Waterloo Wellington Diabetes Central Intake

2021-22 Year End Report

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Contents

Introduction

This annual report provides a summary of activities to date for Diabetes Central Intake, Resource Clinician activities, and the Waterloo Wellington Diabetes website www.waterloowellingtondiabetes.ca. Langs receives base funding from Ontario Health 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 region in system planning for diabetes care by monitoring volume and wait-times
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 2021-22.

At all times, our work continues to be patient-focused, and we continue to emphasize our efforts through reflection on our tagline of ***Improving Access, Improving Knowledge and Improving Health***. We participate regularly with various community partners in the region and beyond and exhibit at many community events, promoting our services both virtually and safely in-person.

Diabetes Central Intake (DCI)

Diabetes Central Intake continues to provide a streamlined process for referrals to Diabetes Education Programs and specialists. This year has remained challenging for the team 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 2021-22, the previous drop in referral numbers due to the pandemic has not remained. The volume has surged even higher than the pre-pandemic rate and as a result, DCI has processed 8,425 referrals for diabetes education (Table 2) from existing referrers and an additional 312 new referral sources (Table 5). In addition, 2,664 referrals have been directed to specialists (Table 4), making a total of 11,089 referrals processed.

We continue to promote the use of eReferral to all physicians. We anticipated that the virtual offerings would increase eReferral use, but the number of eReferrals has plateaued at 29% 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 139 new eReferral sources and 2,438 eReferrals this year. There are 11 diabetes programs and 4 endocrinologists in our region receiving eReferrals.

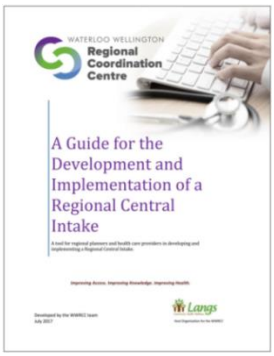
711 referrals have been received from area hospitals, which is up 5% from last year. Much time is spent by our triage nurse following up on discharge plans for patients and arranging timely appointments for people discharged from hospitals. We have transitioned to capturing the number of “Inpatient Late

Discharge" referrals to ensure that the amount of follow-up required by our triage nurse is accurately captured in the number of referrals from hospitals (Table 8).

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

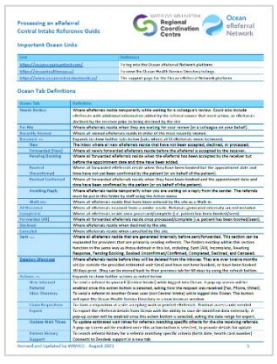
Other regions of the province continue to consult with us on the "how to" of developing a central intake program (not only for diabetes but other specialities). We are actively involved with offering guidance to Toronto Central region in the development of a central intake process and are also currently working with Ontario Health North as they work towards a regional model. We continue to share our guide that we developed on developing a central intake. It is also available by 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 13-page guide on how to processing an Ocean eReferral using a central intake perspective. We have shared it with other regions, as well as within our own region to help with training on Ocean eReferral (Figure 2).

Figure 2: Processing an eReferral Central Intake Reference Guide (with Ocean™)



We also continue to support Southwest region's coordinated access initiative with receiving/sending referrals to them, despite no further funding for this. To date, we have processed 2,928 referrals to the Southwest region, with 306 this year being sent 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:

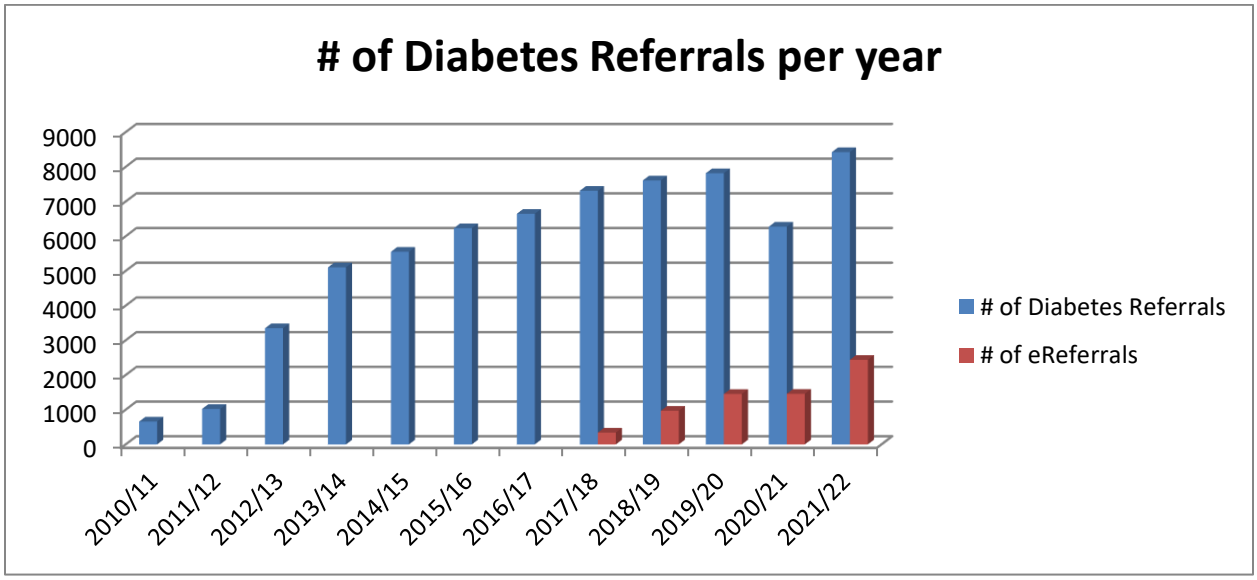
- No-one is “lost in the system”
- Increased number of people referred and followed for education with same resources
- People accessing care close to home
- People can send self-referrals
- Ability to send and receive referrals from other provinces and countries
- Standardized regional wait-times established for benchmarking
- Wait-times for diabetes education programs consistently within target, despite the pandemic
- Continued utilization of community programs versus hospital programs with maximization of services accessible and offered in the community
- Use of pharmacies with Certified Diabetes Educators (CDEs) to offer after-hours education
- Streamlined access to diabetes specialists, including wait list management when new providers have become available in our region
- 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, the volume has returned to higher than pre-pandemic numbers. Our volume of incoming referrals continues to rise exponentially year over year and this past year was the highest yet. There continues to be a higher volume of referrals sent within our region, as well as referrals sent to programs and specialists outside our region (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 continues to be a decrease in self-referrals this year, which is concerning, but is consistent with other streams of care where people have been 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 as an 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

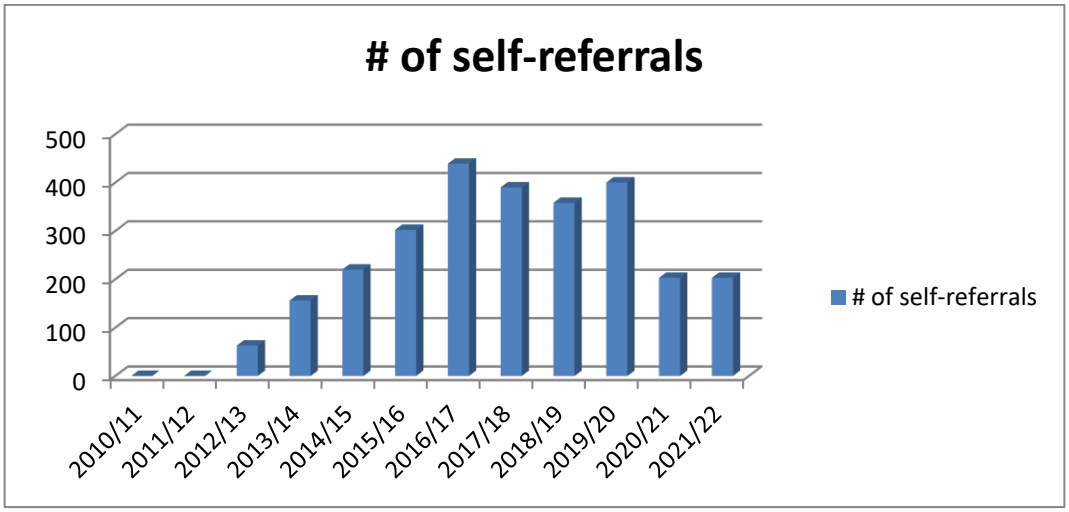
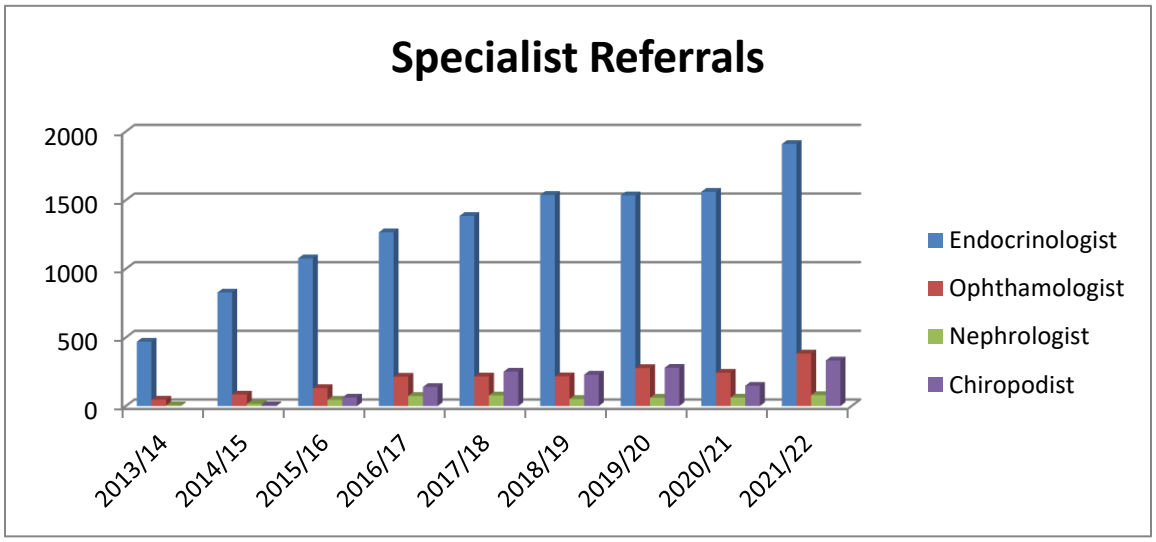


Figure 3: Screenshots of website page and self-referral form

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 Home and Community Care Wound Care Clinic and 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. This year, access to free chiropody services has been an issue in our region, despite rising referral numbers.

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 2,699 referral sources with 56% of total referrals from primary care (Family Physicians and Nurse Practitioners) and 23% from endocrinologists. The tables below represent the total number of unique referral sources (Table 5) and identify the referrals by referrer specialty (Table 6).

Table 5: # of referral sources per year

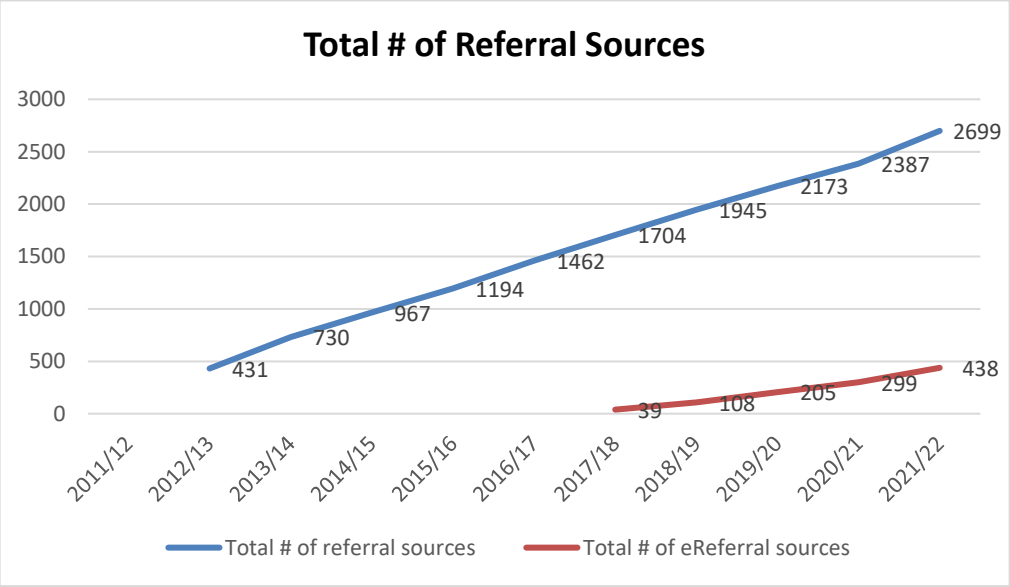
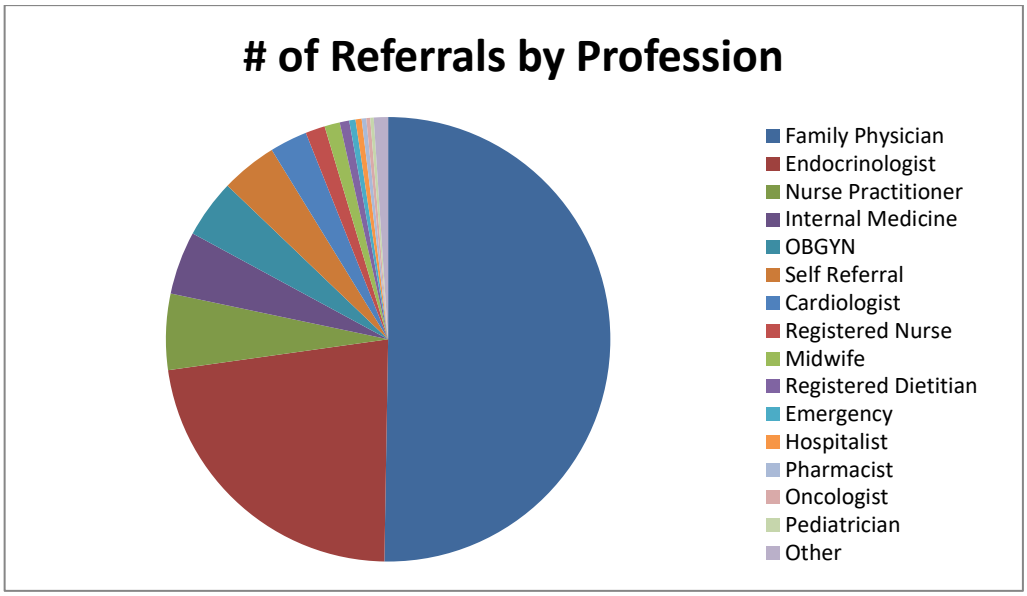


Table 6: # of Referrals by Referral Source/Profession



We continue to see an increase in referrals from hospitals, particularly ER and inpatient departments, except for Guelph General Hospital where their diabetes educators facilitate transition of residents from hospital directly to their Diabetes Education Program. We also saw a slight dip in the number of referrals from Cambridge Memorial Hospital this year. The following tables (Table 7, 8) illustrate the number of referrals from hospitals and the # of referrals by department each year, including those referrals for "Inpatient Late Discharge" that represent additional follow-up required by our triage nurse.

Table 7: # of Hospital Referrals by Year

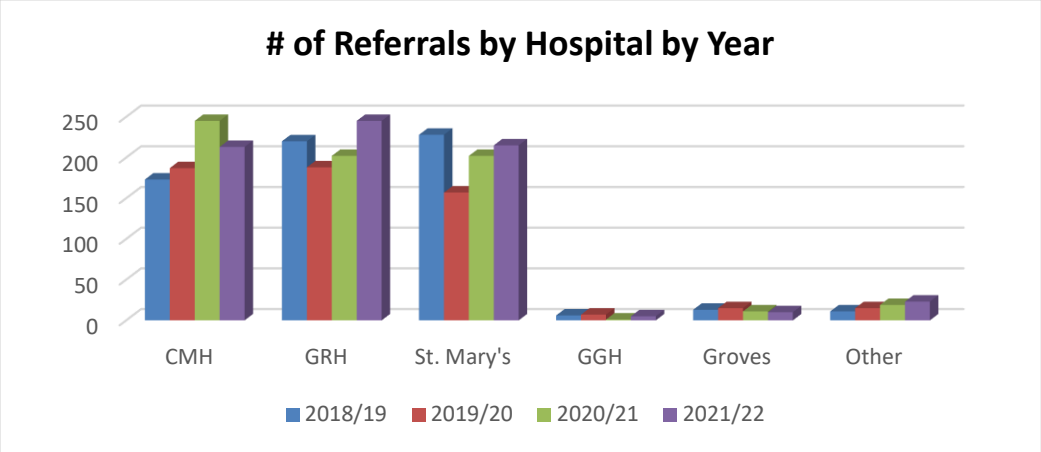
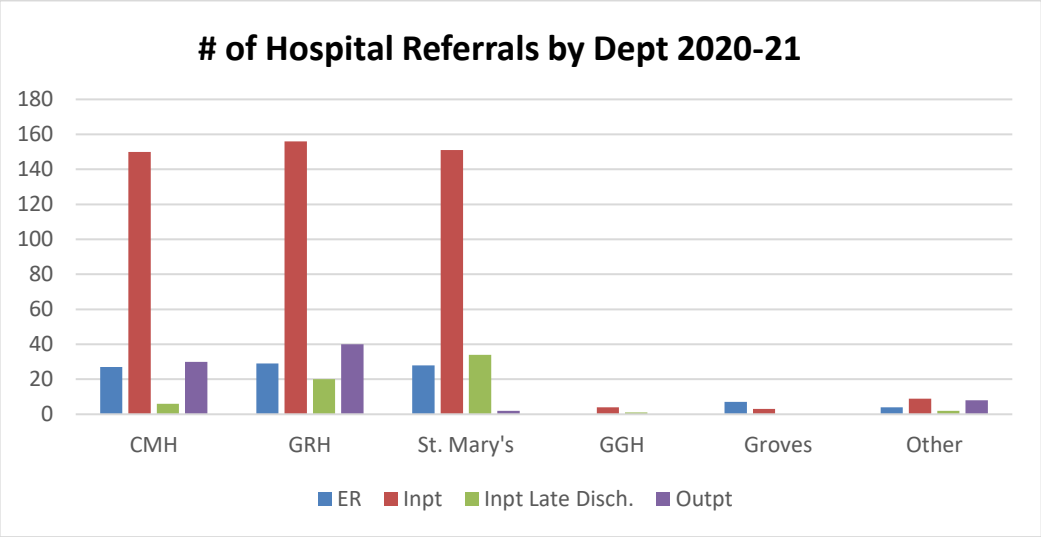


Table 8: # of Hospital Referrals by Department by Hospital 2020-2021



DCI also continues to receive referrals from and direct referrals to programs outside of our regional geographical area in Ontario and outside the province. 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 regions 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	3	3
2	South West	497	44
3	Waterloo Wellington	7,812	184
4	Hamilton Haldimand Niagara Brant	49	17
5	Central West	7	9
6	Mississauga Halton	6	21
7	Toronto Central	2	18
8	Central	2	7
9	Central East	5	7
10	South East	0	0
11	Champlain	6	0
12	North Simcoe Muskoka	21	1
13	North East	4	0
14	North West	3	0
Other Province		8	2
TOTAL		**8,425**	**313**

Triaging

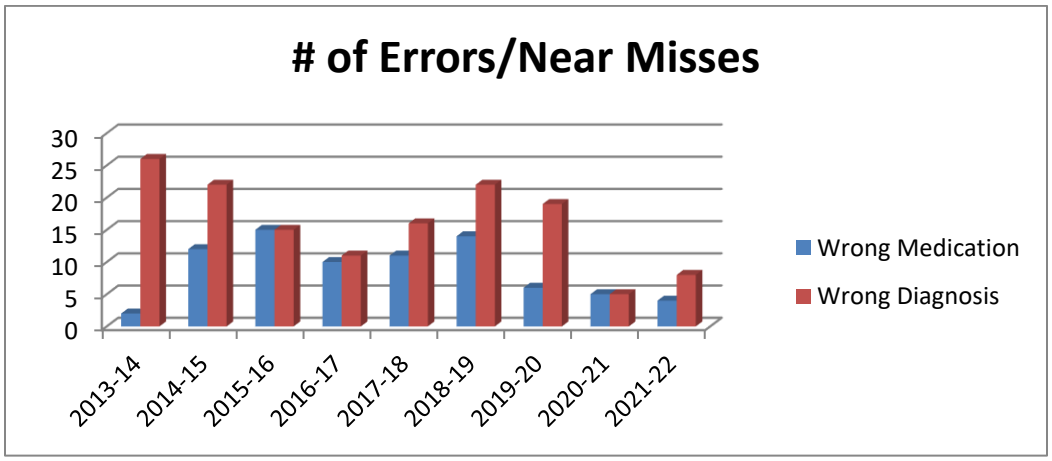
The role of the clinical triage nurse/patient navigator is essential in making Diabetes Central Intake a success. The triage nurse is an experienced Certified Diabetes Nurse Educator (CDE), who reviews every referral and determines the urgency of the referral and where to send the referral to. The triage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

The expertise of the triage nurse has provided identification of cases that were misdiagnosed (i.e., patient identified as having type 2, 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).

This year, the triage nurse has also started tracking system issues, that reflect larger scale issues for managing diabetes in the region, such as diabetes programs declining referrals or lacking the services

necessary to provide quality care, such as lacking a chiropodist or social worker on staff. This year there were 10 examples of system issues identified in our region.

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

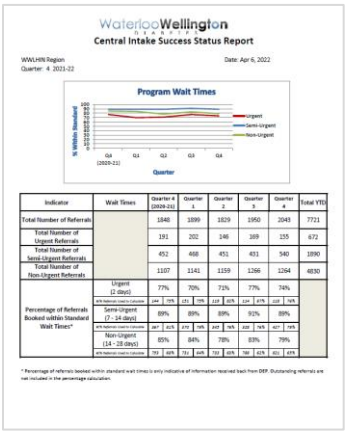


Monitoring of Data

Wait Times

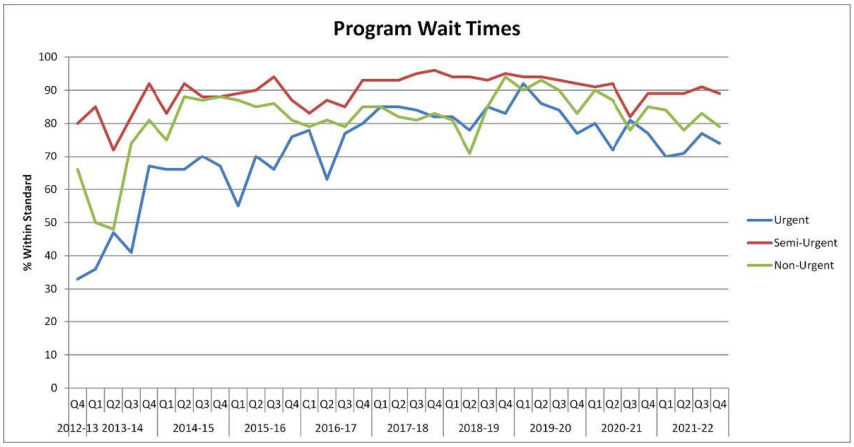
DCI monitors wait times for diabetes education programs and reports to the DEP program managers and Ontario Health West quarterly (Figure 4). This monitoring is not intended to be punitive, but to provide support to managers to review and revise their programming accordingly. With the increasing prevalence of diabetes, and the need for ongoing follow-up to support effective self-management of diabetes, programs need to be constantly identifying more effective and efficient methods of program delivery. The pandemic demanded virtual programming to allow continuation of service, so many of the education programs have re-evaluated their effectiveness and method of delivery in the last year. This DCI service of monitoring and reporting supports programs in offering effective programs.

Figure 4: Copy of Regional Success Status Report



Wait times continue to be consistently within 80% of the benchmark wait times for semi-urgent and non-urgent referrals, with 74% within the benchmark wait time for urgent referrals (Table 11). The number of urgent referrals remained more consistent this year, with an increase in the referrals in both semi-urgent and non-urgent categories. 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 volume of semi-urgent referrals has been consistently rising with the volume, until this past year, where we saw a 16% increase in semi-urgent referrals. This places an added stress on diabetes programs, as these individuals need to be seen within 7-14 days and can require more frequent or ongoing follow-up (i.e., Referrals for GDM, steroid-induced diabetes), which isn't reflected in DCI's data.

The following tables demonstrate the breakdown of urgent/semi-urgent/non-urgent for the region (Table 12) and the change in urgency over the past two years (Table 13).

Table 12: Volume of Referrals by Urgency

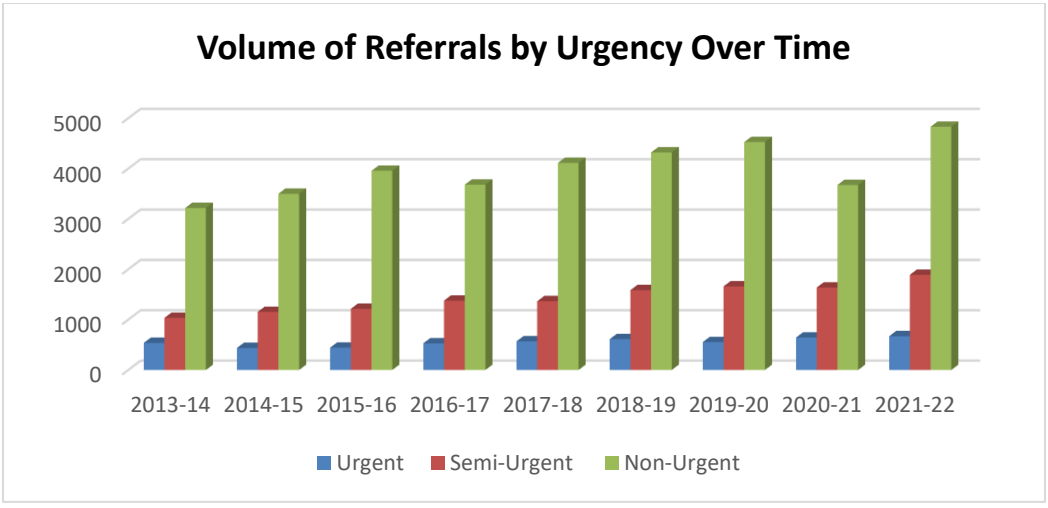
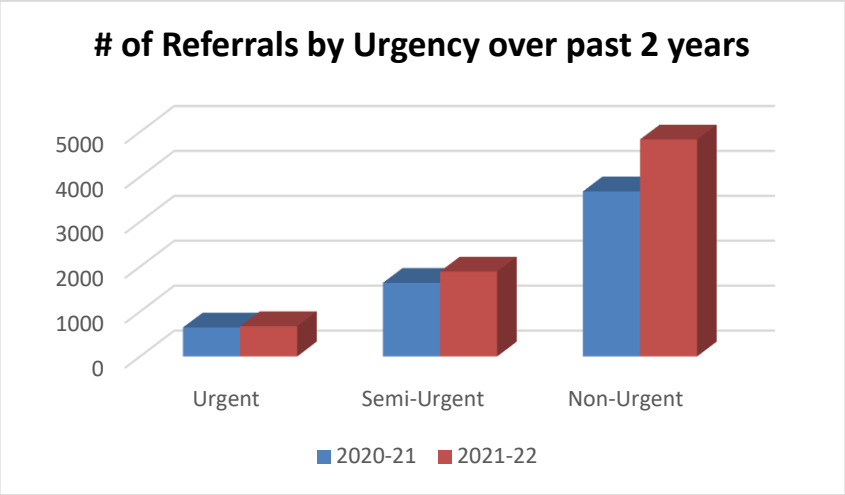
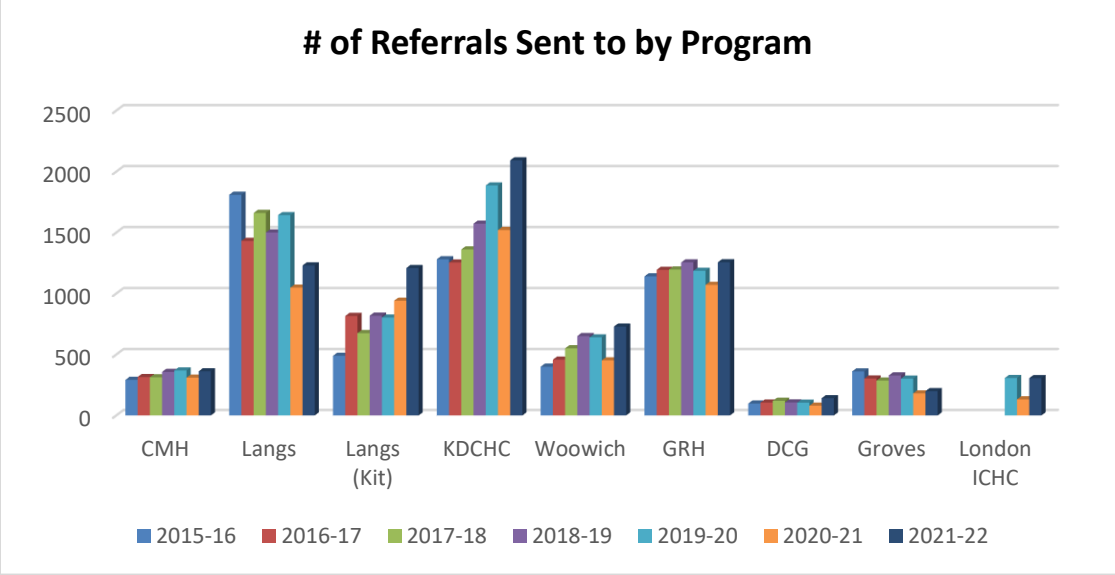


Table 13: Volume of Referrals by Urgency over Past 2 years



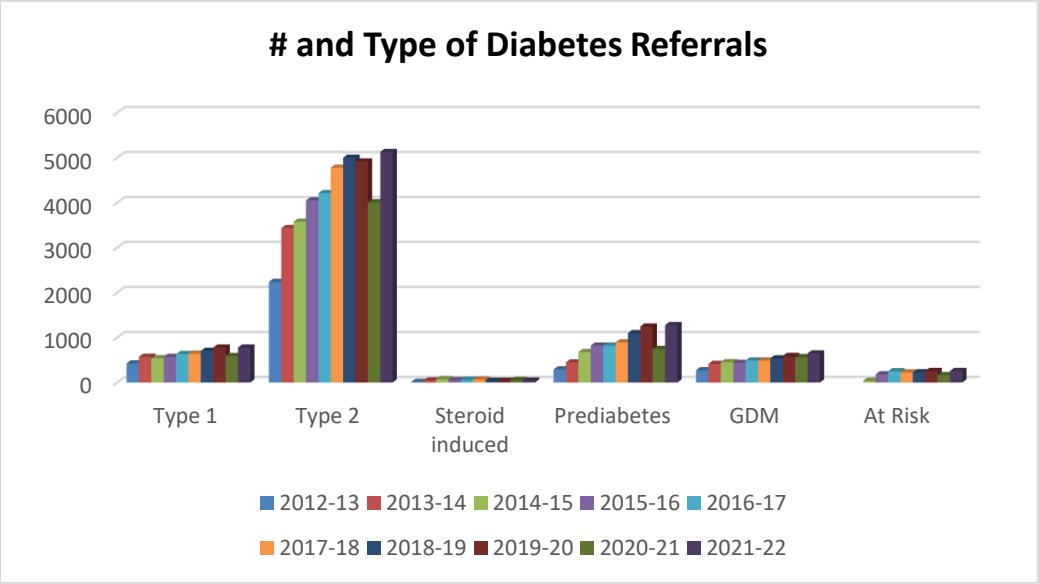
The following table (Table 14) demonstrates the volume of referrals by program.

Table 14: Volume of Referrals by Program



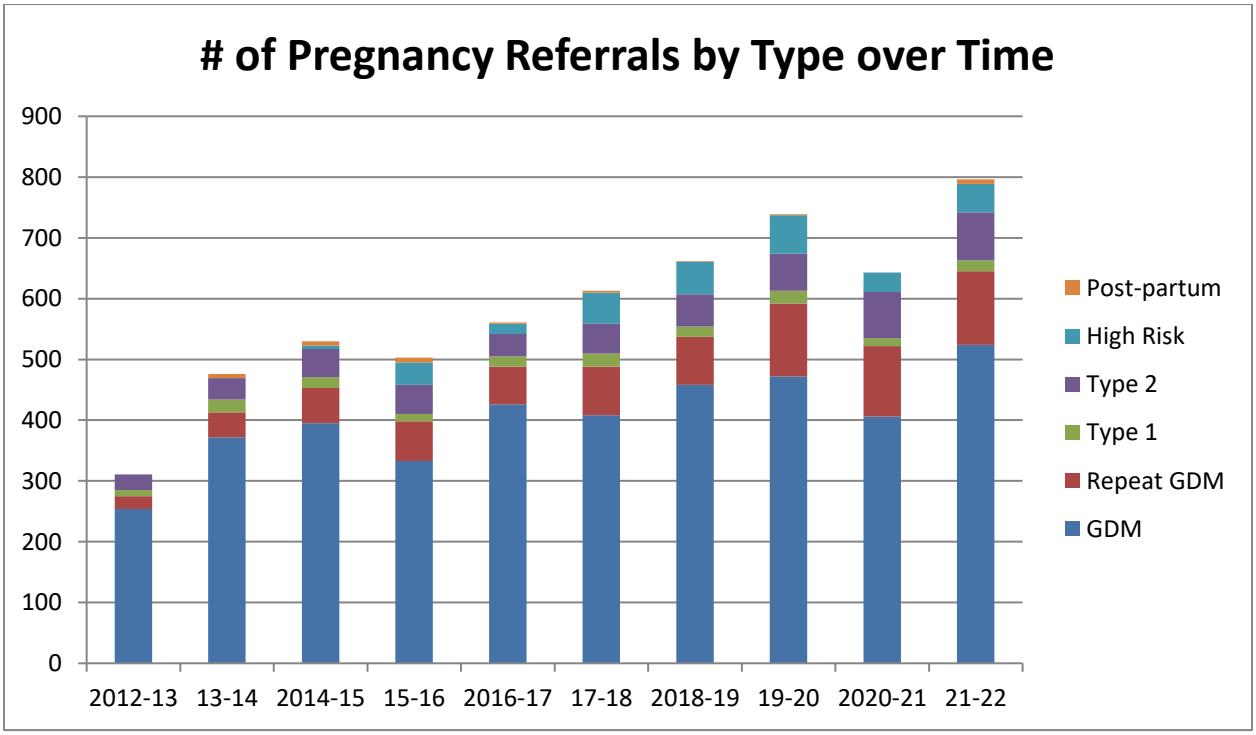
There has been great effort by DCI to move the volume of referrals from the hospitals to the community programs since central intake was introduced. The hospital programs now only receive referrals for complex diabetes cases, such as Type 1 diabetes, diabetes in pregnancy, insulin pumps, steroid induced diabetes, and complex Type 2 diabetes (i.e., those on complex insulin regimes or on dialysis). DCI captures the various types of diabetes noted on referrals for diabetes education (Table 15). This is data that is not available in any other region of the province. This also allows for more effective and specified program planning, and an understanding of the shift from the hospital to the community programs.

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. For example, by monitoring the number of women with gestational diabetes, there is opportunity for post-partum intervention with this group to prevent progression to Type 2 diabetes.

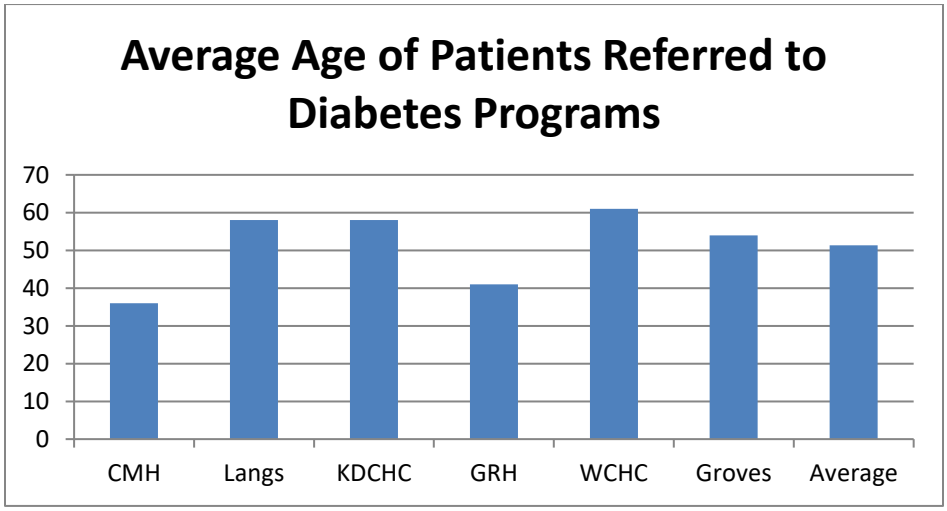
Table 16: # of Pregnancy Referrals by Type Over Time



In addition to volume and wait time trends, DCI captures information about several trends that help with overall system and program planning.

The following table shows the average age of patients at the time of referral being sent to Diabetes Education Programs (Table 17). 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



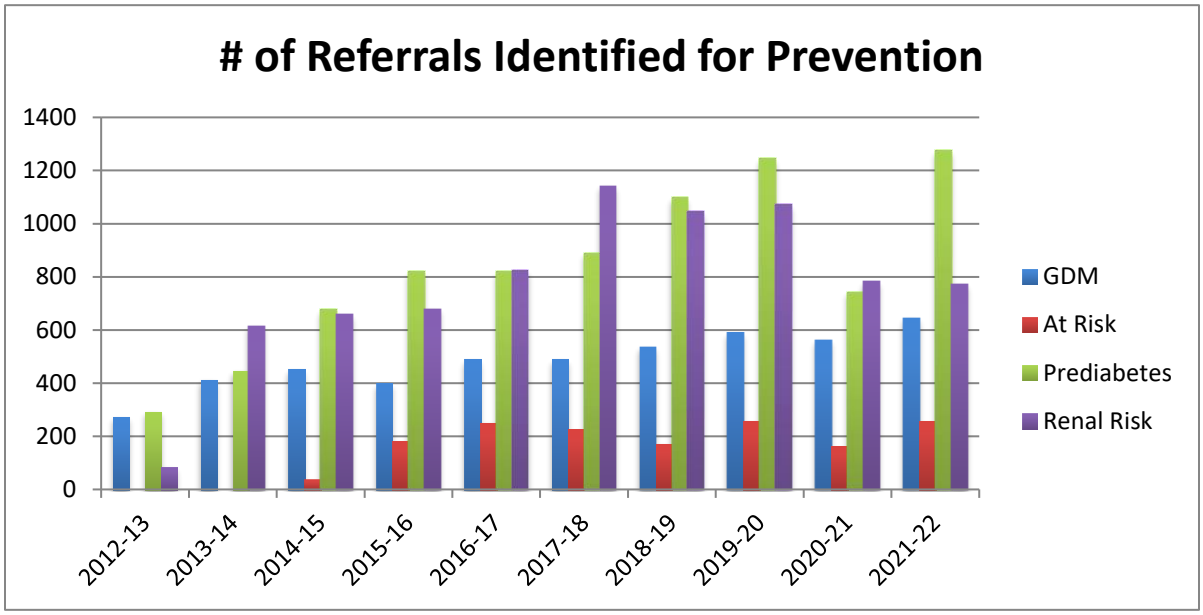
Prevention

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 patients that are both "at risk" for developing diabetes as well as for those diagnosed with prediabetes. Intervention at the prediabetes stage can prevent the progression to diabetes by up to 58% (DPP study). The programs are concerned with the increased volume of this population and the impact on their resources.

DCI also continues to monitor the number of referrals with criteria indicating higher risk for renal disease to identify further opportunities for earlier intervention. These numbers, along with those referrals that were received for GDM, high risk for developing diabetes, and prediabetes are outlined in the table below (Table 18).

Table 18: # of Referrals Focusing on Prevention



Clinician Resource & Project Lead:

The mentoring program, which is unique to this region, was restructured in 2020 to support the growing needs of the program and the region. 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.

A major focus for this position this year was the review and update of the Therapeutic Carbohydrate Restriction Health Care Provider Document that included participation from colleagues from Woolwich Community Health Centre and Diabetes Care Guelph. This was completed in August, and in addition to the health care provider clinical practice guidelines, a 3rd virtual health care provider workshop with MainPro accreditation with the College of Family Physicians of Canada was organized and facilitated by our clinician resource. This workshop, held February 2022, included 2 expert speakers.

Projects/Activities/Workshops Delivered:

- **Central East Self-Management Program:** developed and presented virtual session on Motivational Interviewing/CBT Strategies for Food Behaviour Change
- **Guelph-Wellington Paramedicine Program:** Clinical Diabetes Update training event
- **Regional Diabetes Network:** developed consent forms for electronic diabetes data sharing, steroid induced diabetes resources/referral algorithm
- **Therapeutic Carbohydrate Restriction document:** reviewed and updated
- **MainPro accredited workshop:** developed and facilitated a province-wide session for

- **Regional Oncology AHPs**: basic Motivational Interviewing for behaviour change with challenging patients
- **Community Diabetes Programs**: developed clinical updates for Diabetes and Pregnancy, diabetes assessment skills, series of sessions on advanced use of new generation insulins

healthcare providers and educators on Therapeutic Carbohydrate Restriction and Diabetes Management

Projects Initiated and Ongoing:

- Updates for Diabetes and Pregnancy clinical pathway
- Creating Steroid Induced Diabetes Clinical resource for educators
- Diabetes and Pregnancy 1 Day Workshop
- CDE Exam Preparation Sessions
- Established "Ask the Endo" events for community DEPS – facilitating quarterly

Ongoing Activities:

- Regular Communication serving 21 organizations and 125 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 and this year had the highest number of users to date. 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
2021-22	8,340	10,682	14	100

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 and is lacking in the area of coverage for staff due to the limited resources. 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. This year, we have worked to pursue more active use of the eReferral system specifically for Upper Grand FHT, as some of their providers are actively using the eReferral system, but their diabetes program does not accept referrals electronically.

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 continue to be in active consultation with both Toronto Central and Ontario Health North to support their efforts in initializing a central intake model. 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 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 and provided workshops and learning opportunities in response to educational needs. Our website 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 continue to work very closely with the vendors, and the eHealth Centre of Excellence team to build an eReferral solution to support eReferrals for 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 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.

> *"A brief note of thanks to each of you for contributing your time, effort, and energy into this program. It makes a big difference to me knowing that I am working with people who really care about the service they provide. And more importantly, it makes a big difference to the people this program serves."*
>
> – **Kitchener Advanced Practice Provider**

Sign-Off

Langs

Date: _____May 31, 2022_____

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Interim Director, RCC, Langs

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CEO, Langs