# Waterloo Wellington Diabetes Central Intake

## 2022-23 Year End Report

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**May 31, 2023**

# Contents

## Introduction

This annual report provides a summary of activities to date for Diabetes Central Intake and 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 and families) with easy access to diabetes care;
2. The region in system planning for diabetes care by monitoring volume and wait-times; 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 2022-23.

At all times, our work continues to be data driven and patient focused. We continue to emphasize our efforts in alignment with our tagline, ***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 growing referral volumes.

For the year 2022-23, the volume has surged even higher than the pre-pandemic rate. As a result, DCI has processed 9,142 referrals for diabetes education (Table 1) from existing referrers and an additional 337 new referral sources (Table 2). In addition, 2,971 referrals have been directed to specialists (Table 3), making a total of 12,113 referrals processed.

We continue to promote the use of eReferral with all physicians. We anticipated that continued virtual offerings would increase eReferral use, but the number of eReferrals has plateaued at 29% of referrals, remaining consistent with the previous fiscal year. We encourage all referral sources who currently fax referrals to consider eReferral and expect to see the number of eReferrals increase as additional service offerings come on to Ocean, and as number of primary care providers using Ocean continues to grow. There were 127 new eReferral sources and 2,614 eReferrals this year. The number of diabetes programs and specialists using Ocean remain consistent regionally, with continued conversations to support further uptake.

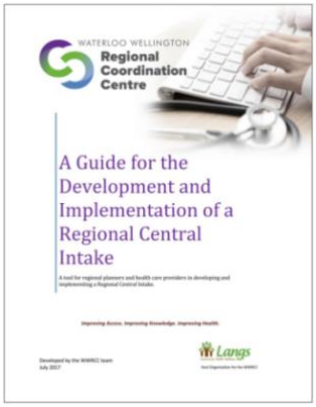
827 referrals have been received from area hospitals, which is up 17% from last year. Much time is spent by our triage nurse following up on discharge plans for patients and arranging timely appointments for people discharged from hospitals. We continue to capture the number of “Inpatient

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.

234 self-referrals have been processed, which represents a slight rise from last year, but remains significantly lower than previous years and is concerning given the risk of people not accessing care.

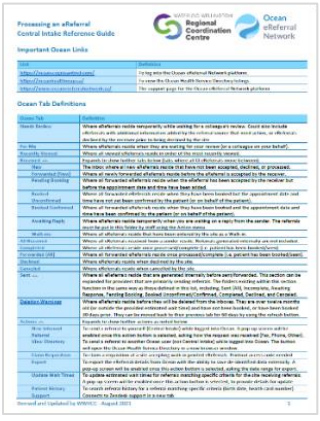
Other regions, both within and Ontario and across Canada2, continue to request direct consultation from us on the "how to" of developing a central intake program (not only for diabetes but other specialities). We are actively involved with offering support to several regions in the development of central intake processes, including Toronto Central and Ontario Health North as they work towards a regional model. We continue to share the guide we created to support others in developing and implementing a regional central intake service. This guide was requested 15 times last year and led to follow-up conversations and inter-agency connection with almost every share. The guide continues to be 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**




Additionally, we continue to update and share a 13-page guide on how to process an Ocean eReferral from our central intake perspective. We have shared it with other regions, as well as within our own region to assist 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 3,413 referrals to the Southwest region, with 286 having been sent to London this year.

## Our Successes

Unfortunately, we no longer receive provincial data on the prevalence and incidence of diabetes in Ontario or in our region, but from national and international data, the prevalence of diabetes continues to rise. Despite an 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 existing resources – enabled through maximized efficiencies
- People are accessing care close to home
- People can get connected to services by sending of self-referrals
- We have the ability to send and receive referrals from other provinces and countries
- We have standardized regional wait-times established for benchmarking
- Wait-times for diabetes education programs are consistently within target
- Continued utilization of community-based programs and hospital programs
- Assisted with successful transition of whole patient roster from hospital to 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 become available in our region
- Increased retinopathy screening regionally
- Increased and targeted prevention

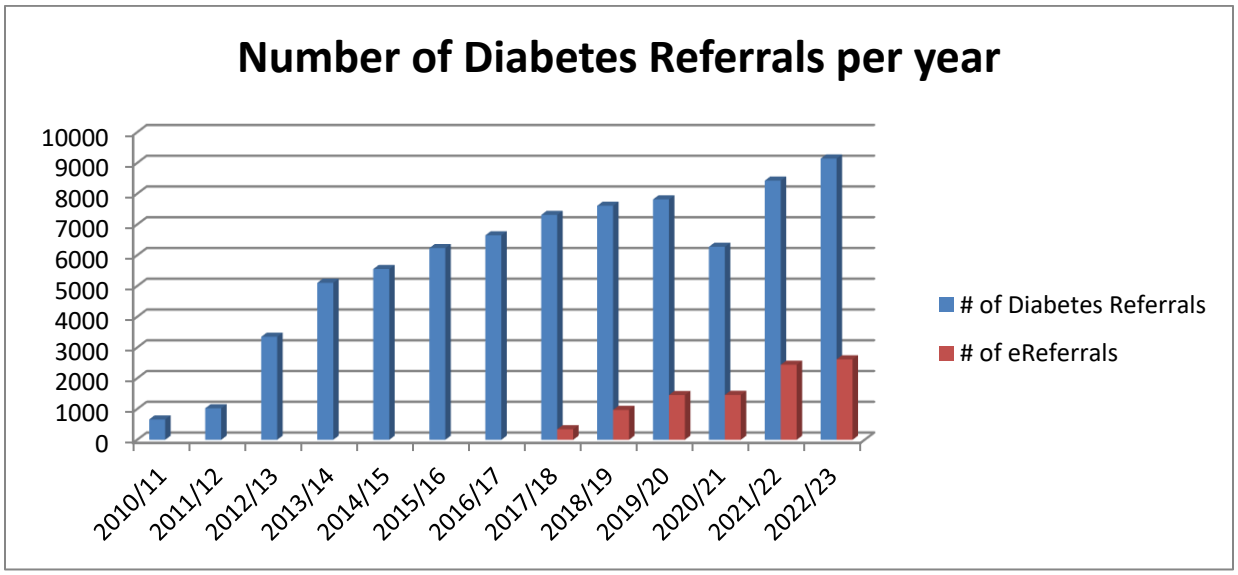
## A Closer Look at our Program

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. During this past year we processed our highest number of referrals to date. Not only do the volume of referrals sent within our region

continue to rise, so too are referrals sent to programs and specialists outside our region. The following table (Table 1) demonstrates the volume of referrals over time to DCI.

**Table 1: Number of Diabetes Referrals to Diabetes Central Intake**




As mentioned above, lower than anticipated self-referrals continued this year, which is concerning (Table 3). The upcoming fiscal year marks an opportunity to further promote the self-referral pathway to residents of our community. We utilize the self-referral process if individuals phone our office to inquire about accessing services. Our self-referral form is also available on-line from our Waterloo Wellington Diabetes website https://www.waterloowellingtondiabetes.ca/Public-Referrals.htm and allows the people to submit the form 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 a notification once the appointment has been booked.

**Table 2: Number of referral sources per year**

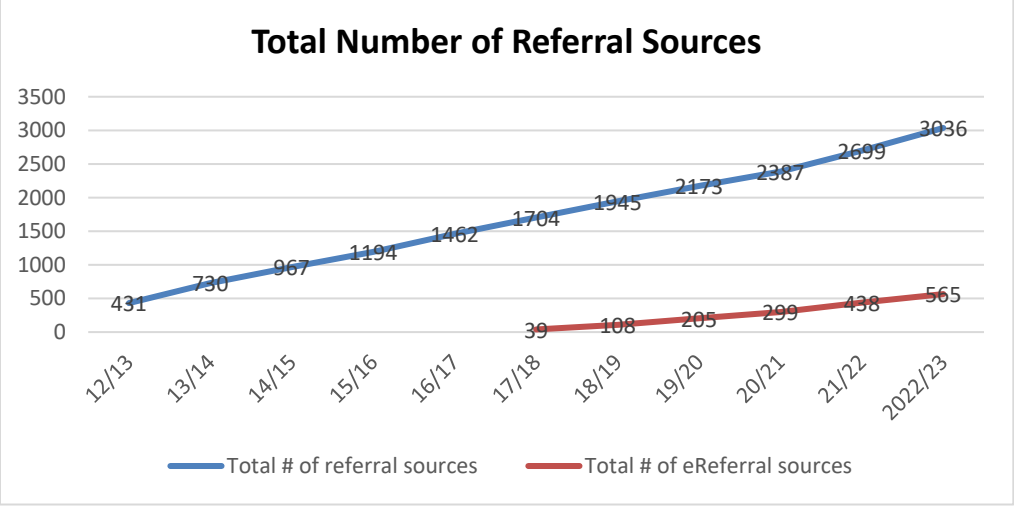


**Table 3: Number of Self-Referrals**

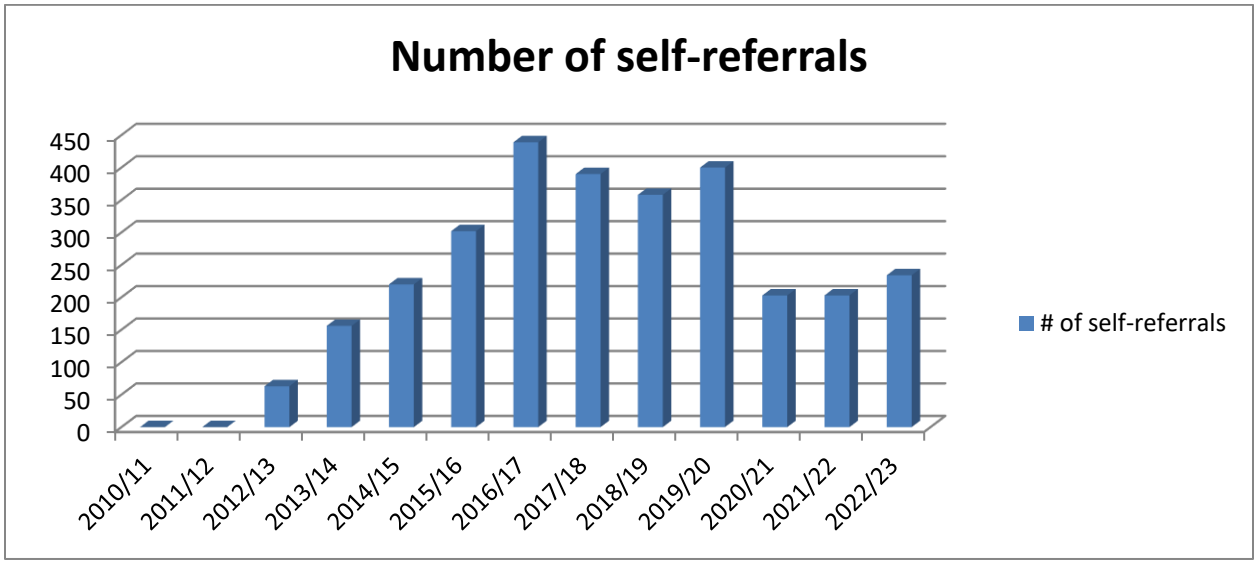
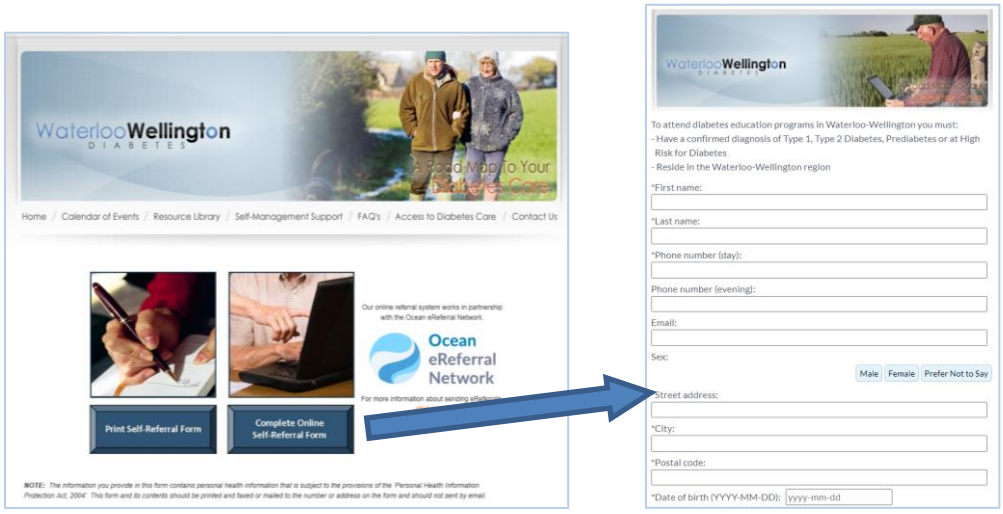
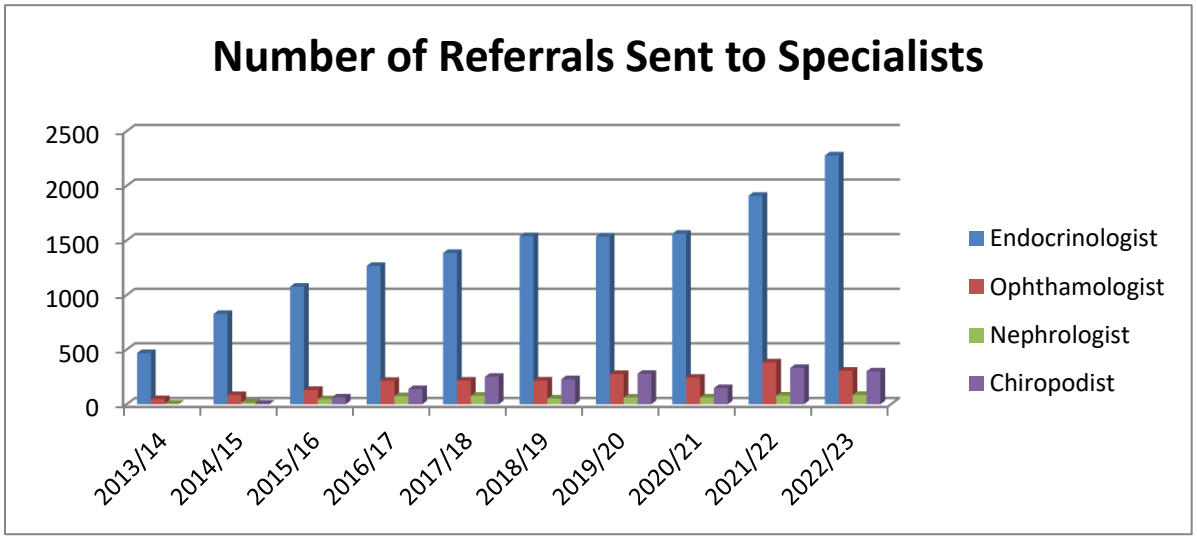



**Figure 3: Screenshots of website page and self-referral form**



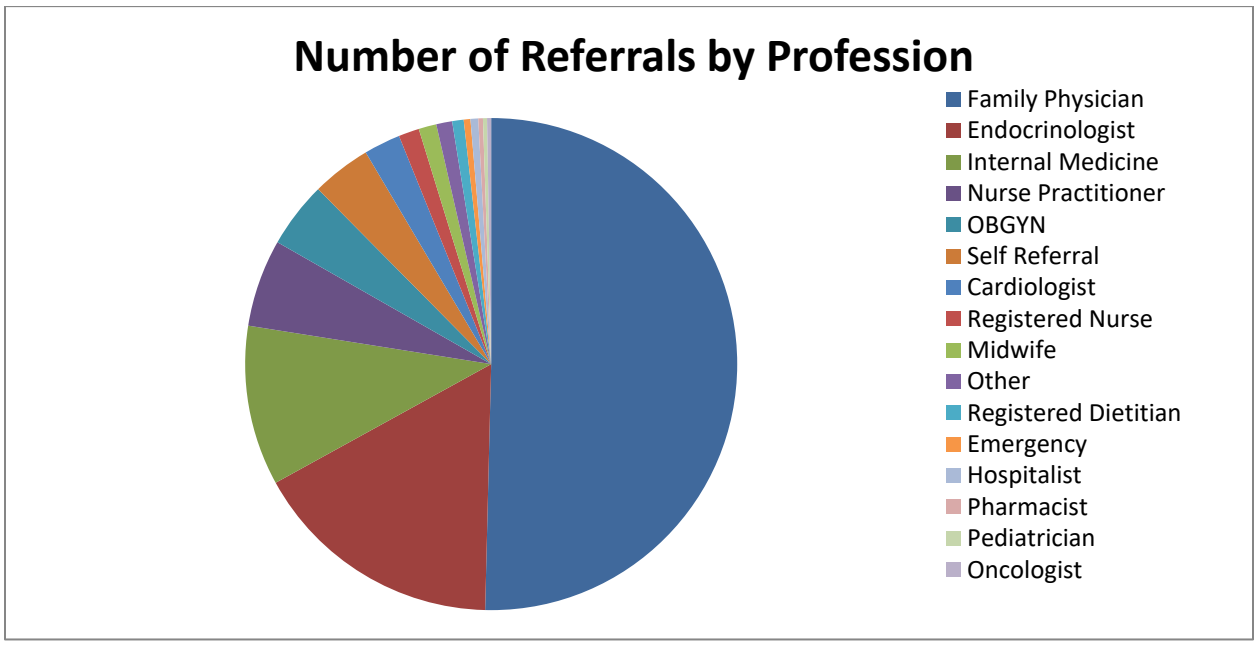

DCI has streamlined coordination and access to specialized diabetes care by providing specialist consults on the same referral form (paper or electronic) for endocrinologist, ophthalmologist, nephrologist, and chiropodist (Table 4). We facilitate referrals to the Home and Community Care Wound Care Clinic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

**Table 4: Number 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 3,036 referral sources with 56% of total referrals from primary care (Family Physicians and Nurse Practitioners) and 17% from endocrinologists. The table below represents the total number of unique referral sources, identified by referrer specialty (Table 5).

**Table 5: Number of Referrals by Referral Source/Profession**



We continue to see an increase in referrals from hospitals, except for Guelph General Hospital where their diabetes educators facilitate transition of residents from hospital directly to their Diabetes Education Program. The was a large increase in the number of referrals from Cambridge Memorial Hospital this year as they started to transition their clinic into the community. The following tables illustrate the number of referrals from hospitals (Table 6) and the number of referrals by department (Table 7) each year, including those referrals for "Inpatient Late Discharge" that represent additional follow-up required by our triage nurse.

**Table 6: Number of Referrals by Hospital by Year**

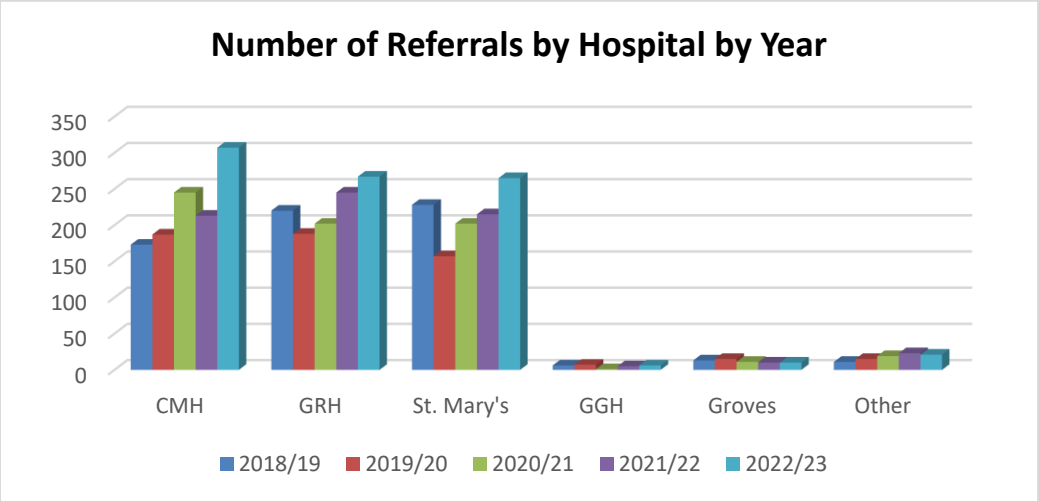
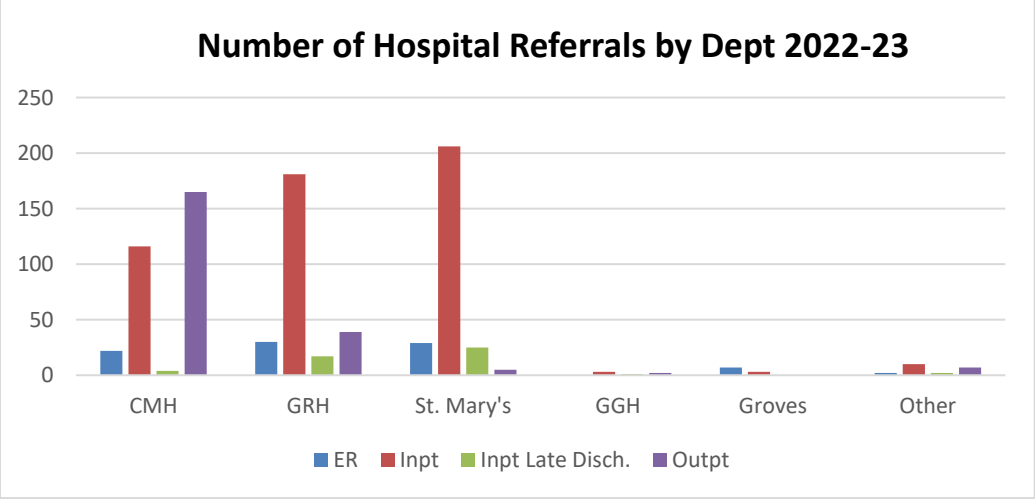



**Table 7: Number of Hospital Referrals by Department 2022-2023**




DCI also continues to receive referrals from, and direct referrals to, programs outside of our regional geographical area in Ontario. 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 8).

**Table 8: Number of Referrals Sent to and Received from Inside and Outside of WWLHIN for 2022-23**

| Region (previous LHIN boundaries) | # of referrals sent to | # of new referral sources from |
|---|---|---|
| **Erie St. Clair** | 7 | 0 |
| **South West** | 485 | 45 |
| **Waterloo Wellington** | 8,558 | 186 |
| **Hamilton Haldimand Niagara Brant** | 37 | 26 |
| **Central West** | 6 | 13 |
| **Mississauga Halton** | 15 | 28 |
| **Toronto Central** | 4 | 27 |
| **Central** | 2 | 5 |
| **Central East** | 3 | 3 |
| **South East** | 4 | 0 |
| **Champlain** | 6 | 0 |
| **North Simcoe Muskoka** | 7 | 2 |
| **North East** | 4 | 2 |
| **North West** | 0 | 0 |
| **Other Province** | 4 | 0 |
| TOTAL | **9,142** | **337** |

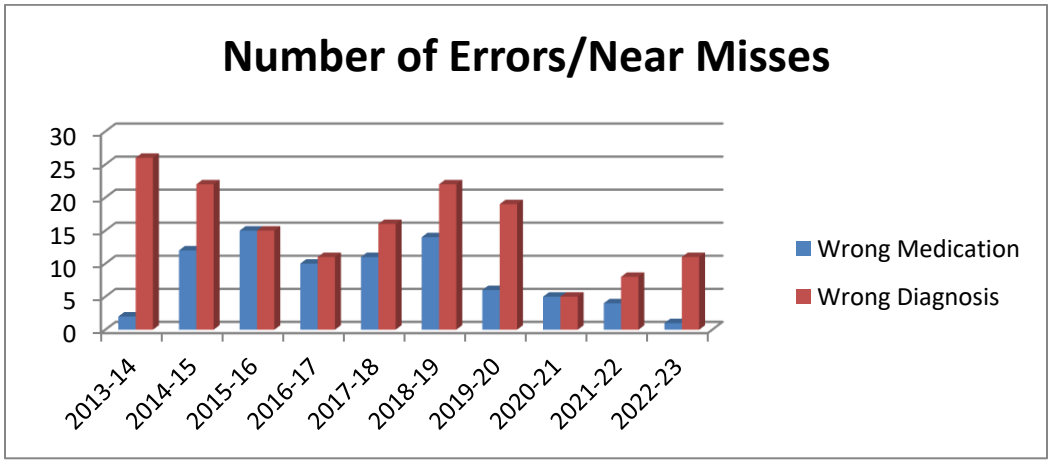
## Triaging

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. The triage nurse is in regular contact with primary care providers, 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 led to identification of cases that were previously 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, a serious life-threatening condition. The triage nurse has also identified cases where patients were prescribed the wrong medication and/or the wrong dosage. Clinical expertise and intervention has provided safe, effective, and efficient service, preventing individuals from ending up in emergency departments or requiring hospital admission. The following table demonstrates the number of misdiagnoses/incorrect medications identified by DCI (Table 9).

The triage nurse also tracks system issues that reflect larger scale issues for managing diabetes in the region, such as diabetes programs that are declining referrals or lacking the services necessary to provide quality care, often due to not having a chiropodist or social worker on staff. This year there were 13 examples of system issues identified in our region.

**Table 9: Number of Missed Diagnoses and Incorrect Medication/Dosages**

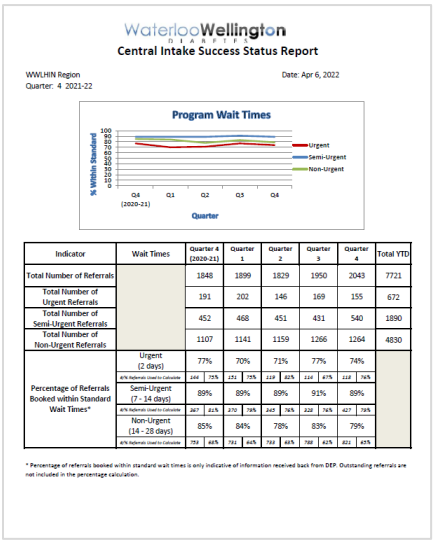



# Monitoring of Data

## 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. This DCI service of monitoring and reporting supports programs in offering more effective programs. 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, continuing with a hybrid model, where appropriate.

**Figure 4: Copy of Regional Success Status Report**



WaterlooWellington DIABETES

Central Intake Success Status Report

WWLHIN Region
Quarter: 4 2021-22

Date: Apr 6, 2022

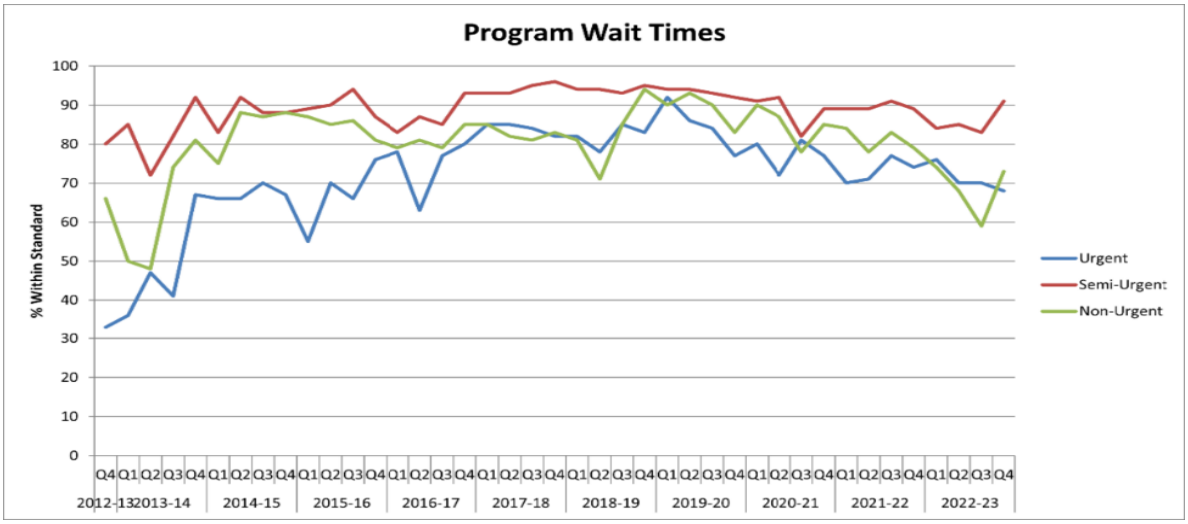


| Indicator | Wait Times | Quarter 4 (2020-21) | Quarter 1 | Quarter 2 | Quarter 3 | Quarter 4 | Total YTD |
|---|---|---|---|---|---|---|---|
| Total Number of Referrals | | 1848 | 1899 | 1829 | 1950 | 2043 | 7721 |
| Total Number of Urgent Referrals | | 191 | 202 | 146 | 169 | 155 | 672 |
| Total Number of Semi-Urgent Referrals | | 452 | 468 | 451 | 431 | 540 | 1890 |
| Total Number of Non-Urgent Referrals | | 1107 | 1141 | 1159 | 1266 | 1264 | 4830 |
| Percentage of Referrals Booked within Standard Wait Times* | Urgent (2 days) | 77% | 70% | 71% | 77% | 74% | |
| | 4% Referrals Used to Calculate | 144 | 75% | 151 | 75% | 110 | 81% | 114 | 67% | 118 | 76% | | |
| | Semi-Urgent (7 - 14 days) | 89% | | 89% | | 89% | | 91% | | 89% | | | |
| | 4% Referrals Used to Calculate | 267 | 81% | 270 | 79% | 265 | 76% | 232 | 74% | 427 | 79% | | |
| | Non-Urgent (14 - 28 days) | 85% | | 84% | | 78% | | 83% | | 79% | | | |
| | 4% Referrals Used to Calculate | 772 | 68% | 791 | 84% | 769 | 68% | 788 | 62% | 821 | 65% | | |

* 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 consistently within 80-90% of the benchmark wait times for semi-urgent referrals and non-urgent referrals; urgent referral booking is sitting around 70% within the benchmark wait times (Table 10). The number of referrals increased across all urgency categories this year. These wait times reflect incoming referrals and not ongoing follow-up care provided by the programs to support individuals with diabetes. Follow-up visits and active clients are captured in DEP reporting.

**Table 10: Program Wait times for Waterloo Wellington Over Time**




As mentioned, the volume of urgent and semi-urgent referrals has been consistently rising with the volume. This places an added stress on diabetes programs, as these individuals need to be seen within 2 or within 7-14 days, respectively, 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 11) and the change in urgency over the past three years (Table 12).

**Table 11: Volume of Referrals by Urgency**

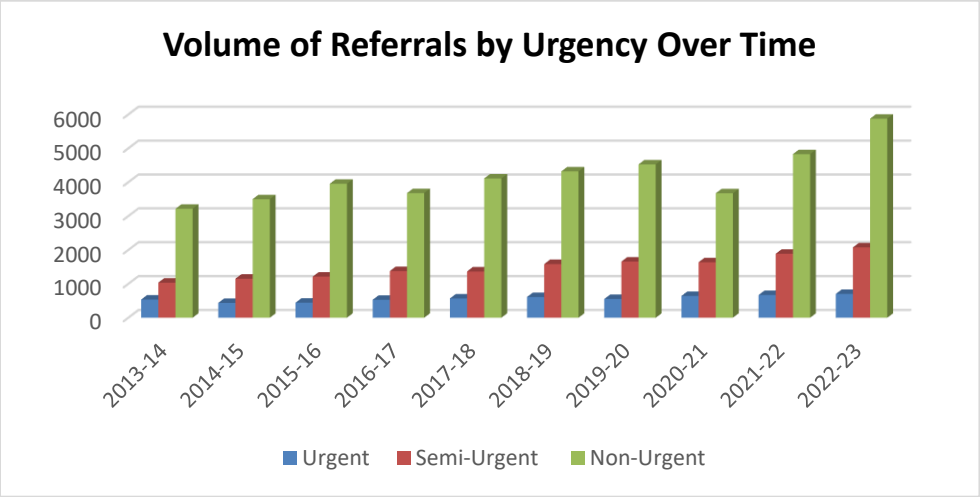
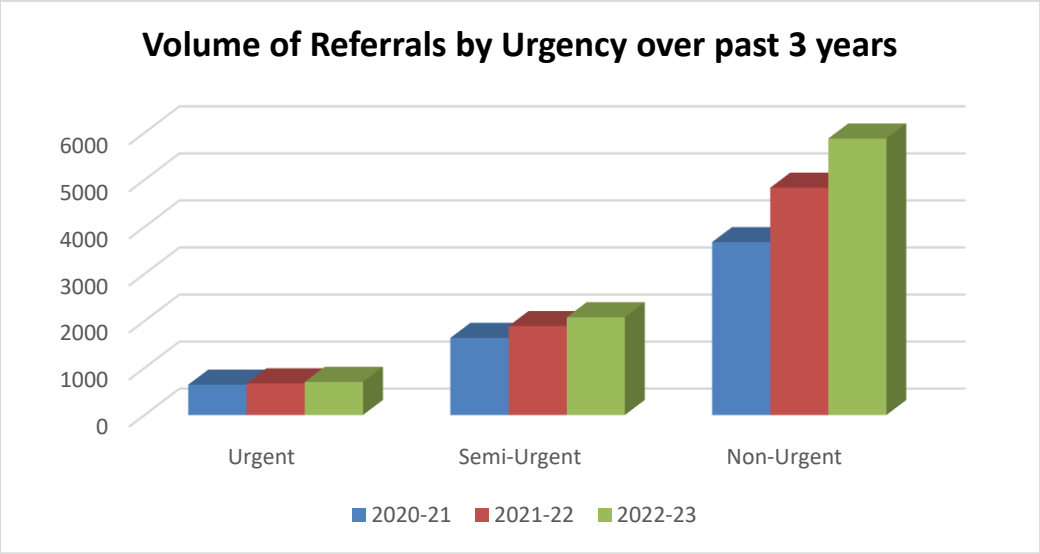
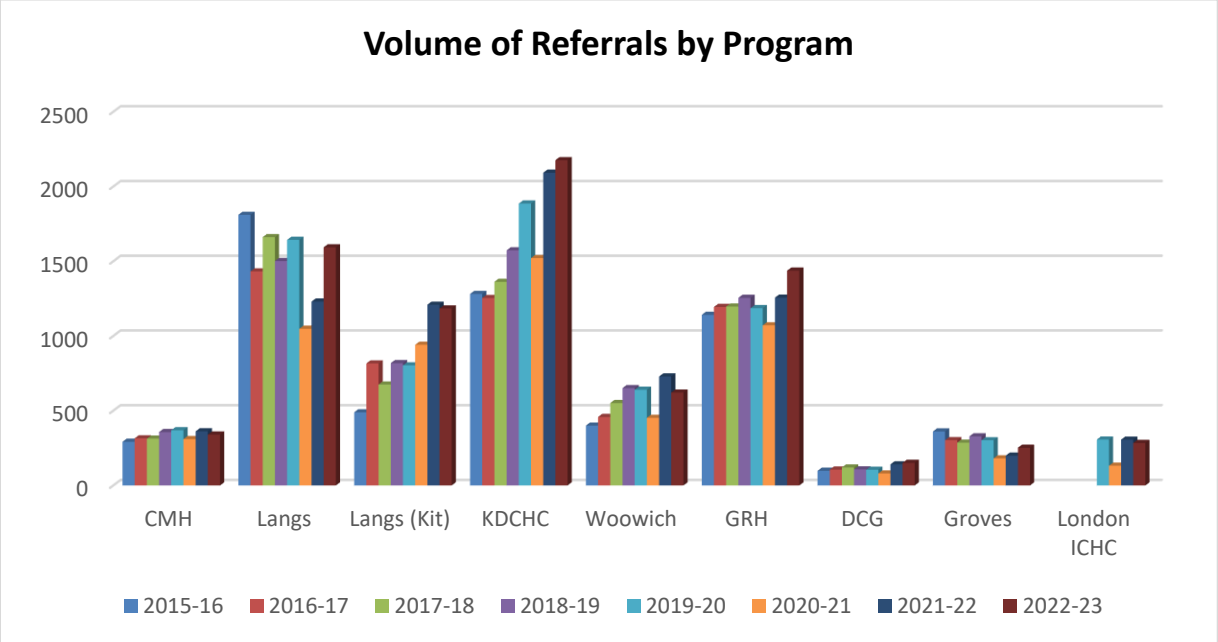


**Table 12: Volume of Referrals by Urgency over Past 3 years**




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

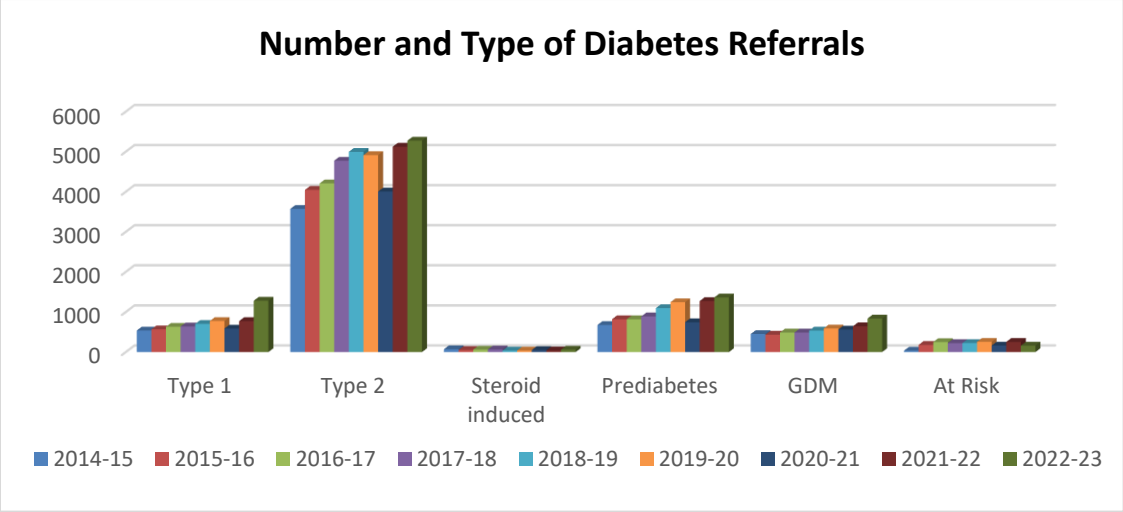
**Table 13: Volume of Referrals by Program**




DCI has worked hard to move the volume of referrals from the hospitals to the community programs since its inception. More recently, in the area of Cambridge, much work has been done to transition the hospital program completely into the community. DCI has assisted with the triaging and processing of the patient referral transfers. Regionally, 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

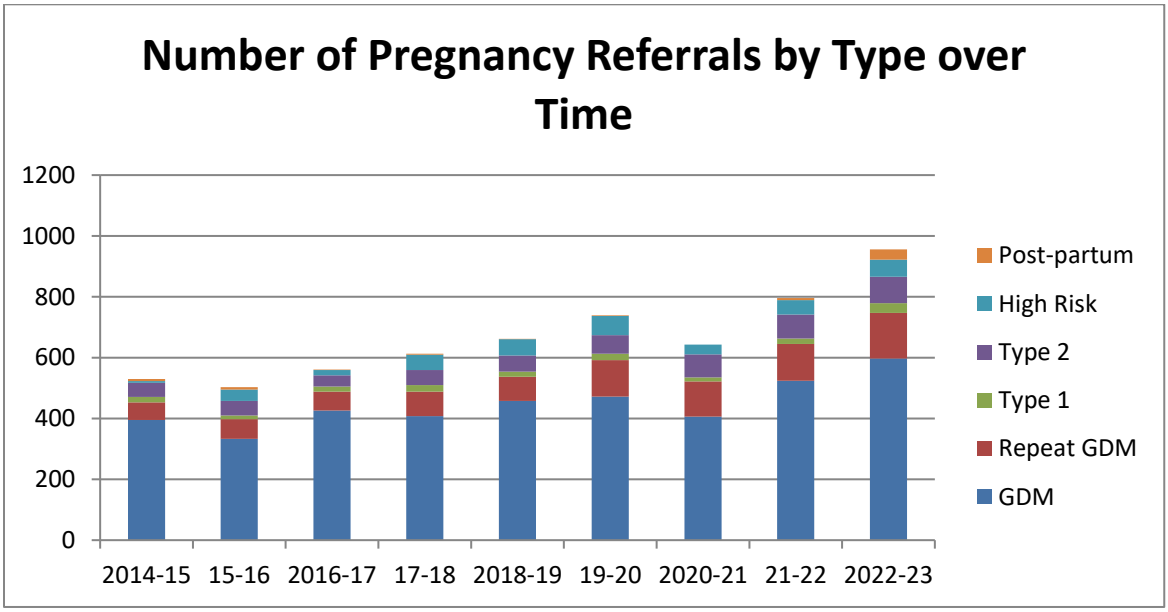
various types of diabetes noted on referrals, which is data that is not available in any other region of the province (Table 14). This also informs more effective and specified program planning and helps drive a shift from the hospital to community-based programs, where appropriate.

**Table 14: Number and Type of Diabetes Referrals**




DCI is also able to capture the number of pregnancy referrals broken down by type (Table 15). This is useful for those hospital programs who manage diabetes and pregnancy. 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. This data does not include Guelph and North Wellington.

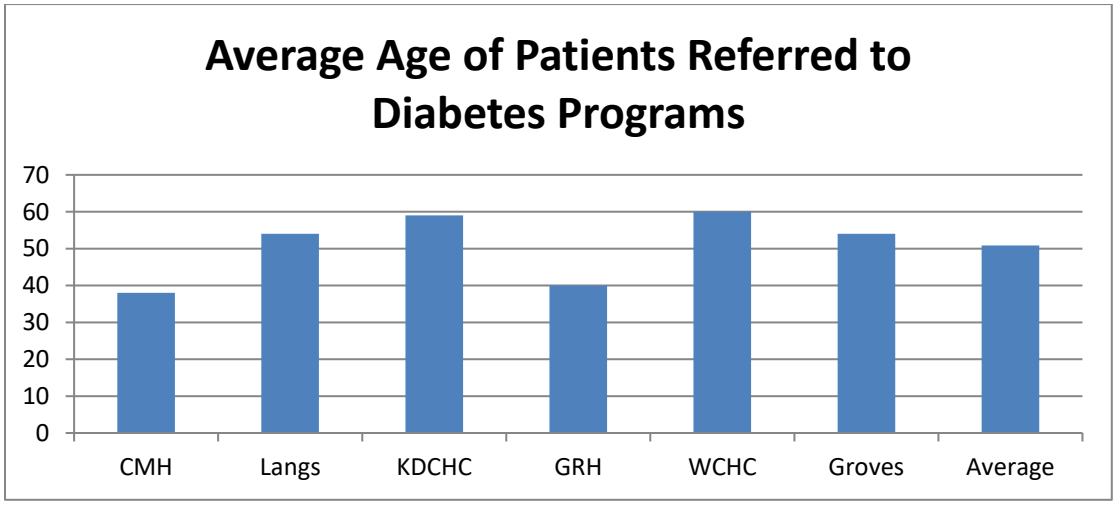
**Table 15: Number of Pregnancy Referrals by Type Over Time**



In addition to volume and wait time patterns, 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 16). The average age of hospital programs is typically lower due to the higher volume of young people with Type 1 diabetes and those who become pregnant.

**Table 16: Average Age of Patients at Time of Referral for Diabetes Education**



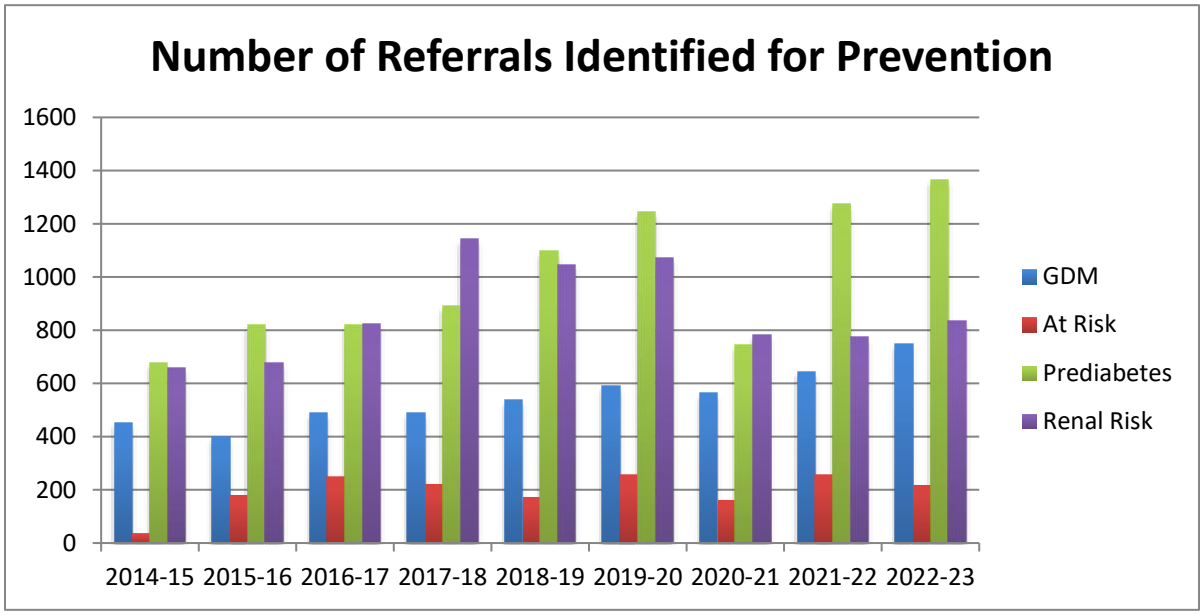

## Prevention

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 facilitating an early referral for education increases opportunities for 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). Despite understanding the importance of these preventative measures, 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 17).

**Table 17: Number of Referrals Identified for 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 has shifted to a resource clinician who is capable of leading targeted practice development, quality improvement projects and knowledge translation activities with diabetes educators and interprofessional clinical teams.

The Clinician Resource and Project Lead also participates at regional and provincial networks. This person engages in active mentoring and coaching with health care professionals and/or teams across the region, leading and/or supporting local communities of practice as needed and develops/delivers/ evaluates effective tools, resources, and workshops for health care professionals throughout the region. Collaborating with the regional Self-Management program, also hosted at the Waterloo Wellington Regional Coordination Centre, is key to supporting general health care provider training.

This year, the Clinician Resource and Project Lead position was vacant for several months, despite intensive recruitment efforts. The lack of qualified and seasoned CDEs across the region has presented a challenge. A needs analysis led by the Regional Diabetes Network highlighted emerging areas of focus for this role. A list of intended directions and functions has been drafted for the person who will assume this role. We fully expect to have this person in place by the end of the first quarter.

## Projects/Activities/Workshops Delivered:

- **Regional Diabetes Programs**: Email updates circulated regularly, including practice and medication updates (such as new injectables like Mounjaro (tirzepatide))
- **Therapeutic Carbohydrate Restriction document:** Circulated, reviewed and updated
- **Workshops:** Multiple training sessions offered throughout the year including 'Diabetes 101', and low BG management flags (2 sessions for March of Dimes PSWs)
- **Ask the Endo" Events:** Facilitated quarterly for community DEPS
- **Regional Diabetes Network:** Participated as acting chair, shared resources, assisted with agenda preparation and follow-ups
- **Steroid Induced Diabetes:** Lead working group, developed resources for patients and providers, prepared referral algorithm
- **Needs Assessment:** Prepared survey and facilitated regional needs assessment to inform future directions and needs and preferences of regional educators

## Projects Initiated and Ongoing Plans:

- Regular Communication serving 21 organizations and 125 active clinicians in our region with practice alerts/updates
- Website content updates/development
- Clinical resource for clinicians
- Support Central Intake and Self-Management
- Updates for Diabetes and Pregnancy clinical pathway – to be completed following next release of Diabetes Canada CPGs
- Circulation of Steroid Induced Diabetes resource for educators and patient materials
- Diabetes and Pregnancy 1 Day Workshop
- Facilitation of working group for T1D/pediatrics
- CDE succession planning as a region and education of newer staff in the region
- Support in transition of patients to biosimilars with change in ODB coverage
- Support and resource development for Diabetes at end-of-life
- CDE Exam Preparation Sessions

# 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 18).

**Table 18: Waterloo Wellington Diabetes Website Data**

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

| | | | |
|---|---|---|---|
| **2020-21** | 6,888 | 17,680 | 93 |
| **2021-22** | 8,340 | 10,682 | 100 |
| **2022-23** | 7,900 | 21,394 | 104 |

## 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.** With our growing referral numbers and current capacity limits, we have relied on the support of an additional admin support staff using an organizational grant from Langs. This additional support has allowed us to maintain the stability of the program but this does not serve as a sustainable solution.

The eReferral solution offers some efficiency with respect to the ease of transmission and notifications, but DCI still requires staffing to process and follow-up regarding the referrals and is lacks coverage for staff due to the limited resources. It is important to note that eReferral is a method of transmission and replaces fax transmission. Having said that, triaging, processing and follow-up are all essential components of central intake. These functions require adequate resourcing to be successful. Needs-based funding principles need to inform future investments in clinical intake commensurate with the projected increasing incidence and prevalence of Diabetes in our communities.

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 region. Hopefully as the electronic system is adopted, they will see the benefit of utilizing a region-wide approach to referring for diabetes care. Work has continued 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 currently 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 province-wide 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 several areas across the province to support their efforts in initializing a central intake model. We believe this could represent 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 in providing excellent service to residents living with diabetes and those who work to support them. 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 excellent diabetes care in the most appropriate ways.

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 continues to be a valuable resource that will help increase capacity of experienced educators in the region and provide learning opportunities to meet educational needs, address knowledge gaps and support HHR succession through practice development within the field. Our website provides education and support to people both within and outside our region.

Much work has been done to move to the Ocean™ electronic system. We continue to work closely with the vendors and the eHealth Centre of Excellence team to offer an eReferral solution to support eReferrals for DCI, and often provide support to inquiries from other Ocean users. 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.**

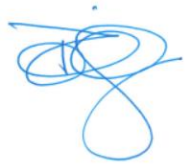
Our co-location and management of Waterloo Wellington Diabetes along with the Regional Self-Management Program, the Regional Orthopedic Central Intake, and the Regional Cataract Central Intake offers great opportunities to expand our services in offering patient-centred care and streamlined coordination, 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, 2023



| Regional Director, RCC, Langs | CEO, Langs |
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