	75 (23.4%), 6
West Toronto DEP	24 (9.4%), 4	30 (10.2%), 7	40 (15.6%), 7	32 (13.1%), 4	31 (10.5%), 1	36 (13.1%), 1	48 (15.5%), 1	46 (14.4%), 3
Women's Health in Women's Hands DEP	4 (1.6%), 0	0	1 (0.4%), 0	0	0	3 (1.1%), 0	1 (0.3%), 0	0
Total = # of referrals (#of insulin)	254 (30)	295 (36)	256 (29)	245 (21)	294 (24)	275 (9)	310 (9)	320 (21)

Referrals by destination DEP sites outside the TC LHIN (N = 60)

DEP Name	Total # of referrals	# referral for insulin
Aurora-Newmarket FHT	1	0
Barrie CHC DEP	6	0
Black Creek CHC - Sheridan Mall Site	32	1
Black Creek CHC - Yorkgate Mall Site	26	1
Bramalea CHC DEP	11	1
CareFirst FHT	49	3
Central East LHIN Central Diabetes Intake	3	0
Chatham-Kent Health Alliance DEP	2	0
Community Diabetes Education of Ottawa	1	0
Credit Valley FHT DEP	19	0
Credit Valley Hospital Diabetes Care Centre	3	1
Diabetes Health Thunder Bay	3	0
Grey Bruce Diabetes - Owen Sound Hospital	1	0
Grey Bruce Diabetes- Southampton Hospital	1	0
Group Health Centre-Algoma Diabetes Education and Care Program	1	0
Groves Memorial Community Hospital DEP	1	0
Guelph FHT DEP	1	0
Haldimand Norfolk Diabetes Program - Dunville	1	0
Halton Diabetes Program - Burlington Site	2	0
Halton Diabetes Program - Georgetown Site	2	2
Halton Diabetes Program - Milton Site	3	0
Halton Diabetes Program - Oakville Site	2	0
Hamilton Health Sciences	1	0
Health Sciences North-Sudbury Outpatient Centre	2	0
Humber River Regional Hospital - Finch Site	26	4
Kemptville District Hospital DEP	1	0

DEP Name	Total # of referrals	# referral for insulin
Lakeridge Health - Bowmanville	3	0
Lakeridge Health - Whitby	1	0
Langs Community Diabetes Programs	1	0
Markham-Stouffville DEC	19	2
Mississauga-Halton LHIN Diabetes Central Intake	19	2
Niagara Diabetes Education Centre	3	0
North Bay Regional Health Centre	1	0
North York FHT	30	1
North York General Hospital - Branson Site	18	6
Orillia Soldiers' Memorial Hospital DEP	1	0
Oshawa CHC	17	0
Peterborough Regional Health Centre DEP	2	0
Port Hope CHC DEP	1	0
Quinte Health Care - Belleville General	1	0
Rexdale DEP	43	3
Rideau Valley Diabetes Services	1	0
Ross Memorial Hospital DEP	2	0
Rouge Valley - Ajax-Pickering Site	40	2
Rouge Valley - Centenary Site	4	1
Scarborough DEP	497	31
Shkagamik-Kwe Health Centre-Sudbury DEP	1	0
Southlake Regional HC	25	2
St. Joseph's Health Care London	4	0
St. Joseph's Healthcare - West 5th campus	2	0
St. Joseph's Healthcare Charlton Campus	2	0
Trillium Health Centre DEC	18	3
Vaughan CHC DEP	21	1
Waterloo Wellington LHIN Diabetes Central Intake	9	0

DEP Name	Total # of referrals	# referral for insulin
William Osler - Bolton/Caledon Site	1	0
William Osler - Brampton Civic Hospital DEP	53	3
William Osler - Etobicoke General Site	49	7
William Osler - Woodbridge	2	0
Windsor Essex CHC DEP	2	0
Wingham and District Hospital DEC	1	0
York Central DEC - Upper Thornhill site	16	0
Total	1,111	77

Appendix 4: Toronto Central Referral Service Process