

Timely access to care for urgent diabetes & endocrinology referrals within the KW4 OHT region

March-September 2024

FINDINGS AND REVIEW OF 6 MONTH PILOT PROJECT TRINA FITTER, NICOLE VAN GERWEN, NISHANA ABDULLA

Purpose of Report

To provide background information and outcome data of a 6-month pilot project focusing on timely access to care for urgent diabetes education and endocrinology referrals received from Urgent Care Centres within the KW4 OHT region. The Urgent Care Centres involved in this pilot project include St. Mary's General Hospital Emergency Department (SMGH ED), Grand River Hospital Emergency Department (GRH ED), and K-W Urgent Care locations (KWUC). This review is based on data collected from March 15, 2024, until September 15, 2024, by Waterloo Wellington Diabetes Central Intake (WWDCI), which is a part of the Waterloo Wellington Regional Coordination Centre (WWRCC).

Background

The WWRCC is a coordination and referral centre with a purpose of streamlining access to care in the region of Waterloo Wellington. The host organization is Langs Community Health Centre in Cambridge and funding for this program is provided by Ontario Health West. The WWRCC has been a provincial leader in developing regional central intakes and currently offers centralized intake for diabetes, orthopedics, cataracts and the Ontario Senior Dental Care Program. The WWRCC is a part of the System-wide Coordinated Access (SCA) strategy to improve access to care for Ontarians.

Waterloo Wellington Diabetes (WWD) is a program of the WWRCC, which provides a centralized intake for diabetes education referrals and specialist referrals for diabetes care. WWD staff include two triage Diabetes Nurse Educators, two Referral Clerks and a Resource Clinician/Project Lead (RC). The RC is a Certified Diabetes Educator, who offers mentoring and support to Diabetes Educators across the Waterloo Wellington region.

In a recent needs assessment with local Diabetes Education Programs (DEPs), a consistent theme was identified across the region: diabetes education referrals received from Urgent Care Centres in the KW4 OHT region which met urgent criteria often lack medication orders, orders to adjust medication and/or an Endocrinology referral. For those referrals that indicate an Endocrinology consult, the time to the first appointment can vary greatly. These factors can make it difficult for Diabetes Educators to assist the patient in achieving improved glycemic control without medication orders and/or orders to adjust medications. Often urgent referrals received from KW4 OHT region Urgent Care Centres are for patients without a primary care provider, making it more difficult to obtain medication orders, especially if an Endocrinology referral has not been requested. This could result in a delay in care and possibly repeat visits to Urgent Care Centres for patients to receive the medications or care they require.

To help improve access to care for these identified patients, WWD staff and a local Endocrinologist engaged local Urgent Care Centre Physicians (Hospital Emergency Department Physicians and two of the largest urgent care walk-in clinics) in the KW4 OHT region.

Key learnings from these engagements were:

 Most Emergency Department and Walk-in Clinic Physicians did not prescribe medications for these patients as they believed each DEP had a prescriber on staff who would take over care once the patient was referred

- Most Emergency Department and Walk-in Clinic Physicians did not refer to Endocrinology for several reasons: perceived lack of Endocrinology services locally/did not want to overburden system, unsure which Endocrinologists were accepting patients currently
- KW Urgent Care Walk-in Clinics employ hundreds of different Physicians: hard to communicate and achieve a consistent approach to care

WWD staff and a local Endocrinologist were able to clarify with KW4 OHT region Emergency Physicians that local DEPs do not have prescribers on staff, medication orders would be beneficial to improve care and avoid additional visits to urgent care, that patients meeting urgent diabetes assessment criteria (Table 1) should be assessed by an Endocrinologist and would not be overburdening Endocrinology services.

Table 1: Standards for Access to Diabetes Education in Canada Urgent Criteria

Standards for Access to Diabetes Education in Canada Urgent Criteria

- Uncontrolled diabetes (BG > 20 mmol/L, Ketonuria > 1.5 mmol/L, HbA1c >12.0%)
- Newly diagnosed type 1 diabetes
- Recent treatment for Diabetic Ketoacidosis (DKA) or Hyperglycemia Hyperosmolar State (HHS)
- Emergency Department discharge follow-up
- CDE Patient Navigator clinical judgement (patient unable to safely care for themselves)

https://www.diabetes.ca/DiabetesCanadaWebsite/media/Learn-About-Diabetes/diabetes-education-booklet.pdf

Concept: Pilot Project

After gaining a better understanding of both the DEPs and Urgent Care Physician perspectives, WWD discussed the concept of a 6-month pilot project with a KW Endocrinologist, KW Urgent Care Physicians and KW DEP Managers. Waterloo Wellington Diabetes Central Intake (WWDCI) performed historical data analysis of the highest Urgent Care referrers by location for referrals meeting urgent criteria within the KW4 OHT region. It was determined that the three largest Urgent Care referral sources were: GRH ED, SMGH ED, and KWUC Walk-in Clinics (2 locations), which would represent the focus of the pilot project.

The aim of the pilot project was to improve access to care for high-risk patients meeting urgent criteria. Participating urgent care providers were encouraged to complete a WWD referral form for Diabetes Education, requesting an Endocrinology consult, and if clinically appropriate, provide medication orders and orders to adjust. To facilitate this, if referrals were received that met the urgent criteria but did not request an endocrinology consult, WWDCI Triage Nurses would attempt to contact the referrer on the same day the referral was received, to advocate for an endocrinology consult.

The pilot project would operate from March 15-September 15, 2024. Entrance referral criteria was:

- Referrals received by WWDCI from participating Urgent Care Centres that were triaged as meeting any or all urgent criteria according to the Standards of Diabetes Education in Canada (Table 1)
- Residents of the KW4 OHT region

The agreed upon deliverables of the pilot project were:

- Improved access to diabetes care for high-risk patients in the KW4 OHT region:
 - o Patient referral meeting urgent criteria are seen by DEP within 48 hours
 - Patient referrals meeting urgent criteria are seen by an Endocrinologist within 48-72 hours (if clinically warranted), and to provide appropriate medication orders to patient and DEP, and to continue to follow the patient until deemed medically stable

Indicators to be tracked during the pilot project timeframe:

- Standards for Diabetes Education in Canada % wait-times within standard for DEP and
 Endocrinology appointments (including patient related factors why wait times are not met)
- Total # of urgent referrals received within the pilot project timeframe
- # and % of urgent referrals initially received with request for Endocrinology consult
- % of referrals received from urgent care centres with medication orders
- % of referrals received from urgent care centres with orders to adjust medications
- Feedback from Endocrinologist evaluation
- Feedback from DEPs evaluations

Planning and Implementation

Planning for the pilot project proposal started the fall of 2023. The final pilot project parameters, additions to existing WWDCI process steps (Figure 1), roles and responsibilities (Figure 2) and data collection template (Figure 3) were completed in early 2024 and agreement signed March 2024.

Figure 1: Process Map

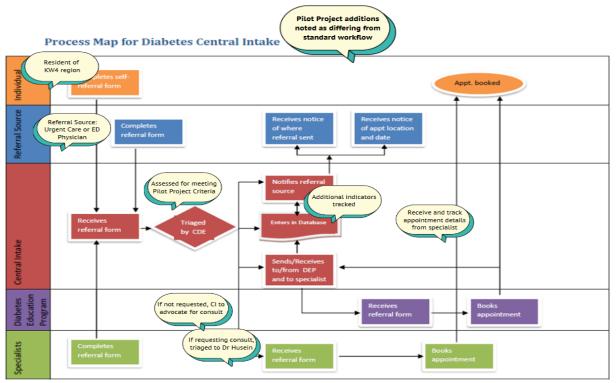


Figure 2: Roles and Responsibilities

WWDCI Urgent Referral Pilot Process – Roles and Responsibilities							
Central Intake	Diabetes Education Program	Endocrinologist					
 Receive and triage urgent referral, enter referral into WWDCI database Advocate for Endocrinology consult if not indicated Send referral to most appropriate DEP and Pilot Project Endocrinologist if consult requested Send triage report to referral source Input referral appointment information and send booked appointment report to referral source Follow up on outstanding appointment information for wait-time calculation Enter de-identified data into data collection template (Figure 3) Summarize results of pilot project in a final report, share with participating Endocrinologist, Urgent 	 Receive triaged referral from CI Book patient and notify CI of appointment date (note any patient-related factors for booked appointment outside of wait times or if unable to contact or patient declined) Send timely documentation notes to referral source Participate in evaluation of pilot project 	Receive triaged referral from CI Book patient and notify CI of appointment date (note any patient-related factors for booked appointment outside of wait times or if unable to contact or patient declined) Send timely documentation notes to referral source Participate in evaluation of pilot project					

Figure 3: Data Collection Template

Patient ID	Referra	il ID		OB 'MM YY)	Gender	Mental Health Indicated	Medicati Orders (Y/N)	•	Ad Med	ers To ljust ication '/N)	Initially Received w/ Endo Consult	If No, DCI Obtained Endo Consult		stances hy no	Date CI Sent (DD/MM /YYYY)
Sent (DD/MM	Referral Source .ocation	for boo	son not king do	App	Endo ointment Date MM/YYYY)	Wait Time (in days for Endo)	If No, Reason Endo indicated	Т	betes	Diagnos	Referral Recipient (ie. DEP/DEC	Referral Recipient (ie. Endo only)	Reason for booking outside	Notes	Patient Postal Code

Outcomes

Data analysis was completed by WWDCI to understand the current state of urgent referrals prior to engaging with urgent care providers is shown in Figure 4. From this data, hospital emergency department prescribers were less likely to request an Endocrinology consult for referrals meeting urgent criteria. This information was shared with emergency department prescribers at the Joint Department Emergency Medicine meeting on October 19, 2023. This data was well received by emergency department prescribers and a discussion on how to improve access to care followed which led to the concept of this pilot project.

Figure 4: Urgent Referral Data prior to Joint Department Emergency Medicine Meeting

2021-2022 Data Presented at Joint Department (SMGH/GRH) Emergency Medicine Meeting							
Referral Source	# and % with Endo Consult	DEP referral recipient					
	26 (85%)	Langs CHC = 11					
KWUC = 27		Grand River Hospital (GRH) = 4					
KVVUC - 27		Community Healthcaring KW (CHKW) = 10					
		Other = 2					
	15 (60%)	Langs CHC = 12					
SMGH ED = 25		Grand River Hospital (GRH) = 1					
SIVIGH ED = 25		Community Healthcaring KW (CHKW) = 10					
	Woolwich CHC = 2						
		Langs CHC = 5					
CDU ED - 21	11 (469/)	Grand River Hospital (GRH) = 4					
GRH ED = 31	11 (46%)	Community Healthcaring KW (CHKW) = 12					
		Woolwich CHC (WCHC) = 3					

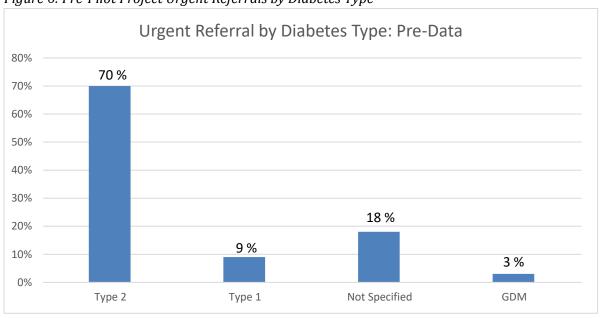
Pre-Pilot

Pre-pilot project data collection was started after Oct 19, 2023, for the following 6 months. During this time the parameters of the project were determined and finalized with the pilot participants. The pre-pilot urgent referral data is presented in Figure 5. Within this 6-month period from the initial conversations with urgent care providers, endocrinology consults requests on urgent diabetes referrals increased 14.6%. WWDCI data analysis of urgent referrals by diabetes type which is depicted in Figure 6. This showed a large portion (70%) of urgent referrals are for patients living with type 2 diabetes and 18% being unspecified diagnosis. An unspecified diagnosis is usually indicated on a referral when a referrer is unsure if the newly diagnosed patient has type 1 or type 2 diabetes. The data also indicated that urgent referrals during this period were equally distributed to diabetes programs across the KW4 OHT region.

Figure 5: Pre-Pilot Project Urgent Referral Data

Pre-Pilot Project Data for Urgent Referrals (6 months prior to data collection) n=34							
Referral Source (# and % of total urgent referrals)	# and % with Endo consult	Improvement from 2021- 2022 data (%)	% with medication orders	% with orders to adjust	DEP referral recipient		
KWUC = 8 (23.5%)	7 (88%)	3%	N/A	N/A	Langs=3 GRH =2 CHKW =3		
SMGH ED = 8 (23.5%)	6 (75%)	15%	N/A	N/A	Langs =4 GRH =1 CHKW =3		
GRH ED = 18 (53%)	13 (72%)	26 %	N/A	N/A	Langs = 4 GRH =5 CHKW =9		

Figure 6: Pre-Pilot Project Urgent Referrals by Diabetes Type



Pilot Project

From March 15-Sept 15, 2024, WWDCI collected the pilot project data parameters in the Data Collection Template (Figure 3). This data was analyzed and compared against the project aim and deliverables and summarized in Figures 7-12 showing:

- Referral source location/volume
- Number and percentage of referrals received with request for Endocrinology consult
- Percentage of referrals received with medication orders
- Percentage of referrals received with orders to adjust
- DEP referral recipient volumes
- Number of referrals received, sorted by diabetes type
- Percentage of referrals with booked appointments within recommended wait-times for Endocrinologist and DEPs

There were fewer urgent referrals during this period compared to the pre-pilot data. This could be due to the data collection timeframe (warmer months), less illness related hyperglycemia. The data indicated overall a 19% improvement in urgent referrals with an Endocrinology consult request compared to baseline. Urgent referrals with medication order and/or orders to adjust were new data points for WWDCI to collect. Overall, 53% of urgent referrals had a medication order written and 14% had an order to adjust diabetes medications. Diabetes education referrals are triaged to the closest, most appropriate DEP. A larger proportion (59%) were triaged to CHKW, which is in downtown Kitchener and services a higher needs community (Figure 7). Data analysis of urgent referrals by diabetes type for the pilot project duration is indicated in Figure 8. Type 2 diabetes was the predominate diagnosis (85%) for urgent referrals.

Figure 7: Pilot Project Urgent Referral Data

	Pilot Project Data for Urgent Referrals (6 months) n=27							
Referral Source (# and % of total urgent referrals)	# and % with Endo consult	Improvement from 2021- 2022 data (%)	% with medication orders	% with orders to adjust	DEP referral recipient			
KWUC = 4 (15%)	4 (100%)	15 %	25%	0%	CHKW =4			
SMGH ED = 10 (37%)	8 (80%)	20%	80%	20%	Langs =3 GRH =1 CHKW =5 WCHC =1			
GRH ED = 13 (48%)	9 (69%)	23 %	54%	23%	Langs = 4 GRH =2 CHKW =7			

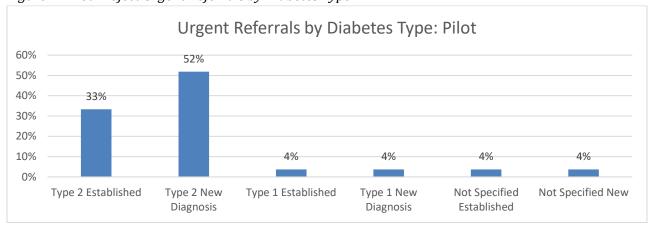


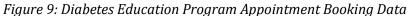
Figure 8: Pilot Project Urgent Referrals by Diabetes Type

Figures 9 and 10 depict the amount of booked appointments for DEPs and Endocrinology during the pilot project timeframe. Booked appointments include those referrals where the patient schedules an appointment and does not include those who declined or were unable to be contacted after three attempts. The DEPs had a higher booked appointment rate (81%) vs Endocrinology (64%). DEPs were able to book 37% of referrals within the suggested urgent criteria wait-time of 2 days and an additional 44% of referrals were offered an appointment within the 2 days criteria but due to patient related factors, the patient opted to book an appointment for a later date.

The Endocrinologist was able to book 14.5% of referrals within the suggested urgent criteria wait-time of 48-72-hours. An additional 50% of referrals were offered an appointment within the 48–72-hour criteria but due to patient related factors, the patient opted to book an appointment for a later date.

The difference in the ability for the DEPs to book an appointment within the 2-day criteria may be due to having multiple diabetes educators to book with as well as offering later in the day appointments or virtual appointments. The DEPs are also aware of the standard booking process and are used to communicating booked appointment details and urgent referral bookings. It was not a change of process for their teams but differed for the specialist.

Figures 11 and 12 are examples of the survey questions that were shared with participating DEPs and Endocrinologist via an electronic survey format. The aim of the survey was to understand how participants interpreted the outcomes of the pilot project and the potential impact on diabetes care regionally, to rank the importance of future improvement initiatives identified during the pilot project and to understand their overall satisfaction with the pilot project.



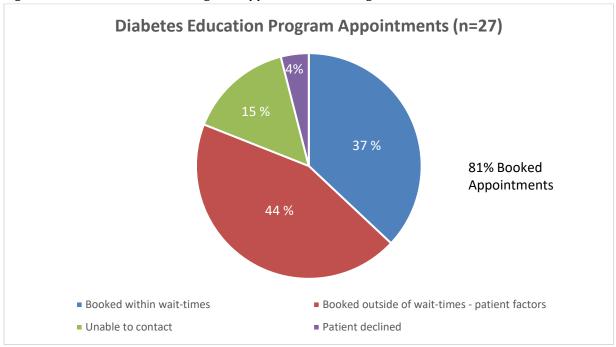
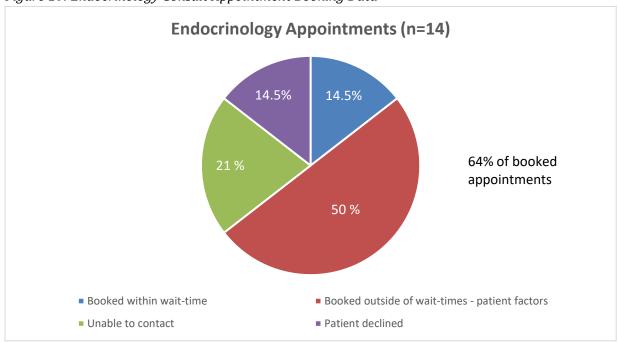


Figure 10: Endocrinology Consult Appointment Booking Data





December 2024

Urgent Referral Pilot Project Evaluation - DEPs

Please take a few moments as a team to complete the survey to share your experience as a participant in the pilot project. The aim of the pilot project was meaningful to my practice. strongly disagree disagree neutral strongly agree The project met the stated objectives. strongly disagree disagree neutral strongly agree Ongoing tracking and reporting of the pilot project deliverables would be beneficial to my practice. strongly disagree disagree neutral agree strongly agree The results of the pilot project will have a positive impact on my workload or practice. strongly agree Based on the parameters outlined in the pilot project to improve access to care for patients meeting urgent criteria, please rank the potential benefit of each indicator to your practice. Endocrinology consult request on urgent referrals Medication orders on urgent referrals Orders to adjust medications on urgent referrals Urgent referral patients seen by Endocrinologist within 48-72 hours Building stronger working relationships with urgent care providers To guide further improvement efforts based on the outcomes of the pilot project, please rank the following items in order of potenital benefit to patient care outcomes. Advocate for urgent care providers use of Ocean e-referral forms, with prompts to consider completing the medication order section/orders to adjust and Endocrinology consult Advocate for primary care clinics for patients without providers Education/advocacy to primary care providers/clinics to perform routine screening for type 2 diabetes to try to have an impact the number of urgent referrals in the region Continue to encourage urgent care providers to refer patients meeting urgent criteria to endocrinology, completing medication order, and orders to adjust medications How satisified are you with the overall results of the pilot project? very satisfied) satisfied very dissatisfied) neutral dissatisfied Comments



December 2024

Urgent Referral Pilot Project Evaluation - Endocrinology

Please take a few moments to complete the survey to share your experience as a participant in the pilot project. The aim of the pilot project was meaningful to my practice. strongly disagree disagree neutral strongly agree The project met the stated objectives. strongly disagree disagree strongly agree Ongoing tracking and reporting of the pilot project deliverables would be beneficial to my practice. strongly disagree strongly agree The results of the pilot project will have a positive impact on my workload or practice. strongly disagree disagree neutral strongly agree Based on the parameters outlined in the pilot project to improve access to care for patients meeting urgent criteria, please rank the potential benefit of each indicator to your practice. Endocrinology consult request on urgent referrals Medication orders on urgent referrals Orders to adjust medications on urgent referrals Urgent referral patients seen by Endocrinologist within 48-72 hours Building stronger working relationships with urgent care providers To guide further improvement efforts based on the outcomes of the pilot project, please rank the following items in order of potenital benefit to patient care outcomes. Advocate for urgent care providers use of Ocean e-referral forms, with prompts to consider completing the medication order section/orders to adjust and Endocrinology consult Advocate for primary care clinics for patients without providers Education/advocacy to primary care providers/clinics to perform routine screening for type 2 diabetes to try to have an impact the number of urgent referrals in the region Continue to encourage urgent care providers to refer patients meeting urgent criteria to endocrinology, completing medication order, and orders to adjust medications How satisified are you with the overall results of the pilot project? very satisfied dissatisfied very dissatisfied neutral Comments:

Successes

- Urgent Care Physicians interest in pilot project and improving access to care
- Follow-up and outcome requests from Urgent Care Physicians and interest from local Ontario Health Teams to understand impact and opportunities
- Correcting misconceptions of how patients access diabetes care regionally
- Building stronger working relationships with urgent care providers
- Improvement in the number of urgent referrals with request for Endocrinology consult
- Established baseline data for urgent referrals with medication orders, orders to adjust medication
- Suggestions were made for additional fields to be created to allow for regional data capture that allows for use as a comparator for future process improvement initiatives
- Validation of a need to focus on education around diabetes screening for high-risk populations, prevention strategies, and earlier intervention based on the large majority of the urgent referrals being for patients with new or established type 2 diabetes

Challenges

There were many challenges identified with the pilot project which have offered opportunities to reflect and improve as follows:

Challenge	Reason	Recommendation
No standardized approach to completion of urgent diabetes referral (medication orders, orders to adjust, Endocrinology consult request)	 Large number of urgent care referrers in KW4 OHT region Each referrer's approach to managing urgent diabetes referrals is unique Inconsistent completion of medication orders, orders to adjust diabetes medications 	Continued attendance at Joint Emergency Department Medicine meetings to encourage a standardized approach to urgent diabetes referrals, advocate for e-referral use with field standardization
Difficulty for WWDCI triage nurses to connect with referrer to request an Endocrinology referral	 Often urgent care referrals sent after patient is discharged and provider no longer on shift when WWDCI triage nurse calls 	Continue to educate/ advocate with providers for endocrinology consults on urgent diabetes referrals
Some data points not collected previously	 Booked appointments dates, patient related factors affecting wait-times from Specialists, and confirmation of those referrals with appointments not deemed clinically warranted Medication orders or orders to adjust being completed on referrals 	Start to track medication orders and orders to adjust in WWDCI database
Wait-times longer	Three out of six months of data collection occurred during the summer months: shortages of appointments at DEPs and Endocrinologist office due to summer vacations	Block urgent referral timeslots in advance, vacation coverage plans in advance

Evaluation

From the perspective of WWDCI, this pilot project has been successful with the pilot project deliverables being achieved. Notable improvements include:

- Urgent referrals with Endocrinology consults request increased by 19% (now 83% of urgent referrals have Endocrinology consult request)
- More than half of urgent referrals had medication orders
- 64% of patients accepted an appointment with the Endocrinologist
- 81% of patients accepted an appointment with a Diabetes Education Program
- Building more direct communication paths with urgent care physicians

Upon reflection, a 6-month timeframe may not have been a long enough period to see improvements in all indicators as only 27 referrals met the inclusion criteria during this time. Another influencing factor is the large number of prescribers working at each of the participating Urgent Care locations. A change in prescribers practice can take time to be reflected in the data.

Without historical data for medication orders or orders to adjust on referrals received, we were not able to determine if this data point improved during the pilot project. WWDCI has added this data point to the data base and will be able to track moving forward to determine trends and provide on-going feedback to urgent care providers.

A draft version of the report was shared with participating DEPs and Endocrinologist to share the outcomes of the pilot project along with a virtual survey to understand their perspectives and satisfaction with the pilot project experience. Survey results indicated that participants agreed to strongly agreed the pilot project was meaningful to their practice, met the stated objectives, ongoing reporting of the project's deliverables would be beneficial to care. All participants were satisfied to very satisfied with the overall results of the pilot project.

Participants were asked to rank the possible next steps in relation to the outcomes of the project and benefits to patient care, below are the order of the rankings:

	1	Advocate for urgent care providers use of Ocean e-referral forms with field standardization to
		prompt completion of orders section and request Endocrinology consult
	2	Continue to encourage providers to refer patients meeting urgent criteria to endocrinology,
	2	completion of medication orders and orders to adjust medications
	3	Advocate for primary care clinics for patients without providers
	4	Education/advocacy to primary care providers to preform routine screening for type 2
		diabetes to try to have an impact on the number of urgent referrals in the region

WWD Resource Clinician will be following up with each participating DEP and Endocrinologist to discuss the pilot project report in more detail to gain a deeper understanding of the impact of the pilot project outcomes on their clinical practice.

Summary and Overall Recommendations

In conducting this pilot project, WWDCI built stronger working relationships with urgent care providers, improved access to care for patients living with diabetes and identified educational opportunities to try to reduce the number of urgent diabetes visits to urgent care centres within KW4 OHT.

There is also the potential for continued improvements as WWDCI works along with Urgent Care Providers to encourage Endocrinology consult requests, medication orders and orders to adjust on referrals that meet urgent criteria.

Based on the pilot project outcomes as well as the participant survey rankings, WWD is committed to undertaking the following initiatives:

- 1. Once Ocean referrer on-boarding resumes, advocate for faxed-based referrers to on-board with Ocean to use e-referrals moving forward
- Create and distribute a practice alert bulletin to over 3700 local referrers, advocating for urgent referrals to include an endocrinology consult request, along with medication orders/orders to adjust
- 3. WWDCI triage nurses to continue to advocate for endocrinology consult for urgent referrals received from urgent care centres within the Waterloo Wellington region. WWDCI triage nurses will try to contact the referral source the day referral is received
- 4. Continue to advocate with Waterloo Wellington OHTs for the creation of primary care clinics for patients without providers

In improving these areas, patients will have improved access and ongoing care by a prescriber, Diabetes Educators will have the ability to adjust medication doses more efficiently to help patients achieve improved glycemic control and improved overall health in a timelier fashion.

During the process of writing the final report, WWD was informed of other local programs (SCOPE, PREVENT Clinic, Rapid Access Primary Care Clinic) which could aid in accessing care for patients living with diabetes. WWD Resource Clinician will connect with these programs to understand if patients living with diabetes could access diabetes education and support through these programs. WWDCI plans to share the results of this pilot project with all three local Ontario Health Teams within the Waterloo Wellington region with the aim of improving access to diabetes care and Specialist consults for people living with diabetes.