Waterloo Wellington Diabetes Central Intake

2020-21 Year End Report to WWLHIN

Debbie Hollahan

May 31, 2021

Contents

Introduction

This annual report provides a summary of activities to date for Diabetes Central Intake, Mentoring and the Waterloo Wellington Diabetes website www.waterloowellingtondiabetes.ca Langs receives base funding from the WWLHIN to offer these regional services to support the coordination of diabetes care for the region of Waterloo Wellington. These services support:

1. residents (patients, families and health care providers) with easy access to diabetes care;
2. the LHIN in system planning for diabetes care by monitoring volume and wait-time reports; and
3. health care providers in the region to enhance their knowledge of diabetes management.

Detailed reports on the volume of referrals and referral sources as well as the types of referrals are submitted quarterly. This end of year report provides a summary of the activities and successes over the past fiscal year of 2020-21.

At all times, our focus continues to be patient focused, and we continue to focus on our tag line of ***Improving Access, Improving Knowledge and Improving Health***. We participate regularly with various community partners in the region and exhibit at many community events, promoting our services.

Diabetes Central Intake (DCI)

Diabetes Central Intake continues to provide a streamlined process for referrals to Diabetes Education Centres and specialists. This year has been challenging due to the pandemic, but we have continued to provide service through a hybrid work model of on-site and at home.

For the year 2020-21, DCI saw a drop in referrals the 1st 2 months of this year due to the pandemic, but the volume has returned to the pre-pandemic rate and as a result, DCI has processed 6,275 referrals for diabetes education (Table 2) from 214 referral sources (Table 5). In addition, 2,014 referrals have been directed to specialists (Table 4), making a total of 8,289 referrals processed.

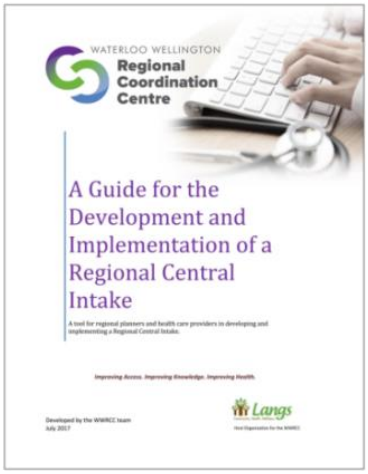
We continue to promote the use of eReferral to all physicians although the number of ereferrals has plateaued at 27% of referrals. We continue to encourage all referral sources who currently fax referrals to consider eReferral and are hoping the number of eReferrals increases as additional service offerings come on Ocean, and as there are a greater number of primary care using Ocean. There were 99 eReferral sources and 1,458 eReferrals this year. There are 7 Diabetes Education Programs and 4 endocrinologists in our region receiving eReferrals now.

678 referrals have been received from area hospitals, which is up 19% from last year. Much time is spent by our triage nurse following up on discharge plans for patients and arranging timely appointments for people discharged from hospitals.

203 self-referrals have been processed, which is down significantly from last year and is also concerning given the pandemic and the risk of people not accessing care.

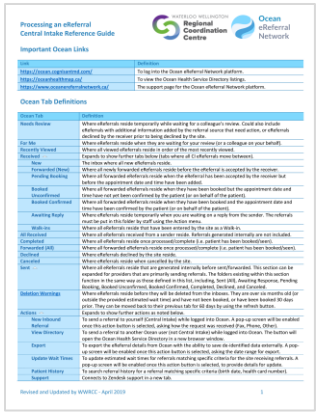
Other regions of the province continue to consult with us on the "how to" of developing a central intake program (not only for diabetes but other specialities). We continue to share our guide that we developed on developing a central intake. It is also available on request from our Resources page on our RCC website (www.wwrcc.ca). (Figure 1)

Figure 1: A Guide for the Development and Implementation of a Regional Central Intake



We also continue to update and share a 12 page guide on "Processing an e-Referral". We have shared it with other regions, as well as within our own LHIN to help with training on Ocean eReferral. (Figure 2)

Figure 2: Processing an eReferral with Ocean™ Guide



We continue to support SWLHIN with receiving/sending referrals to them, despite no further funding for this. To date, we have processed 2,431 referrals (285 this year) to London.

Our Successes

We no longer receive provincial data on the prevalence of diabetes in Ontario or in our region, which is unfortunate, but from national and international data, the prevalence of diabetes continues to increase. Despite the increasing prevalence of diabetes, we continue to demonstrate the following successes in our region:

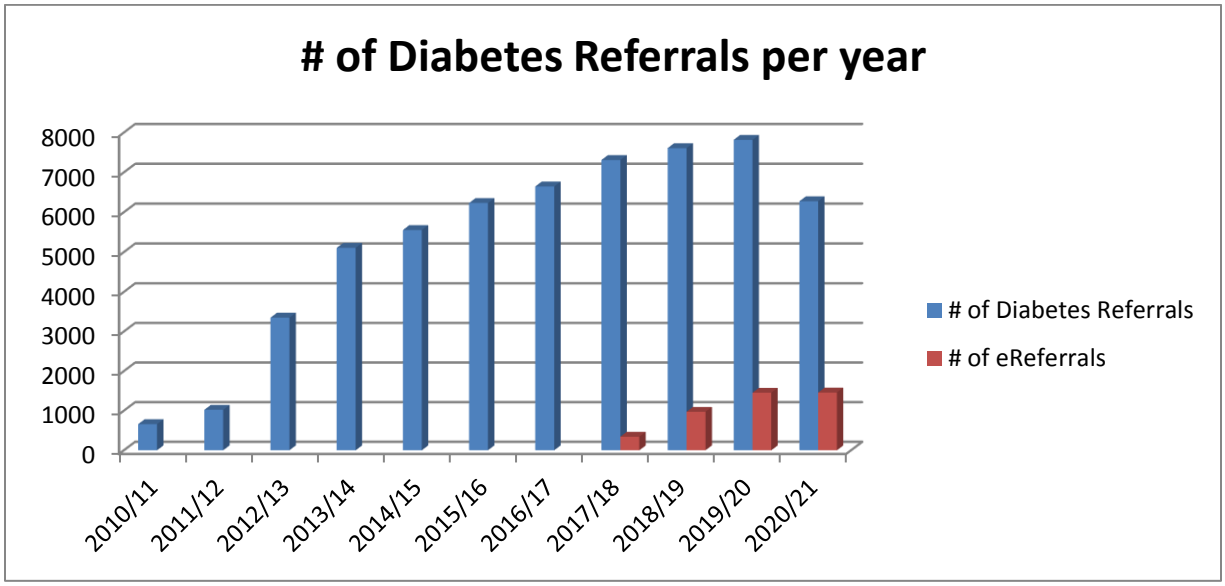
- No-one is “lost in the system”
- Increased number of people referred and followed for education with same resources
- People accessing care close to home
- People are able to send self-referrals
- Have sent and received referrals from other provinces and countries
- Standardized regional wait-times established for benchmarking
- Wait-times for diabetes education programs within target, despite the pandemic
- Continued utilization of community programs versus hospital programs
- Identified pharmacies with Certified Diabetes Educators (CDEs) to offer after-hours education
- Streamlined access to diabetes specialists
- Increased prevention
- Increased retinopathy screening

A Closer Look at our Program

The following data offers a detailed look at our work to date.

As mentioned above, there was a drop in referrals during March and April of this year due to the pandemic, but the volume has returned to pre-pandemic numbers. There was a higher volume of referrals sent within our region this year, but less sent outside our region. (see Table 9) The following table (Table 2) demonstrates the volume of referrals over time to DCI.

Table 2: # of Diabetes Referrals to Diabetes Central Intake



As mentioned above, there is a decrease in self-referrals this year, which is concerning, but is consistent with other streams of care where people are reluctant to access health services during the pandemic. (Table 3) We utilize the self-referral if individuals phone our office to inquire about accessing services. The self-referral form is also available on-line from our WWD website https://www.waterloowellingtondiabetes.ca/Public-Referrals.htm and allows the individual to submit electronically into the Ocean eReferral (Figure 3). The referral then follows the same process of being triaged and sent electronically to the appropriate program. The individual is provided notifications as the appointments are booked.

Table 3: # of Self-Referrals

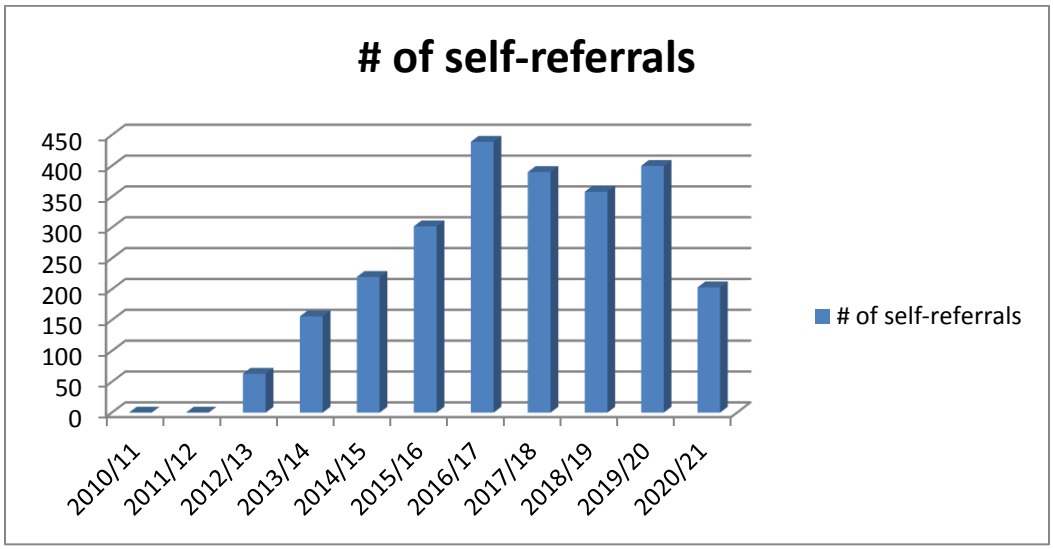
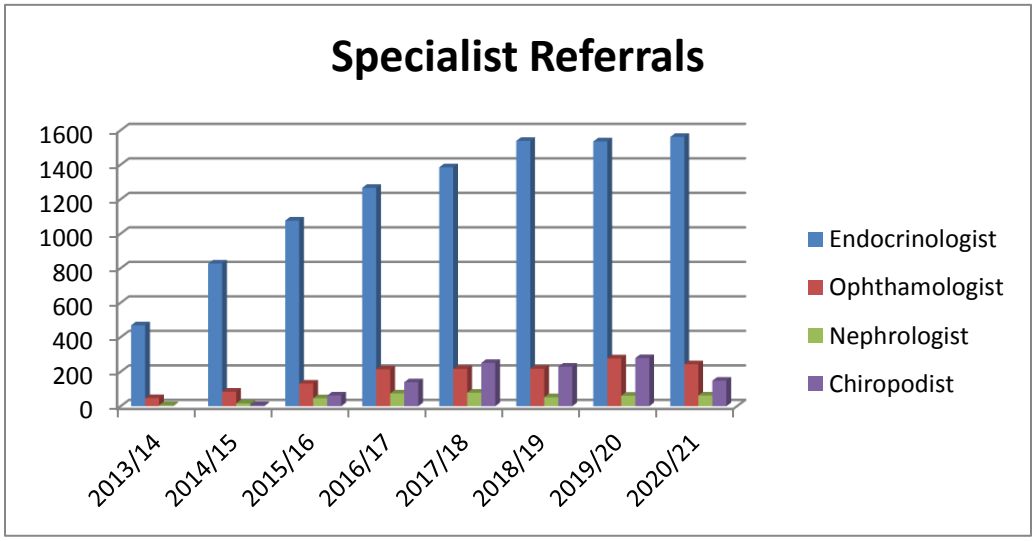


Figure 3: Screenshots of website page and self-referral form

DCI has streamlined coordination and access to specialized diabetes care by providing specialist consults on the same referral form (paper or electronic) for endocrinologist, ophthalmologist, nephrologist, and chiropodist. (Table 4) We facilitate referrals to the LHIN Home and Community Care Wound Care Clinic. We also have agreements with a select number of chiropodists in our region who will receive referrals from us for chiropody services, although this service is fee for service and is dependent on the person's ability to pay.

Table 4: # of Referrals Sent to Specialists



We continue to see an increase in our referral sources from within our region and outside our region. As of year-end, we have a total of 2,387 referral sources with 62% of referrals from primary care (Family Physicians and Nurse Practitioners) and 22% from endocrinologists. **Table 5** represents the total number of unique referral sources and **Table 6** identifies the referral sources by specialty.

Table 5: # of referral sources per year

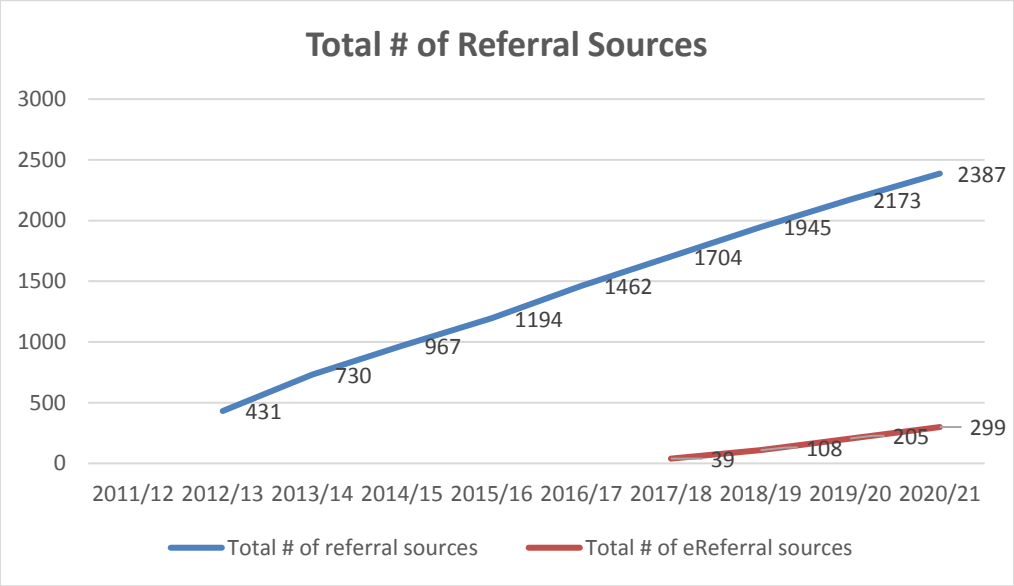
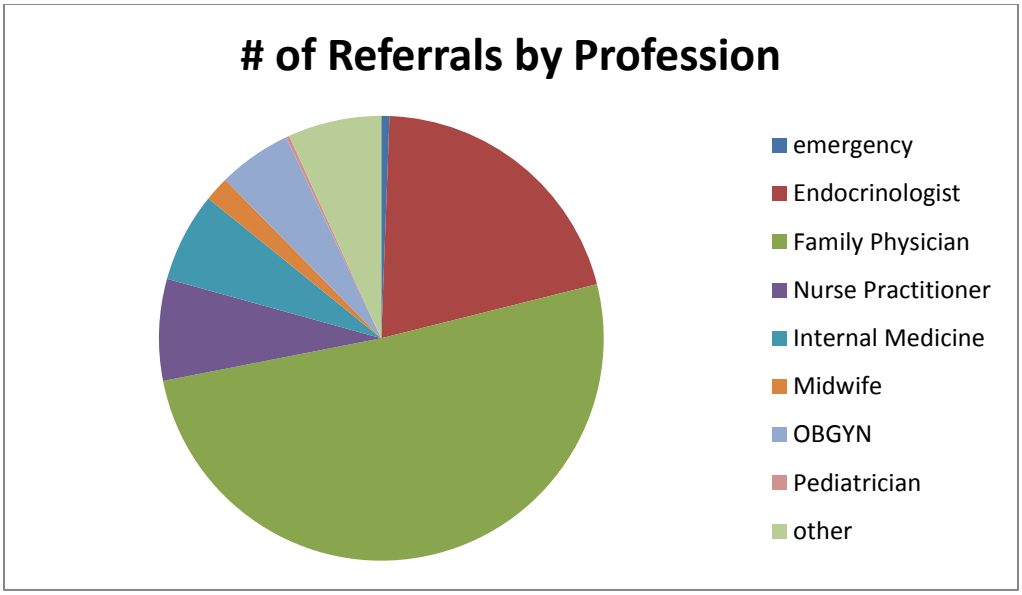


Table 6: # of Referrals by Referral Source/Profession



We continue to see an increase in referrals from hospitals, particularly ER departments except for Guelph General Hospital where their diabetes educators facilitate transition of residents from hospital directly to their Diabetes Education Program. The following tables (Table 7, 8) illustrate the number of referrals from hospitals and the # of referrals by department each year.

Table 7: # of Hospital Referrals by Year

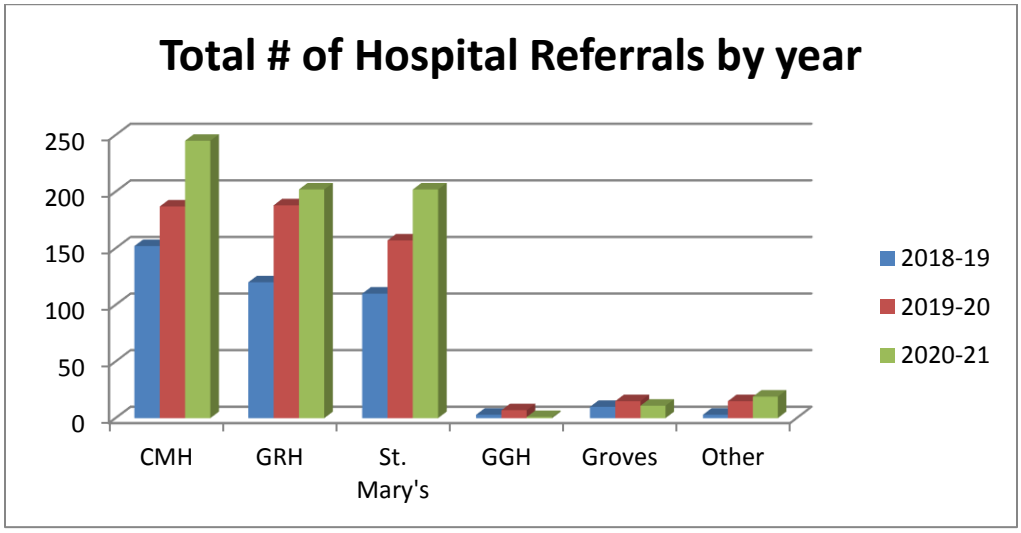
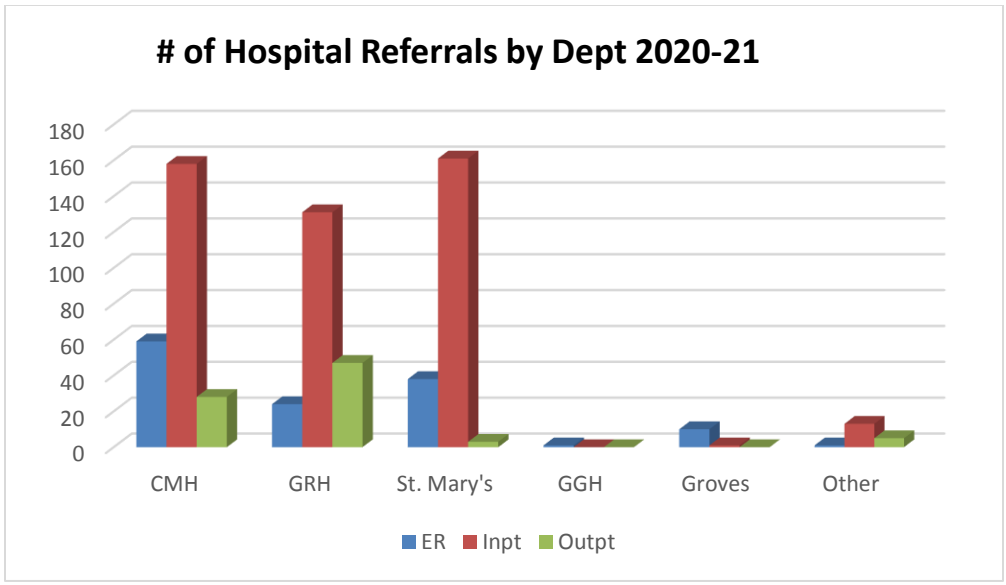


Table 8: # of Hospital Referrals by Department by Hospital 2020-2021



DCI also continues to direct and receive referrals outside of the WWLHIN, although this year, there were not as many referrals sent outside of the region, but there was an increase within our region. We continue to be consulted by other regions and provinces with inquiries on how to implement diabetes

central intake. The following data provides the breakdown of referrals sent to and received from other LHINs and outside of our province. (Table 9)

Table 9: # of Referrals Sent to from inside and outside of WWLHIN for 2020-21

Ontario LHIN #	LHIN name	# of referrals sent to	# of new referral sources from
1	Erie St. Clair	7	0
2	South West	285	18
3	Waterloo Wellington	5,919	130
4	Hamilton Haldimand Niagara Brant	27	16
5	Central West	5	7
6	Mississauga Halton	6	20
7	Toronto Central	4	12
8	Central	1	6
9	Central East	4	2
10	South East	2	0
11	Champlain	1	2
12	North Simcoe Muskoka	10	3
13	North East	3	1
14	North West	0	0
Other Province		1	0
TOTAL		**6275**	**217**

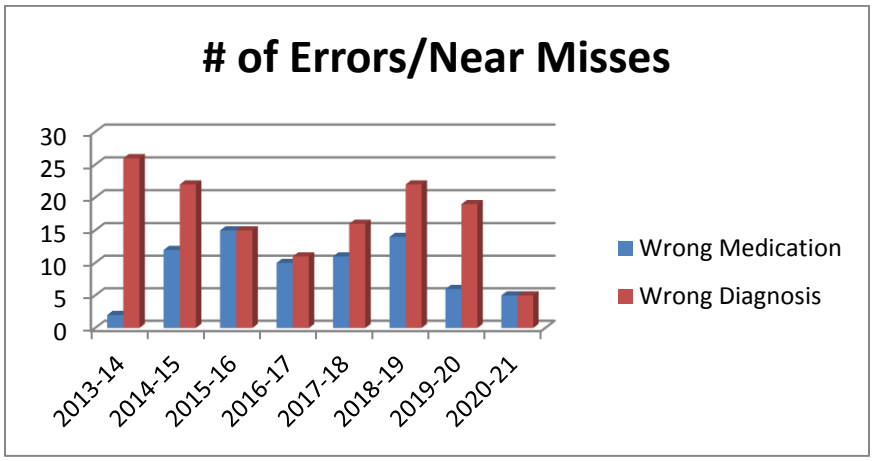
Triaging

The role of the clinical triage nurse/patient navigator is essential in making Diabetes Central Intake a success. The triage nurse is an experienced Certified Diabetes Nurse Educator (CDE), who reviews every referral and determines the urgency of the referral and where to send the referral to. She is in regular contact with Primary care physicians, Endocrinologists and Diabetes Educators in the DEPs to ensure excellent patient navigation and coordination. She connects with hospital units to determine when patients are being discharged from hospital to facilitate appropriate follow-up with Diabetes Education Programs. She uses *ClinicalConnect* when necessary to obtain additional data to support triaging.

The expertise of the triage nurse has provided identification of cases that were misdiagnosed, for example when they were identified as type 2 diabetes when they had type 1 diabetes. This has prevented many patients from progressing to diabetic ketoacidosis , which is a serious life-threatening condition. The triage nurse has also identified cases where the person was prescribed the wrong medication and/or the wrong dosage. This clinical expertise and intervention has provided safe, effective and efficient service, preventing individuals from ending up in Emergency or hospital

admission. The following table demonstrates the # of missed diagnoses/incorrect medication identified by the triage nurse. (Table 10)

Table 10: # of Missed Diagnoses and Incorrect Medication/Dosages

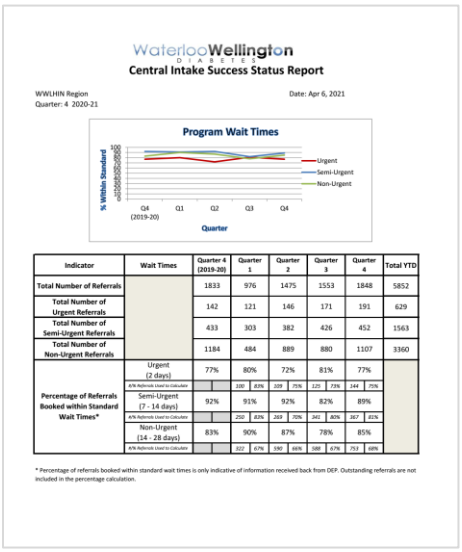


Monitoring of Data

Wait Times

DCI monitors wait times for diabetes education programs and reports to the DEP program managers and the WWLHIN quarterly. (Figure 4) This monitoring is not intended to be punitive, but to provide support to managers to review and revise their programming accordingly. With the increasing prevalence of diabetes, and the need for on-going follow-up to support effective self-management of diabetes, programs need to be constantly identifying more effective and efficient methods of program delivery. This service of monitoring and reporting supports programs in offering effective programs.

Figure 4: Copy of Success Status Report for WWLHIN


WaterlooWellington
DISTRICT
Central Intake Success Status Report

WWLHIN Region
Quarter: 4 2020-21

Date: Apr 6, 2021

Program Wait Times

% Within Standard

Urgent
Semi-Urgent
Non-Urgent

Q4 (2019-20) Q1 Q2 Q3 Q4

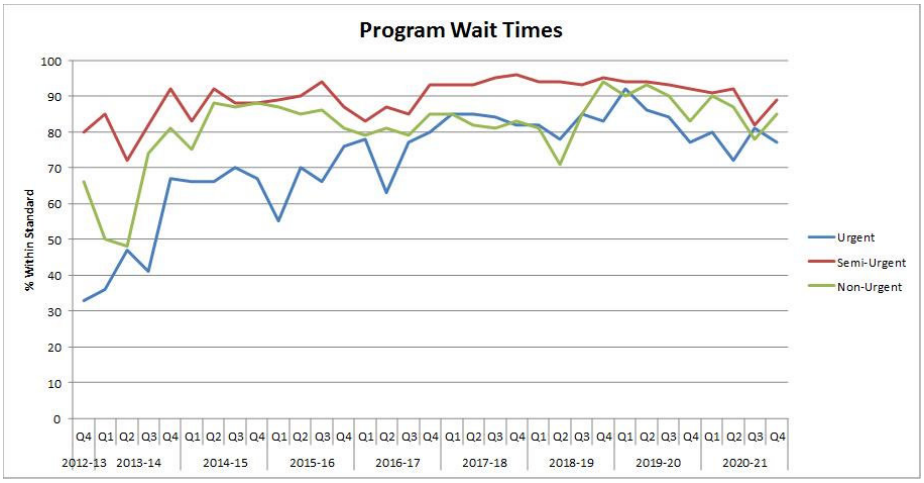
Quarter

Indicator	Wait Times	Quarter 4 (2019-20)	Quarter 1	Quarter 2	Quarter 3	Quarter 4	Total YTD
Total Number of Referrals		1833	976	1475	1553	1848	5852
Total Number of Urgent Referrals		142	121	146	171	191	629
Total Number of Semi-Urgent Referrals		433	303	382	426	452	1563
Total Number of Non-Urgent Referrals		1184	484	889	880	1107	3360
Percentage of Referrals Booked within Standard Wait Times*	Urgent (2 days)	77%	80%	72%	81%	77%	
	K/N Referrals Used to Calculate	100	83%	103	75%	125	73%	144	75%
	Semi-Urgent (7 - 14 days)	92%	91%	92%	82%	89%	
	K/N Referrals Used to Calculate	250	83%	283	79%	341	80%	367	81%
	Non-Urgent (14 - 28 days)	83%	90%	87%	78%	85%	
	K/N Referrals Used to Calculate	317	67%	390	66%	388	67%	713	68%

* Percentage of referrals booked within standard wait times is only indicative of information received back from DEP. Outstanding referrals are not included in the percentage calculation.

Wait times continue to be within 80% of the benchmark wait times for semi-urgent and non-urgent referrals, with 77% within the benchmark wait time for urgent referrals. (Table 11) There were a higher number of urgent referrals, which may be related to worsening diabetes control with the pandemic. These wait times only reflect the incoming referrals and don't reflect the ongoing follow-up care provided by the programs to support individuals with diabetes. The follow-up visits and active clients are captured in the individual DEP reports.

Table 11: Program Wait times for WWLHIN Over Time



As mentioned above, the urgency of the referrals has been consistently rising with the volume, until this past year, where we saw a 16% increase in urgent referrals and a drop in non-urgent referrals. This places an added stress on diabetes programs, as these individuals need to be seen within 1 to 2 days, and often require frequent follow-up in the 1st few weeks, which isn't reflected in DCI's data.

The following table (Table 12) demonstrates the breakdown of urgent/semi-urgent/non-urgent for the region and Table 13 demonstrates the change in urgency over the past year.

Table 12: Volume of Referrals by Urgency

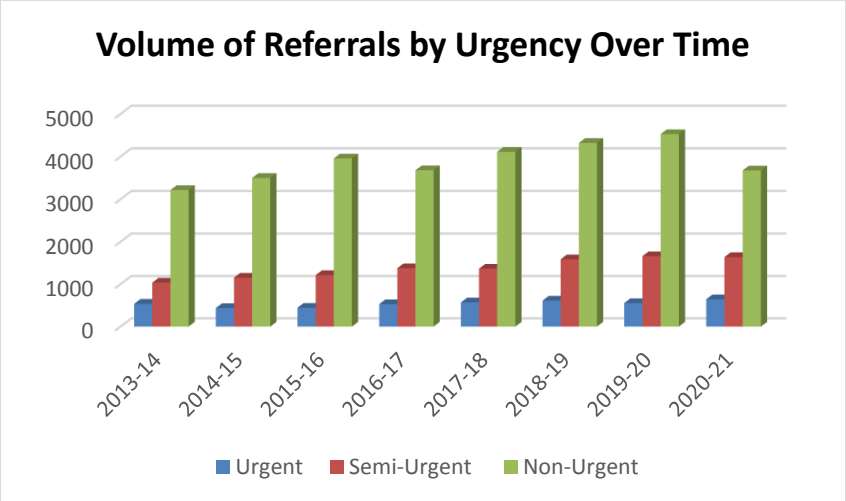
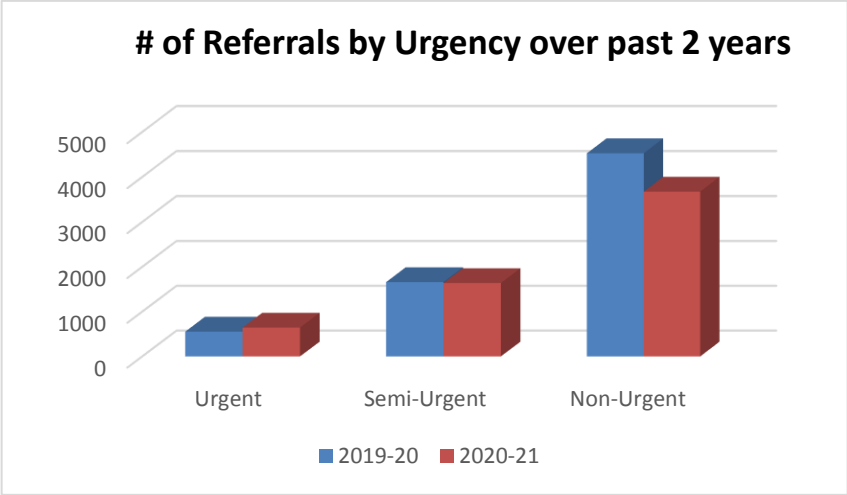
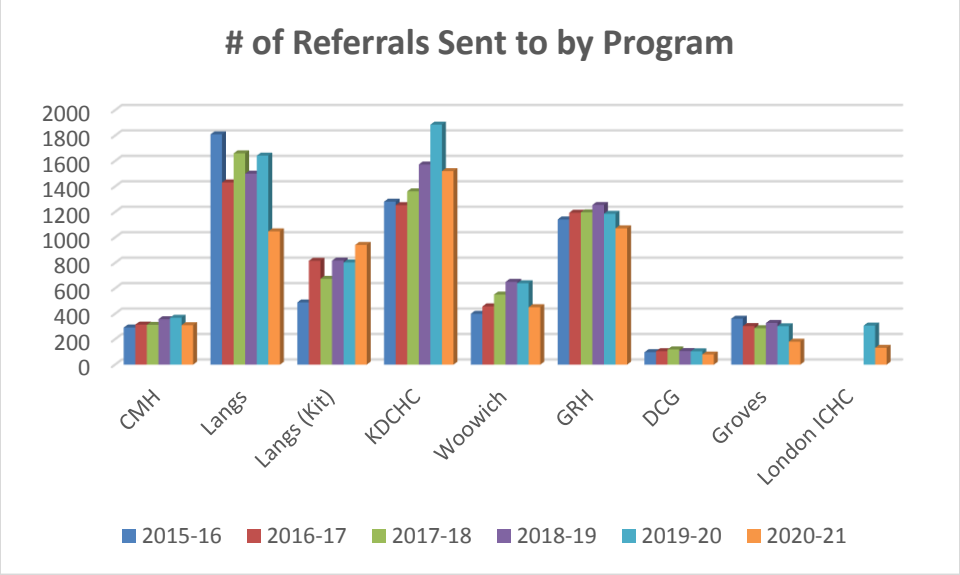


Table 13: Volume of Referrals by Urgency over Past 2 years



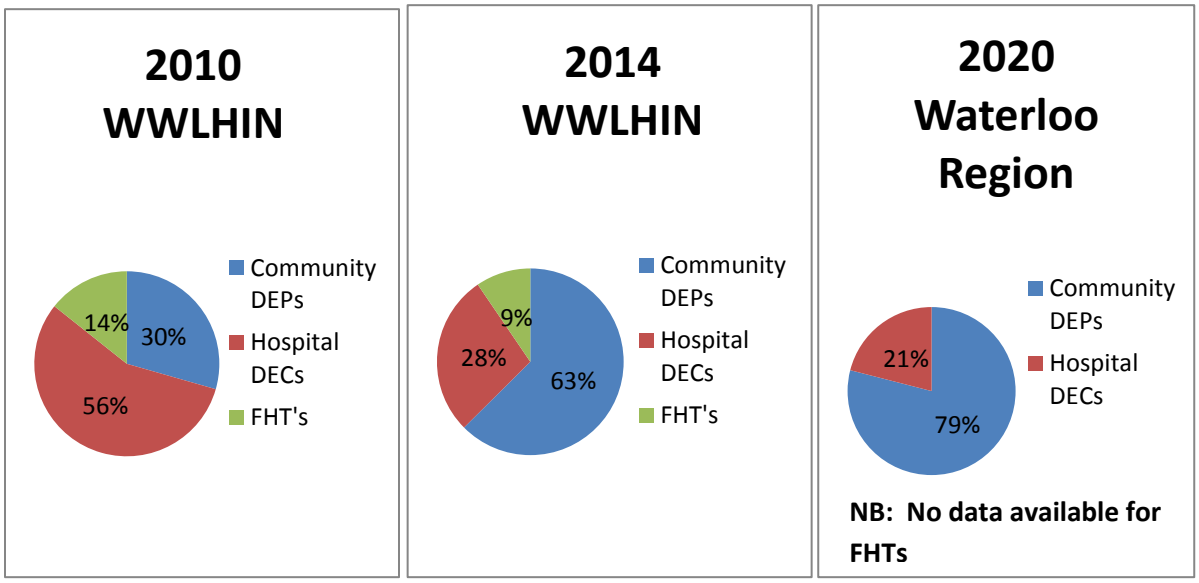
The following table (Table 13) demonstrates the volume of referrals by program.

Table 13: Volume of Referrals by Program



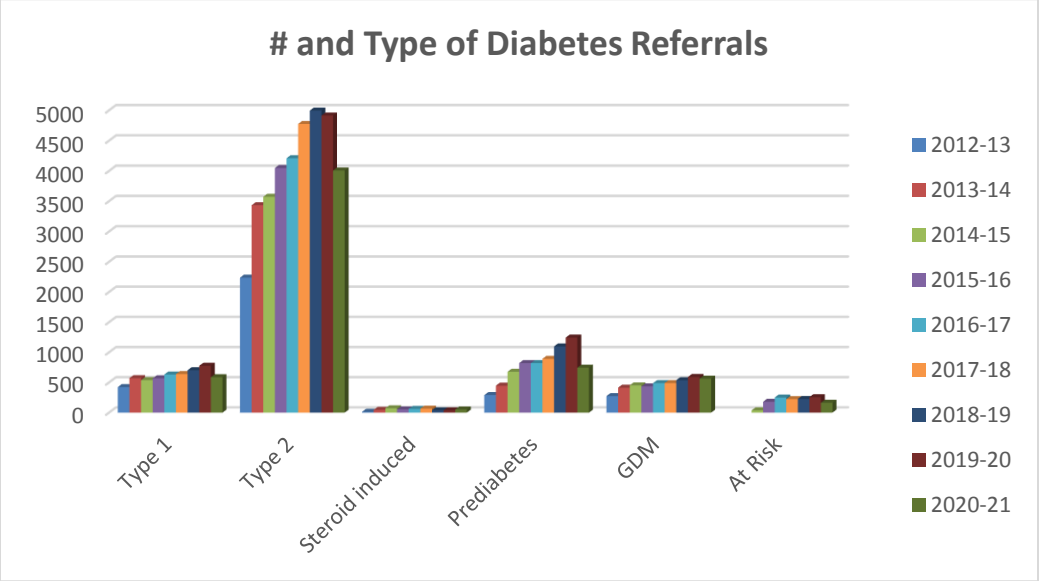
There has been great effort by DCI to move the volume of referrals from the hospitals to the community programs. The hospital programs now only receive referrals for complex diabetes cases, such as Type 1 diabetes, diabetes in pregnancy, insulin pumps, steroid induced diabetes and complex Type 2 diabetes (eg. those on complex insulin regimes or on dialysis). The following graphs (Table 14) demonstrate the percentage of referrals seen in hospital programs in 2010 and the shift over time into the community. Note, the data for FHTs is currently not available to DCI.

Table 14: Volume of Referrals sent to Hospitals versus community programs over time



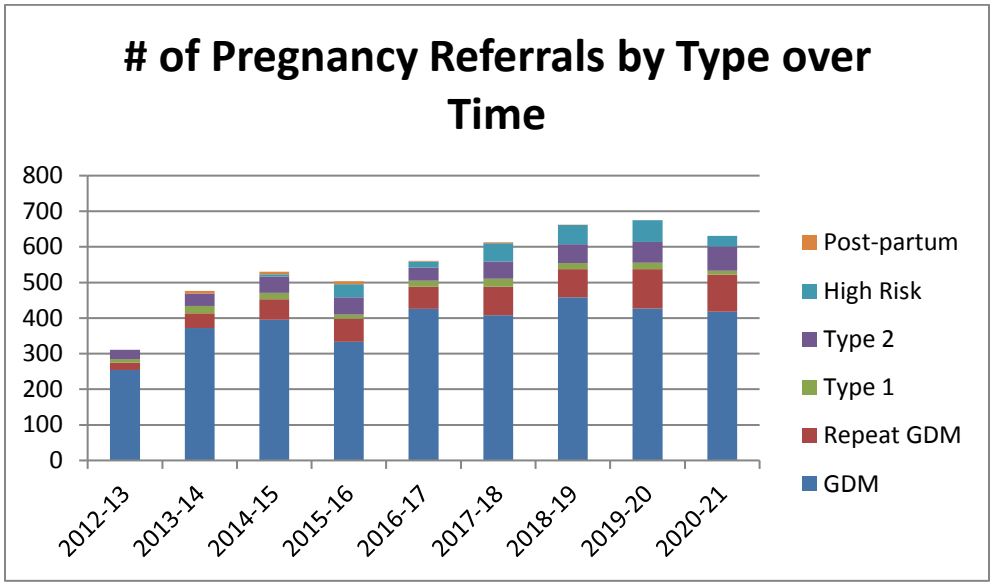
DCI is able to capture the various types of diabetes being referred (Table 15) for Diabetes Education. This is data that is not available in any other region of the province. This also allows for effective program planning. There has been a drop in all types of referrals this year, due to the pandemic.

Table 15: # and Type of Diabetes Referrals



DCI is also able to capture the number of pregnancy referrals broken down by type. (Table 16) This data excludes Guelph and North Wellington, but is useful for the hospital programs who manage diabetes and pregnancy. By monitoring the # of women with gestational diabetes, it provides opportunity for intervention with this group post-partum to prevent them from progressing to Type 2 diabetes.

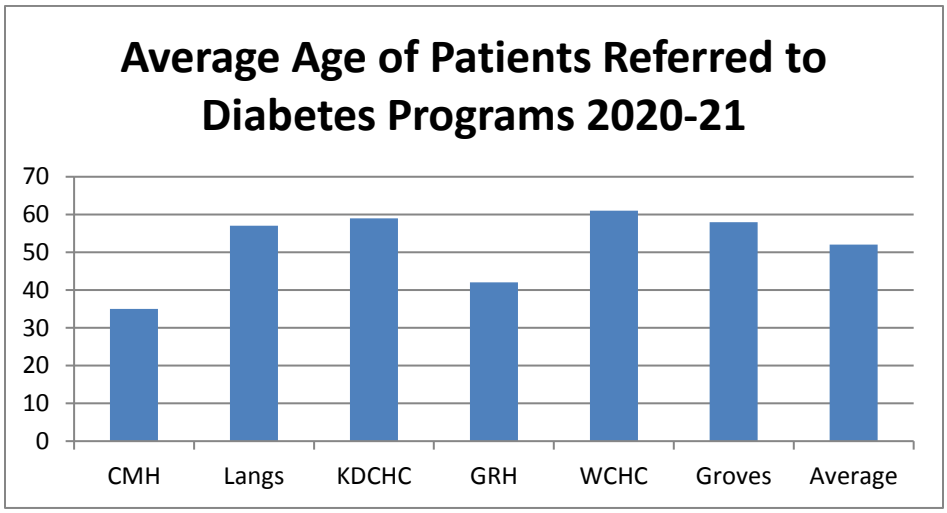
Table 16: # of Pregnancy Referrals by Type Over Time



In addition to volume and wait time trends, DCI is able to capture a number of trends that help with overall system and program planning.

The following table (Table 17) shows the average age of patients at the time of referral, being sent to Diabetes Education Programs. The hospital programs typically average lower, due to the volume of younger people with Type 1 diabetes as well as pregnancy.

Table 17: Average Age of Patients at Time of Referral for Diabetes Education



Prevention

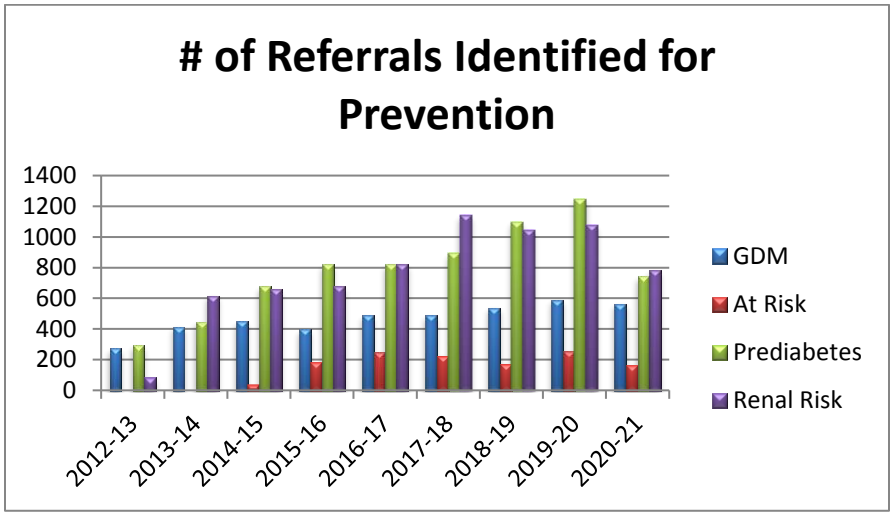
DCI continues to focus on prevention efforts. As mentioned above, the diagnosis of gestational diabetes provides an opportunity to intervene to prevent the onset of type 2 diabetes in both the mother and the

baby. Identifying women with gestational diabetes and early referral indicates improved screening and intervention.

Diabetes Programs accept referrals for "at risk" for diabetes and prediabetes. Intervention at the prediabetes stage can prevent the progression to diabetes by up to 58% (DPP study).

DCI continues to monitor the number of referrals with criteria indicating higher risk for renal disease to identify further opportunities for earlier intervention. (Table 18)

Table 18: # of Referrals Focusing on Prevention



Clinician Resource & Project Lead:

The mentoring program, which is unique to this region, was restructured last year to support the growing needs of the program. It was originally developed to support the community diabetes educators in managing the increased volume and complexity of patients being moved from the hospital to the community programs. That transition has been achieved, so the position was changed to a resource clinician to continue to support diabetes educators but also work with the regional Self-Management program in supporting health care provider training.

Our Clinician Resource & Project Lead position began at the end of February 2020, just prior to the declaration of the Covid pandemic. Despite the initial challenges of onboarding while working from home we have managed to accomplish a variety of projects this year.

A major focus for this position was completion of the Keto/Low Carbohydrate Health Care Provider Document that included participation from colleagues from Woolwich Community Health Centre and Diabetes Care Guelph. This was accomplished in August, and in addition to the health care provider clinical practice guidelines, a patient infographic was created and 2 virtual health care provider workshops were organized and facilitated by our clinician resource. These workshops, held November

27/20 & Mar 26/21, included 5 expert speakers and were attended by 136 participants. Great feed back was provided (44 respondents) and is summarized below.

Workshop Outcomes	% Participants who agree/strongly agree
Program content enhanced knowledge	81%
Program content was relevant & beneficial	90%
Felt virtual/zoom platform was effective	95%
Increased awareness of clinical evidence	85%
Can recognize and discuss medication risks with clients	100%
Increased understanding to implement this intervention	76%

Activities/Workshops Delivered:

- **Provincial Self-Management Program**: developed & presented virtual province wide session on Diabetes Basics for newly diagnosed clients not able to access typical care due to Covid-19
- **Cambridge Seniors Community Group**- Diabetes Management on zoom
- **Regional Oncology AHPs**: basic Motivational Interviewing for behaviour change with challenging patients
- **Craving Change Program**: developed slide content for virtual delivery and supported delivery for 2 sessions
- Compiled/distributed a portfolio of online resources to community/hospital programs for patients
- **Community DM Programs**: developed clinical updates for DM & Pregnancy, Intermittent Fasting, Foot Assessments, DM Assessment skills
- **Regional DM Network**: developed consent forms for electronic DM data sharing

Projects Initiated and Ongoing:

- Updates for Insulin order sets
- Creating non-insulin injectables orders
- Steroid-Induced DM screening protocol

Ongoing Activities:

- Regular Communication serving 21 organizations & 123 active clinicians in our region with practice alerts/updates, continuing education opportunities
- Website content updates/development
- Clinical resource for clinicians
- Support Central Intake and Self-Management Program

Website

Our regional website continues to be well received. Our website offers education, information on upcoming events and local resources. It also offers easy access to referral for diabetes care. The following table describes the volume and reach of our website. (Table 19)

Table 19: Waterloo Wellington Diabetes Website Data

	# of visitors	# of page views	# of regions in province	# of countries
2013-14	3,609	22,391	4	10
2014-15	5,495	18,766	14	81
2015-16	9,901	26,661	14	120
2016-17	7,797	21,543	14	93
2017-18	7,201	25,923	14	77
2018-19	7,192	22,597	14	102
2019-20	6,109	19,798	14	75
2020-21	6,888	17,680	14	93

Challenges, Risks and Opportunities

The biggest challenge for DCI, continues to be the limited resources of **1 FTE** Triage Nurse and **1 FTE** Admin Support. This is the same allocation of staffing resources since the MOHLTC funded DCI in 2012. The eReferral solution offers some efficiency with respect to the ease of transmission and notifications being sent, but DCI still requires staffing to process and follow-up regarding the referrals. It is important to note that eReferral is a method of transmission and replaces fax transmission, but the triaging, processing and follow-up are the components of central intake that require time and resources to support the ongoing success of this service.

Another challenge from a system planning perspective is that Two Rivers FHT, North and East Wellington and Guelph are not currently using Diabetes Central Intake, so the data provided is not reflecting the entire WWLHIN region. Hopefully as the electronic system is adopted, they will see the benefit of utilizing a region-wide approach to referring for diabetes care.

An opportunity, as the Ontario health system transforms, is that our program is well positioned to support the larger region or expand to offer a provincial service. We continue to be consulted by programs throughout the province on how to set up a central intake service. Many programs question if we can expand our service to support the province versus each of them trying to replicate what we have built. We believe this is a very efficient and effective win for the province, and look forward to the opportunity to further expand our central intake service.

Summary

Waterloo Wellington Diabetes, hosted by Langs, continues to be successful, providing an excellent service to residents living or working with diabetes. It aligns with the new Ontario Health focus of connecting and coordinating our current health system and its many complex parts in new and innovative ways to help ensure that Ontarians receive the best possible care.

Our streamlined process and robust referral management system ensure that no-one is lost in the system and that there is communication to the referral sources throughout the patient journey. Our available data provides valuable information for system and program planning. We continue to be consulted by other regions of the province and country on how to design and deliver centralized intake for diabetes services. Many diabetes programs and specialists throughout the province question why they can't have a similar system in their region or if we can offer a provincial program. Our resource clinician has helped increase capacity of experienced educators in the region. Our web-site provides education and support to people not only within but also outside our region.

Much work has been done to move to the Ocean™ electronic system. We have worked very closely with the vendors, and the SCA program to build an eReferral solution to support eReferrals to DCI. We continue to promote and encourage eReferral to referral sources and to referral targets. As mentioned, eReferral offers an effective and efficient transmission solution, but the role of central intake is essential in processing referrals. The biggest **risk** for DCI is the limited staffing resources available.

Our co-location and management of Waterloo Wellington Diabetes along with the Regional Self-Management Program, the Regional Orthopedic Central Intake, and now the Regional Cataract Central Intake offers great opportunities to expand our services in offering patient centred care, and streamlined coordination, especially in the current changing health care system.

> *"We are so glad that you are there. We really appreciate the updates and communications you give us"* – **Kitchener Family Physician**