WATERLOO WELLINGTON DIABETES

Diabetes Central Intake/Mentoring/Website

Year End Report to WWLHIN

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May 15, 2016

Langs
Community. Health. Wellness.

WaterlooWellington
DIABETES

Improving access. Improving knowledge. Improving health.

Contents

Central Intake/Mentoring/Website

Langs receives base funding from the WWLHIN to support the regional services of Diabetes Central Intake, Mentoring and the Waterloo Wellington Diabetes website. These services support residents (patients, families and health care providers) with easy access to diabetes care; the LHIN in system planning for diabetes care; and health care providers in the region to enhance their knowledge of diabetes management. Reports on the volume of referrals and referral sources are submitted monthly and more detailed reports are submitted quarterly. This end of year report provides a summary of the activities and successes over the past fiscal year of 2015/16.

> *"Practicing for over a decade, I am aware that is difficult for health care providers and patients to "navigate the system". Central intake has allowed us to get the RIGHT care at the RIGHT time for the RIGHT patient at the RIGHT location. Central Intake has been effective, efficient and easy for ALL to use!!"* **Endocrinologist, Waterloo**

Central Intake

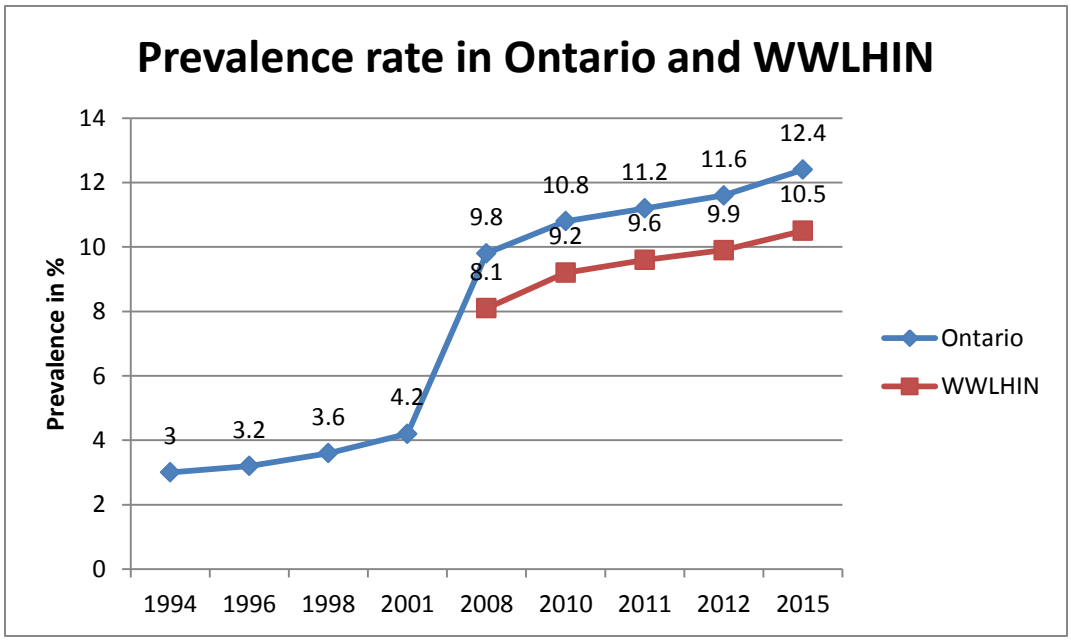
Central Intake (CI) continues to be successful with 21,662 referrals (as of March 31st) being processed since its inception in 2011. Many other regions in the province continue to consult with our program seeking help in developing similar systems. We are currently doing a pilot project with London Intercommunity Health Centre and the SWLHIN to roll-out diabetes central intake to their region. We are also actively participating in the WWLHIN procurement process for selecting a system coordinated access electronic solution with the intent to move to an electronic solution in 2017.

> *"Central Intake has had a huge impact on diabetes care in Waterloo Wellington. Simplifying the referral process for physicians and primary care providers through the development of one referral form with one central location to send it to has made things much easier. The experience that the Patient Navigator brings ensures that care is both triaged and delivered within a timeline that is both safe and responsive."* **Diabetes Nurse Educator**

Prevalence of Diabetes

The prevalence rate for diabetes continues to rise, increasing at 0.2% per year, which is consistent with the provincial rate (Table 1) although WWLHIN continues to be the lowest prevalence rate in the province when compared to other LHINs. (Health Analytics Branch, MOHLTC, 2016) The rate of increase has dropped both regionally and provincially over the past 4 years.

Table 1: Diabetes Prevalence in Ontario and WWLHIN



Prevalence Count (2015)

Ontario: 1.4 M people

WWLHIN: 66,182 people

Our Successes

Despite the increasing prevalence of diabetes, we have demonstrated 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
- Increased self-referrals
- Standardized regional wait-times established for benchmarking
- Wait-times for diabetes education programs within target
- Increased utilization of community programs

"Thank you for all of your help. I don't speak English well and having someone to call to help me get diabetes help is great."
Patient

- Identified pharmacies with Certified Diabetes Educators (CDEs) to offer after-hours education
- Streamlined access to diabetes specialists
- Increased prevention
- Increased retinopathy screening
- Decreased diabetes related ER visits

> *"As a member of the Steering Committee I saw the dedication and hard work in developing the Diabetes Central Intake. While other regions struggled, Waterloo-Wellington moved quickly to navigate challenges and bring about positive change to improve access to care. They have done a wonderful job transforming and strengthening the diabetes care model in our region."* **Canadian Diabetes Association**

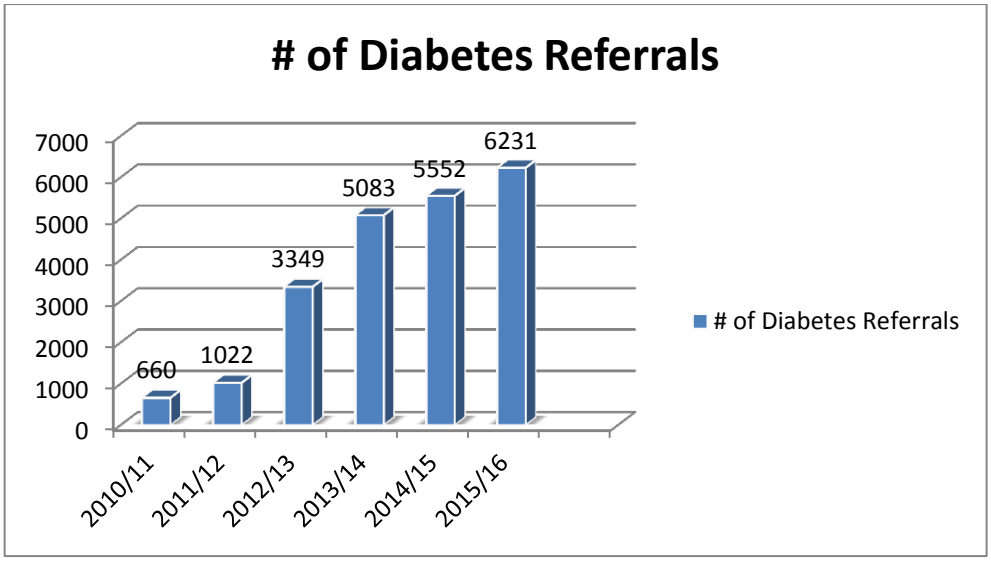
A Closer Look at Our Program

The following data offers a closer look at our program. All of the work to date aligns closely with the provincial "Patients First Action Plan for Health Care".

Access to Care

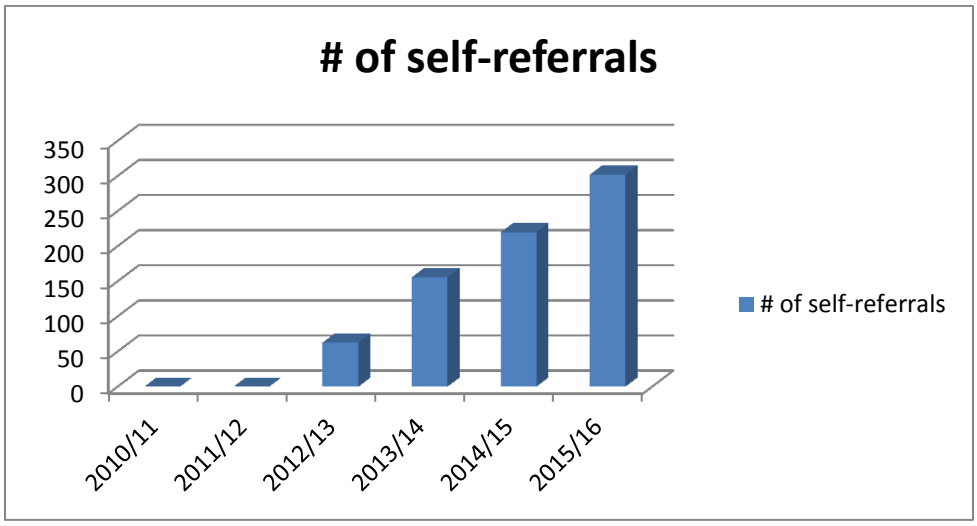
CI has increased access to care by streamlining the referral process with one form and one number to send the form. This has allowed a steady increase yearly in the referrals for diabetes care. (Table 2) As of March 31st, 2016, we have processed 21,662 referrals since CI started.

Table 2: # of Diabetes Referrals to Diabetes Central Intake



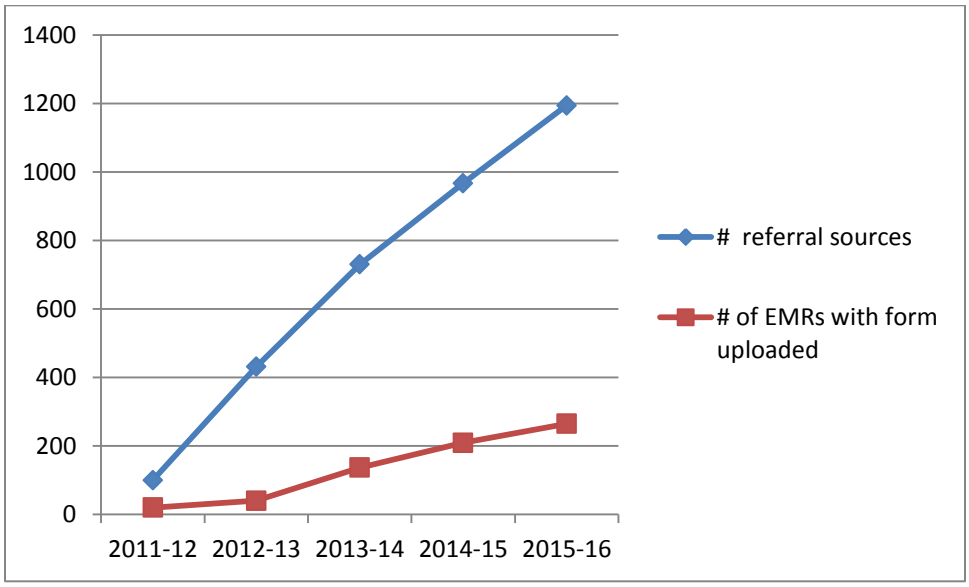
There continues to be an increase in the number of self-referrals through CI, with a record number of 302 self-referrals this year. This demonstrates easier access for people to obtain diabetes care. (Table 3)

Table 3: # of Self-referrals



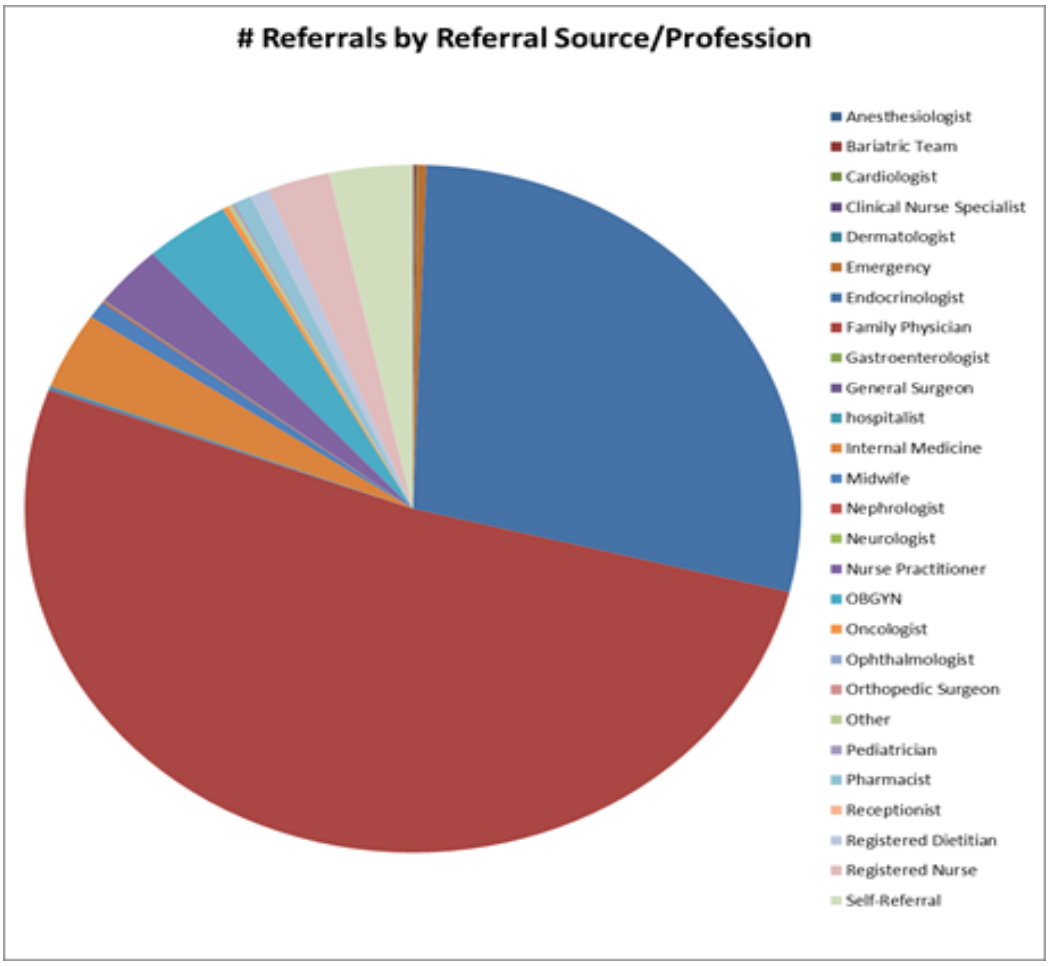
Our referral form is uploaded to 265 EMRs in the region. Our referral sources (1194) continue to increase with 86% of primary care physicians in the WWLHIN using our form (98% of primary care physicians in Kitchener/Waterloo/Cambridge). The following table shows the increasing number of referral sources currently referring through diabetes central intake and # of EMRs with the form uploaded.(Table 4)

Table 4: # of referral sources and # of EMRs per year



Our referral sources include a variety of professions (28 recorded) with the bulk of referrals coming from primary care physicians, and endocrinologists. The following table describes the type of professionals currently referring to Diabetes Central Intake. (Table 5)

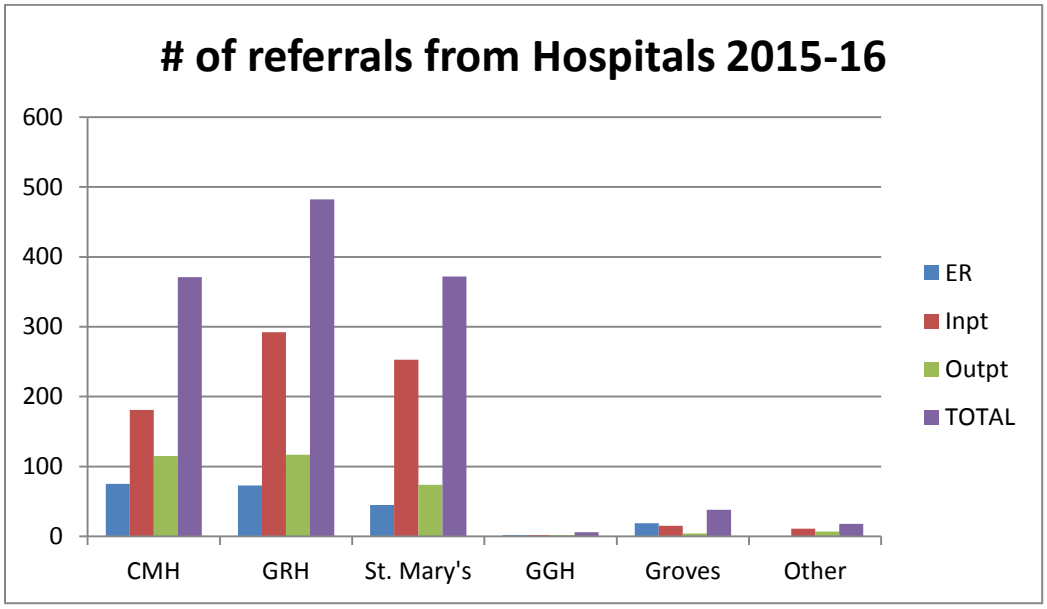
Table 5: # of Referrals by Referral Source/Profession



CI has the referral form in all hospitals, except for Guelph General Hospital, which facilitates transition of residents from hospital to Diabetes Education Programs. Meetings have been held with GGH, but feedback from the Guelph Family Health Team requested that the Diabetes Care Guelph referral form be the only referral form in GGH.

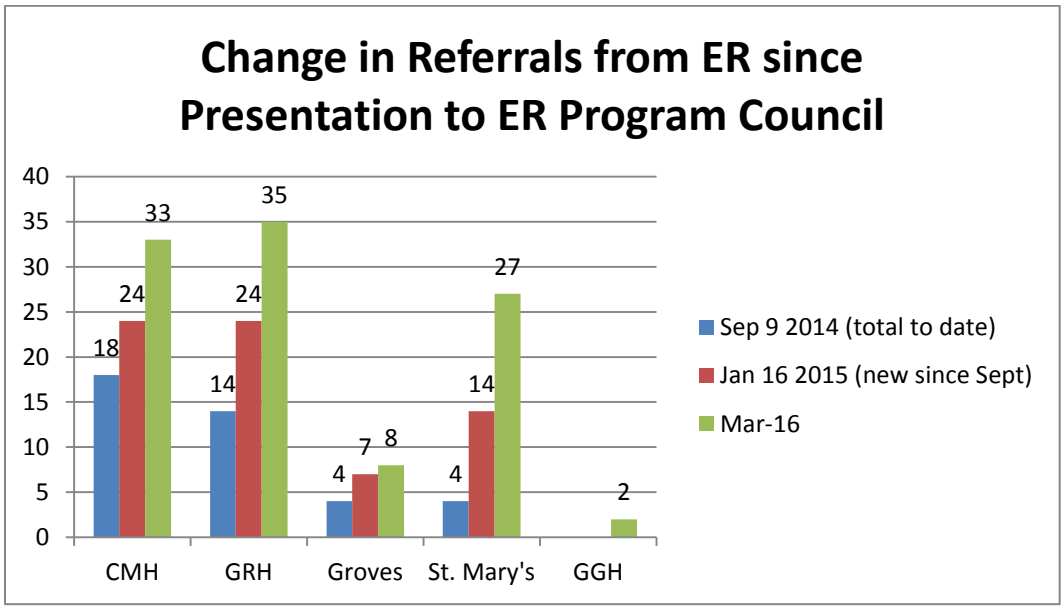
The following table illustrates the breakdown of Emergency Room (ER), In-patient (Inpt) and Out-patient (Outpt) referrals from each of the hospitals. (Table 6)

Table 6: # of Referrals from Hospitals



Since we had the opportunity to present to the WWLHIN ER Program council in September 2014, there has been a steady increase in referrals from ER hospitals in the region. (Table 7) Previous data from WWLHIN suggest reduced ER visits, and readmission since the introduction of CI to the hospitals.

Table 7: Change in Referrals from Hospital ERs



CI also continues to direct and receive referrals outside of the WWLHIN. The following data provides the breakdown per LHIN. (Table 8)

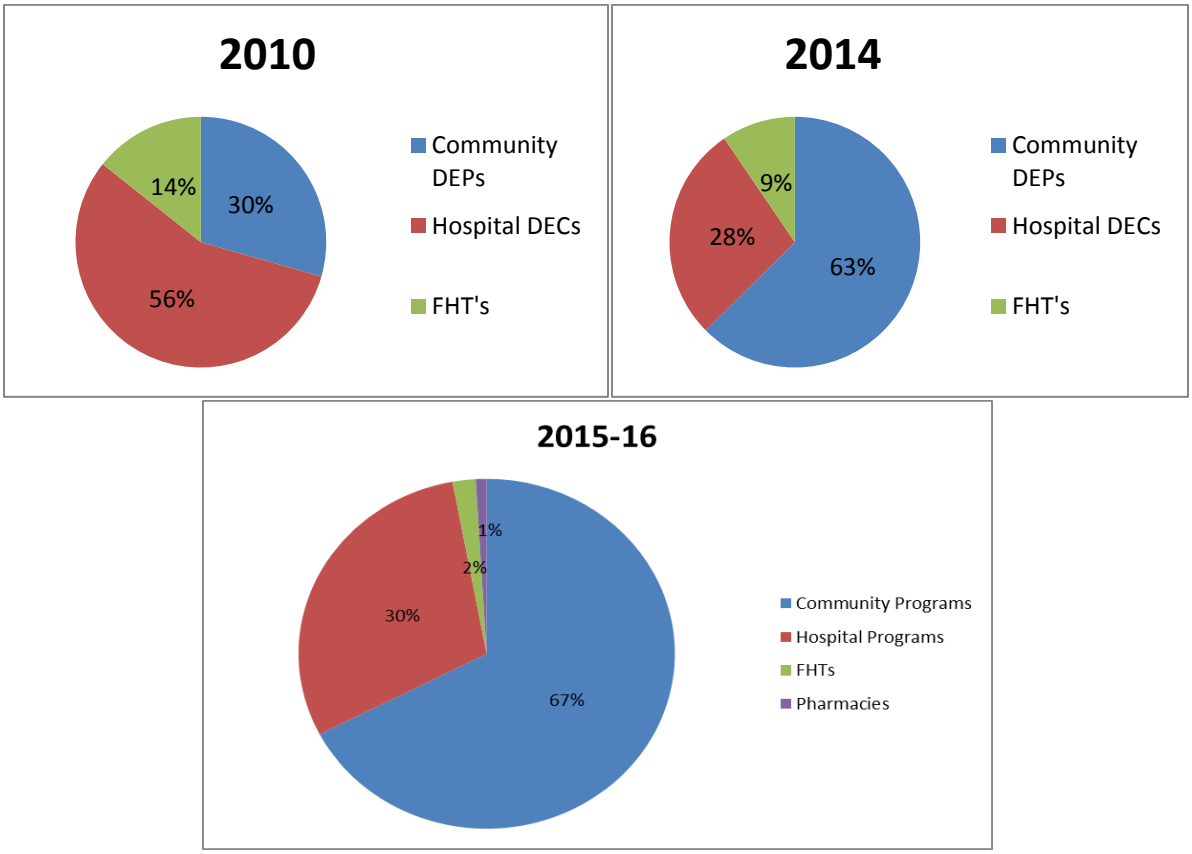
Table 8: # of referrals Sent To and Received From Inside and Outside of WWLHIN

Waterloo Wellington Diabetes Central Intake Data as of Mar 31, 2016			
Ontario		# referrals sent to	# referral sources from
LHIN #	**LHIN name**		
1	Erie St. Clair	11	1
2	South West	266	54
3	Waterloo Wellington	21198	929
4	Hamilton Haldimand Niagara Brant	121	45
5	Central West	11	25
6	Mississauga Halton	20	63
7	Toronto Central	7	30
8	Central	6	17
9	Central East	7	4
10	South East	0	0
11	Champlain	2	1
12	North Simcoe Muskoka	8	6
13	North East	1	1
14	North West	1	0
	unknown		7
Alberta		2	
Nova Scotia		1	
		21662	1183

Increased coordination among care providers

A recommendation from the 2012 Ontario Diabetes Strategy (ODS) Auditor General Report recommended increased utilization of community diabetes programs. CI allows a more equitable distribution of referrals. For example, in 2010 only 30% of referrals were seen in community diabetes programs with the bulk of the diabetes population being seen in hospital Diabetes Education Centres. With the triaging and the mentoring support, 67% of referrals are now being sent to the community programs. We also have identified pharmacies with Certified Diabetes Educators (CDEs) that will accept referrals which increases access to care after hours and on weekends. The following tables demonstrate the shift in referrals from hospital DECs to the community. (Table 9)

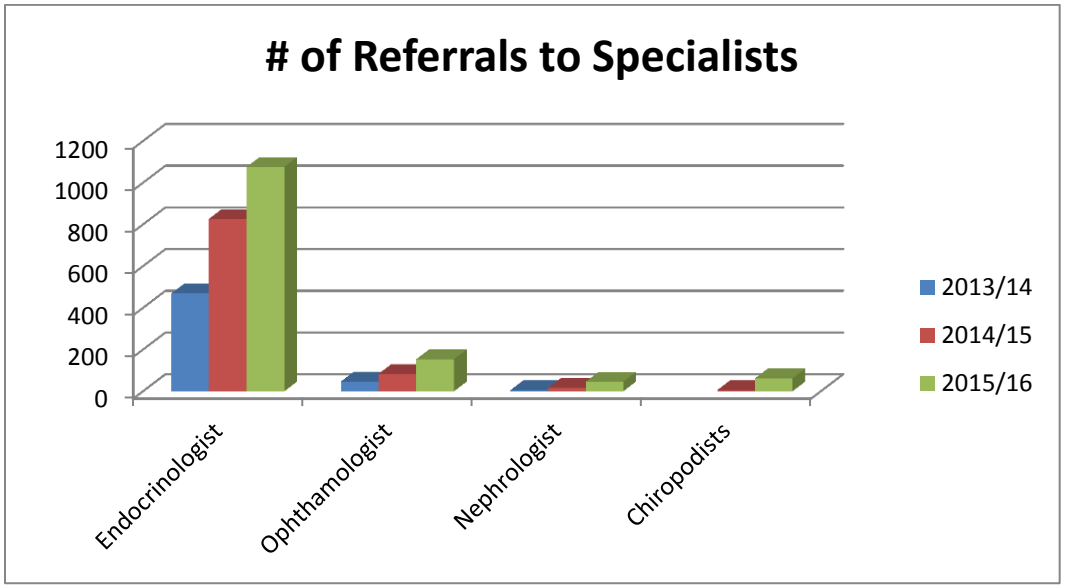
Table 9: Percentage of patients being followed Hospital DECs versus the community



Access to Specialized Diabetes Care

CI has improved coordination and access to specialized diabetes care. CI receives referrals for specialists including endocrinologist, ophthalmologist and nephrologists. CI also receives and directs referrals for chiropody and pharmacists. CI directs referrals in a rotational pattern or to the requested specialist or to the specialist with subspecialty (ie. diabetes and pregnancy). CI does not currently monitor wait-times of specialists, but we do stay informed of their average next available appointments and their vacation schedules. CI also facilitates urgent referrals to specialists, for example, if it is a newly diagnosed person with type 1 diabetes, we will arrange an urgent appointment with the endocrinologist. As new specialists have started practices in the region, CI has facilitated building up their practices and increasing awareness of their practice to primary care. The following table provides a record of the volume of specialist referrals, with a total of 1269 referrals sent to specialists this year.(Table 10)

Table 10: # of Referrals sent to Specialists

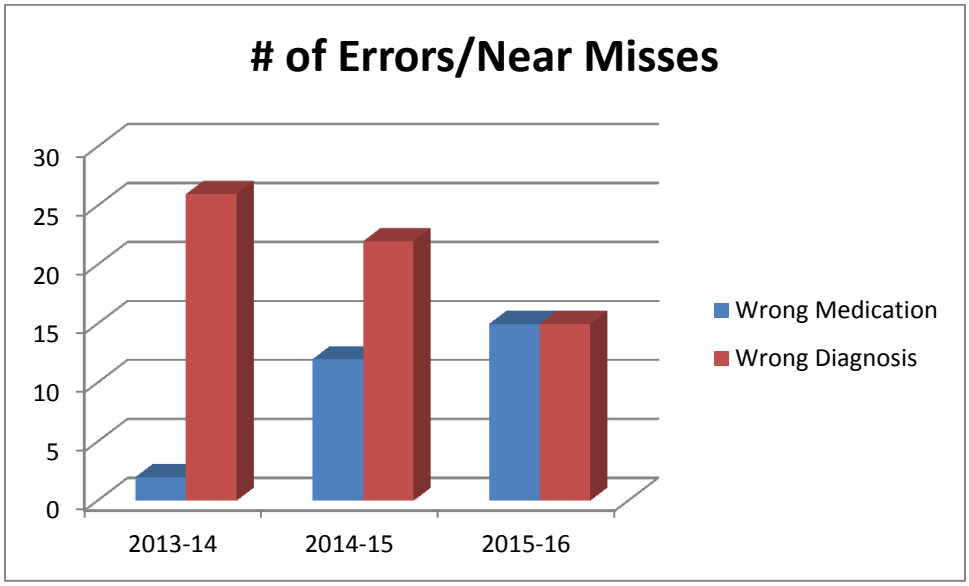


Triaging

The role of the triage nurse/patient navigator is very important in making Diabetes Central Intake a success. The triage nurse is an experienced Certified Diabetes Nurse Educator (CDE). She reviews every referral and determines the urgency of the referral and where to send the referral to. She uses *ClinicalConnect* when necessary to obtain additional data to support triaging. In a one-month period, the triage nurse accessed *ClinicalConnect* 18 times. *ClinicalConnect* was used to improve the reported history and labs, look-ups from referral source, accessed reports for specialist consult. For 13 of 18 patients (72% of accesses representing 2% of total referrals) information was gathered that: i) changed the urgency of the referral , ii) improved facilitation of specialist consult , and iii) sped up referrals to Diabetes Education . (Report from Benefits Evaluation team from eHealth Centre of Excellence, 2016)

The expertise of the triage nurse has prevented many patients from progressing to diabetic ketoacidosis as she has identified cases that were missed or prescribed the wrong medication and/or identified as type 2 diabetes when they were type 1 diabetes. These numbers are tracked, and used to guide educational topics for our primary care educational event and for our mentor to follow-up on. We offered a topic of "Is it Type 1 or Type 2 Diabetes?" at our primary care event, which has been repeated at a number of lunch and learn sessions. Since that time, there has been a reduction in the number of misdiagnosed cases. This is a common problem throughout the province, and the triaging in our region has made a significant improvement in diabetes care for patients in our region. The following table demonstrates the # of missed diagnoses/incorrect medication. (Table 11)

Table 11: # of Missed Diagnoses and Incorrect Medication/Dosages

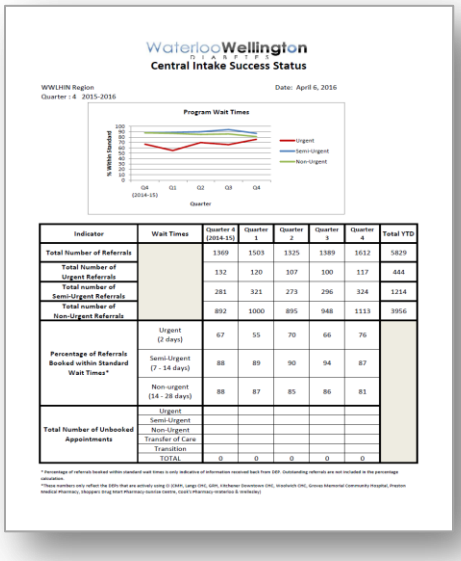


Monitoring of Data

Wait Times

CI monitors wait times for diabetes education programs and reports to the DEP program managers and the WWLHIN quarterly. (Fig. 1) This allows program managers to adjust their programs accordingly.

Figure 1: Copy of Success Status Report for WWLHIN


WaterlooWellington DIABETES

Central Intake Success Status

WWLHIN Region
Quarter : 4 2015-2016

Date: April 6, 2016

Program Wait Times

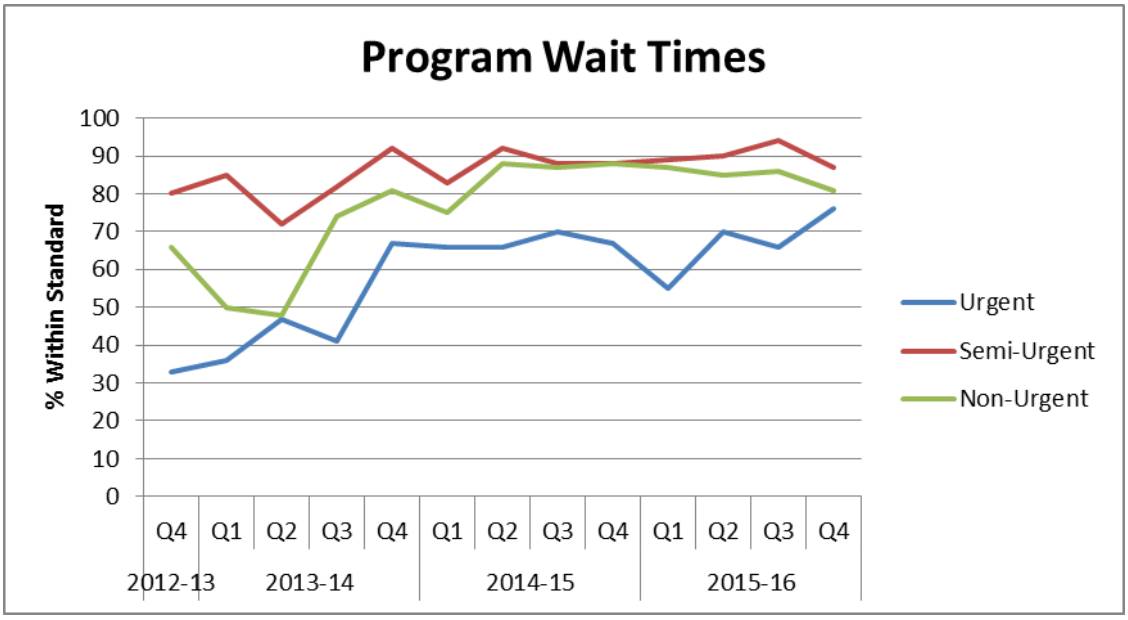
Indicator	Wait Times	Quarter 4 (2014-15)	Quarter 1	Quarter 2	Quarter 3	Quarter 4	Total YTD
Total Number of Referrals		1369	1503	1325	1389	1612	5829
Total Number of Urgent Referrals		132	120	107	100	117	444
Total number of Semi-Urgent Referrals		281	321	273	296	324	1214
Total number of Non-Urgent Referrals		892	1000	895	948	1113	3956
Percentage of Referrals Booked within Standard Wait Times*	Urgent (2 days)	67	55	70	66	76	
	Semi-Urgent (7 - 14 days)	88	89	90	94	87	
	Non-urgent (14 - 28 days)	88	87	85	86	81	
Total Number of Unbooked Appointments	Urgent						
	Semi-Urgent						
	Non-Urgent						
	Transfer of Care						
	Transition						
	TOTAL	0	0	0	0	0	

* 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.

**These numbers only reflect the EIEDs that are actively using CI (CMH, Langs CHC, GBH, Kitchener Downtown CHC, Windsorlo CHC, Groves Memorial Community Hospital, Preston Medical Pharmacy, Shoppers Drug Mart Pharmacy-Sunrise Centre, Cook's Pharmacy-Waterloo & Waterloo)

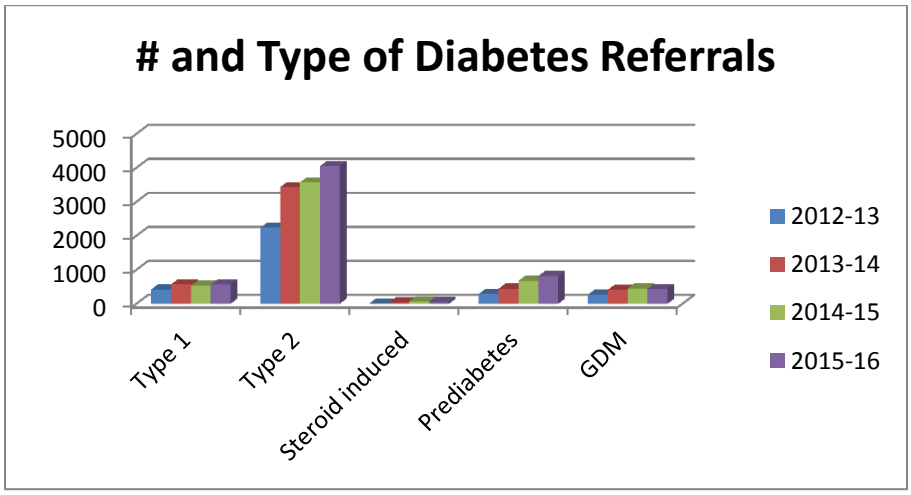
Wait times are within 80% of the standard, which is much improved from several years ago, despite no increased funding for resources. (Table 12) Urgent referrals are not quite within standard although the 48 hour urgent standard wait time is a difficult standard to achieve given that DEPs offer Monday to Friday hours. For example, if an urgent referral comes in Friday afternoon, and the patient is booked in on Monday, they are still outside the urgent wait time standard. The addition of pharmacies accepting referrals has helped with meeting this standard.

Table 12: Program Wait times for WWLHIN



CI is able to capture the various types of diabetes being referred. (Table 13) This is data that is not available in any other region of the province. This also allows for effective program planning.

Table 13: # and Type of Diabetes Referrals



Indicators such as average age at time of referral (Table 14) and average A1C at time of referral (Table 15) are available from our database to help understand the demographics and complexity of patients being referred. By reviewing the average age, timing and approaches for programs can be adjusted accordingly. This also allows us to monitor if type 2 diabetes is being caught at an earlier age, which is predicted by other diabetes data. As expected, the hospital DECs continue to receive referrals with higher A1C s, as they continue to receive the more complex cases. The A1C for Langs is lower, which is likely due to the higher number of prediabetes and at-risk referrals they receive.

Table 14: Average Age of Patients at Time of Referral by Program

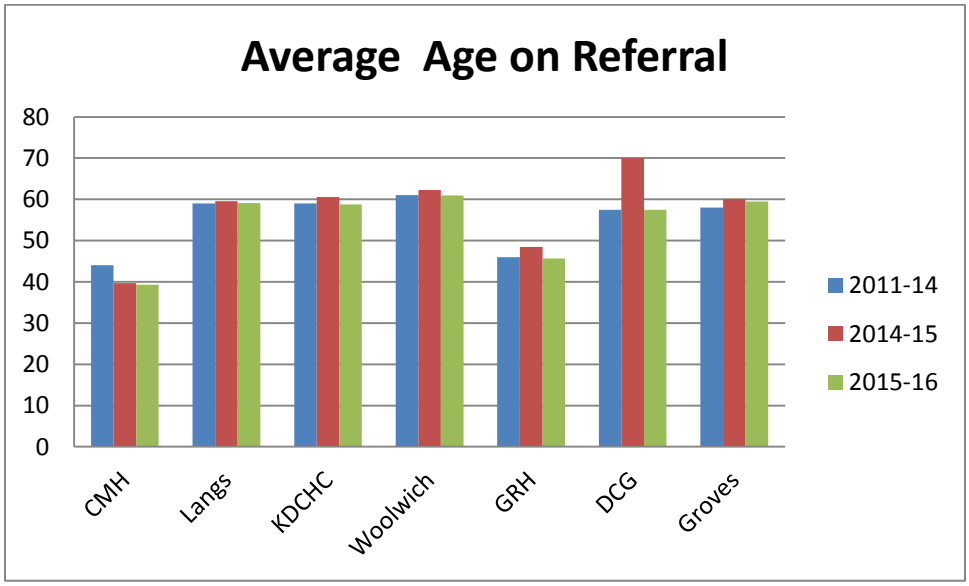
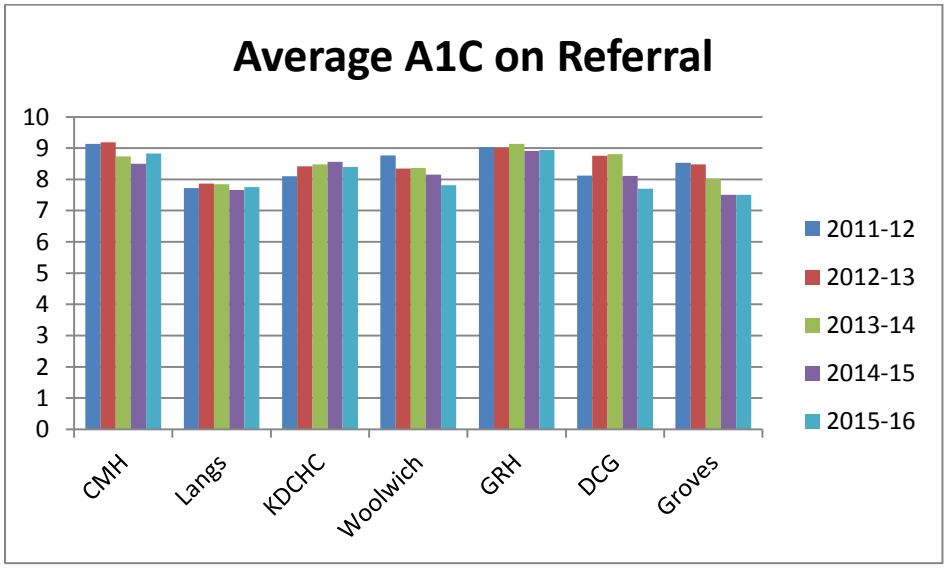


Table 15: Average A1C at Time of Referral by Program

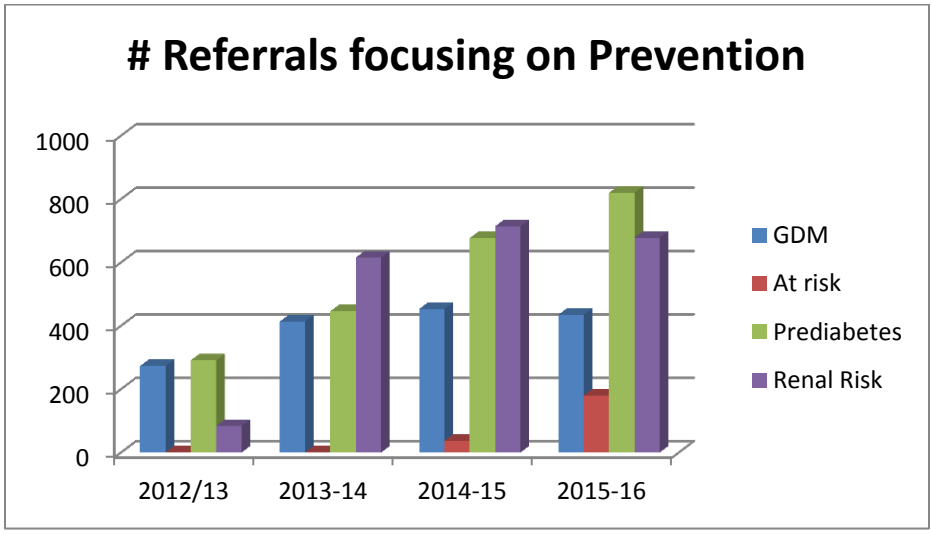


Prevention

In support of the 2012 Auditor General Report of the Ontario Diabetes Strategy, CI continues to focus on prevention efforts. 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. (Table 16)

This year, diabetes programs now accept referrals for "at risk" for diabetes as well as prediabetes. Intervention at the prediabetes stage can prevent the progression to diabetes by up to 58% (DPP study). CI monitors the # of at risk referrals and prediabetes referrals. This number continues to rise (Table 16). CI also continues to monitor the # of referrals with criteria indicating higher risk for renal disease (Table 16) to identify further opportunities for earlier intervention.

Table 16: # of Referrals focusing on Prevention



Education and Mentoring

The mentoring program, which is unique to this region, continues to offer support to health care providers throughout the region. This program offers an experienced Certified Diabetes Educator (CDE) who travels to the various workplaces, enhancing clinicians' knowledge, confidence and skill-set in managing diabetes. Our mentor also provides review sessions for those educators writing their CDE exam as well as lunch and learns on various topics. This year, she offered many of the sessions by webinars allowing even more people to access the service. The mentoring program has made a positive impact on the quality of diabetes care being provided to patients in this region. There are currently 104 CDEs in this region.

This year an educational program was developed to support CDEs to further enhance their knowledge. A full day workshop, called "Moving from CDE to Expert" was offered with 25 attendees, with the

request to offer additional workshops. A binder was developed to support the educators and as a resource in their workplace. (Fig. 2)

Figure 2. Diabetes Educator Event

"Thanks so much for the wonderful learning opportunity. I have already applied concepts that were discussed & addressed. Very knowledgeable & effective facilitators. The case studies really helped broaden and deepen my diabetic knowledge. My eyes were opened to the wealth of knowledge & experience available within the Waterloo-Wellington area. I would welcome any opportunity for mentoring or future similar workshops. Thanks so much for the invitation!"
RN, CDE- Brockton & Area Family Health Team- Durham

"It was very nice to have a CDE specific (and local) event! All the information was very practical and so well organized. It was just the perfect size to network with others. What a wonderful resource binder that was created. I hope this program can continue to be offered to CDE HCP's, as we need to continue to promote the expertise of a CDE and this helped with my confidence as a CDE." **RN CDE – Louise Marshall Hospital- Mount Forest, Ontario**

Educational needs for primary care are identified through CI, resulting in an annual ½ day educational conference offered each fall called, "An Ounce of Prevention is Worth a Pound of Cure". (Fig. 3) The event is accredited through the Ontario College of Family Physicians and this year had an attendance of 70 primary care attendees with excellent feedback.

Figure 3: Annual Primary Care Event

"Very helpful"
"Excellent- good use of research evidence based. A lot of information- very important"
Family Physicians, Kitchener

Website

Our regional website continues to be well received. It 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 17)

Table 17: 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

Awards

Waterloo Wellington was nominated for the Minister's Medal Honouring Excellence in Health Quality and Safety in 2015. We were the recipient of Outstanding Regional Partnership Award by the Central West Ontario Branch of the Canadian Diabetes Association in May 2015.

Challenges

The biggest challenge for Diabetes CI, is the limited resources of **1 FTE Triage nurse** and **1 FTE Admin Support**. This is the same allocation of staffing since we began CI in 2011, yet the volume has increased 6-fold. There is currently no vacation or sick time coverage for triaging, which means the RCC Director or mentor has to cover during these times. Nor is there coverage for the admin position. With the additional staffing for Medical Specialists CI, we have hired more staff and cross-trained them, but this then impacts the Medical Specialist CI productivity during vacation time or busy times. As we move to an electronic system, this is very concerning, as we will need the expertise of the triage nurse and admin person to help guide the proof of concept and learn the new system, leaving no-one to triage or support the current system which will need to run parallel until we are completely electronic. This challenge presents a high risk as it has the potential to threaten a successful launch of the electronic system and needs to be recognized and addressed. To support the Diabetes CI to continue to be successful, an additional 1 FTE Triage Nurse and 1 FTE Admin Support is recommended.

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

Summary

Waterloo Wellington Diabetes, hosted by Langs, continues to be successful, providing an excellent service to residents living or working with diabetes. Our streamlined process and robust database ensure that no-one is lost in the system and that there is communication to the referral source 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. Our mentoring program 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.