DR Barometer
Shifting the needle

The Diabetic Retinopathy Barometer Report

Czech Republic

Contents

For detailed information regarding methodology and limitations of the study please refer to the DR Barometer Global Results Report which can be found at **DRBarometer.com**

Introduction
Global Study

The International Federation on Ageing, the International Diabetes Federation, and the International Agency for the Prevention of Blindness undertook a comprehensive, two-phase, multi-country study to investigate the global and specific country issues surrounding diabetic eye disease (DED) primarily, diabetic retinopathy (DR) and diabetic macular edema (DME).

This report describes the specific findings from information gathered from adults with diabetes and health care professionals in the Czech Republic.

All people with type 1 and type 2 diabetes are at risk of developing DR, which can lead to loss of vision and eventually to blindness. DME is a type of DR that is particularly associated with vision loss. DR is preventable by prompt diagnosis and appropriate management of diabetes.

Vision loss is preventable if DR is identified in its early stages by screening, as effective treatments are now available to prevent progression. Despite the serious risks of DR, little has been published regarding the global awareness of the risks and prevention and effective management of diabetes associated vision impairment.

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Goal

The DR Barometer Study sought, in broad terms, to assess the awareness of, and access and barriers to diabetes management, including screening for DED and timely treatment.

This new information from forty-one countries is vital to understanding the barriers to improved outcomes and the actions required to overcome such barriers.

Initiatives that address the gaps in the care pathway are essential to preventing unnecessary blindness and visual impairment so as to enable people with diabetes to maintain their health and ensure that the contribution that they can make to family and community are not compromised.

Background

The DR Barometer study used a mixed methods approach. Phase I was a qualitative study comprising 120 semi-structured interviews with a small sample of people with diabetes (n = 9 per country) and health care professionals (n = 6 per country) in each of eight countries: Germany, Saudi Arabia, Japan, Romania, Mexico, Argentina, Uganda, and Bangladesh. The countries were purposively selected for variation across income level and region, as delineated by the World Health Organization (WHO) and the World Bank Income Groups (WBIGs).

Phase II was a multi-country quantitative study conducted in 41 countries to investigate the current level of awareness of the risk of DR and of the need for prevention, screening and management to prevent vision loss. The study also sought to better understand the nature of health services and supports available, related national and international policies and the social and economic burden of the disease.

In the quantitative component of the study, both adults with diabetes (patients) and health care professionals (providers) were surveyed. The patient survey consisted of 46 questions divided into four sections covering awareness and knowledge, current care for diabetes and eye complications, screening and treatment of DR and DME, and quality of life.

The provider survey comprised 43 questions covering provider and practice characteristics, and specific information from ophthalmologists. Globally, the patient survey had a total of 4,340 respondents and the provider survey had 2,329 respondents.

Respondents from each country were grouped into regions as defined by the WHO and into the WBIGs.

Study Populations

The people with diabetes participating in the patient survey were self-selected, predominantly from patient organisations. Therefore, this group comprises people who are more likely to be engaged and motivated in the management of their diabetes. Likewise, the provider respondents were self-selected and the same caution should be applied when interpreting the results.

Even though the sample is not representative of the broader population of people with diabetes and health care professionals, the findings illustrate important trends, and highlight areas of concern.

The results from this survey provide new evidence reflecting concerns from the voices of thousands of patients and health care professionals around the world. This study provides a rich resource for generating unique insights into the real-life experiences of people living with diabetes, and as such is a powerful tool to help improve the lives of current and future generations of people with diabetes.

For the purpose of understanding the impact of the progression of diabetic eye disease responses to the patient survey, beyond all respondents, are reported by three subgroups:

• Without DED: people with diabetes without any reported form of DED

• With DED: people with diabetes with reported DED but not DME

• With DME: people with diabetes with reported DED and DME

As reported by 4,340 adults with diabetes who responded to the survey, 20% reported to have been diagnosed with DED and a further 7.6% with DME.

Of the health care professionals who responded to the survey (n = 2,329), 37% were ophthalmologists, 17% were diabetes specialist providers and 16% were primary care providers. The remaining respondents were optometrists, nurses, health educators or other types of professionals.

Introduction
Czech Republic Study

Demographic Characteristics[1]

The Czech Republic is estimated to be the eleventh most populous country in the European Union with a population of approximately 10.5 million. As with many countries in Europe the Czech Republic has undergone population ageing with ~15% of its population estimated to be under the age of 15 years and ~19% are over the age of 65 years.

Due to low fertility rates and an increasing life expectancy, the nation's population is expected to decrease over the next few decades. In less than 25 years (by 2050), it is expected that the population will decrease to 9.9 million, with those under the age of 15 years making up 15% of the total population and those aged 65 years and older comprising 30%.

Diabetes Profile[2]

There are 415 million people with diabetes in the world and more than 59.8 million people in the European Region. By 2040, this number is expected to rise to 71.1 million.

Fifty-six countries comprise the European Region with diverse populations ranging from Norway, the Russian Federation, Turkey, and Iceland.

The Czech Republic has over 799, 300 (631.0-1,045.6‡) adults living with diabetes, and its national prevalence is 9.9% (7.8-13.0‡), which is above the global average of 8.8%. Deaths attributed to diabetes in the Czech Republic in 2015 were 7, 908, and the estimated number of undiagnosed cases was 301, 800 (327.0-541.8‡).

Study Populations: Czech Republic

Only five adults with diabetes completed the survey in Czech Republic and none were diagnosed with DED or DME.

Fifteen health care professionals completed the survey and of these, six were diabetes specialist providers (40%), seven were ophthalmologists (47%), and two were primary care providers (13%).

The DR Barometer Study:
Czech Overview

The DR Barometer study was conducted in 41 countries. In Czech Republic, 5 adults with diabetes and 15 health care professionals provided new information about the experiences of living with, managing and treating diabetes, DR and DME.

25%

of patients said that **long wait times for an appointment** were a barrier to eye exams

39%

of all providers **did not have written protocols/guidelines** for detection and management of diabetes-related vision loss available

DR: Diabetic Retinopathy
DME: Diabetic Macular Edema

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IFA

IAPB

International Diabetes Federation

BAYER

25%

of patients either **never discussed eye complications with their doctor** or did so only after the onset of symptoms

20%

of ophthalmologists **had not received specific training** in the treatment and diagnosis of DR and or DME

Czech Republic DR Barometer Findings:
Adults with Diabetes

Key Demographic Characteristics

Five adults with diabetes completed the patient survey in the Czech Republic: 50% were female and 50% were male. All respondents lived in an urban setting (see Appendix Table 4.2).

The education levels of respondents were as follows: 25% were educated to a secondary school level and 75% to a college/university level. Seventy-five percent of those surveyed were in paid employment (see Appendix Table 4.3 and Table 4.4).

All respondents were of traditional working age (18-59 years). Sixty percent were aged between 18 and 39 years, and 40% 40 and 59 years (see Table 1).

None of the respondents had been diagnosed with DED or DME. Of the respondents, 80% had been diagnosed with type 1 diabetes and 20% with type 2 diabetes (see Appendix Table 2.1). Amongst 18 to 39 year-olds, all respondents had type 1 diabetes (n=3). In the 40-59 age group, one respondent had type 1 and the other had type 2 diabetes. All respondents reported that their diabetes was well controlled.

Forty percent of those surveyed had been diagnosed between 16 and 20 years ago, and 20% diagnosed 1 - 5 years ago, 6 - 10 years ago or 21 years ago or more (20%) (see Appendix Table 2.2).

Table 1: Summary of key characteristics of adults with diabetes

Group	Subgroup	All Respondents	Type 1 diabetes	Type 2 diabetes
All respondents		5 (100%)	4 (80.0%)	1 (20.0%)
Gender	Male	2 (50.0%)	1 (50.0%)	1 (50.0%)
	Female	2 (50.0%)	2 (100.0%)	0 (0.0%)
	Total Missing	1	1	0
Age	18-39 yrs.	3 (60.0%)	3 (100.0%)	0 (0.0%)
	40-59 yrs.	2 (40.0%)	1 (50.0%)	1 (50.0%)
Time since diagnosis	1 - 5 yrs.	1 (20.0%)	0 (0.0%)	1 (100.0%)
	6 - 10 yrs.	1 (20.0%)	1 (100.0%)	0 (0.0%)
	16 - 20 yrs.	2 (40.0%)	2 (100.0%)	0 (0.0%)
	21 yrs. plus	1 (20.0%)	1 (100.0%)	0 (0.0%)
Control of Diabetes	Controlled	4 (100.0%)	3 (75.0%)	1 (25.0%)
	Not controlled	0 (0.0%)	0 (0.0%)	0 (0.0%)
	Total Missing	1	1	0

NB [1]: Percentages for All Respondents category are calculated based on their respective group. All categories are calculated as row percentages.

NB [2]: Diabetes control is based on the respondents' perception of their own control. Diabetes control terms were grouped as follows; Controlled includes patients who selected 'Very Well' and 'Well'. Not Controlled includes patients who selected 'Not very well' and 'Not well at all'.

NB [3]: This table is a summary of various questions. For a detailed breakdown for each question, please refer to the Appendices.

Knowledge and Management of Diabetes

All five respondents saw a diabetes specialist to manage their disease (on average 4.3 times per year) (see Appendix Table 2.3.1 and 2.3.2).

People were informed about their condition through a variety of channels. All respondents received information from a doctor or nurse followed by various sources including a health educator, a diabetes organisation or other health organisation, and the internet (see Table 2 and Appendix Table 2.4).

Table 2: Source of information about diabetes

Information Source	All Respondents (n=4)
Doctor or nurse	4 (100.0%)
Health educator	2 (50.0%)
Diabetes organisation or other health organisation	2 (50.0%)
Internet	2 (50.0%)
Nutritionist or dietician	1 (25.0%)
Family/Friends/Neighbours	1 (25.0%)

A range of strategies was used by respondents to manage their diabetes. For those with type 1 diabetes, apart from insulin, all respondents managed their diabetes with exercise, 67% with diet, and 33% with natural or herbal medicine. All respondents with type 2 diabetes managed their condition with oral medicine.

Only 25% of those surveyed were enrolled in diabetes management programmes, and all said the programme included information on the importance of screening for diabetic eye complications (see Appendix Table 2.6).

All respondents had eye checks, and these occurred at 6 - 12 months (50%) and greater than 12 months (50%) (see Appendix Table 2.7).

The main challenges in controlling diabetes were: respondents did not know enough about diabetes (25%), there were too many other things to do (25%), and they did not want to think about having diabetes (25%) (see Appendix Table 2.9).

Free or low cost medicines or monitoring materials (75%), support groups (50%), support from family or friends (50%), and health education and information (50%) were viewed as important to improving the management of their diabetes (see Appendix Table 2.10).

Nature and Information about Complications

All of those surveyed were aware that vision loss is a consequence of diabetes, as well as other complications such as kidney disease (100%), cardiovascular disease or stroke (75%), foot ulcers (75%), neuropathy (75%) and amputation (75%) were associated with diabetes (See Appendix Table 2.11).

Patients were most concerned about vision loss (75%) yet no respondent reported complications associated with diabetes (Appendix Table 2.12 and Table 2.13).

Table 3: Sources of information about DR and DME

Source	All respondents (n=4)
Doctor/Nurse	3 (75.0%)
Internet	3 (75.0%)
Health educator	2 (50.0%)
Diabetes organisation or other health organisation	1 (25.0%)

NB [1]: Not all respondents answered all questions in the survey; percentages are calculated from non-missing responses to the survey question.

Information about Diabetic Eye Disease and Diabetic Macular Edema

Fifty percent of respondents discussed the possibility of diabetes-related eye complications with their health care professional once a year, followed by multiple times a year (25%) or never (25%) (see Appendix Table 2.14).

Seventy-five percent of those surveyed reported that they did what they could to prevent vision problems (e.g. get routine screenings, visit specialists), yet myths and misperceptions around vision changes and preventions were evident with 50% thinking that vision problems were a normal part of ageing (see Appendix Table 2.15).

All respondents had received information about DR and DME, with the doctor or nurse and the internet being the most common sources (75%) (see Table 3 and Appendix Table 3.9).

Table 4: Barriers to eye examinations

Identified Barriers	All respondents (n=4)
Eye exams are not available near my home	1 (25.0%)
Long wait time for appointment	1 (25.0%)
Fear of treatment/results	1 (25.0%)
Other	1 (25.0%)

Screening for Diabetic Eye Disease

All respondents had an eye exam for DED, with 50% having it within the last year and 50% more than one year ago but less than two years ago. Twenty-five percent were aware of government sponsored screening programs for DED (see Appendix Table 3.1 and Table 3.2).

All of those surveyed thought that they should have their eyes examined for DED once a year (see Appendix Table 3.4).

A number of significant barriers to eye exams were identified by respondents including: the lack of available eye exams near their home (25%), long wait times for an appointment (25%), and a fear of treatment or the results (25%) (see Table 4 and Appendix Table 3.5).

Self-reported Quality of Life

The CDC HRQOL-4 Core Modules of the "Healthy Days Measure" was used to capture information on self-reported quality of life, based on the number of unhealthy days within the last 30 days from when the survey was taken (see Table 6).

Seventy-five percent of respondents had mentally and physically unhealthy days and 33% experienced limitations to their daily activities because of a health problem.

Table 5: Self-reported healthy days of patients without DED, with DED or DME

Health Status	All Respondents
Self-rated health: Good	4 (100.0%)
Self-rated health: Poor	0 (0.0%)
Physically unhealthy days	3 (75.0%)
Mentally unhealthy days	3 (75.0%)
Unhealthy days	3 (75.0%)
Activity limitation days	1 (33.3%)

NB [1]: Not all respondents answered all questions in the survey; percentages are calculated from non-missing responses to the survey question.

NB [2]: This table is a summary of various questions. For a detailed breakdown for each question, please refer to the Appendices.

Czech Republic
DR Barometer Findings:
Health Care Professionals

Key Demographic Characteristics

There were 15 health care professionals who answered at least one of the survey questions in the Czech Republic. Of these, two were primary care providers (13%), six were diabetes specialist providers (40%) and seven were ophthalmologists (47%) (see Appendix PT 1.3).

In this section of the report, data from health care professionals as a whole and then the ophthalmologist subgroup will be reported.

Health care professionals as a group had been practicing for an average of 22 years, with the ophthalmologist group practicing for an average of 21 years (see Appendix PT 1.5).

All providers were well educated (92% with graduate or advanced degree), 31% were female and 69% male, and the largest proportion (31%) were aged 40 - 49 years and 50-59 years (see Table 6 and Appendix PT 3.1).

Table 6: Summary of key characteristics of health care professionals

Group	Subgroup	All Respondents	Primary Care Provider	Diabetes Specialist	Ophthalmologist
All respondents		15 (100.0%)	2 (13.3%)	6 (40.0%)	7 (46.7%)
Age group	30 - 39 yrs.	2 (15.4%)	0 (0.0%)	0 (0.0%)	2 (28.6%)
	40 - 49 yrs.	4 (30.8%)	0 (0.0%)	1 (25.0%)	3 (42.9%)
	50 - 59 yrs.	4 (30.8%)	2 (100.0%)	1 (25.0%)	1 (14.3%)
	60 - 69 yrs.	3 (23.1%)	0 (0.0%)	2 (50.0%)	1 (14.3%)
Gender	Female	4 (30.8%)	1 (50.0%)	2 (50.0%)	1 (14.3%)
	Male	9 (69.2%)	1 (50.0%)	2 (50.0%)	6 (85.7%)
Education	College/University	1 (7.7%)	0 (0.0%)	0 (0.0%)	1 (14.3%)
	Graduate or advanced degree (e.g. PhD, MD, etc.)	12 (92.3%)	2 (100.0%)	4 (100.0%)	6 (85.7%)

[NB [1]: This table is a summary of various questions. For a detailed breakdown for each question, please refer to the Appendices.

Clinical Practice Characteristics

Forty percent of all providers had their main practice setting in a hospital. For ophthalmologists only, the most common settings were an eye clinic (71%) and a hospital (29%). All health care professionals worked in an urban setting (see Appendix PT 2.2).

Most health care professionals worked in the government sector (80%) and ophthalmologists worked mainly in the government (71%) and combined or mixed (29%) sectors (see Appendix PT 2.3).

Health care professionals reported that 62% of patients do not pay for services, 23% pay through insurance for services, and 15% split the cost between themselves and their insurance company. For ophthalmologists, 43% of patients do not pay for services, 29% of patients pay through insurance for services, and 29% of patients split the cost between themselves and their insurance company (see Appendix PT 2.7).

On average all providers see 60 patients per week and on average 48% of these had diabetes; similarly, ophthalmologists saw an average of 66 patients per week, and 31% had diabetes (see Appendix PT 2.6).

For all health care professionals, the average waiting time for an appointment was more than one week but less than one month (39%), between one and two months (23%) (see Table 7 and Appendix PT 2.5).

For an appointment with an ophthalmologist, the wait was between two and months in 43% of practices, but for a further 29% of practices the wait time was more than one week but less than one month.

Table 7: Average wait times to schedule an appointment

Wait Time Intervals	All Respondents (n=13)	Ophthalmologist (n=7)
Less than 1 week	1 (7.7%)	0 (0.0%)
More than 1 week but less than 1 month	5 (38.5%)	2 (28.6%)
More than 1 month but less than 2 months	3 (23.1%)	1 (14.3%)
More than 2 months but less than 3 months	3 (23.1%)	3 (42.9%)
Other	1 (7.7%)	1 (14.3%)

Patient Education Information

A wide range of topics related to diabetes and its management were addressed by the health care professionals in a routine visit (see Figure 1 and Appendix PT 2.10).

Figure 1: Health care topics discussed with patients during a routine visit
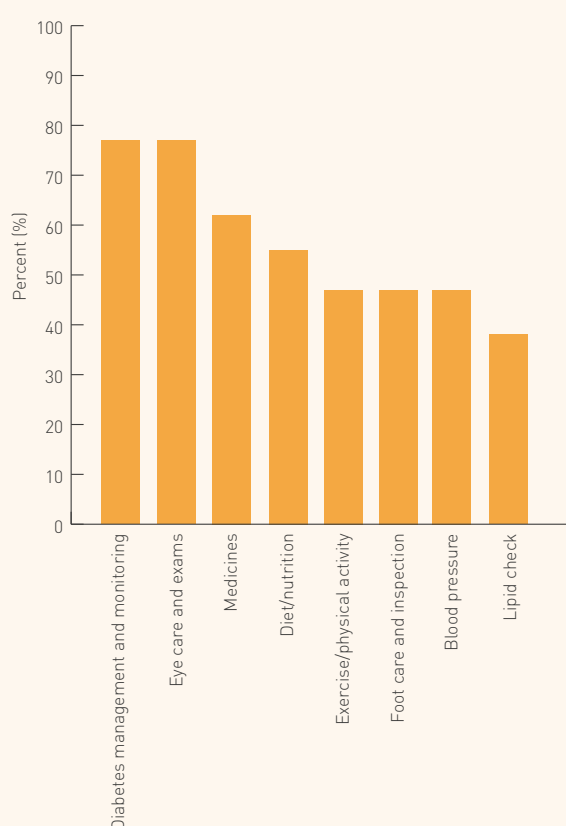
Health care professionals stated that written information about diabetes is available yet the adequacy of that related to eye complications varies.

Fifty-four percent of health care professionals reported that they had sufficient information about eye complications. Fifteen percent said the information on eye complications and diabetes was insufficient, and a further 15% that which was on vision complications was not included. Overall, 15% of those surveyed had no written information available (see Table 9 and Appendix PT 2.11).

Over half of ophthalmologists (57%) had written information about diabetes and potential eye complications. Fourteen percent had information on diabetes where information on eye complications was not sufficient. Twenty-nine percent of ophthalmologists said there was no written information available at all.

Guidelines and Protocols

Fifty percent of providers and 14% of ophthalmologists only, had written protocols for the management of diabetes used by staff. Forty-two percent had no protocols (see Appendix PT 2.12).

With respect to the management of diabetes-related vision issues, 54% of health care professionals and 43% of ophthalmologists had written protocols that were used by staff. For some 7.7%, the protocols were not used by staff. Thirty-nine percent of providers did not have protocols on the management of diabetes-related vision issues available (see Table 8 and Appendix PT 2.13).

Table 8: Availability and use of information and protocols

Question	Response	All Respondents (n=13)	Ophthalmologist (n=7)
Is there written information about diabetes available for patients in your main practice?	Yes, and information on eye complications is sufficient	7 (53.8%)	4 (57.1%)
	Yes, but information on eye complications is not sufficient	2 (15.4%)	1 (14.3%)
	Yes, but no information on eye complications is included	2 (15.4%)	0 (0.0%)
	No written information is available for patients	2 (15.4%)	2 (28.6%)
Question	Response	All Respondents (n=13)	Ophthalmologist (n=7)
Do you have written protocols/guidelines for detection and management of diabetes-related vision issue available in your main practice?	Yes, available and used by staff	7 (53.8%)	3 (42.9%)
	Yes, available but not used by staff	1 (7.7%)	1 (14.3%)
	Not available	5 (38.5%)	3 (42.9%)

NB [1]: This table is a summary of various questions. For a detailed breakdown for each question, please refer to the Appendices.

Screening Protocols and Barriers in the Care Pathway

Recommendations for timing for the initial eye exam for persons with diabetes varied depending upon the type of diabetes as reported by all providers.

For patients with type 1 diabetes, 75% of all providers reported that the initial eye exam should occur at time of the diagnosis of diabetes while for patients with type 2 diabetes, 92% of providers recommended an eye exam at time of diagnosis (see Appendix PT 2.14).

Overall, 85% of health care professionals and 71% of ophthalmologists reported that follow-up eye examinations should be conducted every year. All ophthalmologists and most health care professionals (69%) screen patients for DR (see Appendix PT 2.15).

Across all health care professionals, 77% send appointment reminders and 23% do not (see Appendix PT 2.19).

Ninety-two percent of the health care professionals and all ophthalmologists shared information to optimise patient care management (see Appendix PT 2.20).

The most common patient characteristics influencing the referral process for eye complications for health professionals and ophthalmologists respectively were: diabetes duration (92%) (100%), high glucose levels (85%) (100%), the presence of comorbidities such as hypertension (77%) (86%), the person's age (62%) (71%), and a patient's ability to adhere to recommendations (62%) (71%) (see Appendix PT 2.17).

The major barriers to optimising eye health as perceived by health care professionals were: patients feel that eye exams are not important (62%), patients feel eye complications are unlikely (54%) and a lack of knowledge and/or awareness of the complications (46%) (see Table 9 and Appendix PT 2.18).

Table 9: Major barriers to optimising eye health

Response	All Respondents (n=13)	Ophthalmologists (n=7)
Patients feel eye complications are unlikely	7 (53.8%)	4 (57.1%)
Patients feel eye exams are not important	8 (61.5%)	4 (57.1%)
Lack of knowledge and/or awareness	6 (46.2%)	3 (42.9%)
Patients fear of treatment/results	4 (30.8%)	3 (42.9%)
Patients have competing responsibilities and priorities	6 (46.2%)	3 (42.9%)
Proximity to care	3 (23.1%)	2 (28.6%)
Cost of care	1 (7.7%)	1 (14.3%)
Long wait time for appointment	4 (30.8%)	1 (14.3%)
Referral process	2 (15.4%)	1 (14.3%)
Recommended treatments are not available	2 (15.4%)	1 (14.3%)
Patients feel they are a burden on family/friends	1 (7.7%)	1 (14.3%)
Long wait time on the day of visit	3 (23.1%)	0 (0.0%)
Limited access to diabetes specialists	1 (7.7%)	0 (0.0%)
Limited access to eye specialists	1 (7.7%)	0 (0.0%)
Clinic too small or lack necessary equipment/staff	1 (7.7%)	0 (0.0%)

Czech Republic
DR Barometer Findings:
Ophthalmologists

There were five ophthalmologists who answered at least one of the supplementary questions (see Appendix PT 4.1 to PT 4.14) in the DR Barometer Study. Findings should be taken in context of the notably very small sample. On average, 29% of patients seen by the ophthalmologists had DR and 17% had DME (see Appendix PT 4.1 and PT 4.2).

Screening

The most common waiting times for a screening appointment for DED were more than one week but less than one month (43%) and between two and three months (43%) (see Appendix PT 4.3).

Eighty-six percent of ophthalmologists reported a wait time from screening to diagnosis of less than one week, while one ophthalmologist shared the diagnosis at time of screening (see Appendix PT 4.4).

Treatment and Challenges

All ophthalmologists personally administer treatment for DR (see Appendix PT 4.6). The most common factors influencing treatment for DR or DME were the presence of comorbidities such as hypertension (80%), high glucose levels (80%), and a patient's ability to adhere to recommendations (80%) (see Appendix PT 4.7).

Outreach screening for DED was either not evident or not well known by the ophthalmologists surveyed (see Appendix PT 4.13).

All ophthalmologists reported that they screen patients for DR based on fundoscopy through dilated pupils. Retinal photo, optical coherence tomography, and fluorescein angiography are also all used. Sixty percent of ophthalmologists treat DR and DME based on both visual and anatomical outcomes (see Appendix PT 4.8 and Appendix PT 4.9).

Eighty percent (n=4) reported that most patients present when visual problems have already occurred and 20% (n=1) said that patients present "in time" for screening (see Appendix PT 4.10).

Eighty percent of ophthalmologists had received specific training on the treatment and diagnosis of DR and / or DME. Fifty percent had training within the past year and 50% had training five or more years ago (see Appendix PT 4.11). All would be interested in online education and certification on DME, angiogenesis and anti-VEGF therapies (see Appendix PT 4.12).

The greatest perceived challenges for improving patient outcomes in DED were late diagnosis (100%, n=5), and reimbursement restrictions on approved therapy (60%, n=3). Further challenges related to limited access to education and the lack of universal guidelines (see Table 10 and Appendix PT 4.14).

Table 10: Challenges for improving outcomes in DED

Question	Response	Ophthalmologist (n=5)
What do you perceive to be the greatest challenges for improving patient outcomes in diabetic eye disease?	Late diagnosis	5 (100.0%)
	Reimbursement/restrictions on approved therapy	3 (60.0%)
	Limited access to patient education on diabetic retinopathy and diabetic macular edema	2 (40.0%)
	No universal guidelines on referral/ screening	2 (40.0%)
	Government/insurance not able to cover patient costs	2 (40.0%)
	Multi-disciplinary team integration is poor	2 (40.0%)

Czech Republic
DR Barometer Summary

In the Czech Republic, five respondents with diabetes and 12 health care professionals provided insights about their experiences of living with, managing and treating diabetes, DR and DME. The results of the DR Barometer Study Czech Republic aim to help improve the level of awareness around diabetes and eye complications, and access and barriers to diabetes management, including screening and timely treatment for those diagnosed with DED and DME.

The Czech Republic is estimated to be the eleventh most populous country in the European Union with approximately 10.5 million people. The population is expected to decrease over the coming decades, yet the percentage of those over 65 years is expected to increase. By 2050, the total population will decrease to 9.9 million, with those aged 65 years and older comprising almost one in every three people, i.e. 30% of the population.

The Czech Republic has over 799, 300 adults living with diabetes. Deaths attributed to diabetes in 2015 were 7, 908, and the estimated number of undiagnosed cases was 301, 800.

Eighty percent of those surveyed identified as having type 1 diabetes and 20% with type 2 diabetes and all respondents reported that their diabetes was well controlled. None of the respondents had been diagnosed with DED or DME.

All of those surveyed received information about diabetes from a doctor or nurse, and some from a health educator, a diabetes organisation or other health organisation, and from the internet. Nutritionists and family, friends and neighbours played a much lesser role with respondents.

It is unclear from the survey as to the level of access to diabetes management programmes as only one in four of those surveyed are enrolled, thus this observation requires further examination.

All respondents thought their diabetes was well controlled, but listed several challenges in controlling their condition including: not knowing enough about diabetes, there were too many other things to do, and they did not want to think about having diabetes, suggesting both a lack of knowledge and / or awareness.

Awareness of the complications associated with diabetes was extremely high with some 75% of respondents most concerned about vision loss. Notably, all respondents reported that they had no complications of diabetes.

Knowing that diabetic-related vision loss is preventable and addressing barriers to eye screening is an important policy issue; it was encouraging that all respondents had received an eye exam for DED, with half within the last year and the remaining more than one-year ago but less than two years ago. However, there remained many other barriers to screening such as the proximity of clinics to their home, long wait times, and the fear of treatment and / or the results.

Evidence shows that the relationship between the patient and the health care professional is critical to ensure realistic and optimal patient outcomes. Surprisingly, 25% of respondents had never discussed diabetes-related eye complications with their health care professional. Fifty percent had this discussion once a year and 25% had it multiple times a year.

Concerning are the myths and perceptions around vision changes, with 50% thinking that vision problems were a normal part of ageing.

Further validating the impact that diabetes has on life and lifestyle 75% of respondents had mentally and physically unhealthy days and 33% experienced limitations to their daily activities because of a health problem.

Patient education is very much at the heart of a proactive approach and 54% of health care professionals surveyed said they had sufficient information about eye complications. Fifteen percent said the information they did have was insufficient and 15% did not have access to written information at all. Fifty-four percent of providers and 43% of ophthalmologists had written protocols on the management of diabetes-related vision issues, but an alarming 39% of providers did not have the necessary protocols.

Recommendations for the timing of the initial eye exam for persons with diabetes varied depending upon the type of diabetes as reported by all providers. For patients with type 1 diabetes, 75% of all providers reported that the initial eye exam should occur at the time of diagnosis of diabetes and those with type 2 diabetes, 92% recommended an eye exam at time of diagnosis.

Certain factors influenced the referral process for respondents with eye complications, the main being diabetes duration, high glucose levels, presence of comorbidities such as hypertension, a patient's age, and a patient's ability to adhere to recommendations.

The major barriers to optimising eye health as perceived by health care professionals were that patients felt that eye exams were not important, eye complications were unlikely, and a concerning lack of knowledge and / or awareness.

Late diagnosis and reimbursement restrictions were perceived by ophthalmologists as the greatest challenges to improving patient outcomes in DED.

In large part, the patients and providers who participated in the study were self-selected, and therefore this population group is more likely to be engaged and motivated in the management of their diabetes hence a possible explanation for the rates of awareness and screening.

Even though the sample is not representative of the broader population, and as such may not truly reflect the national situation, the findings illustrate important trends, and certainly highlight specific areas of concern and potential calls for policy action in the Czech Republic.

References and Acknowledgement

[1] The World Bank. (2016). *Health nutrition and population statistics: Population estimates and projections* (World Data Bank). Washington, D.C.: The World Bank. Retrieved from http://databank.worldbank.org/data/reports.aspx?source=Health%20Nutrition%20and%20Population%20Statistics:%20Population%20estimates%20and%20projections

[2] International Diabetes Federation. (2015). *IDF Diabetes Atlas.* Accessed from: http://www.diabetesatlas.org/

Appendices

The Diabetic Retinopathy Barometer Survey: Appendices for Czech Republic

APPENDIX 1 : National Results

Table 1.1

Survey Information	Number of Respondents (%)
All valid respondents [1]	6 (100.0%)
Respondents aged 18 or over	6 (100.0%)
Respondents with diabetes	5 (83.3%)

NB [1]: valid respondents are those with country information

Table 1.2

Survey Information	Number of Respondents (%)
All valid respondents	6 (100.0%)
Included in Diabetic Analysis Set	5 (83.3%)
Excluded from Diabetic Analysis Set	1 (16.7%)
Reasons for exclusion from diabetic analysis set	.
Missing information on diabetes diagnosis	1

Table 1.3

Survey Information	Number of Respondents (%)
Diabetic Analysis Set	5 (100.0%)
World Bank Income Group: High Income	5 (100.0%)
Persons with Type I diabetes	4 (80.0%)
Persons with Type II diabetes	1 (20.0%)
Persons seeing health care professional for diabetes	5 (100.0%)

Table 2.1

Question	Response	Number of Respondents (%)
With which type of diabetes have you been diagnosed?	Type I	4 (80.0)
	Type II	1 (20.0)
	Total Valid Response	5 (100.0)

Table 2.2

Question	Response	Number of Respondents (%)
When was your diabetes diagnosed?	1 - 5 years ago	1 (20.0)
	6 - 10 years ago	1 (20.0)
	16 - 20 years ago	2 (40.0)
	21 years ago or longer	1 (20.0)
	Total Valid Response	5 (100.0)

Table 2.3.1

Question	Response	Number of Respondents (%)
Do you see a health care professional for your diabetes?	Yes	5 (100.0)
	Total Valid Response	5 (100.0)
What kind of health care professional?	Diabetes Specialist	5 (100.0)
	Total Valid Response	5 (100.0)

Table 2.3.2

Type of health care professional	Times per year seen for diabetes	Value
Diabetes Specialist	Total valid numeric response (n)	3
	Mean	4.3
	SD	1.5
	Median	4.0
	Min	3
	Max	6
	Total missing	2

Table 2.4

Question	Response	Number of Respondents (%)
How have you received information about diabetes?	Doctor or nurse	4 (100.0%)
	Health educator	2 (50.0%)

Question	Response	Number of Respondents (%)
	Nutritionist or dietitian	1 (25.0%)
	Diabetes organization or other health organization	2 (50.0%)
	Family/Friends/Neighbors	1 (25.0%)
	Internet	2 (50.0%)
	Total Valid Response	4 (100.0%)
	Total missing	1

Table 2.5

Question	Response	Number of Respondents (%)
How do you manage your diabetes?	Diet	2 (50.0%)
	Oral medicine	1 (25.0%)
	Exercise	3 (75.0%)
	Insulin	3 (75.0%)
	Natural/Herbal medicine	1 (25.0%)
	Total Valid Response	4 (100.0%)
	Total missing	1

Table 2.6

Question	Response	Number of Respondents (%)
Are you currently enrolled in a diabetes patient management support programme?	Yes	1 (25.0)
	No	3 (75.0)
	Total Valid Response	4 (100.0)
	Total missing	1
Who sponsors the programme?	Hospital support program	1 (100.0)
	Total Valid Response	1 (100.0)
	Total missing	4
Does the programme include education on the importance of screening for diabetic eye complications?	Yes	1 (100.0)
	Total Valid	1 (100.0)

Question	Response	Number of Respondents (%)
	Response	
	Total missing	4

Table 2.7

Test	Response	Number of Respondents (%)
Have you ever had the following tests in a doctors office of clinic? And if yes, how long ago?		
Blood glucose test	Yes	4 (100.0%)
	Less than 6 months	4 (100.0%)
	Total valid response	4 (100.0%)
	Total missing	1
	Total valid response	4 (100.0%)
	Total missing	1
Urine check	Yes	4 (100.0%)
	Less than 6 months	2 (50.0%)
	6 - 12 months	2 (50.0%)
	Total valid response	4 (100.0%)
	Total missing	1
	Total valid response	4 (100.0%)
	Total missing	1
Weight check	Yes	4 (100.0%)
	Less than 6 months	3 (75.0%)
	6 - 12 months	1 (25.0%)
	Total valid response	4 (100.0%)
	Total missing	1
	Total valid response	4 (100.0%)

Test	Response	Number of Respondents (%)
	Total missing	1
Blood pressure check	Yes	4 (100.0%)
	Less than 6 months	3 (75.0%)
	Greater than 12 months	1 (25.0%)
	Total valid response	4 (100.0%)
	Total missing	1
	Total valid response	4 (100.0%)
	Total missing	1
Foot check	Yes	1 (25.0%)
	Less than 6 months	1 (25.0%)
	Total valid response	1 (25.0%)
	Total missing	4
	No	3 (75.0%)
	Total valid response	4 (100.0%)
	Total missing	1
Eye check	Yes	4 (100.0%)
	6 - 12 months	2 (50.0%)
	Greater than 12 months	2 (50.0%)
	Total valid response	4 (100.0%)
	Total missing	1
	Total valid response	4 (100.0%)
	Total missing	1

Table 2.8

Question	Response	Number of Respondents (%)

Question	Response	Number of Respondents (%)
How well do you think your diabetes is controlled?	Very well	3 (75.0%)
	Well	1 (25.0%)
	Total Valid Response	4 (100.0%)
	Total missing	1

Table 2.9

Question	Response	Number of Respondents (%)
What are the main challenges you face in controlling your diabetes?	Don't know enough about diabetes	1 (25.0%)
	Too many other things to do	1 (25.0%)
	Don't want to think about having diabetes	1 (25.0%)
	Other	2 (50.0%)
	Total Valid Response	4 (100.0%)
	Total missing	1

Table 2.10

Question	Response	Number of Respondents (%)
Which of the following services currently help you better manage your diabetes?	Free or low cost medicines or monitoring materials	3 (75.0%)
	Support groups	2 (50.0%)
	Support from family or friends	2 (50.0%)
	Health education and information	2 (50.0%)
	Other	1 (25.0%)
	None	1 (25.0%)
	Total Valid Response	4 (100.0%)
	Total missing	1

Table 2.11

Question	Response	Number of Respondents (%)

Question	Response	Number of Respondents (%)
What complications (or problems), to your knowledge, arise from diabetes?	Amputation	3 (75.0%)
	Foot ulcers	3 (75.0%)
	Increased risk of broken bones or fractures	1 (25.0%)
	Loss of feeling in hands or toes (neuropathy)	3 (75.0%)
	Vision loss	4 (100.0%)
	Kidney disease	4 (100.0%)
	Cardiovascular disease/Stroke	3 (75.0%)
	Other	2 (50.0%)
	Total Valid Response	4 (100.0%)
	Total missing	1

Table 2.12

Question	Response	Number of Respondents (%)
Which complication of diabetes are you most concerned about?	Vision loss	3 (75.0)
	None	1 (25.0)
	Total Valid Response	4 (100.0)
	Total missing	1

Table 2.13

Question	Response	Number of Respondents (%)
Which of the following complications of diabetes do you have?	None	4 (100.0%)
	Total Valid Response	4 (100.0%)
	Total missing	1

Table 2.14

Question	Response	Number of Respondents (%)
How often do you discuss the possibility of eye complications with your health care professional?	Multiple times per year	1 (25.0%)
	Once per year	2 (50.0%)
	Never	1 (25.0%)
	Total Valid Response	4 (100.0%)
	Total missing	1

Table 2.15

Question	Response	Number of Respondents (%)
Which of the following best describes your attitude to vision issues?	I think that vision problems are a normal part of ageing	2 (50.0%)
	I do what I can to prevent vision problems (e.g. get routine screenings, visit specialists)	3 (75.0%)
	Total Valid Response	4 (100.0%)
	Total missing	1

Table 2.16

Question	Response	Number of Respondents (%)
What type of health insurance do you have?	Public	4 (100.0)
	Total Valid Response	4 (100.0)
	Total missing	1

Table 2.17

Question	Response	Number of Respondents (%)
Most often, how do you pay for the following types of medical care and services?		
General doctor visits (e.g. primary care doctor)	Care is free	1 (25.0)
	Insurance pays total cost	3 (75.0)

Question	Response	Number of Respondents (%)
	Total Valid Response	4 (100.0)
	Total missing	1
Specialist medical visits (e.g. eye doctor, gynecologist, urologist)	Care is free	1 (25.0)
	Insurance pays total cost	1 (25.0)
	Insurance and out-of-pocket/cash (e.g. co-pays)	2 (50.0)
	Total Valid Response	4 (100.0)
	Total missing	1
Medicines	Care is free	1 (33.3)
	Insurance pays total cost	1 (33.3)
	Insurance and out-of-pocket/cash (e.g. co-pays)	1 (33.3)
	Total Valid Response	3 (100.0)
	Total missing	2
Medical supplies (e.g. blood glucose meter/strips)	Care is free	1 (25.0)
	Insurance pays total cost	1 (25.0)
	Insurance and out-of-pocket/cash (e.g. co-pays)	2 (50.0)
	Total Valid Response	4 (100.0)
	Total missing	1
Procedures	Care is free	1 (25.0)
	Insurance pays total cost	1 (25.0)
	Insurance and out-of-pocket/cash (e.g. co-pays)	1 (25.0)
	Do not use service	1 (25.0)
	Total Valid Response	4 (100.0)
	Total missing	1
Tests/screenings	Care is free	1 (25.0)
	Insurance pays total cost	2 (50.0)
	Insurance and out-of-pocket/cash (e.g. co-pays)	1 (25.0)
	Total Valid Response	4 (100.0)
	Total missing	1

Question	Response	Number of Respondents (%)
Health education	Care is free	1 (33.3)
	Insurance pays total cost	1 (33.3)
	Out-of-pocket only (pay cash for all care)	1 (33.3)
	Total Valid Response	3 (100.0)
	Total missing	2
Counseling	Care is free	2 (66.7)
	Do not use service	1 (33.3)
	Total Valid Response	3 (100.0)
	Total missing	2

Table 3.1

Question	Response	Number of Respondents (%)
Are you aware of any government sponsored screening programs for diabetic eye disease (diabetic retinopathy)?	Yes	1 (25.0%)
	No	3 (75.0%)
	Total valid response	4 (100.0%)
	Total missing	1

Table 3.2

Question	Response	Number of Respondents (%)
Have you ever had an eye exam for diabetic eye disease?	Yes	4 (100.0%)
	Total valid response	4 (100.0%)
	Total missing	1
How long ago was your last eye exam?	Within the last year	2 (50.0%)
	More than 1 year ago but less than 2 years	2 (50.0%)
	Total valid response	4 (100.0%)
	Total missing	1
Who did the last exam?	Eye doctor/Eye clinic	4 (100.0%)
	Total valid response	4 (100.0%)

Question	Response	Number of Respondents (%)
	Total missing	1

Table 3.3

Question	Response	Number of Respondents (%)
Have you ever had a dilated eye exam, where your eyes are examined after eye drops?	Yes	4 (100.0%)
	Total valid response	4 (100.0%)
	Total missing	1

Table 3.4

Question	Response	Number of Respondents (%)
Based on what you know, how often should you get your eyes examined for diabetic eye disease?	Once a year	4 (100.0%)
	Total valid response	4 (100.0%)
	Total missing	1

Table 3.5

Question	Response	Number of Respondents (%)
For you, what are the biggest barriers to eye exams?	Eye exams are not available near my home	1 (25.0%)
	Long wait time for appointment	1 (25.0%)
	Fear of treatment/results	1 (25.0%)
	Other	1 (25.0%)
	Total valid response	4 (100.0%)
	Total missing	1

Table 3.6

Question	Response	Number of Respondents (%)
Have you been diagnosed with diabetic eye disease?	No	4 (100.0%)
	Total valid	4 (100.0%)

Question	Response	Number of Respondents (%)
	response	
	Total missing	1
Has your diabetic eye disease affected your vision?	Total missing	5
Have vision issues caused you to have difficulty with any of the following?	Total missing	5

Table 3.7

Question	Response	Number of Respondents (%)
Have you had any treatment for diabetic eye disease?	Total missing	5
What treatment did you receive?	Total missing	5
Did you complete the treatment?	Total missing	5
Do you feel that the treatment worked?	Total missing	5
What is/are the reason(s) that you did not complete the treatment?	Total missing	5
What are the reason(s) that you have not had treatment for diabetic eye disease?	Total missing	5

Table 3.8

Question	Response	Number of Respondents (%)
Have you been diagnosed with diabetic macular edema?	No	4 (100.0%)
	Total valid response	4 (100.0%)
	Total missing	1
If Yes, which of the following would you prefer	Total missing	5

Table 3.9

Question	Response	Number of Respondents (%)
Have you received information about diabetic retinopathy or diabetic macular edema from any	Doctor/Nurse	3 (75.0%)

Question	Response	Number of Respondents (%)
of the following sources?		
	Health educator	2 (50.0%)
	Diabetes organization or other health organization	1 (25.0%)
	Internet	3 (75.0%)
	Total valid response	4 (100.0%)
	Total missing	1

Table 4.1

Question	Response	Number of Respondents (%)
What is your gender?	Female	2 (50.0)
	Male	2 (50.0)
	Total Valid Response	4 (100.0)
	Total missing	1
Please indicate your age	18 - 29	2 (40.0)
	30 - 39	1 (20.0)
	40 - 49	2 (40.0)
	Total Valid Response	5 (100.0)

Table 4.2

Question	Response	Number of Respondents (%)
Where do you live?	Urban setting	4 (100.0)
	Total Valid Response	4 (100.0)
	Total missing	1

Table 4.3

Question	Response	Number of Respondents (%)
What is the highest level of education you completed?	Secondary school	1 (25.0)
	College/University	3 (75.0)
	Total valid response	4 (100.0)

Question	Response	Number of Respondents (%)
	Total missing	1

Table 4.4

Question	Response	Number of Respondents (%)
Are you currently working?	Working for pay	3 (75.0)
	Student	1 (25.0)
	Total Valid Response	4 (100.0)
	Total missing	1

Table 4.5

Question	Response	Number of Respondents (%)
Do you receive assistance from the government?	Food assistance	1 (25.0%)
	None of the above	3 (75.0%)
	Total valid response	4 (100.0%)
	Total missing	1

Table 4.6

Question	Response	Number of Respondents (%)
Did you have trouble paying for food at anytime during the past year?	No	4 (100.0)
	Total Valid Response	4 (100.0)
	Total missing	1

Table 4.7

Question	Response	Number of Respondents (%)
Do you feel that your access to health care is negatively affected by any of the following?	Age	1 (25.0)

Question	Response	Number of Respondents (%)
	Place where you live	1 (25.0)
	None of the above	2 (50.0)
	Total valid response	4 (100.0)
	Total missing	1

Table 4.8

Question	Response	Number of Respondents (%)
Which of the following do you worry about most?	Health	3 (75.0)
	Family	1 (25.0)
	Total Valid Response	4 (100.0)
	Total missing	1

Table 5.1

Question	Response	Number of Respondents (%)
In general, would you say your health is:	Excellent	1 (25.0%)
	Very good	2 (50.0%)
	Good	1 (25.0%)
	Total good health	4 (100.0%)
	Total valid response	4 (100.0%)
	Total missing	1

Table 5.2

Question	Response	Number of Respondents (%)
How many days during last 30 days was your physical health not good	Any unhealthy days	3 (75.0%)
	1-5 unhealthy days	2 (50.0%)
	21-30 unhealthy days	1 (25.0%)

Question	Response	Number of Respondents (%)
	No unhealthy days	1 (25.0%)
	Total valid response	4 (100.0%)
	Total missing	1

Table 5.3.1

Question	Response	Number of Respondents (%)
How many days during last 30 days was your mental health not good	Any unhealthy days	3 (75.0%)
	1-5 unhealthy days	1 (25.0%)
	11-20 unhealthy days	1 (25.0%)
	21-30 unhealthy days	1 (25.0%)
	No unhealthy days	1 (25.0%)
	Total valid response	4 (100.0%)
	Total missing	1

Table 5.3.2

Question	Response	Number of Respondents (%)
Unhealthy days (physically or mentally unhealthy, max 30)	Any unhealthy days	3 (75.0%)
	1-5 unhealthy days	1 (25.0%)
	11-20 unhealthy days	1 (25.0%)
	21-30 unhealthy days	1 (25.0%)
	No unhealthy days	1 (25.0%)
	Total valid response	4 (100.0%)

Table 5.4

Question	Response	Number of Respondents (%)
How many days during last 30 days did poor health limit your usual activities	Any unhealthy days	1 (33.3%)
	1-5 unhealthy days	1 (33.3%)
	No unhealthy days	2 (66.7%)
	Total valid response	3 (100.0%)
	Total missing	2

Table 5.5

Question	Response	Number of Respondents (%)
Are you limited in any way in any activities because of any impairment or health problem?	No	3 (100.0%)
	Total valid response	3 (100.0%)
	Total missing	2
Which impairment or health problem, if any, limits your activities?		
a) Arthritis/rheumatism	Total missing	5
b) Back or neck problem	Total missing	5
c) Fractures, bone/joint injury	Total missing	5
d) Walking problem	Total missing	5
e) Lung/breathing problem	Total missing	5
f) Hearing problem	Total missing	5
g) Eye/vision problem	Total missing	5
h) Heart problem	Total missing	5
i) Stroke problem	Total missing	5
j) Hypertension/high blood pressure	Total missing	5
k) Diabetes	Total missing	5
l) Cancer	Total missing	5
m) Mental or emotional health	Total missing	5

PT 1.2

Analysis Sets	Number of Respondents (%)
All valid respondents	15 (100.0%)
Included in Provider Analysis Set (PAS)	15 (100.0%)
Excluded in Provider Analysis Set (PAS)	0 (0.0%)
Reasons for exclusion from Provider Analysis Set:	
No other valid survey data	0
Provider Analysis Set	15
Included in the Eye Care Professional Set (Eye Specialist)	7 (46.7%)
Excluded in the Eye Care Professional Set (Eye Specialist)	8 (53.3%)
Reasons for exclusion from Eye Care Professional Set:	
Missing required speciality	8
No valid (non-missing) response for the supplemental eye questionnaire	0

PT 1.3

Subgroups	Number of Respondents (%)
Provider Analysis Set	15 (100.0%)
Primary Care Provider	2 (13.3%)
Diabetes Specialist Provider	6 (40.0%)
Eye Care Professional	7 (46.7%)
Ophthalmologist	7 (46.7%)

NB [1]: Primary Care Provider = General Practitioner/Family practitioner (but not diabetes specialist or eye care professional)
NB [2]: Diabetes specialist provider = Diabetes specialist (but not eye care professional)
NB [4]: Ophthalmologist = General ophthalmologist or retinal specialist
NB [5]: Note that providers may have selected more than one specialty

PT 1.4

Item	Response	Primary Care Provider	Diabetes Specialist Provider	Ophthalmologist	PAS
What is your specialty?	General primary care/Family practitioner	2 (100.0%)	1 (16.7%)	0 (0.0%)	3 (20.0%)
	Diabetes specialist	0 (0.0%)	6 (100.0%)	0 (0.0%)	6 (40.0%)
	General ophthalmologist	0 (0.0%)	0 (0.0%)	1 (14.3%)	1 (6.7%)
	Optometrist	0 (0.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)

Item	Response	Primary Care Provider	Diabetes Specialist Provider	Ophthalmologist	PAS
	Retinal specialist	0 (0.0%)	0 (0.0%)	7 (100.0%)	7 (46.7%)
	Nurse	0 (0.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)
	Health educator	0 (0.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)
	None of the above	0 (0.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)
	Total valid response	2 (100.0%)	6 (100.0%)	7 (100.0%)	15 (100.0%)
	Total missing	0	0	0	0

PT 1.5

Item	Response	Primary Care Provider	Diabetes Specialist Provider	Ophthalmologist	PAS
How long have you been practicing in this profession?	Total valid response (n)	2	6	7	15
	Mean	27.5	22.3	21.0	22.4
	SD	3.5	8.5	10.7	9.0
	Median	27.5	23.5	20.0	20.0
	Min.	25	12	10	10
	Max.	30	30	40	40
	Total missing	0	0	0	0

PT 2.1

Question	Response	Primary Care Provider	Diabetes Specialist Provider	Ophthalmologist	PAS
What is your main practice setting?	Diabetes clinic/practice	0 (0.0%)	3 (50.0%)	0 (0.0%)	3 (20.0%)
	Eye clinic/practice	0 (0.0%)	0 (0.0%)	5 (71.4%)	5 (33.3%)
	General medical clinic/practice	1 (50.0%)	0 (0.0%)	0 (0.0%)	1 (6.7%)
	Hospital	1 (50.0%)	3 (50.0%)	2 (28.6%)	6 (40.0%)
	Other	0 (0.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)
	Total Valid Response	2 (100.0%)	6 (100.0%)	7 (100.0%)	15 (100.0%)

PT 2.2

Question	Response	Primary Care Provider	Diabetes Specialist Provider	Ophthalmologist	PAS
Where is your main practice located?	Urban setting	2 (100.0%)	6 (100.0%)	7 (100.0%)	15 (100.0%)
	Non-urban setting	0 (0.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)
	Total Valid Response	2 (100.0%)	6 (100.0%)	7 (100.0%)	15 (100.0%)
	Total missing	0	0	0	0

PT 2.3

Question	Response	Primary Care Provider	Diabetes Specialist Provider	Ophthalmologist	PAS
In which sector is your main practice?	Government	1 (50.0%)	6 (100.0%)	5 (71.4%)	12 (80.0%)
	Private	1 (50.0%)	0 (0.0%)	0 (0.0%)	1 (6.7%)
	Non profit	0 (0.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)
	Combined/mixed	0 (0.0%)	0 (0.0%)	2 (28.6%)	2 (13.3%)
	Total Valid Response	2 (100.0%)	6 (100.0%)	7 (100.0%)	15 (100.0%)
	Non profit	0	0	0	0

PT 2.4

Question	Response	Primary Care Provider	Diabetes Specialist Provider	Ophthalmologist	PAS
Is your main practice limited to certain populations?	No	0 (0.0%)	5 (83.3%)	7 (100.0%)	12 (80.0%)
	Yes, limited by age	1 (50.0%)	1 (16.7%)	0 (0.0%)	2 (13.3%)
	Yes, limited to persons who pay out-of-pocket	1 (50.0%)	0 (0.0%)	0 (0.0%)	1 (6.7%)

Question	Response	Primary Care Provider	Diabetes Specialist Provider	Ophthalmologist	PAS
	Total valid response	2 (100.0%)	6 (100.0%)	7 (100.0%)	15 (100.0%)
	Total missing	0	0	0	0

PT 2.5

Question	Response	Primary Care Provider	Diabetes Specialist Provider	Ophthalmologist	PAS
What is the average wait time for an appointment in your main practice?	Less than 1 week	1 (50.0%)	0 (0.0%)	0 (0.0%)	1 (7.7%)
	More than 1 week but less than 1 month	1 (50.0%)	2 (50.0%)	2 (28.6%)	5 (38.5%)
	More than 1 month but less than 2 months	0 (0.0%)	2 (50.0%)	1 (14.3%)	3 (23.1%)
	More than 2 months but less than 3 months	0 (0.0%)	0 (0.0%)	3 (42.9%)	3 (23.1%)
	Other	0 (0.0%)	0 (0.0%)	1 (14.3%)	1 (7.7%)
	Total Valid Response	2 (100.0%)	4 (100.0%)	7 (100.0%)	13 (100.0%)
	Total missing	0	2	0	2

PT 2.6

Question	Response	Primary Care Provider	Diabetes Specialist Provider	Ophthalmologist	PAS
On average, how many patients do you see per week in your main practice [n patients]	Total valid response (n)	2	4	7	13
	Mean	65	47.5	66.4	60.4
	SD	7.1	20.6	27.8	24
	Median	65	50	70	60

Question	Response	Primary Care Provider	Diabetes Specialist Provider	Ophthalmologist	PAS
	Min.	60	20	30	20
	Max.	70	70	100	100
	Total missing	0	2	0	2
What percentage of the patients in your main practice have diabetes [% patients]	Total valid response (n)	2	4	7	13
	Mean	11	97	30.7	48.1
	SD	12.7	4.8	23.9	38.8
	Median	11	99	30	30
	Min.	2	90	10	2
	Max.	20	100	80	100
	Total missing	0	2	0	2

PT 2.7

Question	Response	Primary Care Provider	Diabetes Specialist Provider	Ophthalmologist	PAS
In your main practice, how do patients pay for the care and services that you provide?	Don't pay	1 (50.0%)	4 (100.0%)	3 (42.9%)	8 (61.5%)
	Pay out-of-pocket (full fees)	1 (50.0%)	0 (0.0%)	0 (0.0%)	1 (7.7%)
	Pay through insurance	0 (0.0%)	1 (25.0%)	2 (28.6%)	3 (23.1%)
	Patient pays some, insurance pays some	0 (0.0%)	0 (0.0%)	2 (28.6%)	2 (15.4%)
	Total valid response	2 (100.0%)	4 (100.0%)	7 (100.0%)	13 (100.0%)
	Total missing	0	2	0	2

PT 2.8

Question	Response	Primary Care Provider	Diabetes Specialist Provider	Ophthalmologist	PAS
In addition to your main practice, do you work in another practice setting?	Yes	1 (50.0%)	2 (50.0%)	4 (57.1%)	7 (53.8%)
	No	1 (50.0%)	2 (50.0%)	3 (42.9%)	6 (46.2%)
	Total valid response	2 (100.0%)	4 (100.0%)	7 (100.0%)	13 (100.0%)
	Total missing		2		2
In which other practice setting(s) do you work?	Hospital		1 (50.0%)		1 (14.3%)
	General medical clinic/practice		1 (50.0%)		1 (14.3%)
	Diabetes clinic/practice		1 (50.0%)		1 (14.3%)
	Eye clinic/practice			4 (100.0%)	4 (57.1%)
	Other	1 (100.0%)			1 (14.3%)
	Total valid response	1 (100.0%)	2 (100.0%)	4 (100.0%)	7 (100.0%)
	Total missing	1	4	3	8
In which sector(s) is(are) the practice(s)?	Government		1 (50.0%)		1 (14.3%)
	Private	1 (100.0%)	1 (50.0%)	4 (100.0%)	6 (85.7%)
	Total valid response	1 (100.0%)	2 (100.0%)	4 (100.0%)	7 (100.0%)
	Total missing	1	4	3	8
Is there a major difference between your practices with respect to how diabetic eye disease is screened and managed?	Yes	1 (100.0%)		2 (50.0%)	3 (42.9%)
	No		2 (100.0%)	2 (50.0%)	4 (57.1%)

Question	Response	Primary Care Provider	Diabetes Specialist Provider	Ophthalmologist	PAS
	Total valid response	1 (100.0%)	2 (100.0%)	4 (100.0%)	7 (100.0%)
	Total missing	1	4	3	8

PT 2.9

Type of Test	Yes/No	How often/year	Primary Care Provider	Diabetes Specialist Provider	Ophthalmologist	PAS
Blood glucose	Yes		2 (100.0%)	4 (100.0%)		6 (60.0%)
			2 (100.0%)	3 (75.0%)	0 (0.0%)	5 (50.0%)
		Mean	5.0	124.3		76.6
		SD	1.4	208.4		161.2
		Median	5.0	4.0		4.0
		Min	4	4		4
		Max	6	365		365
		Total missing	0	3	7	10
	No				4 (100.0%)	4 (40.0%)
		Total valid response	2 (100.0%)	4 (100.0%)	4 (100.0%)	10 (100.0%)
		Total missing		2	3	5
HbA1c	Yes		2 (100.0%)	4 (100.0%)	1 (25.0%)	7 (70.0%)
		Total valid numeric response (n)	2 (100.0%)	4 (100.0%)	1 (25.0%)	7 (70.0%)
		Mean	2.5	3.8	1.0	3.0
		SD	0.7	0.5		1.2
		Median	2.5	4.0	1.0	3.0
		Min	2	3	1	1
		Max	3	4	1	4

Type of Test	Yes/No	How often/year	Primary Care Provider	Diabetes Specialist Provider	Ophthalmologist	PAS
		Total missing	0	2	6	8
	No				3 (75.0%)	3 (30.0%)
	Total valid response		2 (100.0%)	4 (100.0%)	4 (100.0%)	10 (100.0%)
	Total missing			2	3	5
Urine check	Yes		2 (100.0%)	4 (100.0%)		6 (60.0%)
			2 (100.0%)	3 (75.0%)	0 (0.0%)	5 (50.0%)
		Mean	3.0	1.3		2.0
		SD	1.4	0.6		1.2
		Median	3.0	1.0		2.0
		Min	2	1		1
		Max	4	2		4
		Total missing	0	3	7	10
	No				4 (100.0%)	4 (40.0%)
	Total valid response		2 (100.0%)	4 (100.0%)	4 (100.0%)	10 (100.0%)
	Total missing			2	3	5
Weight check	Yes		2 (100.0%)	4 (100.0%)	1 (25.0%)	7 (70.0%)
		Total valid numeric response (n)	2 (100.0%)	4 (100.0%)	1 (25.0%)	7 (70.0%)
		Mean	5.0	3.0	1.0	3.3
		SD	1.4	2.0		2.1
		Median	5.0	4.0	1.0	4.0
		Min	4	0	1	0
		Max	6	4	1	6

Type of Test	Yes/No	How often/year	Primary Care Provider	Diabetes Specialist Provider	Ophthalmologist	PAS
		Total missing	0	2	6	8
	No				3 (75.0%)	3 (30.0%)
	Total valid response		2 (100.0%)	4 (100.0%)	4 (100.0%)	10 (100.0%)
	Total missing			2	3	5
Blood pressure check	Yes		2 (100.0%)	4 (100.0%)	1 (25.0%)	7 (70.0%)
		Total valid numeric response (n)	2 (100.0%)	4 (100.0%)	1 (25.0%)	7 (70.0%)
		Mean	7.0	4.0	1.0	4.4
		SD	1.4	0.0		2.1
		Median	7.0	4.0	1.0	4.0
		Min	6	4	1	1
		Max	8	4	1	8
		Total missing	0	2	6	8
	No				3 (75.0%)	3 (30.0%)
	Total valid response		2 (100.0%)	4 (100.0%)	4 (100.0%)	10 (100.0%)
	Total missing			2	3	5
Foot check	Yes		2 (100.0%)	4 (100.0%)		6 (60.0%)
			2 (100.0%)	4 (100.0%)	0 (0.0%)	6 (60.0%)
		Mean	4.0	3.3		3.5
		SD	2.8	1.5		1.8
		Median	4.0	4.0		4.0
		Min	2	1		1
		Max	6	4		6

Type of Test	Yes/No	How often/year	Primary Care Provider	Diabetes Specialist Provider	Ophthalmologist	PAS
		Total missing	0	2	7	9
	No				4 (100.0%)	4 (40.0%)
	Total valid response		2 (100.0%)	4 (100.0%)	4 (100.0%)	10 (100.0%)
	Total missing			2	3	5
Eye examination - Un-dilated	Yes		2 (100.0%)	2 (66.7%)	4 (80.0%)	8 (80.0%)
		Total valid numeric response (n)	2 (100.0%)	2 (66.7%)	4 (80.0%)	8 (80.0%)
		Mean	5.0	0.5	92.3	47.5
		SD	1.4	0.7	181.8	128.3
		Median	5.0	0.5	2.0	2.0
		Min	4	0	0	0
		Max	6	1	365	365
		Total missing	0	4	3	7
	No			1 (33.3%)	1 (20.0%)	2 (20.0%)
	Total valid response		2 (100.0%)	3 (100.0%)	5 (100.0%)	10 (100.0%)
	Total missing			3	2	5
Eye examination - Optical Coherence Tomography	Yes			1 (33.3%)	6 (100.0%)	7 (63.6%)
		Total valid numeric response (n)	0 (0.0%)	0 (0.0%)	6 (100.0%)	6 (54.5%)
		Mean			62.8	62.8
		SD			148.0	148.0

Type of Test	Yes/No	How often/year	Primary Care Provider	Diabetes Specialist Provider	Ophthalmologist	PAS
		Median			2.5	2.5
		Min			1	1
		Max			365	365
		Total missing	2	6	1	9
	No		2 (100.0%)	2 (66.7%)		4 (36.4%)
	Total valid response		2 (100.0%)	3 (100.0%)	6 (100.0%)	11 (100.0%)
	Total missing			3	1	4
Eye examination - Fundoscopy	Yes		1 (50.0%)	1 (33.3%)	6 (100.0%)	8 (72.7%)
		Total valid numeric response (n)	1 (50.0%)	1 (33.3%)	6 (100.0%)	8 (72.7%)
		Mean	2.0	1.0	63.2	47.8
		SD			147.9	128.2
		Median	2.0	1.0	3.5	2.5
		Min	2	1	1	1
		Max	2	1	365	365
		Total missing	1	5	1	7
	No		1 (50.0%)	2 (66.7%)		3 (27.3%)
	Total valid response		2 (100.0%)	3 (100.0%)	6 (100.0%)	11 (100.0%)
	Total missing			3	1	4
Eye examination - Fluorescein Angiography	Yes			1 (33.3%)	6 (100.0%)	7 (63.6%)
		Total valid numeric	0 (0.0%)	0 (0.0%)	6 (100.0%)	6 (54.5%)

Type of Test	Yes/No	How often/year	Primary Care Provider	Diabetes Specialist Provider	Ophthalmologist	PAS
		response (n)				
		Mean			61.8	61.8
		SD			148.5	148.5
		Median			1.0	1.0
		Min			1	1
		Max			365	365
		Total missing	2	6	1	9
	No		2 (100.0%)	2 (66.7%)		4 (36.4%)
	Total valid response		2 (100.0%)	3 (100.0%)	6 (100.0%)	11 (100.0%)
	Total missing			3	1	4
Eye examination - Lipid check	Yes		1 (50.0%)	2 (66.7%)	3 (60.0%)	6 (60.0%)
		Total valid numeric response (n)	1 (50.0%)	2 (66.7%)	3 (60.0%)	6 (60.0%)
		Mean	2.0	3.0	123.3	63.0
		SD		1.4	209.3	148.0
		Median	2.0	3.0	4.0	3.0
		Min	2	2	1	1
		Max	2	4	365	365
		Total missing	1	4	4	9
	No		1 (50.0%)	1 (33.3%)	2 (40.0%)	4 (40.0%)
	Total valid response		2 (100.0%)	3 (100.0%)	5 (100.0%)	10 (100.0%)
	Total missing			3	2	5

PT 2.10

Question	Response	Primary Care Provider	Diabetes Specialist Provider	Ophthalmologist	PAS
In your main practice, what topics do you cover during a routine visit with a patient who has diabetes?	Diabetes management and monitoring	2 (100.0%)	4 (100.0%)	4 (57.1%)	10 (76.9%)
	Diet/nutrition	2 (100.0%)	4 (100.0%)	1 (14.3%)	7 (53.8%)
	Exercise/physical activity	2 (100.0%)	4 (100.0%)	0 (0.0%)	6 (46.2%)
	Medicines	2 (100.0%)	4 (100.0%)	2 (28.6%)	8 (61.5%)
	Foot care and inspection	2 (100.0%)	4 (100.0%)	0 (0.0%)	6 (46.2%)
	Blood pressure	2 (100.0%)	4 (100.0%)	0 (0.0%)	6 (46.2%)
	Eye care and exams	1 (50.0%)	2 (50.0%)	7 (100.0%)	10 (76.9%)
	Lipid check	1 (50.0%)	4 (100.0%)	0 (0.0%)	5 (38.5%)
	Total valid response	2 (100.0%)	4 (100.0%)	7 (100.0%)	13 (100.0%)
	Total missing	0	2	0	2

PT 2.11

Question	Response	Primary Care Provider	Diabetes Specialist Provider	Ophthalmologist	PAS
Is there written information about diabetes available for patients in your main practice?	Yes, and information on eye complications is sufficient	0 (0.0%)	3 (75.0%)	4 (57.1%)	7 (53.8%)
	Yes, but information on eye complications is not sufficient	1 (50.0%)	0 (0.0%)	1 (14.3%)	2 (15.4%)
	Yes, but no information on eye complications is	1 (50.0%)	1 (25.0%)	0 (0.0%)	2 (15.4%)

Question	Response	Primary Care Provider	Diabetes Specialist Provider	Ophthalmologist	PAS
	included				
	No written information is available for patients	0 (0.0%)	0 (0.0%)	2 (28.6%)	2 (15.4%)
	Total Valid Response	2 (100.0%)	4 (100.0%)	7 (100.0%)	13 (100.0%)
	Total missing	0	2	0	2

PT 2.12

Question	Response	Primary Care Provider	Diabetes Specialist Provider	Ophthalmologist	PAS
Do you have written protocols/guidelines available in your main practice for the management of diabetes?	Yes, available and used by staff	2 (100.0%)	3 (100.0%)	1 (14.3%)	6 (50.0%)
	Yes, available but not used by staff	0 (0.0%)	0 (0.0%)	1 (14.3%)	1 (8.3%)
	Not available	0 (0.0%)	0 (0.0%)	5 (71.4%)	5 (41.7%)
	Total Valid Response	2 (100.0%)	3 (100.0%)	7 (100.0%)	12 (100.0%)
	Total missing	0	3	0	3

PT 2.13

Question	Response	Primary Care Provider	Diabetes Specialist Provider	Ophthalmologist	PAS
Do you have written protocols/guidelines for detection and management of diabetes-related vision issue available in your main practice?	Yes, available and used by staff	1 (50.0%)	3 (75.0%)	3 (42.9%)	7 (53.8%)

Question	Response	Primary Care Provider	Diabetes Specialist Provider	Ophthalmologist	PAS
	Yes, available but not used by staff	0 (0.0%)	0 (0.0%)	1 (14.3%)	1 (7.7%)
	Not available	1 (50.0%)	1 (25.0%)	3 (42.9%)	5 (38.5%)
	Total Valid Response	2 (100.0%)	4 (100.0%)	7 (100.0%)	13 (100.0%)
	Total missing	0	2	0	2

PT 2.14

Question	Response	Primary Care Provider	Diabetes Specialist Provider	Ophthalmologist	PAS
What is the protocol in your main practice for timing of initial eye exams for persons with diabetes - Type I?	After a predetermined number of years (numeric response) (n)	0 (0.0%)	1 (25.0%)	0 (0.0%)	1 (8.3%)
	Mean		5.0		5.0
	SD				
	Median		5.0		5.0
	Min		5		5
	Max		5		5
	After a predetermined age (numeric response) (n)	0 (0.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)
	Mean				
	SD				
	Median				
	Min				
	Max				
	As soon as they are	1 (50.0%)	3 (75.0%)	5 (83.3%)	9

Question	Response	Primary Care Provider	Diabetes Specialist Provider	Ophthalmologist	PAS
	diagnosed				(75.0%)
	No standard practice, timing varies case by case	1 (50.0%)		1 (16.7%)	2 (16.7%)
	Total valid response	2 (100.0%)	4 (100.0%)	6 (100.0%)	12 (100.0%)
	Total missing		2	1	3
What is the protocol in your main practice for timing of initial eye exams for persons with diabetes - Type II?	After a predetermined number of years (numeric response) (n)	0 (0.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)
	Mean				
	SD				
	Median				
	Min				
	Max				
	After a predetermined age (numeric response) (n)	0 (0.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)
	Mean				
	SD				
	Median				
	Min				
	Max				
	As soon as they are diagnosed	2 (100.0%)	4 (100.0%)	5 (83.3%)	11 (91.7%)
	No standard practice, timing varies case by case			1 (16.7%)	1 (8.3%)
	Total valid response	2 (100.0%)	4 (100.0%)	6 (100.0%)	12 (100.0%)
	Total missing		2	1	3

PT 2.15

Question	Response	Primary Care Provider	Diabetes Specialist Provider	Ophthalmologist	PAS
What is the protocol in your main practice for timing of follow-up eye examinations for persons with diabetes?	Once a year	2 (100.0%)	4 (100.0%)	5 (71.4%)	11 (84.6%)
	Other	0 (0.0%)	0 (0.0%)	2 (28.6%)	2 (15.4%)
	Total Valid Response	2 (100.0%)	4 (100.0%)	7 (100.0%)	13 (100.0%)
	Total missing	0	2	0	2

PT 2.16

Question	Response	Primary Care Provider	Diabetes Specialist Provider	Ophthalmologist	PAS
Do you screen patients for DR?	Yes	1 (50.0%)	1 (25.0%)	7 (100.0%)	9 (69.2%)
	No	1 (50.0%)	3 (75.0%)		4 (30.8%)
	Total valid response	2 (100.0%)	4 (100.0%)	7 (100.0%)	13 (100.0%)
	Total missing		2		2
Where do you screen patients?	In clinic		1 (100.0%)	6 (100.0%)	7 (87.5%)
	Outreach			2 (33.3%)	2 (25.0%)
	Other	1 (100.0%)			1 (12.5%)
	Total valid response	1 (100.0%)	1 (100.0%)	6 (100.0%)	8 (100.0%)
	Total missing	1	5	1	7

PT 2.17

Question	Response	Primary Care Provider	Diabetes Specialist Provider	Ophthalmologist	PAS
What patient characteristics influence your vision care and/or	Diabetes duration	2 (100.0%)	3 (75.0%)	7 (100.0%)	12 (92.3%)

Question	Response	Primary Care Provider	Diabetes Specialist Provider	Ophthalmologist	PAS
vision referrals?					
	Patient's age	2 (100.0%)	1 (25.0%)	5 (71.4%)	8 (61.5%)
	Patient's gender	1 (50.0%)	0 (0.0%)	0 (0.0%)	1 (7.7%)
	Presence of comorbidities such as hypertension, etc.	2 (100.0%)	2 (50.0%)	6 (85.7%)	10 (76.9%)
	High glucose levels	2 (100.0%)	2 (50.0%)	7 (100.0%)	11 (84.6%)
	Ability or inability to pay	0 (0.0%)	0 (0.0%)	1 (14.3%)	1 (7.7%)
	Insurance restrictions	0 (0.0%)	0 (0.0%)	1 (14.3%)	1 (7.7%)
	Patient educational level	0 (0.0%)	1 (25.0%)	4 (57.1%)	5 (38.5%)
	Patient adherence to recommendations	1 (50.0%)	2 (50.0%)	5 (71.4%)	8 (61.5%)
	None of the above	0 (0.0%)	1 (25.0%)	0 (0.0%)	1 (7.7%)
	Total valid response	2 (100.0%)	4 (100.0%)	7 (100.0%)	13 (100.0%)
	Total missing	0	2	0	2

PT 2.18

Question	Response	Primary Care Provider	Diabetes Specialist Provider	Ophthalmologist	PAS
What are the major barriers to optimizing eye health faced by patients with diabetes in your main practice?	Cost of care	0 (0.0%)	0 (0.0%)	1 (14.3%)	1 (7.7%)
	Proximity to care	0 (0.0%)	1 (25.0%)	2 (28.6%)	3 (23.1%)
	Long wait time for appointment	2 (100.0%)	1 (25.0%)	1 (14.3%)	4 (30.8%)
	Long wait time on the day of visit	0 (0.0%)	3 (75.0%)	0 (0.0%)	3 (23.1%)

Question	Response	Primary Care Provider	Diabetes Specialist Provider	Ophthalmologist	PAS
	Referral process	0 (0.0%)	1 (25.0%)	1 (14.3%)	2 (15.4%)
	Recommended treatments are not available	1 (50.0%)	0 (0.0%)	1 (14.3%)	2 (15.4%)
	Lack of knowledge and/or awareness	2 (100.0%)	1 (25.0%)	3 (42.9%)	6 (46.2%)
	Patients fear of treatment/results	0 (0.0%)	1 (25.0%)	3 (42.9%)	4 (30.8%)
	Patients they are a burden on family/friends	0 (0.0%)	0 (0.0%)	1 (14.3%)	1 (7.7%)
	Limited access to diabetes specialists	1 (50.0%)	0 (0.0%)	0 (0.0%)	1 (7.7%)
	Limited access to eye specialists	1 (50.0%)	0 (0.0%)	0 (0.0%)	1 (7.7%)
	Patients feel eye complications are unlikely	1 (50.0%)	2 (50.0%)	4 (57.1%)	7 (53.8%)
	Patients feel eye exams are not important	2 (100.0%)	2 (50.0%)	4 (57.1%)	8 (61.5%)
	Patients have competing responsibilities and priorities	1 (50.0%)	2 (50.0%)	3 (42.9%)	6 (46.2%)
	Clinic too small or lack necessary equipment/staff	1 (50.0%)	0 (0.0%)	0 (0.0%)	1 (7.7%)
	Total valid response	2 (100.0%)	4 (100.0%)	7 (100.0%)	13 (100.0%)
	Total missing	0	2	0	2

PT 2.19

Question	Response	Primary Care Provider	Diabetes Specialist Provider	Ophthalmologist	PAS
In your main practice, are patients contacted with reminders for general	Yes	2 (100.0%)	4 (100.0%)	4 (57.1%)	10 (76.9%)

Question	Response	Primary Care Provider	Diabetes Specialist Provider	Ophthalmologist	PAS
follow-up appointments?					
	No	0 (0.0%)	0 (0.0%)	3 (42.9%)	3 (23.1%)
	Total Valid Response	2 (100.0%)	4 (100.0%)	7 (100.0%)	13 (100.0%)
	Total missing	0	2	0	2

PT 2.20

Question	Response	Primary Care Provider	Diabetes Specialist Provider	Ophthalmologist	PAS
Do you share relevant patient information with other health care professionals involved in the patients care e.g. his or her general practitioner, ophthalmologist, podiastrist?	Yes	1 (50.0%)	4 (100.0%)	7 (100.0%)	12 (92.3%)
	No	1 (50.0%)	0 (0.0%)	0 (0.0%)	1 (7.7%)
	Total Valid Response	2 (100.0%)	4 (100.0%)	7 (100.0%)	13 (100.0%)
	Total missing	0	2	0	2

PT 3.1

Question	Response	Primary Care Provider	Diabetes Specialist Provider	Ophthalmologist	PAS
Please indicate your age:	30 - 39			2 (28.6%)	2 (15.4%)
	40 - 49		1 (25.0%)	3 (42.9%)	4 (30.8%)
	50 - 59	2 (100.0%)	1 (25.0%)	1 (14.3%)	4 (30.8%)
	60 - 69		2 (50.0%)	1 (14.3%)	3 (23.1%)
	Total valid response	2 (100.0%)	4 (100.0%)	7 (100.0%)	13 (100.0%)

Question	Response	Primary Care Provider	Diabetes Specialist Provider	Ophthalmologist	PAS
	Total missing		2		2
What is your gender?	Female	1 (50.0%)	2 (50.0%)	1 (14.3%)	4 (30.8%)
	Male	1 (50.0%)	2 (50.0%)	6 (85.7%)	9 (69.2%)
	Total valid response	2 (100.0%)	4 (100.0%)	7 (100.0%)	13 (100.0%)
	Total missing		2		2
What is your highest level of education completed?	College/University			1 (14.3%)	1 (7.7%)
	Graduate or advanced degree (e.g. PhD, MD, etc)	2 (100.0%)	4 (100.0%)	6 (85.7%)	12 (92.3%)
	Total valid response	2 (100.0%)	4 (100.0%)	7 (100.0%)	13 (100.0%)
	Total missing		2		2

PT 4.1

Question	Response	Ophthalmologist
What percentage of your patients have diabetic retinopathy	Total valid numeric response (n)	7
	Mean	28.6
	SD	25.4
	Median	30.0
	Min	0
	Max	80

PT 4.2

Question	Response	Ophthalmologist
What percentage of your patients have diabetic macular edema?	Total valid numeric response (n)	7
	Mean	17.1
	SD	13.5
	Median	20.0

Question	Response	Ophthalmologist
	Min	0
	Max	40

PT 4.3

Question	Response	Ophthalmologist
What is the average amount of time your patients wait for an appointment to be screened for diabetic eye disease in your practice?	More than 1 week but less than 1 month	3 (42.9%)
	More than 1 month but less than 2 months	1 (14.3%)
	More than 2 months but less than 3 months	3 (42.9%)
	Total Valid Response	7 (100.0%)

PT 4.4

Question	Response	Ophthalmologist
From the time a patient is screened, what is the average length of time he/she waits for diagnosis?	Less than 1 week	6 (85.7%)
	There is not wait, diagnosis is given when screened	1 (14.3%)
	Total Valid Response	7 (100.0%)

PT 4.5

Type of Treatment	Question	Response/time	Ophthalmologist
Laser photocoagulation	Is the treatment available?	Available within country	1 (14.3%)
		Available locally	2 (28.6%)
		Available in practice	7 (100.0%)
		Total valid response	7 (100.0%)
	What is the average amount of time your patients wait for a consultation appointment? (weeks)	Total valid numeric response (n)	5 (83.3%)
		Mean	7.0
		SD	4.4

Type of Treatment	Question	Response/time	Ophthalmologist
		Median	8.0
		Min	2
		Max	12
		Don't know/not sure	1 (16.7%)
		Total valid response	6 (100.0%)
		Total missing	1
	What is the average amount of time your patients wait for a first treatment?(weeks)	Total valid numeric response (n)	5 (100.0%)
		Mean	5.6
		SD	3.4
		Median	8.0
		Min	1
		Max	8
		Total valid response	5 (100.0%)
		Total missing	2
	What is the average amount of time your patients wait for a second treatment?(weeks)	Total valid numeric response (n)	4 (80.0%)
		Mean	5.8
		SD	2.6
		Median	6.0
		Min	3
		Max	8
		Don't know/not sure	1 (20.0%)
		Total valid response	5 (100.0%)
		Total missing	2
Anti-VEGF therapies	Is the treatment available?	Available within country	1 (14.3%)
		Available locally	1 (14.3%)
		Available in practice	7 (100.0%)

Type of Treatment	Question	Response/time	Ophthalmologist
		Total valid response	7 (100.0%)
	What is the average amount of time your patients wait for a consultation appointment? (weeks)	Total valid numeric response (n)	5 (83.3%)
		Mean	6.6
		SD	4.1
		Median	8.0
		Min	2
		Max	12
		Don't know/not sure	1 (16.7%)
		Total valid response	6 (100.0%)
		Total missing	1
	What is the average amount of time your patients wait for a first treatment?(weeks)	Total valid numeric response (n)	5 (100.0%)
		Mean	6.4
		SD	4.4
		Median	8.0
		Min	1
		Max	12
		Total valid response	5 (100.0%)
		Total missing	2
	What is the average amount of time your patients wait for a second treatment?(weeks)	Total valid numeric response (n)	4 (80.0%)
		Mean	6.3
		SD	2.4
		Median	7.0
		Min	3
		Max	8
		Don't know/not sure	1 (20.0%)
		Total valid	5 (100.0%)

Type of Treatment	Question	Response/time	Ophthalmologist
		response	
		Total missing	2
Intravitreal steroid	Is the treatment available?	Available within country	2 (28.6%)
		Available locally	1 (14.3%)
		Available in practice	5 (71.4%)
		Not available	1 (14.3%)
		Total valid response	7 (100.0%)
	What is the average amount of time your patients wait for a consultation appointment? (weeks)	Total valid numeric response (n)	4 (100.0%)
		Mean	5.3
		SD	3.2
		Median	5.5
		Min	2
		Max	8
		Total valid response	4 (100.0%)
		Total missing	3
	What is the average amount of time your patients wait for a first treatment?(weeks)	Total valid numeric response (n)	4 (100.0%)
		Mean	5.0
		SD	3.6
		Median	5.5
		Min	1
		Max	8
		Total valid response	4 (100.0%)
		Total missing	3
	What is the average amount of time your patients wait for a second treatment?(weeks)	Total valid numeric response (n)	3 (75.0%)
		Mean	5.7
		SD	2.5

Type of Treatment	Question	Response/time	Ophthalmologist
		Median	6.0
		Min	3
		Max	8
		Don't know/not sure	1 (25.0%)
		Total valid response	4 (100.0%)
		Total missing	3
Uncomplicated vitrectomy	Is the treatment available?	Available within country	2 (28.6%)
		Available locally	1 (14.3%)
		Available in practice	5 (71.4%)
		Not available	1 (14.3%)
		Total valid response	7 (100.0%)
	What is the average amount of time your patients wait for a consultation appointment? (weeks)	Total valid numeric response (n)	4 (80.0%)
		Mean	8.0
		SD	3.3
		Median	8.0
		Min	4
		Max	12
		Don't know/not sure	1 (20.0%)
		Total valid response	5 (100.0%)
		Total missing	2
	What is the average amount of time your patients wait for a first treatment?(weeks)	Total valid numeric response (n)	4 (100.0%)
		Mean	8.0
		SD	3.3
		Median	8.0
		Min	4
		Max	12

Type of Treatment	Question	Response/time	Ophthalmologist
		Total valid response	4 (100.0%)
		Total missing	3
	What is the average amount of time your patients wait for a second treatment?(weeks)	Total valid numeric response (n)	3 (75.0%)
		Mean	8.0
		SD	0.0
		Median	8.0
		Min	8
		Max	8
		Don't know/not sure	1 (25.0%)
		Total valid response	4 (100.0%)
		Total missing	3
Complex vitreo-retinal surgery	Is the treatment available?	Available within country	2 (28.6%)
		Available locally	1 (14.3%)
		Available in practice	5 (71.4%)
		Not available	1 (14.3%)
		Total valid response	7 (100.0%)
	What is the average amount of time your patients wait for a consultation appointment? (weeks)	Total valid numeric response (n)	4 (80.0%)
		Mean	6.5
		SD	3.8
		Median	5.0
		Min	4
		Max	12
		Don't know/not sure	1 (20.0%)
		Total valid response	5 (100.0%)
		Total missing	2

Type of Treatment	Question	Response/time	Ophthalmologist
	What is the average amount of time your patients wait for a first treatment?(weeks)	Total valid numeric response (n)	4 (100.0%)
		Mean	6.5
		SD	3.8
		Median	5.0
		Min	4
		Max	12
		Total valid response	4 (100.0%)
		Total missing	3
	What is the average amount of time your patients wait for a second treatment?(weeks)	Total valid numeric response (n)	3 (75.0%)
		Mean	6.0
		SD	2.0
		Median	6.0
		Min	4
		Max	8
		Don't know/not sure	1 (25.0%)
		Total valid response	4 (100.0%)
		Total missing	3

PT 4.6

Question	Response	Ophthalmologist
Do you personally administer treatment for diabetic retinopathy?	Yes	5 (100.0%)
	Total valid response	5 (100.0%)
	Total missing	2
Who administer it?	Total missing	7

PT 4.7

Question	Response	Ophthalmologist

Question	Response	Ophthalmologist
Do any of the following influence how you treat diabetic retinopathy or diabetic macular edema?	Diabetes duration	3 (60.0%)
	Patient's age	3 (60.0%)
	Presence of comorbidities such as hypertension, etc.	4 (80.0%)
	High glucose levels	4 (80.0%)
	Insurance restrictions	1 (20.0%)
	Patient educational level	1 (20.0%)
	Patient adherence to recommendations	4 (80.0%)
	None of the above	1 (20.0%)
	Total valid response	5 (100.0%)
	Total missing	2

PT 4.8

Question	Response	Ophthalmologist
Do you treat diabetic retinopathy and diabetic macular edema based on:	Visual outcome	1 (20.0%)
	Anatomical outcomes	1 (20.0%)
	Both	3 (60.0%)
	Total Valid Response	5 (100.0%)
	Total missing	2

PT 4.9

Question	Response	Ophthalmologist
How are your patients with diabetes screened for diabetic eye disease?	Fundoscopy dilated	5 (100.0%)
	Retinal photo	5 (100.0%)
	Optical Coherence Tomography	5 (100.0%)
	Fluorescein Angiography	5 (100.0%)
	Other	1 (20.0%)
	Total valid response	5 (100.0%)

Question	Response	Ophthalmologist
	Total missing	2

PT 4.10

Question	Response	Ophthalmologist
In your opinion, do the majority of your patients present:	In time for screening	1 (20.0%)
	When visual problems have already occurred	4 (80.0%)
	Total Valid Response	5 (100.0%)
	Total missing	2

PT 4.11

Question	Response	Ophthalmologist
Have you received training specifically on treatment and diagnosis of diabetic retinopathy and/or clinically significant diabetic macular edema?	Yes	4 (80.0%)
	No	1 (20.0%)
	Total valid response	5 (100.0%)
	Total missing	2
If yes, When was your last training?	Five or more years ago	2 (50.0%)
	Within the past year	2 (50.0%)
	Total valid response	4 (100.0%)
	Total missing	3

PT 4.12

Question	Response	Ophthalmologist
Would you be interested in online education and certification on DME, Angiogenesis and Anti-VEGF therapies?	Yes	5 (100.0%)
	Total Valid Response	5 (100.0%)
	Total missing	2

PT 4.13

Question	Response	Ophthalmologist
How is outreach for screening for diabetic eye disease done in your main practice?	Other	1 (20.0%)
	Not done	3 (60.0%)
	Don't know/Not sure	1 (20.0%)
	Total valid response	5 (100.0%)
	Total missing	2

PT 4.14

Question	Response	Ophthalmologist
What do you perceive to be the greatest challenges for improving patient outcomes in diabetic eye disease?	Reimbursement/restrictions on approved therapy	3 (60.0%)
	Late diagnosis	5 (100.0%)
	Limited access to patient education on diabetic retinopathy and diabetic macular edema	2 (40.0%)
	No universal guidelines on referral/screening	2 (40.0%)
	Government/insurance not able to cover patient costs	2 (40.0%)
	Multi-disciplinary team integration is poor	2 (40.0%)
	Total valid response	5 (100.0%)
	Total missing	2

EXP 1

Question	Response	Without DED (%)	With DED (%)	With DME (%)
Which of the following complications of diabetes do you have?	None	4 (100.0%)	0 (0.0%)	0 (0.0%)
	Total Valid Response	4 (100.0%)	0 (0.0%)	0 (0.0%)
	Total missing	1	0	0

NB [1]: Without DED = respondents who did not select "Yes" for both DED and DME.
NB [2]: DED = respondents with DED ="Yes" minus respondents with DME ="Yes".
NB [3]: DME = respondents with DME ="Yes".
NB [4]: Percentages within groups are calculated from non-missing data for that question.

EXP 2: No data to display

EXP 3

Health Status	Without DED (%)	With DED (%)	With DME (%)
Self-rated health: Good	4 (100.0%)	0 (0.0%)	0 (0.0%)
Self-rated health: Poor	0 (0.0%)	0 (0.0%)	0 (0.0%)
Physically unhealthy days	3 (75.0%)	0 (0.0%)	0 (0.0%)
Mentally unhealthy days	3 (75.0%)	0 (0.0%)	0 (0.0%)
Unhealthy days	3 (75.0%)	0 (0.0%)	0 (0.0%)
Activity limitation days	1 (33.3%)	0 (0.0%)	0 (0.0%)

NB [1]: Without DED = respondents who did not select "Yes" for both DED and DME.
NB [2]: DED = respondents with DED ="Yes" minus respondents with DME ="Yes".
NB [3]: DME = respondents with DME ="Yes".

EXP 4

Item	Response	All respondents	Respondents with Type I diabetes	Respondents with Type II diabetes
How do you manage your diabetes?	Diet	2 (50.0%)	2 (66.7%)	
	Oral medicine	1 (25.0%)		1 (100.0%)
	Exercise	3 (75.0%)	3 (100.0%)	
	Insulin	3 (75.0%)	3 (100.0%)	
	Natural/Herbal medicine	1 (25.0%)	1 (33.3%)	

NB [1]: Percentages within groups are calculated from non-missing data for that question.

EXP 5.1

Item	Response	Without DED (%)	With DED (%)	With DME (%)
Are you currently working?	Working for pay	3 (75.0%)	0 (0.0%)	0 (0.0%)
	Student	1 (25.0%)	0 (0.0%)	0 (0.0%)
	Total Valid Response	4 (100.0%)	0 (0.0%)	0 (0.0%)
	Total missing	1	0	0
Do you receive assistance from the government?	Food assistance	1 (25.0%)	0 (0.0%)	0 (0.0%)
	None of the above	3 (75.0%)	0 (0.0%)	0 (0.0%)

Item	Response	Without DED (%)	With DED (%)	With DME (%)
	Total valid response	4 (100.0%)	0	0
	Total missing	1	0	0
Did you have trouble paying for food at anytime during the past year?	No	4 (100.0%)	0 (0.0%)	0 (0.0%)
	Total Valid Response	4 (100.0%)	0 (0.0%)	0 (0.0%)
	Total missing	1	0	0

NB [1]: Without DED = respondents who did not select "Yes" for both DED and DME.
NB [2]: DED = respondents with DED ="Yes" minus respondents with DME ="Yes".
NB [3]: DME = respondents with DME ="Yes".
NB [4]: Percentages within groups are calculated from non-missing data for that question.

EXP 5.2: Age group 18-39 years

Item	Response	Without DED (%)	With DED (%)	With DME (%)
Are you currently working?	Working for pay	1 (50.0%)	0 (0.0%)	0 (0.0%)
	Student	1 (50.0%)	0 (0.0%)	0 (0.0%)
	Total Valid Response	2 (100.0%)	0 (0.0%)	0 (0.0%)
	Total missing	1	0	0
Do you receive assistance from the government?	None of the above	2 (100.0%)	0 (0.0%)	0 (0.0%)
	Total valid response	2 (100.0%)	0	0
	Total missing	1	0	0
Did you have trouble paying for food at anytime during the past year?	No	2 (100.0%)	0 (0.0%)	0 (0.0%)
	Total Valid Response	2 (100.0%)	0 (0.0%)	0 (0.0%)
	Total missing	1	0	0

NB [1]: Without DED = respondents who did not select "Yes" for both DED and DME.
NB [2]: DED = respondents with DED ="Yes" minus respondents with DME ="Yes".
NB [3]: DME = respondents with DME ="Yes".

EXP 5.3: Age group 40-59 years

Item	Response	Without DED (%)	With DED (%)	With DME (%)
Are you currently working?	Working for	2 (100.0%)	0 (0.0%)	0 (0.0%)

Item	Response	Without DED (%)	With DED (%)	With DME (%)
	pay			
	Total Valid Response	2 (100.0%)	0 (0.0%)	0 (0.0%)
Do you receive assistance from the government?	Food assistance	1 (50.0%)	0 (0.0%)	0 (0.0%)
	None of the above	1 (50.0%)	0 (0.0%)	0 (0.0%)
	Total valid response	2 (100.0%)	0	0
	Total missing	0	0	0
Did you have trouble paying for food at anytime during the past year?	No	2 (100.0%)	0 (0.0%)	0 (0.0%)
	Total Valid Response	2 (100.0%)	0 (0.0%)	0 (0.0%)

NB [1]: Without DED = respondents who did not select "Yes" for both DED and DME.
NB [2]: DED = respondents with DED ="Yes" minus respondents with DME ="Yes".
NB [3]: DME = respondents with DME ="Yes".

EXP 5.4: Age group 60-79 years – no data to display

EXP 5.5: Age group 80+ years – no data to display

EXP 6

Group	Subgroup	All respondents	Type 1 diabetes	Type 2 diabetes	With DED (%)	With DME (%)
All respondents		5 (100%)	4 (80.0%)	1 (20.0%)	0 (0.0%)	0 (0.0%)
Gender	Male	2 (50.0%)	1 (50.0%)	1 (50.0%)	0 (0.0%)	0 (0.0%)
	Female	2 (50.0%)	2 (100.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)
	Total Missing	1	1	0	0	0
Age	18-39 yrs	3 (60.0%)	3 (100.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)
	40-59 yrs	2 (40.0%)	1 (50.0%)	1 (50.0%)	0 (0.0%)	0 (0.0%)
	1 - 5 years ago	1 (20.0%)	0 (0.0%)	1 (100.0%)	0 (0.0%)	0 (0.0%)
	6 - 10 years ago	1 (20.0%)	1 (100.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)
	16 - 20 years ago	2 (40.0%)	2 (100.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)
	21 years ago or longer	1 (20.0%)	1 (100.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)
Control of	Controlled	4 (100.0%)	3 (75.0%)	1 (25.0%)	0 (0.0%)	0 (0.0%)

Group	Subgroup	All respondents	Type 1 diabetes	Type 2 diabetes	With DED (%)	With DME (%)
Diabetes						
	Total Missing	1	1	0	0	0

NB [1]: DED = respondents with DED ="Yes" minus respondents with DME ="Yes".

NB [2]: DME = respondents with DME ="Yes".

NB [3]: Percentages within groups are calculated from non-missing data for that question.

EXP 7 – no data to display

DR
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Shifting the needle

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