

The Diabetic Retinopathy Barometer Report













Contents

Introduction: Global Study	3
Goal	3
Background	3
Study Populations	4
Introduction: Russia Study	5
Demographic Characteristics	5
Diabetes Profile	5
Study Populations: Russia	5
Russia DR Barometer Findings: Adults with Diabetes	8
Key Demographic Characteristics	8
Knowledge and Management of Diabetes	10
Nature and Information about Complications	11
Information about Diabetic Eye Disease and Diabetic Macular Edema	12
Screening for Diabetic Eye Disease	13
Treatment of Diabetic Eye Disease and Diabetic Macular Edema	14
Impact of Diabetic Eye Disease and Diabetic Macular Edema	15
Self-reported Quality of Life	17
Russia DR Barometer Findings: Health Care Professionals	18
Key Demographic Characteristics	18
Clinical Practice Characteristics	19
Patient Education Information	20
Guidelines and Protocols	21
Screening Protocols and Barriers in the Care Pathway	22
Russia DR Barometer Findings: Ophthalmologists	24
Screening	24
Treatment and Challenges	24
Russia DR Barometer Summary	26
References and Acknowledgement	30
Appendices	31



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, multicountry 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 Russia.

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.

This research was made possible with support from Bayer AG. Bayer has funded and facilitated this research, acted as an advisor and will assist in the dissemination of the research findings.

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 and the social and economic burden of the disease through a systematic literature review. 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 World Health Organization (WHO) and into World Bank Income Groups (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 the three following 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 professionals.



Introduction Russia Study

Demographic Characteristics¹

Russia is reported to be the most populous country in Europe with a population of approximately 144 million. According to most recent statistics it is estimated that 17% of the population is under the age of 15 years and 14% over the age of 65 years.

Similarly to most countries in Europe, Russia's population is expected to steadily decrease despite the population group under the age of 15 years remaining stable. By 2050, those under the age of 15 years will continue to make up 17% of the total population. However, those over the age of 65 years will comprise one-fifth (21%) of the nation's population.

In just over 30 years the population of 65 years or over will reach an all-time high of approximately 26 million, meaning that about every fifth person will be recognised as 'an older person.'

Diabetes Profile²

There are 415 million people living with diabetes and more than 59.8 million people are 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. While the European Region has the second-lowest age-adjusted comparative diabetes prevalence rate of any International Diabetes Federation (IDF) region (after the Africa region) there are still many countries with relatively high diabetes prevalence rates. Russia has the highest number of people living with diabetes in the European Region at ~12.1 million (6,235.4-17,026.9‡), which accounts to ~20% of people living with diabetes in this region. Globally, Russia is the 5th country in the world for the number of adults living with diabetes. Russia will continue to be in the top ten countries with the highest number of people living with diabetes in 2040 with a predicted 12.4 million people (6.4-17.1‡).

It is important to note that Russia is the 8th country in the world for diabetes-related health expenditures at 14 billion USD. Along with their continually increasing population of people living with diabetes in 2040, Russia will continue to be in the top ten countries for diabetes-related health expenditures at an estimated 14 billion USD.

Study Populations: Russia

As reported by 113 respondents with diabetes in Russia, 31% were diagnosed with DED and a further 25% with DME.

Sixty-five health care professionals completed the survey in Russia. Of these, seven were diabetes specialist providers (11%), 19 were ophthalmologists (29%), and one was a primary care providers (1.5%). The remaining respondents were either optometrists, nurses or other types of professionals.

The DR Barometer Study: **Russia Overview**

The DR Barometer study was conducted in 41 countries. In Russia, 113 adults with diabetes and 65 health care professionals provided new information about the experiences of living with, managing and treating diabetes, DR and DME.

48%

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



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

DRBarometer.com









IHI

14%

of respondents said their vision impairment due to DR or DME made it **difficult to manage their diabetes**





82%

of patients with vision loss due to DR or DME said that their condition made everyday activities, **such as driving,** working and completing basic household tasks difficult and in some cases impossible



of those with DME experienced days of **poor physical and mental health**



31%

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

31%

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

Russia DR Barometer Findings: Adults with Diabetes

Key Demographic Characteristics

One hundred and thirteen adults with diabetes (patients) completed the patients' survey in Russia: 80% were female and 20% were male. Eightysix percent lived in an urban setting and 14% in a non-urban setting (see Appendix Table 4.2).

The education levels of all respondents were as follows: 1% did not complete primary school, 1% were educated to a primary school level, 27% to a secondary school level, 67% to a college or university level and 4% to a graduate or post-graduate level (see Appendix Table 4.3).

Twenty-two percent of all respondents were in paid employment, 66% were retired, and 6.9% were not working (see Appendix Table 4.4).

Most respondents (65%) were aged between 60 and 79 years (11% were 18-39 years, 24% were 40-59 years and 0.9% were 80 years of age and over). Thirty-five percent were of traditional working age (18- 59 years) (see Table 1).

Of the respondents in Russia, 24% had been diagnosed with type 1 diabetes and 74% with type 2 diabetes. A further 1.8% of respondents were either unsure of or did not know their type of diabetes (see Appendix Table 2.1).

Thirty-one percent of respondents (n=35) had been diagnosed with DED and a further 25% (n=28) with DME. One percent of those surveyed were diagnosed with diabetes within the last year, 1 - 5 years ago (20%), 6 - 10 years ago (26%), 11 - 15 years ago (19%), 16 - 20 years ago (17%) and 21 years ago or more (17%) (see Appendix Table 2.2).

A younger population tended to be associated with type 1 diabetes and the older population with type 2 diabetes. Amongst 18 to 39-yearolds, 75% had type 1 and 17% had type 2 diabetes. In the 40-59 age group, 22% had type 1 and 78% had type 2 diabetes, 16% of 60-79-year-olds had type 1 diabetes and 81% had type 2.

In people aged 18-39 years, 8.3% had DED and 33% had DME. For the age group 40-59 years 41% had DED and 26% had DME. For those aged 60-79 years, 32% had DED and 23% had DME.

In the first 5 years since diagnosis of diabetes 9.1% were diagnosed with DED and 23% were diagnosed with DME. In comparison, for those diagnosed with diabetes more than 21 years ago, 61% had been diagnosed with DED, and a third had been diagnosed with DME.

While most (71%) respondents reported that their diabetes was well controlled 26% felt that this was not the case. For those whose diabetes was controlled, 32% had DED and 23% had DME whereas this increased when diabetes was not well controlled (41% DED and 41% DME).

Group	Subgroup	All Respondents	Type 1 diabetes	Type 2 diabetes	With DED	With DME
All respondents		113 (100.0%)	27 (23.9%)	83 (73.5%)	35 (31.0%)	28 (24.8%)
Gender	Male	19 (19.6%)	4 (21.1%)	15 (78.9%)	4 (21.1%)	5 (26.3%)
	Female	78 (80.4%)	17 (21.8%)	58 (74.4%)	30 (38.5%)	22 (28.2%)
	Total Missing	16	6	10	1	1
Age	18-39 yrs.	12 (10.6%)	9 (75.0%)	2 (16.7%)	1 (8.3%)	4 (33.3%)
	40-59 yrs.	27 (23.9%)	6 (22.2%)	21 (77.8%)	11 (40.7%)	7 (25.9%)
	60-79 yrs.	73 (64.6%)	12 (16.4%)	59 (80.8%)	23 (31.5%)	17 (23.3%)
	80 yrs. plus	1 (0.9%)	0 (0.0%)	1 (100.0%)	0 (0.0%)	0 (0.0%)
Time since diagnosis	Within the last year	1 (0.9%)	0 (0.0%)	1 (100.0%)	0 (0.0%)	0 (0.0%)
	1 - 5 yrs.	22 (20.2%)	4 (18.2%)	17 (77.3%)	2 (9.1%)	5 (22.7%)
	6 - 10 yrs.	28 (25.7%)	4 (14.3%)	24 (85.7%)	8 (28.6%)	7 (25.0%)
	11 - 15 yrs.	21 (19.3%)	5 (23.8%)	16 (76.2%)	8 (38.1%)	6 (28.6%)
	16 - 20 yrs.	18 (16.5%)	6 (33.3%)	12 (66.7%)	6 (33.3%)	4 (22.2%)
	21 yrs. plus	18 (16.5%)	8 (44.4%)	9 (50.0%)	11 (61.1%)	6 (33.3%)
	Don't know/ Not sure	1 (0.9%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)
	Total Missing	4	0	4	0	0
Control of Diabetes	Controlled	74 (71.2%)	16 (21.6%)	57 (77.0%)	24 (32.4%)	17 (23.0%)
	Not controlled	27 (26.0%)	6 (22.2%)	21 (77.8%)	11 (40.7%)	11 (40.7%)
	Don't know/ Not sure	3 (2.9%)	1 (33.3%)	0 (0.0%)	0 (0.0%)	0 (0.0%)
	Total Missing	9	4	5	0	0

Table 1: Summary of key characteristics of adults with diabetes

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]: DED = respondents with DED = "Yes" minus respondents with DME= "Yes".

NB [4]: DME = respondents with DME = "Yes".

NB [5]: 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

Ninety-six percent of those surveyed saw a health care professional for their diabetes, with 91% seeing a diabetes specialist (average number of visits was 6.1 times per year) and 7.9% seeing a general or family doctor (average number of visits was 5.1 times per year) (see Appendix Table 2.3.1 and 2.3.2).

People were informed about their condition through a variety of channels. Sixty-one percent received information from a doctor or nurse, 52% from the TV, radio, newspaper or magazines and 32% from a diabetes organisation or other health organisation (see Table 2 and Appendix Table 2.4).

Table 2: Source of information regarding diabetes

Information Source	All Respondents (n=104)
Doctor or nurse	63 (60.6%)
TV/Radio/Newspaper/Magazines	54 (51.9%)
Diabetes organisation or other health organisation	33 (31.7%)
Family/Friends/Neighbours	23 (22.1%)
Internet	23 (22.1%)
Nutritionist or dietician	5 (4.8%)
Social media (e.g. Facebook, Twitter, blogs)	4 (3.8%)
Health educator	3 (2.9%)
Pharmacist	2 (1.9%)
None of the above	3 (2.9%)

A range of strategies was used by respondents to manage their diabetes. For those with type 1 diabetes, apart from insulin, 63% managed their diabetes with diet, 46% with exercise, 29% with oral medicine and 17% with natural or herbal medicine. Of the respondents with type 2 diabetes, 73% reported that they managed their condition with diet, 71% with oral medicine, 31% with insulin, 26% with exercise, and 19% with natural or herbal medicine.

Twenty-eight percent of respondents were enrolled in diabetes management programmes and of these, 83% said the programme included information on education on the importance of screening for diabetic eye complications (see Appendix Table 2.6).

The nature and frequency of tests that people with diabetes experienced included blood glucose checks and eye checks. For those who had eye checks (97%) these occurred at less than 6 months (44%), 6 - 12 months (45%) and greater than 12 months (7.5%) (see Appendix Table 2.7).

The main challenges in controlling diabetes cited by respondents were: long wait times for an appointment to see their doctor or specialist (41%), the high cost of care (38%), travel to their regular doctor or specialist was difficult (22%), it was too hard to eat the right things (20%) and the health services which were needed were not available (16%) (see Appendix Table 2.9).

Support from family or friends (51%), free or low cost medicines or monitoring materials (38%), health education and information (22%), emergency helpline (13%), and support groups (7.1%) were identified as important to improving the management of their diabetes (see Appendix Table 2.10).



Nature and Information about Complications

Eighty-one percent of respondents were aware of vision loss and believed other complications, such as: cardiovascular disease or stroke (77%), neuropathy (57%), kidney disease (54%), and amputation (48%) were associated with diabetes (see Appendix Table 2.11).

Patients were most concerned about vision loss (33%), cardiovascular disease or stroke (24%), amputation (14%), neuropathy (13%), and increased risk of broken bones or fractures (7%) (see Appendix Table 2.12).

Fifteen percent of respondents reported that they had no complications of diabetes. However, of those who did have complications 54% had vision loss, cardiovascular disease or stroke (40%), neuropathy (37%), kidney disease (21%), and amputation (1.1%) (see Figure 1 and Appendix Table 2.13).

Almost all people with DED (97%) had complications associated with their condition (see Table 3 and Appendix EXP 1). Aside from vision loss, there was a considerable increase in the frequency of people with DED and DME experiencing certain complications compared to people without DED. The frequency of neuropathy increased from 16% in those without DED to 63% with DED and 37% with DME; as with the reporting of kidney disease increasing from 8.1% for those without DED to 37% with DED and to 22% with DME.

100 90 80 70 Percent [%] 60 50 40 30 20 10 n /ision loss Cardiovascular disease/Stroke None ⁻oot ulcers -oss of feeling (idney disease mputation

Figure 1: Presence of complications

Table 3: Presence of complications without DED, with DED or DME

Complication	Without DED (n=37)	With DED (n=30)	With DME (n=27)
Any	24 (64.9%)	29 (96.7%)	27 (100.0%)
Loss of feeling in hands or toes (neuropathy)	6 (16.2%)	19 (63.3%)	10 (37.0%)
Cardiovascular disease/Stroke	14 (37.8%)	18 (60.0%)	6 (22.2%)
Vision loss	12 (32.4%)	14 (46.7%)	25 (92.6%)
Kidney disease	3 (8.1%)	11 (36.7%)	6 (22.2%)
Foot ulcers	1 (2.7%)	0 (0.0%)	0 (0.0%)
Amputation	1 (2.7%)	0 (0.0%)	0 (0.0%)
None	13 (35.1%)	1 (3.3%)	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".

 NB [4]: Percentages within groups are calculated from non-missing data for that question.

NB [5]: Not all responses have been presented in this table, but have been included under "Any". Please see Appendix Table EXP1 for the full list of responses.

Information about Diabetic Eye Disease and Diabetic Macular Edema

Eighty-three percent of respondents stated that eye complications were discussed with their health care professionals. Notwithstanding this, almost one in every three patients (31%) either never discussed their eye complications with their health care providers (8.7%) or discussions only took place when symptoms arose (22%). The frequency of regular discussions varied from every visit (24%), multiple times a year (8.7%) and once a year (27%) (see Appendix Table 2.14). Over three-quarters of patients (78%) reported that they did what they could to prevent vision problems (e.g. get routine screenings, visit specialists) yet 12% thought that vision problems were a normal part of ageing and 12% made no special effort to have a preventative approach to their health (see Appendix Table 2.15).

Seventy-eight percent of all respondents received information about DR and DME with the doctor or nurse being the most common source (54%). A surprise finding was that one in five respondents did not receive such information from any of the sources listed (see Appendix Table 3.9).

Table 4: Source of information about DR and DME

Source	All respondents (n=86)
Doctor/Nurse	46 (53.5%)
TV/Radio/Newspaper/ Magazines	22 (25.6%)
Diabetes organisation or other health organisation	20 (23.3%)
Family/Friends/ Neighbours	12 (14.0%)
Internet	11 (12.8%)
Health educator	3 (3.5%)
None of the above	19 (22.1%)

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



Screening for Diabetic Eye Disease

Over three-quarters (78%) of respondents reported having an eye exam for DED, with 75% having the exam within the last year and a further 23% more than one year ago but less than two years ago (see Appendix Table 3.2). Over one-quarter of respondents were aware of government sponsored screening programmes for DED (see Appendix Table 3.1).

While 87% of those surveyed thought they should have their eyes examined for DED once a year there were varied small number of respondents who thought that testing should happen every two years (see Appendix Table 3.4).

The biggest barriers to eye exams were long wait times for an appointment (48%), the referral process is complicated, or takes too long (27%) and long wait times on the day of the visit (26%) (see Table 5 and Appendix Table 3.5).

Table 5: Barriers to eye examinations

Identified Barriers	All Respondents (n=93)
Long wait time for appointment	45 (48.4%)
Referral process is complicated or takes too long	25 (26.9%)
Long wait time on the day of the visit	24 (25.8%)
They are expensive	16 (17.2%)
Limited access to diabetes specialists	16 (17.2%)
Eye exams are not available near my home	13 (14.0%)
Too many other things to do or worry about	8 (8.6%)
Fear of treatment/results	5 (5.4%)
Burden on my family/friends	5 (5.4%)
Eye exams are not important	5 (5.4%)
Don't know much about my condition	4 (4.3%)
Clinics are too small or lack necessary equipment/staff	2 (2.2%)
I'm not likely to have eye complications	1 (1.1%)
Other	13 (14.0%)

Treatment of Diabetic Eye Disease and Diabetic Macular Edema

Treatment was assessed separately in people with DED and in those with DME. Those with DED (63%) all received laser treatment which was ongoing for ten of the respondents. Over onequarter has completed treatment and 94% of this group felt that treatment had been successful and their vision had either improved (41%) or stayed the same (53%) (see Table 6).

Seventy-five percent of patients with DME (n=21) had received treatment, that being laser and most felt that the treatment had been successful and either their vision had improved (33%) or stayed the same (43%).

There was a strong preference by all those with DME to have a proactive approach in the treatment pathway to prevent further vision loss rather than a reactive approach once further vision loss occurred (see Appendix Table 3.8).

Question	Response	With DED (n=35)	With DME (n=28)
Have you had any treatment for	Yes	22 (62.9%)	21 (75.0%)
diabetic eye disease?	No	7 (20.0%)	2 (7.1%)
	Don't know/Not sure	6 (17.1%)	5 (17.9%)
What treatment did you receive?	Laser	12 (54.5%)	16 (80.0%)
	Anti-VEGF	4 (18.2%)	9 (45.0%)
	Surgery	5 (22.7%)	7 (35.0%)
	Other	7 (31.8%)	1 (5.0%)
Did you complete the treatment?	Yes	6 (27.3%)	6 (28.6%)
	No	5 (22.7%)	0 (0.0%)
	Still receiving treatment	10 (45.5%)	14 (66.7%)
	Don't know/Not sure	1 (4.5%)	1 (4.8%)
Do you feel that the treatment worked?	Yes, and vision improved	7 (41.2%)	7 (33.3%)
	Yes, but vision stayed the same	9 (52.9%)	9 (42.9%)
	Still waiting to know	0 (0.0%)	3 (14.3%)
	Don't know/Not sure	1 (5.9%)	2 (9.5%)
What is/are the reason(s) that you	Treatment was not effective	1 (20.0%)	0 (0.0%)
did not complete the treatment?	l was too busy	1 (20.0%)	0 (0.0%)
	Other	4 (80.0%)	0 (0.0%)
What are the reason(s) that you	My doctor did not recommend any treatment	1 (33.3%)	0 (0.0%)
have not had treatment for diabetic	Still waiting for treatment	1 (33.3%)	0 (0.0%)
eye uisedse?	Other	1 (33.3%)	1 (100.0%)

Table 6: Treatment characteristics of patients with DED and DME

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

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

NB [3]: Not all respondents answered all questions in the survey; percentages are calculated from non-missing responses to the survey question. NB [4]: This table is a summary of various questions. For a detailed breakdown for each question, please refer to the Appendices.



Impact of Diabetic Eye Disease and Diabetic Macular Edema

Almost all (97%) of those diagnosed with DED or DME said that their vision was affected (41% significantly, 56% slightly) (see Appendix Table 3.6).

Eighty-two percent of these respondents reported vision issues impacting their daily lives in various ways such as working or keeping a job (36%), household responsibilities, such as cooking or cleaning (30%), driving a vehicle (25%), travelling (21%), leisure activities or exercise (14%), managing their underlying diabetes (14%), and social interactions with family or friends (7.1%) (see Table 7).

Table 7: Activities affected through vision impairment and loss

	All Respondents (n=56)
Work or keeping a job	20 (35.7%)
Household responsibilities, such as cooking or cleaning	17 (30.4%)
Driving (a car/vehicle)	14 (25.0%)
Travelling	12 (21.4%)
Leisure activities/exercise	8 (14.3%)
Managing my diabetes	8 (14.3%)
Social interactions with family/ friends	4 (7.1%)
Other	12 (21.4%)
None	10 (17.9%)

Fourteen percent of those with DED, and 26% with DME, were in paid employment compared with 26% of respondents without DED (see Table 8 and EXP 5.1). Patients with vision complications reported difficulties with work or keeping a job (36%) and 11% of those with DED (n=4) were not working.

Eight percent of all those surveyed did not receive assistance from the government while 77% received pension assistance (see Appendix Table 4.5).

The majority of people with diabetes received some form of assistance from the government, 90% of those without DED, 94% of those with DED and 93% of those with DME received assistance.

Sixty-nine percent of respondents said they had no trouble paying for food at any time during the last years. An unexpected finding was that for 30 of those surveyed access to health care was affected, and for 25% it was affected by their age (see Appendix Table 4.7).

Seventy-two percent of patients worried about their health, 10% about family while 4% were not worried about any of the items in the survey (see Appendix Table 4.8).

Question	Response	Without DED (n=39)	With DED (n=35)	With DME (n=27)
Are you currently working?	Working for pay	10 (25.6%)	5 (14.3%)	7 (25.9%)
	Working without pay at home (e.g. housework, farming)	1 (2.6%)	1 [2.9%]	1 (3.7%)
	Volunteering	1 (2.6%)	1 (2.9%)	0 (0.0%)
	Retired	25 (64.1%)	24 (68.6%)	18 (66.7%)
	Not working	2 (5.1%)	4 (11.4%)	1 (3.7%)
Question	Response	Without DED	With DED	With DME
		(n=39)	(n=34)	(n=27)
Do you receive assistance from the government?	Income assistance	8 (20.5%)	3 (8.8%)	4 (14.8%)
	Medical assistance	13 (33.3%)	17 (50.0%)	15 (55.6%)
	Food assistance	4 (10.3%)	6 (17.6%)	6 (22.2%)
	Housing assistance	6 (15.4%)	0 (0.0%)	4 (14.8%)
	Pension assistance	31 (79.5%)	26 (76.5%)	20 (74.1%)
	None of the above	4 (10.3%)	2 (5.9%)	2 (7.4%)
Question	Response	Without DED (n=39)	With DED (n=34)	With DME (n=27)
Did you have trouble paying for food at any time during the past year?	Yes	11 (28.2%)	12 (35.3%)	8 (29.6%)
	No	28 (71.8%)	22 (64.7%)	19 (70.4%)

Table 8: Socio-economic profile of patients without DED, with DED or DME

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

NB [5]: This table is a summary of various questions. For a detailed breakdown for each question, please refer to the Appendices.



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. The reported health status varied depending on whether respondents had been diagnosed with DED or DME and are summarised in Table 9.

More than 90% of people with DED and DME reported self-rated health as poor compared with 79% of people without DED. People with DED and DME experienced a greater impact on their physical health with 82% of those with DED and 89% of those with DME experiencing physically unhealthy days compared with 56% of those without DED.

Six percent of people with DED, 21% without DED and 4% with DME reported their health as poor. While reported health had some variability whether the respondent had DED or not, there was a 27% increase in the self-reported physically unhealthy days of those with DED compared to those without DED. Furthermore, for those people DME reported a 24% increase in the activity limiting days.

Compared with 46% of those without DED, 57% of people with DED and 70% of people with DME experienced specific limitations to their daily activities as a result of poor health. Where health impacted daily activities, the primary limitations were: diabetes, vision problems, back or neck problems and hypertension or high blood pressure (see Appendix EXP 2).

Health Status	Without DED	With DED	With DME
Self-rated health: Good	8 (21.1%)	2 (6.3%)	1 (3.7%)
Self-rated health: Poor	30 (78.9%)	30 (93.8%)	26 (96.3%)
Physically unhealthy days	15 (55.6%)	14 (82.4%)	16 (88.9%)
Mentally unhealthy days	11 (39.3%)	5 (33.3%)	5 (31.3%)
Unhealthy days	19 (65.5%)	16 (84.2%)	17 (94.4%)
Activity limitation days	8 (44.4%)	3 (30.0%)	13 (68.4%)

Table 9: Self-reported healthy days of patients without DED, with DED or DME

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

NB [5]: This table is a summary of various questions. For a detailed breakdown for each question, please refer to the Appendices.

Russia DR Barometer Findings: Health Care Professionals

Key Demographic Characteristics

There were 65 health care professionals who answered at least one of the survey questions in Russia. Of these, one was a primary care providers (1.5%), seven were diabetes specialist providers (11%) and 19 were ophthalmologists (29%). The remaining respondents were optometrists, nurses or other professionals (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 14 years, with the ophthalmologist group practicing for an average of 16 years (see Appendix PT 1.5).

Health care professionals were well educated (27% with graduate or advanced degree); 68% were female and 32% male; and, the largest proportion (41%) were aged 30 - 39 years with a further 21% in the 40-49 and 20% in the 50-59 age group (see Table 10 and Appendix PT 3.1).

Group	Subgroup	All Respondents	Primary Care Provider	Diabetes Specialist	Ophthalmologist
All respondents		65 (100.0%)	1 (1.5%)	7 (10.8%)	19 (29.2%)
Age group	18 - 29 yrs.	8 (14.3%)	0 (0.0%)	0 (0.0%)	2 (13.3%)
	30 - 39 yrs.	23 (41.1%)	0 (0.0%)	3 (50.0%)	5 (33.3%)
	40 - 49 yrs.	12 (21.4%)	0 (0.0%)	2 (33.3%)	3 (20.0%)
	50 - 59 yrs.	11 (19.6%)	1 (100.0%)	0 (0.0%)	4 (26.7%)
	60 - 69 yrs.	2 (3.6%)	0 (0.0%)	1 (16.7%)	1 (6.7%)
Gender	Female	38 (67.9%)	1 (100.0%)	4 (66.7%)	10 (66.7%)
	Male	18 (32.1%)	0 (0.0%)	2 (33.3%)	5 (33.3%)
Education	Secondary School	1 (1.8%)	0 (0.0%)	1 (16.7%)	0 (0.0%)
	College/University	40 (71.4%)	1 (100.0%)	3 (50.0%)	9 (60.0%)
	Graduate or advanced degree (e.g. PhD, MD, etc.)	15 (26.8%)	0 (0.0%)	2 (33.3%)	6 (40.0%)

Table 10: Summary of key characteristics of health care professionals

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

Seventy-four percent of all providers had their main practice setting in an eye clinic and for ophthalmologists only, the settings were eye clinic (74%), hospital (16%), and diabetes clinic (5.3%) (see Appendix PT 2.1). Ninety-seven percent of 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 (68%), combined or mixed (16%), and private sectors (11%) (see Appendix PT 2.3).

The health care professionals reported that 57% of patients pay through insurance for services, 55% pay out-of-pocket (full fees) and 29% do not pay for services. The pattern was similar for ophthalmologists, where 63% of patients pay through insurance for services, 53% pay out-of-pocket (full fees) and 32% pay some and insurance pays some for services (see Appendix PT 2.7).

On average, all providers see 62 patients per week and 29% of these patients had diabetes. Similarly, ophthalmologists saw an average of 60 patients per week and 30% of their patient population had diabetes (see Appendix PT 2.6). For all health care professionals, the average waiting time for an appointment was most commonly less than one week (32%), or more than one week but less than one month (31%) (see Appendix PT 2.5).

For an appointment with an ophthalmologist, it was usually less than one week in 37% of practices but in a further 26% of practices, the wait time was more than one week but less than one month (see Table 11 and Appendix PT 2.5).

Table 11: Average wait times to schedule an appointment

Wait Time Intervals	All Respondents (n=65)	Ophthalmologist (n=19)
Less than 1 week	21 (32.3%)	7 (36.8%)
More than 1 week but less than 1 month	20 (30.8%)	5 (26.3%)
More than 1 month but less than 2 months	6 (9.2%)	3 (15.8%)
More than 2 months but less than 3 months	1 (1.5%)	0 (0.0%)
Do not take appointments	9 (13.8%)	2 (10.5%)
Other	5 (7.7%)	1 (5.3%)
Don't know/Not sure	3 [4.6%]	1 (5.3%)

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 2 and Appendix PT 2.10).



Figure 2: 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.

Forty-four percent of all providers reported that they had sufficient information about eye complications, 15% said the information on eye complications and diabetes was not sufficient and 6.5% said there was no such information. Overall, 31% of those surveyed had no written information (see Table 12 and Appendix PT 2.11).

Some ophthalmologists (28%) had written information about diabetes and potential eye complications, 5.6% had information on diabetes but information on eye complications was not sufficient and 11% reported that information on eye complications was not included. Fifty percent of ophthalmologists said there was no written information available at all.



Guidelines and Protocols

Sixty-one percent of providers and 65% of ophthalmologists had written protocols for the management of diabetes, which were used by staff. However, 18% had no protocols (see Appendix PT 2.12).

With respect to the management of diabetes-related vision issues, 72% of health care professionals and 71% of ophthalmologists had written protocols and these were used by staff but for some 4.9%, the protocols available were not used by staff. Twelve percent of providers did not have protocols on the management of diabetes-related vision issues available (see Table 12 and Appendix PT 2.13).

Our officer	D	All Deservation to	On half a loss a la miat
uuestion	Response	All Respondents (n=62)	(n=18)
Is there written information about dia-betes available for patients in your main practice?	Yes, and information on eye complications is sufficient	27 (43.5%)	5 (27.8%)
	Yes, but information on eye complications is not sufficient	9 (14.5%)	1 (5.6%)
	Yes, but no infor-mation on eye com-plications is included	4 (6.5%)	2 (11.1%)
	No written infor-mation is available for patients	19 (30.6%)	9 (50.0%)
	Don't know/Not sure	3 (4.8%)	1 (5.6%)
Question	Response	All Respondents (n=61)	Ophthalmologist (n=17)
Do you have written proto-cols/guidelines for	Yes, available and used by staff	44 (72.1%)	12 (70.6%)
detection and man-agement of diabetes-related vision issue available in your main practice?	Yes, available but not used by staff	3 (4.9%)	1 (5.9%)
	Not available	7 (11.5%)	2 (11.8%)
	Don't know/Not sure	7 (11.5%)	2 (11.8%)

Table 12: Availability and use of information and protocols

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

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

For those with type 1 diabetes, 73% of all providers reported that the initial eye exam should occur at time of the diagnosis of diabetes. For patients with type 2 diabetes, 82% of all providers recommended an eye exam at time of diagnosis (see Appendix PT 2.14).

Overall, 63% of health care professionals and 73% of ophthalmologists reported that follow-up eye examinations were conducted every year (see Appendix PT 2.15) and the majority screen patients for DR (see Appendix PT 2.16)

Across all health care professionals, 84% reported that they send appointment reminders and 11% do not and 82% of the health care professionals and 80% of ophthalmologists shared information to optimise patient care management (see Appendix PT 2.19 and PT 2.20) The most common patient characteristics influencing the referral process for eye complications for health professionals were: diabetes duration (51%), high glucose levels (43%), presence of comorbidities such as hypertension (40%), and a patient's age (26%) (see Appendix PT 2.17).

As reported by health care professionals, the major barriers to optimising eye health faced by patients with diabetes were cost of care (47%), a limited access to diabetes specialists (46%) and the patient's feeling that eye exams were not important (44%) (see Appendix PT 2.18). Ophthalmologists, like health care professionals, reported similar such barriers (see Table 13 and Appendix PT 2.18).



Table 13: Major barriers to optimising eye health

Response	All Respondents (n=55)	Ophthalmologists (n=15)
Patients feel eye exams are not important	24 [43.6%]	9 (60.0%)
Limited access to diabetes specialists	25 (45.5%)	8 (53.3%)
Cost of care	26 (47.3%)	7 (46.7%)
Limited access to eye specialists	18 (32.7%)	7 [46.7%]
Long wait time for appointment	7 (12.7%)	4 (26.7%)
Referral process	10 (18.2%)	4 (26.7%)
Long wait time on the day of visit	6 (10.9%)	3 (20.0%)
Patients fear of treatment/results	12 (21.8%)	3 (20.0%)
Proximity to care	8 (14.5%)	2 (13.3%)
Lack of knowledge and/or awareness	9 (16.4%)	2 (13.3%)
Patients have competing responsibilities and priorities	8 (14.5%)	2 (13.3%)
Recommended treatments are not available	4 (7.3%)	1 (6.7%)
Patients feel they are a burden on family/friends	2 (3.6%)	1 (6.7%)
Clinic too small or lack necessary equipment/staff	2 (3.6%)	0 (0.0%)
Other	8 (14.5%)	1 (6.7%)
Other	4 (9.1%)	0 (0.0%)

Russia DR Barometer Findings: Ophthalmologists

Screening

There were twelve ophthalmologists who answered at least one of the supplementary questions (see Appendix PT 4.1 to PT 4.14). On average, 27% of patients seen by ophthalmologists had DR and 25% had DME (see Appendix PT 4.1 and PT 4.2).

The most common waiting time for a screening appointment for DED was more than one week but less than one month (47%) with 33% stating less than one week (see Appendix PT 4.3). Sixty-seven ophthalmologists said that there was no wait from time of screening to diagnosis, 13% (n=2) reported a wait time of less than one week (see Appendix PT 4.4).

Treatment and Challenges

Most (86%) of ophthalmologists personally administer treatment for DR (see Appendix PT 4.6). The most common factors influencing how ophthalmologists treat patients with DR or DME were: the presence of comorbidities such as hypertension (83%), the duration of diabetes (75%) and the high glucose levels (67%) (see Appendix PT 4.7).

The most common outreach venues for screening for DED were vision centres (42%), health fairs for all (25%), health fairs for people with diabetes (25%), and mobile screening centres (17%) (see Appendix PT 4.13). All ophthalmologists reported that they screen patients for DR based on fundoscopy through dilated pupils, 92% based on optical coherence tomography, 77% based on fluorescein angiography and 62% based on retinal photo. Fifty-four percent said that they treat DR and DME based on both visual and anatomical outcomes (see Appendix PT 4.8 and PT 4.9).

Sixty-nine percent (n=9) of ophthalmologists said that most patients present when visual problems have already occurred and 31% (n=4) said that patients present too late for effective treatment (see Appendix PT 4.10) although the sample is notably very small.

Sixty-nine percent of ophthalmologists had received specific training on treatment and diagnosis of DR and or DME. Sixty-seven percent had training between one and five years ago, 22% had training within the past year, and 11% five years ago or more (see Appendix PT 4.11). Sixty-nine percent would be interested in online education and certification on DME, angiogenesis and anti-VEGF therapies (see Appendix PT 4.12).



Table 14: Challenges for improving outcomes in DED

Question	Response	Ophthalmologist (n=12)
What do you perceive to be the	Late diagnosis	12 (100.0%)
greatest challenges for improving patient outcomes in diabetic eye disease?	Limited access to patient education on diabetic retinopathy and diabetic macular edema	8 (66.7%)
	Multi-disciplinary team integration is poor	8 (66.7%)
	Government/insurance not able to cover patient costs	5 (41.7%)
	Referral pathways	4 (33.3%)
	No universal guidelines on referral/ screening	4 (33.3%)
	Reimbursement/restrictions on approved therapy	3 (25.0%)
	No universal guideline on when to treat	3 (25.0%)
	Ineffective screening services	3 (25.0%)
	No universal guidelines on how to treat	2 (16.7%)
	Current available therapies not effective	1 (8.3%)
	Other	2 (16.7%)

Russia DR Barometer Summary

In Russia, 113 adults with diabetes and 65 health care professionals have provided insight about their experiences of living with, managing, and treating diabetes, DR, and DME.

The results of the DR Barometer Study Russia help to understand the level of awareness around diabetes and eye complications, and access and barriers to diabetes management, including screening for DED and DME and timely treatment.

Russia has reached a significant demographic milestone which will impact the society for many decades to come. It is reported to be the most populous country in Europe with a population of approximately 144 million, and by 2050 21% of the total population will be aged 65 years and older while those aged 0-14 years of age will make up only about 17% of the population. In just over 30 years the population of 65 years or over will reach an all-time high of approximately 26 million, meaning that about every fifth person will be recognised as 'an older person.'

Alongside the demographic changes the prevalence of people with diabetes is climbing rapidly. Today Russia has the highest number of people living with diabetes in the European Region at ~12.1 million (6,235.4-17,026.9‡), which accounts to ~20% in the region. Russia will continue to be in the top ten countries for diabetesrelated health expenditures in 2040 at an estimated 14 billion USD. The DR Barometer findings indicate that overall a younger population was more likely to be associated with type 1 diabetes, which was the opposite for those with type 2 diabetes, which tended to be an older population. Seventy-five percent of those in the youngest age group (18-39 years) had type 1 diabetes (17% type 2), in the 40 – 59 age group 22% had type 1 (78% type 2), and 16% in the 60-79 age group had type 1 (81% type 2). Thirty-one percent of those surveyed had DED, and 25% DME.

An important trend noted in the study was the association between the time since diagnoses of diabetes and likelihood of DED and DME. Nine percent of those diagnosed within the last year had DED and this increased progressively over time to 61% of those diagnosed for 21 years or more.

People were most often informed about their condition by health professionals such as the doctor, nurse, and nutritionist. A surprising finding in Russia was the value placed on information via the TV, radio, newspaper, magazines (52%) followed by diabetes organisations or other health organisations (37%), family and friends. A trend globally, which was reflected in the Russia study, was the use of the internet for information on diabetes by 22% of the respondents.

Surprisingly, only 28% of patients were enrolled in a diabetes management programme and most of these (83%) noted there was education on the importance of screening for eye complications.



Many of those surveyed struggled with the management of their diabetic condition with some issues that were within their personal control such as eating the right foods and balancing the responsibilities of family and work without compromising their health. Some didn't even want to think about having diabetes. In addition the high cost of care, long wait times for appointments, and travel to their doctor or specialist were particular challenges.

There was a relatively high awareness of the complications associated with diabetes. Vision loss (33%) was most concerning followed by cardiovascular disease, amputation and neuropathy. Only 15% reported they had no complications therefore of great significance was that over half had vision loss (54%), cardiovascular disease or stroke (40%), neuropathy (37%), and kidney disease (21%).

Almost all people with DED (97%) complications with their condition and the frequency of complications, aside from vision loss, was significantly greater for those respondents with DED (e.g. 16% without DED and 63% with DED reported neuropathy).

Knowing that diabetic-related vision loss is preventable addressing barriers to eye screening is an important policy issue. While most respondents had received an eye exam, which is understandable considering the purposeful sample, there remained many barriers including long wait times to schedule an appointment and on the day of the visit as well as the referral process being too complicated or taking too long. Evidence shows that the relationship between the patient and the health care professional is critical to ensure realistic and optimal patient outcomes. It was therefore surprising that 31% of patients surveyed had either never had a conversation about eye complications with their health professional or it only took place after symptoms were present. Equally concerning is the myths and perceptions around vision changes with 24% of patients reporting that vision problems were a normal part of ageing and some not making any special effort to prevent vision problems.

Almost all (97%) of people with DED or DME said that their vision was slightly or significantly affected which in turn impacted their health, lifestyle and life choices. One in three (36%) had trouble being in paid employment or maintaining the job, undertaking household responsibilities (30%) and driving a vehicle for a quarter of respondents was a difficulty.

More than 90% of people with DED and DME rated their health as poor compared with 79% of people without DED. Overall, those with DED (82%) experienced significantly more physically unhealthy days compared with those without DED (56%).

A proactive treatment approach to prevent further vision loss was preferred rather than reactive treatment once further vision loss had occurred. A concerning finding in the Russia study was that a quarter of respondents felt that their age was a barrier to accessing healthcare. Nearly threequarter (72%) were worried about their health, followed by family (10%). Patient education is very much at the heart of a proactive approach so it was unexpected and most concerning that one in three (31%) providers, including 50% of ophthalmologists, had no written information about diabetes and eye complications available in their practice. On a positive note, 72% of providers had written protocols for the management of diabetesrelated vision, which were used by staff. In some practices education material and protocols on the management of diabetesrelated vision did not exist.

For both patients with type 1 and type 2 diabetes 73% and 82% of all providers respectively said that an initial eye exam should occur at time of the diagnosis of diabetes and there was agreement by most providers and ophthalmologists that follow-up eye examinations should be conducted every year.

The top three patient characteristics influencing the referral process for eye complications across providers and ophthalmologists were diabetes duration, high glucose levels, presence of comorbidities such as hypertension and the patient's age. Late diagnosis and a limited access to patient education on DR and DME were viewed by ophthalmologists as some of the greatest challenges for improving patient outcomes in DED.

In large part, the patients and providers who participated in the study were selfselected, 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 Russia.



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%20 Nutrition%20and%20Population%20 Statistics:%20Population%20estimates %20and%20projections
- ² International Diabetes Federation. (2015). *IDF Diabetes Atlas*. Accessed from: http://www.diabetesatlas.org/

The IFA, IDF and IAPB would like to acknowledge and thank the many organisations and health care professionals from Russia that assisted in the dissemination of patient and provider surveys, your contributions were pivotal to the success of the DR Barometer Study.

Appendices



The Diabetic Retinopathy Barometer Survey: Appendices for Russia

APPENDIX 1 : National Results

Table 1.1

Survey Information	Number of Respondents (%)
All valid respondents [1]	131 (100.0%)
Respondents aged 18 or over	129 (98.5%)
Respondents with diabetes	113 (86.3%)

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

Table 1.2

Survey Information	Number of Respondents (%)
All valid respondents	131 (100.0%)
Included in Diabetic Analysis Set	113 (86.3%)
Excluded from Diabetic Analysis Set	18 (13.7%)
Reasons for exclusion from diabetic analysis set	•
Under 18 years of age	2
Not diagnosed with diabetes	9
Missing information on diabetes diagnosis	7

Table 1.3

Survey Information	Number of Respondents (%)
Diabetic Analysis Set	113 (100.0%)
World Bank Income Group: High Income	113 (100.0%)
Persons with diabetic eye disease (DED)	35 (31.0%)
Persons with diabetic macular edema (DME)	28 (24.8%)
Persons with Type I diabetes	27 (23.9%)
Persons with Type II diabetes	83 (73.5%)
Persons not seeing health care professional for diabetes	5 (4.4%)
Persons seeing health care professional for diabetes	105 (92.9%)
Persons with eye disease & not received treatment	9 (8.0%)
Persons with eye disease & received treatment	43 (38.1%)

Table 2.1

Question	Response	Number of Respondents (%)
With which type of diabetes have you been diagnosed?	Туре І	27 (24.1)
	Type II	83 (74.1)
	Don't know/Not sure	2 (1.8)
	Total Valid Response	112 (100.0)
	Total missing	1

Table 2.2

Question	Response	Number of Respondents (%)
When was your diabetes diagnosed?	Within the last year	1 (0.9)
	1 - 5 years ago	22 (20.2)
	6 - 10 years ago	28 (25.7)
	11 - 15 years ago	21 (19.3)
	16 - 20 years ago	18 (16.5)
	21 years ago or longer	18 (16.5)
	Don't know/Not sure	1 (0.9)
	Total Valid Response	109 (100.0)
	Total missing	4

Table 2.3.1

Question	Response	Number of Respondents (%)
Do you see a health care professional for your diabetes?	Yes	105 (95.5)
	No	5 (4.5)
	Total Valid Response	110 (100.0)
	Total missing	3
What kind of health care professional?	General/Family Doctor	8 (7.9)
	Diabetes Specialist	92 (91.1)
	Other	1 (1.0)



Question	Response	Number of Respondents (%)
	Total Valid Response	101 (100.0)
	Total missing	12

Table 2.3.2

Type of health care professional	Times per year seen for diabetes	Value
General/Family Doctor	Total valid numeric response (n)	7
	Mean	5.1
	SD	3.3
	Median	4.0
	Min	2
	Max	12
	Total missing	1
Diabetes Specialist	Total valid numeric response (n)	62
	Mean	6.1
	SD	4.3
	Median	4.0
	Min	1
	Max	15
	Don't know/Not sure	3
	Total missing	27
Other	Total valid numeric response (n)	1
	Mean	12.0
	SD	
	Median	12.0
	Min	12
	Max	12

Table 2.4

Question	Response	Number of Respondents (%)
How have you received information about diabetes?	Doctor or nurse	63 (60.6%)

Question	Response	Number of Respondents (%)
	Health educator	3 (2.9%)
	Nutritionist or dietitian	5 (4.8%)
	Diabetes organization or other health organization	33 (31.7%)
	Family/Friends/Neighbors	23 (22.1%)
	TV/Radio/Newspaper/Magazines	54 (51.9%)
	Internet	23 (22.1%)
	Social media (e.g. Facebook, Twitter, blogs)	4 (3.8%)
	Pharmacist	2 (1.9%)
	None of the above	3 (2.9%)
	Total Valid Response	104 (100.0%)
	Total missing	9

Table 2.5

Question	Response	Number of Respondents (%)
How do you manage your diabetes?	Diet	74 (70.5%)
	Oral medicine	63 (60.0%)
	Exercise	31 (29.5%)
	Insulin	48 (45.7%)
	Natural/Herbal medicine	19 (18.1%)
	Total Valid Response	105 (100.0%)
	Total missing	8

Table 2.6

Question	Response	Number of Respondents (%)
Are you currently enrolled in a diabetes patient management support programme?	Yes	30 (28.3)
	No	76 (71.7)
	Total Valid Response	106 (100.0)
	Total missing	7
Who sponsors the programme?	Hospital support program	4 (13.8)



Question	Response	Number of Respondents (%)
	Pharmaceutical support program	2 (6.9)
	Don't know/Not sure	23 (79.3)
	Total Valid Response	29 (100.0)
	Total missing	84
Does the programme include education on the importance of screening for diabetic eye complications?	Yes	24 (82.8)
	No	5 (17.2)
	Total Valid Response	29 (100.0)
	Total missing	84

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	106 (100.0%)
	Less than 6 months	105 (99.1%)
	Greater than 12 months	1 (0.9%)
	Total valid response	106 (100.0%)
	Total missing	7
	Total valid response	106 (100.0%)
	Total missing	7
Urine check	Yes	104 (98.1%)
	Less than 6 months	44 (41.5%)
	6 - 12 months	56 (52.8%)
	Greater than 12 months	4 (3.8%)
	Total valid response	104 (98.1%)
	Total missing	9

Test	Response	Number of Respondents (%)
Have you ever had the following tests in a doctors office of clinic? And if yes, how long ago		
	No	2 (1.9%)
	Total valid response	106 (100.0%)
	Total missing	7
Weight check	Yes	91 (85.8%)
	Less than 6 months	38 (35.8%)
	6 - 12 months	10 (9.4%)
	Greater than 12 months	43 (40.6%)
	Total valid response	91 (85.8%)
	Total missing	22
	No	15 (14.2%)
	Total valid response	106 (100.0%)
	Total missing	7
Blood pressure check	Yes	103 (98.1%)
	Less than 6 months	88 (83.8%)
	6 - 12 months	11 (10.5%)
	Greater than 12 months	3 (2.9%)
	Total valid response	102 (97.1%)
	Total missing	11
	No	1 (1.0%)
	Don't know/Not sure	1 (1.0%)
	Total valid response	105 (100.0%)
	Total missing	8
Foot check	Yes	91 (88.3%)
	Less than 6 months	37 (35.9%)


Test	Response	Number of Respondents (%)
Have you ever had the following tests in a doctors office of clinic? And if yes, how long ago		
	6 - 12 months	45 (43.7%)
	Greater than 12 months	9 (8.7%)
	Total valid response	91 (88.3%)
	Total missing	22
	No	12 (11.7%)
	Total valid response	103 (100.0%)
	Total missing	10
Eye check	Yes	103 (97.2%)
	Less than 6 months	47 (44.3%)
	6 - 12 months	48 (45.3%)
	Greater than 12 months	8 (7.5%)
	Total valid response	103 (97.2%)
	Total missing	10
	No	2 (1.9%)
	Don't know/Not sure	1 (0.9%)
	Total valid response	106 (100.0%)
	Total missing	7

Question	Response	Number of Respondents (%)
How well do you think your diabetes is controlled?	Very well	52 (50.0%)
	Well	22 (21.2%)
	Not very well	19 (18.3%)
	Not well at all	8 (7.7%)

Question	Response	Number of Respondents (%)
	Don't know/Not sure	3 (2.9%)
	Total Valid Response	104 (100.0%)
	Total missing	9

Question	Response	Number of Respondents (%)
What are the main challenges you face in controlling your diabetes?	High cost of care	37 (37.8%)
	No insurance	2 (2.0%)
	Travel to my regular doctor or specialist is difficult	22 (22.4%)
	Long wait time for an appointment to see my doctor or specialist	40 (40.8%)
	Health services needed are not available	16 (16.3%)
	Don't know enough about diabetes	10 (10.2%)
	Too hard to eat the right things	20 (20.4%)
	Too many other things to do	10 (10.2%)
	Stigma or discrimination because of diabetes	3 (3.1%)
	Don't want to think about having diabetes	12 (12.2%)
	Other	2 (2.0%)
	Total Valid Response	98 (100.0%)
	Total missing	15

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	38 (38.4%)
	Support groups	7 (7.1%)
	Support from family or friends	50 (50.5%)



Question	Response	Number of Respondents (%)
	Health education and information	22 (22.2%)
	Mobile services (services that travel to or near your home)	4 (4.0%)
	Coordination of healthcare and services by a professional	6 (6.1%)
	Emergency helpline	13 (13.1%)
	Other	4 (4.0%)
	None	15 (15.2%)
	Total Valid Response	99 (100.0%)
	Total missing	14

Question	Response	Number of Respondents (%)
What complications (or problems), to your knowledge, arise from diabetes?	Amputation	49 (48.0%)
	Foot ulcers	49 (48.0%)
	Increased risk of broken bones or fractures	36 (35.3%)
	Loss of feeling in hands or toes (neuropathy)	58 (56.9%)
	Vision loss	83 (81.4%)
	Irritable bowel disease	16 (15.7%)
	Kidney disease	55 (53.9%)
	Cardiovascular disease/Stroke	78 (76.5%)
	Other	5 (4.9%)
	Don't know/Not sure	3 (2.9%)
	None	1 (1.0%)
	Total Valid Response	102 (100.0%)
	Total missing	11

Question	Response	Number of Respondents (%)

Question	Response	Number of Respondents (%)
Which complication of diabetes are you most concerned about?	Amputation	14 (14.0)
	Increased risk of broken bones or fractures	7 (7.0)
	Loss of feeling in hands or toes (neuropathy)	13 (13.0)
	Vision loss	33 (33.0)
	Irritable bowel disease	1 (1.0)
	Kidney disease	4 (4.0)
	Cardiovascular disease/Stroke	24 (24.0)
	Don't know/Not sure	1 (1.0)
	None	3 (3.0)
	Total Valid Response	100 (100.0)
	Total missing	13

Question	Response	Number of Respondents (%)
Which of the following complications of diabetes do you have?	Amputation	1 (1.1%)
	Foot ulcers	1 (1.1%)
	Broken bones or fractures	8 (8.5%)
	Loss of feeling in hands or toes (neuropathy)	35 (37.2%)
	Vision loss	51 (54.3%)
	Irritable bowel disease	6 (6.4%)
	Kidney disease	20 (21.3%)
	Cardiovascular disease/Stroke	38 (40.4%)
	Don't know/Not sure	3 (3.2%)
	None	14 (14.9%)
	Total Valid Response	94 (100.0%)
	Total missing	19



Question	Response	Number of Respondents (%)
How often do you discuss the possibility of eye complications with your health care professional?	Every visit	25 (24.3%)
	Multiple times per year	9 (8.7%)
	Once per year	28 (27.2%)
	Only when symptoms arise	23 (22.3%)
	Never	9 (8.7%)
	Don't know/Not sure	9 (8.7%)
	Total Valid Response	103 (100.0%)
	Total missing	10

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	12 (12.4%)
	I do what I can to prevent vision problems (e.g. get routine screenings, visit specialists)	76 (78.4%)
	I do not make any special effort to prevent vision problems	12 (12.4%)
	Total Valid Response	97 (100.0%)
	Total missing	16

Question	Response	Number of Respondents (%)
What type of health insurance do you have?	Public	98 (95.1)
	Public - Private	1 (1.0)
	None	4 (3.9)
	Total Valid Response	103 (100.0)
	Total missing	10

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	90 (90.9)
	Insurance pays total cost	2 (2.0)
	Insurance and out-of- pocket/cash (e.g. co-pays)	1 (1.0)
	Out-of-pocket only (pay cash for all care)	4 (4.0)
	Do not use service	2 (2.0)
	Total Valid Response	99 (100.0)
	Total missing	14
Specialist medical visits (e.g. eye doctor, gynecologist, urologist)	Care is free	82 (79.6)
	Insurance and out-of- pocket/cash (e.g. co-pays)	7 (6.8)
	Out-of-pocket only (pay cash for all care)	14 (13.6)
	Total Valid Response	103 (100.0)
	Total missing	10
Medicines	Care is free	61 (63.5)
	Insurance and out-of- pocket/cash (e.g. co-pays)	8 (8.3)
	Out-of-pocket only (pay cash for all care)	25 (26.0)
	Do not use service	1 (1.0)
	Don't know/Not Sure	1 (1.0)
	Total Valid Response	96 (100.0)
	Total missing	17
Medical supplies (e.g. blood glucose meter/strips)	Care is free	12 (11.9)
	Insurance and out-of- pocket/cash (e.g. co-pays)	54 (53.5)
	Out-of-pocket only (pay cash for all care)	34 (33.7)
	Do not use service	1 (1.0)
	Total Valid Response	101 (100.0)



Question	Response	Number of Respondents (%)
Most often, how do you pay for the following types of medical care and services?		
	Total missing	12
Procedures	Care is free	21 (22.3)
	Insurance and out-of- pocket/cash (e.g. co-pays)	58 (61.7)
	Out-of-pocket only (pay cash for all care)	11 (11.7)
	Do not use service	4 (4.3)
	Total Valid Response	94 (100.0)
	Total missing	19
Tests/screenings	Care is free	28 (27.7)
	Insurance and out-of- pocket/cash (e.g. co-pays)	62 (61.4)
	Out-of-pocket only (pay cash for all care)	9 (8.9)
	Don't know/Not Sure	2 (2.0)
	Total Valid Response	101 (100.0)
	Total missing	12
Health education	Care is free	78 (83.0)
	Insurance and out-of- pocket/cash (e.g. co-pays)	1 (1.1)
	Out-of-pocket only (pay cash for all care)	4 (4.3)
	Do not use service	6 (6.4)
	Don't know/Not Sure	5 (5.3)
	Total Valid Response	94 (100.0)
	Total missing	19
Counseling	Care is free	23 (24.5)
	Insurance pays total cost	1 (1.1)
	Insurance and out-of- pocket/cash (e.g. co-pays)	58 (61.7)
	Out-of-pocket only (pay cash for all care)	9 (9.6)
	Don't know/Not Sure	3 (3.2)
	Total Valid Response	94 (100.0)

Question	Response	Number of Respondents (%)
Most often, how do you pay for the following types of medical care and services?		
	Total missing	19

Question	Response	Number of Respondents (%)
Are you aware of any government sponsored screening programs for diabetic eye disease (diabetic retinopathy)?	Yes	26 (26.8%)
	No	71 (73.2%)
	Total valid response	97 (100.0%)
	Total missing	16

Question	Response	Number of Respondents (%)
Have you ever had an eye exam for diabetic eye disease?	Yes	80 (77.7%)
	No	23 (22.3%)
	Total valid response	103 (100.0%)
	Total missing	10
How long ago was your last eye exam?	Within the last year	60 (75.0%)
	More than 1 year ago but less than 2 years	18 (22.5%)
	More than 2 years ago but less than 3 years	1 (1.3%)
	More than 3 years ago but less than 5 years	1 (1.3%)
	Total valid response	80 (100.0%)
	Total missing	33
Who did the last exam?	General/Family practitioner	6 (7.6%)
	Eye doctor/Eye clinic	71 (89.9%)
	Don't know/Not sure	2 (2.5%)
	Total valid response	79 (100.0%)
	Total missing	34



Question	Response	Number of Respondents (%)
Have you ever had a dilated eye exam, where your eyes are examined after eye drops?	Yes	86 (86.0%)
	No	9 (9.0%)
	Don't know/Not sure	5 (5.0%)
	Total valid response	100 (100.0%)
	Total missing	13

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	85 (86.7%)
	Every two years	1 (1.0%)
	Only when symptoms occur	1 (1.0%)
	Never	3 (3.1%)
	Don't know/Not sure	8 (8.2%)
	Total valid response	98 (100.0%)
	Total missing	15

Question	Response	Number of Respondents (%)
For you, what are the biggest barriers to eye exams?	They are expensive	16 (17.2%)
	Eye exams are not available near my home	13 (14.0%)
	Long wait time for appointment	45 (48.4%)
	Long wait time on the day of the visit	24 (25.8%)
	Referral process is complicated or takes too long	25 (26.9%)

Question	Response	Number of Respondents (%)
	Don't know much about my condition	4 (4.3%)
	Fear of treatment/results	5 (5.4%)
	Burden on my family/friends	5 (5.4%)
	Limited access to diabetes specialists	16 (17.2%)
	I'm not likely to have eye complications	1 (1.1%)
	Eye exams are not important	5 (5.4%)
	Too many other things to do or worry about	8 (8.6%)
	Clinics are too small or lack necessary equipment/staff	2 (2.2%)
	Other	13 (14.0%)
	Total valid response	93 (100.0%)
	Total missing	20

Question	Response	Number of Respondents (%)
Have you been diagnosed with diabetic eye disease?	Yes	63 (61.8%)
	No	39 (38.2%)
	Total valid response	102 (100.0%)
	Total missing	11
Has your diabetic eye disease affected your vision?	Yes, slightly	35 (55.6%)
	Yes, significantly	26 (41.3%)
	No	2 (3.2%)
	Total valid response	63 (100.0%)
	Total missing	50
Have vision issues caused you to have difficulty with any of the following?	Traveling	12 (21.4%)
	Household responsibilities, such as cooking or cleaning	17 (30.4%)
	Social interactions with family/friends	4 (7.1%)
	Leisure activities/exercise	8 (14.3%)



Question	Response	Number of Respondents (%)
	Work or keeping a job	20 (35.7%)
	Managing my diabetes	8 (14.3%)
	Other	12 (21.4%)
	None	10 (17.9%)
	Driving (a car/vehicle)	14 (25.0%)
	Total valid response	56 (100.0%)
	Total missing	57

Question	Response	Number of Respondents (%)
Have you had any treatment for diabetic eye disease?	Yes	43 (68.3%)
	No	9 (14.3%)
	Don't know/Not sure	11 (17.5%)
	Total valid response	63 (100.0%)
	Total missing	50
What treatment did you receive?	Laser	28 (66.7%)
	Injection in the eye (Anti- VEGF)	13 (31.0%)
	Surgery	12 (28.6%)
	Other	8 (19.0%)
	Total valid response	42 (100.0%)
	Total missing	71
Did you complete the treatment?	Yes	12 (27.9%)
	No	5 (11.6%)
	Still receiving treatment	24 (55.8%)
	Don't know/Not sure	2 (4.7%)
	Total valid response	43 (100.0%)
	Total missing	70
Do you feel that the treatment worked?	Yes, and vision improved	14 (36.8%)
	Yes, but vision stayed the same	18 (47.4%)
	Still waiting to know	3 (7.9%)

Question	Response	Number of Respondents (%)
	Don't know/Not sure	3 (7.9%)
	Total valid response	38 (100.0%)
	Total missing	75
What is/are the reason(s) that you did not complete the treatment?	Treatment was not effective	1 (20.0%)
	I was too busy	1 (20.0%)
	Other	4 (80.0%)
	Total valid response	5 (100.0%)
	Total missing	108
What are the reason(s) that you have not had treatment for diabetic eye disease?	My doctor did not recommend any treatment	1 (25.0%)
	Still waiting for treatment	1 (25.0%)
	Other	2 (50.0%)
	Total valid response	4 (100.0%)
	Total missing	109

Question	Response	Number of Respondents (%)
Have you been diagnosed with diabetic macular edema?	Yes	28 (28.9%)
	No	49 (50.5%)
	Don't know/Not sure	20 (20.6%)
	Total valid response	97 (100.0%)
	Total missing	16
If Yes, which of the following would you prefer	Treatment to prevent further vision loss	22 (84.6%)
	Don't know/Not sure	4 (15.4%)
	Total valid response	26 (100.0%)
	Total missing	87

Question	Response	Number of Respondents (%)
Have you received information about	Doctor/Nurse	46 (53.5%)



Question	Response	Number of Respondents (%)
diabetic retinopathy or diabetic macular edema from any of the following sources?		
	Health educator	3 (3.5%)
	Diabetes organization or other health organization	20 (23.3%)
	Family/Friends/Neighbors	12 (14.0%)
	TV/Radio/Newspaper/Magazines	22 (25.6%)
	Internet	11 (12.8%)
	None of the above	19 (22.1%)
	Total valid response	86 (100.0%)
	Total missing	27

Table 4.1

Question	Response	Number of Respondents (%)
What is your gender?	Female	78 (80.4)
	Male	19 (19.6)
	Total Valid Response	97 (100.0)
	Total missing	16
Please indicate your age	18 - 29	6 (5.3)
	30 - 39	6 (5.3)
	40 - 49	7 (6.2)
	50 - 59	20 (17.7)
	60 - 69	49 (43.4)
	70 - 79	24 (21.2)
	80 - 89	1 (0.9)
	Total Valid Response	113 (100.0)

Table 4.2

Question	Response	Number of Respondents (%)
Where do you live?	Urban setting	83 (85.6)
	Non-urban setting	14 (14.4)
	Total Valid Response	97 (100.0)
	Total missing	16

Table 4.3

Question	Response	Number of Respondents (%)
What is the highest level of education you completed?	Did not complete primary school	1 (1.0)
	Primary school	1 (1.0)
	Secondary school	27 (26.7)
	College/University	68 (67.3)
	Graduate or post-graduate	4 (4.0)
	Total valid response	101 (100.0)
	Total missing	12

Table 4.4

Question	Response	Number of Respondents (%)
Are you currently working?	Working for pay	22 (21.8)
	Working without pay at home (e.g. housework, farming)	3 (3.0)
	Volunteering	2 (2.0)
	Retired	67 (66.3)
	Not working	7 (6.9)
	Total Valid Response	101 (100.0)
	Total missing	12

Table 4.5

Question	Response	Number of Respondents (%)
Do you receive assistance from the government?	Income assistance	15 (15.0%)
	Medical assistance	45 (45.0%)
	Food assistance	16 (16.0%)
	Housing assistance	10 (10.0%)
	Pension assistance	77 (77.0%)
	None of the above	8 (8.0%)
	Total valid	100 (100.0%)



Question	Response	Number of Respondents (%)
	response	
	Total missing	13

Table 4.6

Question	Response	Number of Respondents (%)
Did you have trouble paying for food at anytime during the past year?	Yes	31 (31.0)
	No	69 (69.0)
	Total Valid Response	100 (100.0)
	Total missing	13

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	25 (25.3)
	Income	6 (6.1)
	Place where you live	3 (3.0)
	Tribal affiliation	1 (1.0)
	None of the above	69 (69.7)
	Total valid response	99 (100.0)
	Total missing	14

Table 4.8

Question	Response	Number of Respondents (%)
Which of the following do you worry about most?	Food	7 (7.1)
	Money	7 (7.1)
	Health	71 (71.7)
	Family	10 (10.1)

Question	Response	Number of Respondents (%)
	None of the above	4 (4.0)
	Total Valid Response	99 (100.0)
	Total missing	14

Table 5.1

Question	Response	Number of Respondents (%)
In general, would you say your health is:	Very good	2 (2.1%)
	Good	9 (9.3%)
	Total good health	11 (11.3%)
	Fair	54 (55.7%)
	Poor	32 (33.0%)
	Fair or poor health	86 (88.7%)
	Total valid response	97 (100.0%)
	Total missing	16

Table 5.2

Question	Response	Number of Respondents (%)
How many days during last 30 days was your physical health not good	Any unhealthy days	45 (72.6%)
	1-5 unhealthy days	7 (11.3%)
	6-10 unhealthy days	9 (14.5%)
	11-20 unhealthy days	13 (21.0%)
	21-30 unhealthy days	16 (25.8%)
	No unhealthy days	17 (27.4%)
	Total valid response	62 (100.0%)
	Total missing	51

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	21 (35.6%)
	1-5 unhealthy days	5 (8.5%)
	6-10 unhealthy days	8 (13.6%)
	11-20 unhealthy days	1 (1.7%)
	21-30 unhealthy days	7 (11.9%)
	No unhealthy days	38 (64.4%)
	Total valid response	59 (100.0%)
	Total missing	54

Table 5.3.2

Question	Response	Number of Respondents (%)
Unhealthy days (physically or mentally unhealthy, max 30)	Any unhealthy days	52 (78.8%)
	1-5 unhealthy days	11 (16.7%)
	6-10 unhealthy days	11 (16.7%)
	11-20 unhealthy days	10 (15.2%)
	21-30 unhealthy days	20 (30.3%)
	No unhealthy days	14 (21.2%)
	Total valid response	66 (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	24 (51.1%)

Question	Response	Number of Respondents (%)
	1-5 unhealthy days	9 (19.1%)
	6-10 unhealthy days	8 (17.0%)
	11-20 unhealthy days	2 (4.3%)
	21-30 unhealthy days	5 (10.6%)
	No unhealthy days	23 (48.9%)
	Total valid response	47 (100.0%)
	Total missing	66

Table 5.5

Question	Response	Number of Respondents (%)
Are you limited in any way in any activities because of any impairment or health problem?	Yes	57 (66.3%)
	No	29 (33.7%)
	Total valid response	86 (100.0%)
	Total missing	27
Which impairment or health problem, if any, limits your activities?		
a) Arthritis/rheumatism	Yes	26 (44.8%)
	No	30 (51.7%)
	Don't know/Not sure	2 (3.4%)
	Total valid response	58 (100.0%)
	Total missing	55
b) Back or neck problem	Yes	45 (73.8%)
	No	16 (26.2%)
	Total valid response	61 (100.0%)
	Total missing	52



Question	Response	Number of Respondents (%)
c) Fractures, bone/joint injury	Yes	17 (29.8%)
	No	39 (68.4%)
	Don't know/Not sure	1 (1.8%)
	Total valid response	57 (100.0%)
	Total missing	56
d) Walking problem	Yes	39 (67.2%)
	No	17 (29.3%)
	Don't know/Not sure	2 (3.4%)
	Total valid response	58 (100.0%)
	Total missing	55
e) Lung/breathing problem	Yes	28 (50.0%)
	No	28 (50.0%)
	Total valid response	56 (100.0%)
	Total missing	57
f) Hearing problem	Yes	18 (31.6%)
	No	39 (68.4%)
	Total valid response	57 (100.0%)
	Total missing	56
g) Eye/vision problem	Yes	52 (78.8%)
	No	14 (21.2%)
	Total valid response	66 (100.0%)
	Total missing	47
h) Heart problem	Yes	39 (68.4%)
	No	17 (29.8%)
	Don't know/Not sure	1 (1.8%)
	Total valid response	57 (100.0%)
	Total missing	56

Question	Response	Number of Respondents (%)
i) Stroke problem	Yes	7 (13.0%)
	No	47 (87.0%)
	Total valid response	54 (100.0%)
	Total missing	59
j) Hypertension/high blood pressure	Yes	45 (81.8%)
	No	10 (18.2%)
	Total valid response	55 (100.0%)
	Total missing	58
k) Diabetes	Yes	57 (93.4%)
	No	3 (4.9%)
	Don't know/Not sure	1 (1.6%)
	Total valid response	61 (100.0%)
	Total missing	52
I) Cancer	Yes	1 (1.8%)
	No	55 (96.5%)
	Refused	1 (1.8%)
	Total valid response	57 (100.0%)
	Total missing	56
m) Mental or emotional health	Yes	7 (11.5%)
	No	14 (23.0%)
	Don't know/Not sure	36 (59.0%)
	Refused	4 (6.6%)
	Total valid response	61 (100.0%)
	Total missing	52

PT 1.2



Analysis Sets	Number of Respondents (%)
All valid respondents	65 (100.0%)
Included in Provider Analysis Set (PAS)	65 (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	65
Included in the Eye Care Professional Set (Eye Specialist)	54 (83.1%)
Excluded in the Eye Care Professional Set (Eye Specialist)	11 (16.9%)
Reasons for exclusion from Eye Care Professional Set:	
Missing required speciality	11
No valid (non-missing) response for the supplemental eye questionnaire	0

PT 1.3

Subgroups	Number of Respondents (%)
Provider Analysis Set	65 (100.0%)
Primary Care Provider	1 (1.5%)
Diabetes Specialist Provider	7 (10.8%)
Eye Care Professional	54 (83.1%)
Ophthalmologist	19 (29.2%)

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	1 (100.0%)	0 (0.0%)	0 (0.0%)	1 (1.5%)
	Diabetes specialist	0 (0.0%)	7 (100.0%)	0 (0.0%)	8 (12.3%)
	General ophthalmologist	0 (0.0%)	0 (0.0%)	7 (36.8%)	7 (10.8%)
	Optometrist	0 (0.0%)	0 (0.0%)	6 (31.6%)	41 (63.1%)

ltem	Response	Primary Care Provider	Diabetes Specialist Provider	Ophthalmologist	PAS
	Retinal specialist	0 (0.0%)	0 (0.0%)	15 (78.9%)	15 (23.1%)
	Nurse	0 (0.0%)	0 (0.0%)	1 (5.3%)	2 (3.1%)
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%)	2 (3.1%)
	Total valid response	1 (100.0%)	7 (100.0%)	19 (100.0%)	65 (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)	1	7	19	65
	Mean	27.0	11.3	16.0	13.7
	SD	•	8.7	10.7	9.5
	Median	27.0	5.0	14.0	12.0
	Min.	27	5	1	0
	Max.	27	27	39	39
	Total missing	0	0	0	0

Question	Response	Primary Care Provider	Diabetes Specialist Provider	Ophthalmologist	PAS
What is your main practice setting?	Diabetes clinic/practice	0 (0.0%)	2 (28.6%)	1 (5.3%)	4 (6.2%)
	Eye clinic/practice	1 (100.0%)	0 (0.0%)	14 (73.7%)	51 (78.5%)
	General medical clinic/practice	0 (0.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)
	General medical clinic/practice	0 (0.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)



Question	Response	Primary Care Provider	Diabetes Specialist Provider	Ophthalmologist	PAS
	Hospital	0 (0.0%)	5 (71.4%)	3 (15.8%)	8 (12.3%)
	Other	0 (0.0%)	0 (0.0%)	1 (5.3%)	2 (3.1%)
	Total Valid Response	1 (100.0%)	7 (100.0%)	19 (100.0%)	65 (100.0%)

Question	Response	Primary Care Provider	Diabetes Specialist Provider	Ophthalmologist	PAS
Where is your main practice located?	Urban setting	1 (100.0%)	7 (100.0%)	18 (94.7%)	63 (96.9%)
	Non-urban setting	0 (0.0%)	0 (0.0%)	1 (5.3%)	2 (3.1%)
	Total Valid Response	1 (100.0%)	7 (100.0%)	19 (100.0%)	65 (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 (100.0%)	4 (57.1%)	13 (68.4%)	52 (80.0%)
	Private	0 (0.0%)	1 (14.3%)	2 (10.5%)	3 (4.6%)
	Non profit	0 (0.0%)	1 (14.3%)	1 (5.3%)	2 (3.1%)
	Combined/mixed	0 (0.0%)	1 (14.3%)	3 (15.8%)	8 (12.3%)
	Total Valid Response	1 (100.0%)	7 (100.0%)	19 (100.0%)	65 (100.0%)
	Non profit	0	0	0	0

Question	Response	Primary Care Provider	Diabetes Specialist Provider	Ophthalmologist	PAS
ls your main	No	1 (100.0%)	3 (42.9%)	12 (63.2%)	51

Question	Response	Primary Care Provider	Diabetes Specialist Provider	Ophthalmologist	PAS
practice limited to certain populations?					(78.5%)
	Yes, limited by age	0 (0.0%)	1 (14.3%)	2 (10.5%)	3 (4.6%)
	Yes, limited by gender	0 (0.0%)	1 (14.3%)	0 (0.0%)	1 (1.5%)
	Yes, limited to persons in the military or veterans	0 (0.0%)	0 (0.0%)	1 (5.3%)	1 (1.5%)
	Yes, limited to persons with health insurance	0 (0.0%)	1 (14.3%)	2 (10.5%)	5 (7.7%)
	Yes, limited to low income or uninsured persons	0 (0.0%)	1 (14.3%)	0 (0.0%)	3 (4.6%)
	Yes, limited to persons who pay out-of-pocket	0 (0.0%)	0 (0.0%)	2 (10.5%)	5 (7.7%)
	Yes, other	0 (0.0%)	0 (0.0%)	1 (5.3%)	2 (3.1%)
	Total valid response	1 (100.0%)	7 (100.0%)	19 (100.0%)	65 (100.0%)
	Total missing	0	0	0	0

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	0 (0.0%)	5 (71.4%)	7 (36.8%)	21 (32.3%)
	More than 1 week but less than 1 month	0 (0.0%)	2 (28.6%)	5 (26.3%)	20 (30.8%)
	More than 1 month but less than 2 months	0 (0.0%)	0 (0.0%)	3 (15.8%)	6 (9.2%)



Question	Response	Primary Care Provider	Diabetes Specialist Provider	Ophthalmologist	PAS
	More than 2 months but less than 3 months	0 (0.0%)	0 (0.0%)	0 (0.0%)	1 (1.5%)
	Do not take appointments	0 (0.0%)	0 (0.0%)	2 (10.5%)	9 (13.8%)
	Other	1 (100.0%)	0 (0.0%)	1 (5.3%)	5 (7.7%)
	Don't know/Not sure		0 (0.0%)	1 (5.3%)	3 (4.6%)
	Total Valid Response	1 (100.0%)	7 (100.0%)	19 (100.0%)	65 (100.0%)

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)	1	7	19	64
	Mean	60	33.9	59.8	61.5
	SD		35.1	38.7	43.4
	Median	60	15	50	50
	Min.	60	5	1	1
	Max.	60	100	150	200
	Total missing	0	0	0	1
What percentage of the patients in your main practice have diabetes [% patients]	Total valid response (n)	1	7	19	65
	Mean	70	37.1	29.5	29.3
	SD		38.9	22.8	20.2
	Median	70	10	25	30
	Min.	70	5	2	2
	Max.	70	100	80	100
	Total missing	0	0	0	0

PΤ	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	0 (0.0%)	4 (57.1%)	2 (10.5%)	19 (29.2%)
	Pay a reduced/subsidized rate	0 (0.0%)	1 (14.3%)	0 (0.0%)	2 (3.1%)
	Pay out-of-pocket (full fees)	1 (100.0%)	1 (14.3%)	10 (52.6%)	36 (55.4%)
	Pay through insurance	1 (100.0%)	4 (57.1%)	12 (63.2%)	37 (56.9%)
	Patient pays some, insurance pays some	0 (0.0%)	1 (14.3%)	6 (31.6%)	16 (24.6%)
	Other	0 (0.0%)	0 (0.0%)	8 (42.1%)	14 (21.5%)
	Total valid response	1 (100.0%)	7 (100.0%)	19 (100.0%)	65 (100.0%)
	Total missing	0	0	0	0

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 (100.0%)	4 (57.1%)	5 (26.3%)	15 (23.1%)
	No		3 (42.9%)	14 (73.7%)	50 (76.9%)
	Total valid response	1 (100.0%)	7 (100.0%)	19 (100.0%)	65 (100.0%)
In which other practice setting(s) do you work?	Hospital	1 (100.0%)	2 (50.0%)	3 (60.0%)	8 (53.3%)
	General medical		1 (25.0%)		1 (6.7%)



Question	Response	Primary Care Provider	Diabetes Specialist Provider	Ophthalmologist	PAS
	clinic/practice				
	Eye clinic/practice			3 (60.0%)	3 (20.0%)
	Other		1 (25.0%)		4 (26.7%)
	Total valid response	1 (100.0%)	4 (100.0%)	5 (100.0%)	15 (100.0%)
	Total missing		3	14	50
In which sector(s) is(are) the practice(s)?	Government	1 (100.0%)	2 (50.0%)	3 (60.0%)	9 (60.0%)
	Private		2 (50.0%)	2 (40.0%)	6 (40.0%)
	Total valid response	1 (100.0%)	4 (100.0%)	5 (100.0%)	15 (100.0%)
	Total missing		3	14	50
Is there a major difference between your practices with respect to how diabetic eye disease is screened and managed?	Yes		1 (25.0%)	2 (40.0%)	5 (33.3%)
	No	1 (100.0%)	3 (75.0%)	3 (60.0%)	10 (66.7%)
	Total valid response	1 (100.0%)	4 (100.0%)	5 (100.0%)	15 (100.0%)
	Total missing		3	14	50

Type of Test	Yes/No	How often/year	Primary Care Provider	Diabetes Specialist Provider	Ophthalmologist	PAS
Blood glucose	Yes		1 (100.0%)	5 (100.0%)	11 (84.6%)	48 (90.6%)
		Total valid numeric response (n)	1 (100.0%)	5 (100.0%)	11 (84.6%)	47 (88.7%)
		Mean	12.0	79.0	154.1	50.5
		SD		159.9	176.7	113.6

Type of Test	Yes/No	How often/year	Primary Care Provider	Diabetes Specialist Provider	Ophthalmologist	PAS
		Median	12.0	12.0	12.0	6.0
		Min	12	1	0	0
		Max	12	365	365	365
		Total missing	0	2	8	18
	No		•		2 (15.4%)	5 (9.4%)
	Total valid response		1 (100.0%)	5 (100.0%)	13 (100.0%)	53 (100.0%)
	Total missing			2	6	12
HbA1c	Yes			5 (100.0%)	7 (63.6%)	25 (53.2%)
		Total valid numeric response (n)	0 (0.0%)	5 (100.0%)	7 (63.6%)	24 (51.1%)
		Mean		5.2	5.0	4.8
		SD		5.6	3.1	5.0
		Median		4.0	4.0	4.0
		Min		1	3	0
		Max		15	12	20
		Total missing	1	2	12	41
	No		1 (100.0%)		4 (36.4%)	22 (46.8%)
	Total valid response		1 (100.0%)	5 (100.0%)	11 (100.0%)	47 (100.0%)
	Total missing			2	8	18
Urine check	Yes		1 (100.0%)	5 (100.0%)	9 (81.8%)	41 (83.7%)
		Total valid numeric response (n)	1 (100.0%)	5 (100.0%)	9 (81.8%)	40 (81.6%)
		Mean	12.0	4.0	3.7	5.6
		SD		4.6	3.6	5.4



Type of Test	Yes/No	How often/year	Primary Care Provider	Diabetes Specialist Provider	Ophthalmologist	PAS
		Median	12.0	2.0	4.0	4.0
		Min	12	1	0	0
		Max	12	12	12	25
		Total missing	0	2	10	25
	No				2 (18.2%)	8 (16.3%)
	Total valid response		1 (100.0%)	5 (100.0%)	11 (100.0%)	49 (100.0%)
	Total missing			2	8	16
Weight check	Yes		1 (100.0%)	5 (100.0%)	3 (33.3%)	24 (51.1%)
	1	Total valid numeric response (n)	1 (100.0%)	5 (100.0%)	3 (33.3%)	23 (48.9%)
		Mean	12.0	6.0	6.3	6.0
		SD		5.6	4.9	4.8
		Median	12.0	4.0	4.0	4.0
		Min	12	1	3	0
		Max	12	12	12	12
		Total missing	0	2	16	42
	No				6 (66.7%)	23 (48.9%)
	Total valid response		1 (100.0%)	5 (100.0%)	9 (100.0%)	47 (100.0%)
	Total missing			2	10	18
Blood pressure check	Yes		1 (100.0%)	5 (100.0%)	11 (84.6%)	46 (88.5%)
		Total valid numeric response (n)	1 (100.0%)	5 (100.0%)	11 (84.6%)	45 (86.5%)
		Mean	12.0	78.4	118.1	51.7

Type of Test	Yes/No	How often/year	Primary Care Provider	Diabetes Specialist Provider	Ophthalmologist	PAS
		SD		160.3	162.1	114.0
		Median	12.0	12.0	12.0	10.0
		Min	12	1	0	0
		Max	12	365	365	365
		Total missing	0	2	8	20
	No				2 (15.4%)	6 (11.5%)
	Total valid response		1 (100.0%)	5 (100.0%)	13 (100.0%)	52 (100.0%)
	Total missing			2	6	13
Foot check	Yes			4 (80.0%)	6 (60.0%)	24 (52.2%)
	1	Total valid numeric response (n)	0 (0.0%)	4 (80.0%)	5 (50.0%)	22 (47.8%)
		Mean		93.3	3.2	19.2
		SD		181.2	1.9	77.3
		Median		3.5	4.0	2.5
		Min		1	0	0
		Max		365	5	365
		Total missing	1	3	14	43
	No		1 (100.0%)	1 (20.0%)	4 (40.0%)	22 (47.8%)
	Total valid response		1 (100.0%)	5 (100.0%)	10 (100.0%)	46 (100.0%)
	Total missing			2	9	19
Eye examination - Un-dilated	Yes		1 (100.0%)	5 (100.0%)	12 (85.7%)	52 (96.3%)
		Total valid numeric response (n)	1 (100.0%)	5 (100.0%)	12 (85.7%)	49 (90.7%)



Type of Test	Yes/No	How often/year	Primary Care Provider	Diabetes Specialist Provider	Ophthalmologist	PAS
		Mean	0.0	6.4	62.4	26.5
		SD		10.5	141.3	87.7
		Median	0.0	1.0	2.0	3.0
		Min	0	1	0	0
		Max	0	25	365	365
		Total missing	0	2	7	16
	No				2 (14.3%)	2 (3.7%)
	Total valid response		1 (100.0%)	5 (100.0%)	14 (100.0%)	54 (100.0%)
	Total missing			2	5	11
Eye examination - Optical Coherence Tomography	Yes		1 (100.0%)	1 (25.0%)	15 (88.2%)	53 (91.4%)
		Total valid numeric response (n)	1 (100.0%)	1 (25.0%)	12 (70.6%)	47 (81.0%)
		Mean	2.0	1.0	62.4	33.1
		SD			141.3	102.3
		Median	2.0	1.0	2.5	2.0
		Min	2	1	0	0
		Max	2	1	365	365
		Total missing	0	6	7	18
	No			3 (75.0%)	2 (11.8%)	5 (8.6%)
	Total valid response		1 (100.0%)	4 (100.0%)	17 (100.0%)	58 (100.0%)
	Total missing			3	2	7
Eye examination - Fundoscopy	Yes		1 (100.0%)	4 (100.0%)	16 (100.0%)	57 (100.0%)

Type of Test	Yes/No	How often/year	Primary Care Provider	Diabetes Specialist Provider	Ophthalmologist	PAS
		Total valid numeric response (n)	1 (100.0%)	3 (75.0%)	15 (93.8%)	52 (91.2%)
		Mean	2.0	9.3	51.5	32.4
		SD		13.6	127.3	97.2
		Median	2.0	2.0	4.0	4.0
		Min	2	1	0	0
		Max	2	25	365	365
		Total missing	0	4	4	13
	Total valid response		1 (100.0%)	4 (100.0%)	16 (100.0%)	57 (100.0%)
	Total missing			3	3	8
Eye examination - Fluorescein Angiography	Yes		1 (100.0%)		14 (87.5%)	42 (75.0%)
	<u>.</u>	Total valid numeric response (n)	1 (100.0%)	0 (0.0%)	13 (81.3%)	40 (71.4%)
		Mean	2.0		56.9	23.3
		SD		-	136.7	82.8
		Median	2.0		1.0	1.0
		Min	2		0	0
		Max	2		365	365
		Total missing	0	7	6	25
	No			4 (100.0%)	2 (12.5%)	14 (25.0%)
	Total valid response		1 (100.0%)	4 (100.0%)	16 (100.0%)	56 (100.0%)
	Total missing			3	3	9
Eye examination -	Yes		1 (100.0%)	2 (50.0%)	3 (33.3%)	19 (44.2%)



Type of Test	Yes/No	How often/year	Primary Care Provider	Diabetes Specialist Provider	Ophthalmologist	PAS
Lipid check						
		Total valid numeric response (n)	1 (100.0%)	2 (50.0%)	3 (33.3%)	18 (41.9%)
		Mean	4.0	3.0	3.3	3.4
		SD		1.4	2.3	4.1
		Median	4.0	3.0	2.0	2.0
		Min	4	2	2	0
		Max	4	4	6	18
		Total missing	0	5	16	47
	No			2 (50.0%)	6 (66.7%)	24 (55.8%)
	Total valid response		1 (100.0%)	4 (100.0%)	9 (100.0%)	43 (100.0%)
	Total missing			3	10	22

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	1 (100.0%)	5 (71.4%)	14 (77.8%)	51 (82.3%)
	Diet/nutrition	1 (100.0%)	5 (71.4%)	9 (50.0%)	40 (64.5%)
	Exercise/physical activity	1 (100.0%)	5 (71.4%)	3 (16.7%)	30 (48.4%)
	Medicines	1 (100.0%)	5 (71.4%)	10 (55.6%)	50 (80.6%)
	Foot care and inspection	0 (0.0%)	4 (57.1%)	3 (16.7%)	18 (29.0%)
	Blood pressure	1	3 (42.9%)	13 (72.2%)	48

Question	Response	Primary Care Provider	Diabetes Specialist Provider	Ophthalmologist	PAS
		(100.0%)			(77.4%)
	Eye care and exams	1 (100.0%)	4 (57.1%)	15 (83.3%)	55 (88.7%)
	Lipid check	1 (100.0%)	4 (57.1%)	3 (16.7%)	29 (46.8%)
	Total valid response	1 (100.0%)	7 (100.0%)	18 (100.0%)	62 (100.0%)
	Total missing	0	0	1	3

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	1 (100.0%)	4 (57.1%)	5 (27.8%)	27 (43.5%)
	Yes, but information on eye complications is not sufficient	0 (0.0%)	2 (28.6%)	1 (5.6%)	9 (14.5%)
	Yes, but no information on eye complications is included	0 (0.0%)	1 (14.3%)	2 (11.1%)	4 (6.5%)
	No written information is available for patients	0 (0.0%)	0 (0.0%)	9 (50.0%)	19 (30.6%)
	Don't know/Not sure	0 (0.0%)	0 (0.0%)	1 (5.6%)	3 (4.8%)
	Total Valid Response	1 (100.0%)	7 (100.0%)	18 (100.0%)	62 (100.0%)
	Total missing	0	0	1	3



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	0 (0.0%)	4 (57.1%)	11 (64.7%)	37 (60.7%)
	Yes, available but not used by staff	0 (0.0%)	1 (14.3%)	1 (5.9%)	3 (4.9%)
	Not available	1 (100.0%)	0 (0.0%)	3 (17.6%)	11 (18.0%)
	Don't know/Not sure	0 (0.0%)	2 (28.6%)	2 (11.8%)	10 (16.4%)
	Total Valid Response	1 (100.0%)	7 (100.0%)	17 (100.0%)	61 (100.0%)
	Total missing	0	0	2	4

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 (100.0%)	5 (71.4%)	12 (70.6%)	44 (72.1%)
	Yes, available but not used by staff	0 (0.0%)	1 (14.3%)	1 (5.9%)	3 (4.9%)
	Not available	0 (0.0%)	1 (14.3%)	2 (11.8%)	7 (11.5%)
	Don't know/Not sure	0 (0.0%)	0 (0.0%)	2 (11.8%)	7 (11.5%)
	Total Valid	1	7 (100.0%)	17 (100.0%)	61

Question	Response	Primary Care Provider	Diabetes Specialist Provider	Ophthalmologist	PAS
	Response	(100.0%)			(100.0%)
	Total missing	0	0	2	4

Question	Response	Primary Care	Diabetes Specialist	Ophthalmologist	PAS
		Provider	Provider		
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%)	3 (42.9%)	0 (0.0%)	3 (5.1%)
	Mean		5.0		5.0
	SD		0.0	-	0.0
	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		I		
	SD				
	Median				
	Min				
	Max				
	As soon as they are diagnosed	1 (100.0%)	3 (42.9%)	12 (80.0%)	43 (72.9%)
	When a patient reports eye/vision problems			2 (13.3%)	8 (13.6%)
	No standard practice, timing varies case by case			1 (6.7%)	3 (5.1%)
	Don't know/Not	1	1 (14.3%)		1 (1.7%)


Question	Response	Primary Care Provider	Diabetes Specialist Provider	Ophthalmologist	PAS
	sure				
	Other			-	1 (1.7%)
	Total valid response	1 (100.0%)	7 (100.0%)	15 (100.0%)	59 (100.0%)
	Total missing			4	6
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%)	1 (14.3%)	0 (0.0%)	2 (3.3%)
	Mean		8.0		6.5
	SD			1	2.1
	Median		8.0]	6.5
	Min		8		5
	Max		8		8
	After a predetermined age (numeric response) (n)	0 (0.0%)	0 (0.0%)	0 (0.0%)	1 (1.7%)
	Mean			1	5.0
	SD				
	Median				5.0
	Min				5
	Max				5
	As soon as they are diagnosed	1 (100.0%)	6 (85.7%)	14 (87.5%)	49 (81.7%)
	When a patient reports eye/vision problems			1 (6.3%)	4 (6.7%)
	No standard practice, timing varies case by case			1 (6.3%)	3 (5.0%)
	Other			L	1 (1.7%)
	Total valid response	1 (100.0%)	7 (100.0%)	16 (100.0%)	60 (100.0%)

Question	Response	Primary Care Provider	Diabetes Specialist Provider	Ophthalmologist	PAS
	Total missing			3	5

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	1 (100.0%)	4 (66.7%)	11 (73.3%)	36 (63.2%)
	Every two years	0 (0.0%)	1 (16.7%)	1 (6.7%)	4 (7.0%)
	More than every two years	0 (0.0%)	1 (16.7%)	0 (0.0%)	1 (1.8%)
	Only when symptoms are present	0 (0.0%)	0 (0.0%)	0 (0.0%)	1 (1.8%)
	Other	0 (0.0%)	0 (0.0%)	3 (20.0%)	15 (26.3%)
	Total Valid Response	1 (100.0%)	6 (100.0%)	15 (100.0%)	57 (100.0%)
	Total missing	0	1	4	8

PT 2.16

Question	Response	Primary Care Provider	Diabetes Specialist Provider	Ophthalmologist	PAS
Do you screen patients for DR?	Yes		3 (50.0%)	15 (93.8%)	54 (91.5%)
	No	1 (100.0%)	3 (50.0%)	1 (6.3%)	5 (8.5%)
	Total valid response	1 (100.0%)	6 (100.0%)	16 (100.0%)	59 (100.0%)
	Total missing		1	3	6
Where do you screen patients?	In clinic		3 (100.0%)	14 (100.0%)	53 (100.0%)
	Outreach			1 (7.1%)	6 (11.3%)



Question	Response	Primary Care Provider	Diabetes Specialist Provider	Ophthalmologist	PAS
	Other			2 (14.3%)	2 (3.8%)
	Total valid response		3 (100.0%)	14 (100.0%)	53 (100.0%)
	Total missing	1	4	5	12

PT 2.17

Question	Response	Primary Care Provider	Diabetes Specialist Provider	Ophthalmologist	PAS
What patient characteristics influence your vision care and/or vision referrals?	Diabetes duration	1 (100.0%)	2 (33.3%)	8 (53.3%)	27 (50.9%)
	Patient's age	1 (100.0%)	2 (33.3%)	3 (20.0%)	14 (26.4%)
	Patient's gender	0 (0.0%)	0 (0.0%)	0 (0.0%)	4 (7.5%)
	Presence of comorbidities such as hypertension, etc.	0 (0.0%)	1 (16.7%)	6 (40.0%)	21 (39.6%)
	High glucose levels	1 (100.0%)	2 (33.3%)	5 (33.3%)	23 (43.4%)
	Ability or inability to pay	0 (0.0%)	0 (0.0%)	1 (6.7%)	2 (3.8%)
	Insurance restrictions	0 (0.0%)	0 (0.0%)	0 (0.0%)	1 (1.9%)
	Patient adherence to recommendations	0 (0.0%)	0 (0.0%)	3 (20.0%)	5 (9.4%)
	None of the above	0 (0.0%)	0 (0.0%)	1 (6.7%)	6 (11.3%)
	Not applicable	0 (0.0%)	2 (33.3%)	5 (33.3%)	16 (30.2%)
	Total valid response	1 (100.0%)	6 (100.0%)	15 (100.0%)	53 (100.0%)
	Total missing	0	1	4	12

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%)	7 (46.7%)	26 (47.3%)
	Proximity to care	0 (0.0%)	0 (0.0%)	2 (13.3%)	8 (14.5%)
	Long wait time for appointment	0 (0.0%)	0 (0.0%)	4 (26.7%)	7 (12.7%)
	Long wait time on the day of visit	1 (100.0%)	0 (0.0%)	3 (20.0%)	6 (10.9%)
	Referral process	0 (0.0%)	0 (0.0%)	4 (26.7%)	10 (18.2%)
	Recommended treatments are not available	0 (0.0%)	3 (50.0%)	1 (6.7%)	4 (7.3%)
	Lack of knowledge and/or awareness	0 (0.0%)	2 (33.3%)	2 (13.3%)	9 (16.4%)
	Patients fear of treatment/results	0 (0.0%)	0 (0.0%)	3 (20.0%)	12 (21.8%)
	Patients they are a burden on family/friends	0 (0.0%)	0 (0.0%)	1 (6.7%)	2 (3.6%)
	Limited access to diabetes specialists	0 (0.0%)	0 (0.0%)	8 (53.3%)	25 (45.5%)
	Limited access to eye specialists	0 (0.0%)	2 (33.3%)	7 (46.7%)	18 (32.7%)
	Patients feel eye complications are unlikely	0 (0.0%)	1 (16.7%)	9 (60.0%)	22 (40.0%)
	Patients feel eye exams are not important	0 (0.0%)	1 (16.7%)	9 (60.0%)	24 (43.6%)
	Patients have competing responsibilities and priorities	0 (0.0%)	0 (0.0%)	2 (13.3%)	8 (14.5%)
	Clinic too small or lack necessary	0 (0.0%)	2 (33.3%)	0 (0.0%)	2 (3.6%)



Question	Response	Primary Care Provider	Diabetes Specialist Provider	Ophthalmologist	PAS
	equipment/staff				
	Other	0 (0.0%)	1 (16.7%)	1 (6.7%)	8 (14.5%)
	Total valid response	1 (100.0%)	6 (100.0%)	15 (100.0%)	55 (100.0%)
	Total missing	0	1	4	10

PT 2.19

Question	Response	Primary Care Provider	Diabetes Specialist Provider	Ophthalmologist	PAS
In your main practice, are patients contacted with reminders for general follow-up appointments?	Yes	1 (100.0%)	3 (50.0%)	11 (73.3%)	47 (83.9%)
	No	0 (0.0%)	3 (50.0%)	2 (13.3%)	6 (10.7%)
	Don't know/Not sure	0 (0.0%)	0 (0.0%)	2 (13.3%)	3 (5.4%)
	Total Valid Response	1 (100.0%)	6 (100.0%)	15 (100.0%)	56 (100.0%)
	Total missing	0	1	4	9

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 (100.0%)	5 (83.3%)	12 (80.0%)	46 (82.1%)
	No	0 (0.0%)	1 (16.7%)	3 (20.0%)	8 (14.3%)
	Don't know/Not	0 (0.0%)	0 (0.0%)	0 (0.0%)	2 (3.6%)

Question	Response	Primary Care Provider	Diabetes Specialist Provider	Ophthalmologist	PAS
	sure				
	Total Valid Response	1 (100.0%)	6 (100.0%)	15 (100.0%)	56 (100.0%)
	Total missing	0	1	4	9

PT 3.1

Question	Response	Primary Care Provider	Diabetes Specialist Provider	Ophthalmologist	PAS
Please indicate your age:	18 - 29			2 (13.3%)	8 (14.3%)
	30 - 39		3 (50.0%)	5 (33.3%)	23 (41.1%)
	40 - 49		2 (33.3%)	3 (20.0%)	12 (21.4%)
	50 - 59	1 (100.0%)		4 (26.7%)	11 (19.6%)
	60 - 69		1 (16.7%)	1 (6.7%)	2 (3.6%)
	Total valid response	1 (100.0%)	6 (100.0%)	15 (100.0%)	56 (100.0%)
	Total missing		1	4	9
What is your gender?	Female	1 (100.0%)	4 (66.7%)	10 (66.7%)	38 (67.9%)
	Male		2 (33.3%)	5 (33.3%)	18 (32.1%)
	Total valid response	1 (100.0%)	6 (100.0%)	15 (100.0%)	56 (100.0%)
	Total missing		1	4	9
What is your highest level of education completed?	Secondary School		1 (16.7%)		1 (1.8%)
	College/University	1 (100.0%)	3 (50.0%)	9 (60.0%)	40 (71.4%)
	Graduate or advanced degree (e.g. PhD, MD, etc)		2 (33.3%)	6 (40.0%)	15 (26.8%)



Question	Response	Primary Care Provider	Diabetes Specialist Provider	Ophthalmologist	PAS
	Total valid response	1 (100.0%)	6 (100.0%)	15 (100.0%)	56 (100.0%)
	Total missing		1	4	9

Question	Response	Ophthalmologist
What percentage of your patients have diabetic retinopathy	Total valid numeric response (n)	14
	Mean	27.3
	SD	13.4
	Median	22.5
	Min	7
	Max	50
	Total missing	5

PT 4.2

Question	Response	Ophthalmologist
What percentage of your patients have diabetic macular edema?	Total valid numeric response (n)	15
	Mean	25.3
	SD	16.3
	Median	20.0
	Min	3
	Max	60
	Total missing	4

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?	Less than 1 week	5 (33.3%)
	More than 1 week but less than 1 month	7 (46.7%)
	More than 1 month but	2 (13.3%)

Question	Response	Ophthalmologist
	less than 2 months	
	More than 2 months but less than 3 months	0 (0.0%)
	Do not take appointment	0 (0.0%)
	Other	0 (0.0%)
	Don't know/Not sure	1 (6.7%)
	Total Valid Response	15 (100.0%)
	Total missing	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	2 (13.3%)
	More than 1 week but less than 1 month	2 (13.3%)
	More than 1 month but less than 2 months	1 (6.7%)
	There is not wait, diagnosis is given when screened	10 (66.7%)
	Total Valid Response	15 (100.0%)
	Total missing	4

Type of Treatment	Question	Response/time	Ophthalmologist
Laser photocoagulation	Is the treatment available?	Available within country	7 (46.7%)
		Available locally	11 (73.3%)
		Available in practice	10 (66.7%)
		Total valid response	15 (100.0%)
		Total missing	4
	What is the average amount of time your patients wait for a consultation appointment? (weeks)	Total valid numeric response (n)	11 (91.7%)
		Mean	1.4



Type of Treatment	Question	Response/time	Ophthalmologist
		SD	0.9
		Median	1.0
		Min	0
		Max	3
		Don't know/not sure	1 (8.3%)
		Not applicable	
		Total valid response	12 (100.0%)
		Total missing	7
	What is the average amount of time your patients wait for a first treatment?(weeks)	Total valid numeric response (n)	10 (100.0%)
		Mean	1.3
		SD	0.9
		Median	1.0
		Min	0
		Max	3
		Not applicable	
		Total valid response	10 (100.0%)
		Total missing	9
	What is the average amount of time your patients wait for a second treatment?(weeks)	Total valid numeric response (n)	7 (70.0%)
		Mean	1.4
		SD	2.1
		Median	1.0
		Min	0
		Max	6
		Don't know/not sure	
		Not applicable	3 (30.0%)
		Total valid response	10 (100.0%)
		Total missing	9

Type of Treatment	Question	Response/time	Ophthalmologist
Anti-VEGF therapies	Is the treatment available?	Available within country	7 (46.7%)
		Available locally	11 (73.3%)
		Available in practice	10 (66.7%)
		Total valid response	15 (100.0%)
		Total missing	4
	What is the average amount of time your patients wait for a consultation appointment? (weeks)	Total valid numeric response (n)	12 (92.3%)
		Mean	2.0
		SD	1.3
		Median	1.0
		Min	1
		Max	4
		Don't know/not sure	1 (7.7%)
		Not applicable	
		Total valid response	13 (100.0%)
		Total missing	6
	What is the average amount of time your patients wait for a first treatment?(weeks)	Total valid numeric response (n)	11 (91.7%)
		Mean	2.3
		SD	1.7
		Median	2.0
		Min	0
		Max	5
		Don't know/not sure	1 (8.3%)
		Not applicable	
		Total valid response	12 (100.0%)
		Total missing	7
	What is the average amount of time your patients wait for a second	Total valid numeric	8 (72.7%)



Type of Treatment	Question	Response/time	Ophthalmologist
	treatment?(weeks)	response (n)	
		Mean	2.3
		SD	2.1
		Median	2.0
		Min	0
		Max	6
		Don't know/not sure	
		Not applicable	3 (27.3%)
		Total valid response	11 (100.0%)
		Total missing	8
Intravitreal steroid	Is the treatment available?	Available within country	6 (42.9%)
		Available locally	8 (57.1%)
		Available in practice	8 (57.1%)
		Not available	1 (7.1%)
		Total valid response	14 (100.0%)
		Total missing	5
	What is the average amount of time your patients wait for a consultation appointment? (weeks)	Total valid numeric response (n)	8 (72.7%)
		Mean	2.0
		SD	1.4
		Median	1.0
		Min	1
		Max	4
		Don't know/not sure	3 (27.3%)
		Not applicable	
		Total valid response	11 (100.0%)
		Total missing	8
	What is the average amount of time your patients wait for a first	Total valid numeric response (n)	7 (77.8%)

Type of Treatment	Question	Response/time	Ophthalmologist
	treatment?(weeks)		
		Mean	1.9
		SD	1.5
		Median	1.0
		Min	1
		Max	4
		Don't know/not sure	2 (22.2%)
		Not applicable	
		Total valid response	9 (100.0%)
		Total missing	10
	What is the average amount of time your patients wait for a second treatment?(weeks)	Total valid numeric response (n)	4 (36.4%)
		Mean	1.0
		SD	0.0
		Median	1.0
		Min	1
		Max	1
		Don't know/not sure	3 (27.3%)
		Not applicable	4 (36.4%)
		Total valid response	11 (100.0%)
		Total missing	8
Uncomplicated vitrectomy	Is the treatment available?	Available within country	7 (46.7%)
		Available locally	12 (80.0%)
		Available in practice	9 (60.0%)
		Total valid response	15 (100.0%)
		Total missing	4
	What is the average amount of time your patients wait for a consultation appointment? (weeks)	Total valid numeric response (n)	11 (91.7%)



Type of Treatment	Question	Response/time	Ophthalmologist
		Mean	2.6
		SD	1.6
		Median	3.0
		Min	1
		Max	6
		Don't know/not sure	1 (8.3%)
		Not applicable	
		Total valid response	12 (100.0%)
		Total missing	7
	What is the average amount of time your patients wait for a first treatment?(weeks)	Total valid numeric response (n)	9 (81.8%)
		Mean	2.9
		SD	1.3
		Median	3.0
		Min	1
		Max	4
		Don't know/not sure	2 (18.2%)
		Not applicable	
		Total valid response	11 (100.0%)
		Total missing	8
	What is the average amount of time your patients wait for a second treatment?(weeks)	Total valid numeric response (n)	7 (63.6%)
		Mean	3.4
		SD	3.2
		Median	3.0
		Min	1
		Max	10
		Don't know/not sure	1 (9.1%)
		Not applicable	3 (27.3%)

Type of Treatment	Question	Response/time	Ophthalmologist
		Total valid response	11 (100.0%)
		Total missing	8
Complex vitreo- retinal surgery	Is the treatment available?	Available within country	7 (46.7%)
		Available locally	12 (80.0%)
		Available in practice	8 (53.3%)
		Total valid response	15 (100.0%)
		Total missing	4
	What is the average amount of time your patients wait for a consultation appointment? (weeks)	Total valid numeric response (n)	10 (83.3%)
		Mean	3.0
		SD	2.4
		Median	3.0
		Min	1
		Max	8
		Don't know/not sure	2 (16.7%)
		Not applicable	
		Total valid response	12 (100.0%)
		Total missing	7
	What is the average amount of time your patients wait for a first treatment?(weeks)	Total valid numeric response (n)	9 (81.8%)
		Mean	3.9
		SD	2.6
		Median	3.0
		Min	1
		Max	8
		Don't know/not sure	2 (18.2%)
		Not applicable	
		Total valid	11 (100.0%)



Type of Treatment	Question	Response/time	Ophthalmologist
	·	response	
		Total missing	8
	What is the average amount of time your patients wait for a second treatment?(weeks)	Total valid numeric response (n)	7 (63.6%)
		Mean	4.0
		SD	4.0
		Median	3.0
		Min	1
		Max	12
		Don't know/not sure	1 (9.1%)
		Not applicable	3 (27.3%)
		Total valid response	11 (100.0%)
		Total missing	8

Question	Response	Ophthalmologist
Do you personally administer treatment for diabetic retinopathy?	Yes	12 (85.7%)
	No	2 (14.3%)
	Total valid response	14 (100.0%)
	Total missing	5
Who administer it?	Another provider in your practice	1 (50.0%)
	Refer to a provider at another facility	1 (50.0%)
	Total valid response	2 (100.0%)
	Total missing	17

Question	Response	Ophthalmologist
Do any of the following influence how you treat diabetic retinopathy or diabetic macular edema?	Diabetes duration	9 (75.0%)

Question	Response	Ophthalmologist
	Patient's age	7 (58.3%)
	Patient's gender	
	Presence of comorbidities such as hypertension, etc.	10 (83.3%)
	High glucose levels	8 (66.7%)
	Ability or inability to pay	4 (33.3%)
	Insurance restrictions	2 (16.7%)
	Patient educational level	2 (16.7%)
	Patient adherence to recommendations	4 (33.3%)
	None of the above	
	Not applicable	1 (8.3%)
	Total valid response	12 (100.0%)
	Total missing	7

Question	Response	Ophthalmologist
Do you treat diabetic retinopathy and diabetic macular edema based on:	Visual outcome	3 (23.1%)
	Anatomical outcomes	1 (7.7%)
	Both	7 (53.8%)
	Other	2 (15.4%)
	Total Valid Response	13 (100.0%)
	Total missing	6

Question	Response	Ophthalmologist
How are your patients with diabetes screened for diabetic eye disease?	Fundoscopy undilated	1 (7.7%)
	Fundoscopy dilated	13 (100.0%)
	Retinal photo	8 (61.5%)
	Optical Coherence Tomography	12 (92.3%)
	Fluorescein Angiography	10 (76.9%)



Question	Response	Ophthalmologist
	Other	4 (30.8%)
	Total valid response	13 (100.0%)
	Total missing	6

Question	Response	Ophthalmologist
In your opinion, do the majority of your patients present:	When visual problems have already occurred	9 (69.2%)
	Too late for effective treatment	4 (30.8%)
	Total Valid Response	13 (100.0%)
	Total missing	6

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	9 (69.2%)
	No	4 (30.8%)
	Total valid response	13 (100.0%)
	Total missing	6
If yes, When was your last training?	Five or more years ago	1 (11.1%)
	Greater than 1 year ago but less than 5 years	6 (66.7%)
	Within the past year	2 (22.2%)
	Total valid response	9 (100.0%)
	Total missing	10

Question	Response	Ophthalmologist
Would you be interested in online education and certification on DME, Angiogenesis and Anti-VEGF therapies?	Yes	9 (69.2%)
	No	4 (30.8%)
	Total Valid Response	13 (100.0%)

Question	Response	Ophthalmologist
	Total missing	6

Question	Response	Ophthalmologist
How is outreach for screening for diabetic eye disease done in your main practice?	Health fairs for all	3 (25.0%)
	Health fairs for people with diabetes	3 (25.0%)
	Mobile screening centers	2 (16.7%)
	At vision centers	5 (41.7%)
	Other	3 (25.0%)
	Not done	2 (16.7%)
	Don't know/Not sure	4 (33.3%)
	Total valid response	12 (100.0%)
	Total missing	7

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 (25.0%)
	Late diagnosis	12 (100.0%)
	Referral pathways	4 (33.3%)
	Limited access to patient education on diabetic retinopathy and diabetic macular edema	8 (66.7%)
	No universal guidelines on referral/screening	4 (33.3%)
	No universal guidelines on how to treat	2 (16.7%)
	No universal guideline on when to treat	3 (25.0%)
	Current available therapies not effective	1 (8.3%)
	Government/insurance not able to cover patient costs	5 (41.7%)
	Multi-disciplinary team integration is poor	8 (66.7%)
	Ineffective screening services	3 (25.0%)



Question	Response	Ophthalmologist
	Other	2 (16.7%)
	Total valid response	12 (100.0%)
	Total missing	7

EXP 1

Question	Response	Without DED (%)	With DED (%)	With DME (%)
Which of the following complications of diabetes do you have?	Broken bones or fractures	2 (5.4%)	3 (10.0%)	3 (11.1%)
	Cardiovascular disease/Stroke	14 (37.8%)	18 (60.0%)	6 (22.2%)
	Irritable bowel disease	3 (8.1%)	2 (6.7%)	1 (3.7%)
	Kidney disease	3 (8.1%)	11 (36.7%)	6 (22.2%)
	Loss of feeling in hands or toes (neuropathy)	6 (16.2%)	19 (63.3%)	10 (37.0%)
	Vision loss	12 (32.4%)	14 (46.7%)	25 (92.6%)
	Foot ulcers	1 (2.7%)	0 (0.0%)	0 (0.0%)
	Amputation	1 (2.7%)	0 (0.0%)	0 (0.0%)
	None	13 (35.1%)	1 (3.3%)	0 (0.0%)
	Don't know/Not sure	3 (8.1%)	0 (0.0%)	0 (0.0%)
	Total Valid Response	37 (100.0%)	30 (100.0%)	27 (100.0%)
	Total missing	13	5	1

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.

Limitations	Without DED n (%)	With DED n (%)	With DME n (%)
Limited in any way in any activities because of impairment or health problem	18 (46.2%)	20 (57.1%)	19 (70.4%)
Impairment or health problem			
Diabetes	22 (100.0%)	22 (91.7%)	13 (86.7%)
Hypertension/high blood pressure	18 (85.7%)	18 (85.7%)	9 (69.2%)
Eye/vision problem	18 (81.8%)	17 (68.0%)	17 (89.5%)

Limitations	Without DED n (%)	With DED n (%)	With DME n (%)
Back or neck problem	14 (63.6%)	18 (72.0%)	13 (92.9%)
Walking problem	14 (63.6%)	15 (68.2%)	10 (71.4%)
Heart problem	13 (61.9%)	17 (73.9%)	9 (69.2%)
Lung/breathing problem	12 (57.1%)	10 (45.5%)	6 (46.2%)
Arthritis/rheumatism	8 (36.4%)	12 (52.2%)	6 (46.2%)
Fractures, bone/joint injury	7 (33.3%)	5 (22.7%)	5 (35.7%)
Hearing problem	6 (28.6%)	5 (22.7%)	7 (50.0%)
Mental or emotional health	4 (18.2%)	2 (8.3%)	1 (6.7%)
Stroke problem	2 (9.5%)	3 (15.0%)	2 (15.4%)
Cancer	0 (0.0%)	0 (0.0%)	1 (7.7%)

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 3

Health Status	Without DED (%)	With DED (%)	With DME (%)
Self-rated health: Good	8 (21.1%)	2 (6.3%)	1 (3.7%)
Self-rated health: Poor	30 (78.9%)	30 (93.8%)	26 (96.3%)
Physically unhealthy days	15 (55.6%)	14 (82.4%)	16 (88.9%)
Mentally unhealthy days	11 (39.3%)	5 (33.3%)	5 (31.3%)
Unhealthy days	19 (65.5%)	16 (84.2%)	17 (94.4%)
Activity limitation days	8 (44.4%)	3 (30.0%)	13 (68.4%)

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".

Item	Response	All respondents	Respondents with Type I diabetes	Respondents with Type II diabetes
How do you manage your diabetes?	Diet	74 (70.5%)	15 (62.5%)	57 (73.1%)
	Oral medicine	63 (60.0%)	7 (29.2%)	55 (70.5%)
	Exercise	31 (29.5%)	11 (45.8%)	20 (25.6%)
	Insulin	48 (45.7%)	23 (95.8%)	24 (30.8%)
	Natural/Herbal medicine	19 (18.1%)	4 (16.7%)	15 (19.2%)



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

EXP 5.1

ltem	Response	Without DED (%)	With DED (%)	With DME (%)
Are you currently working?	Working for pay	10 (25.6%)	5 (14.3%)	7 (25.9%)
	Working without pay at home (e.g. housework, farming)	1 (2.6%)	1 (2.9%)	1 (3.7%)
	Volunteering	1 (2.6%)	1 (2.9%)	0 (0.0%)
	Retired	25 (64.1%)	24 (68.6%)	18 (66.7%)
	Not working	2 (5.1%)	4 (11.4%)	1 (3.7%)
	Total Valid Response	39 (100.0%)	35 (100.0%)	27 (100.0%)
	Total missing	11	0	1
Do you receive assistance from the government?	Income assistance	8 (20.5%)	3 (8.8%)	4 (14.8%)
	Medical assistance	13 (33.3%)	17 (50.0%)	15 (55.6%)
	Food assistance	4 (10.3%)	6 (17.6%)	6 (22.2%)
	Housing assistance	6 (15.4%)	0 (0.0%)	4 (14.8%)
	Pension assistance	31 (79.5%)	26 (76.5%)	20 (74.1%)
	None of the above	4 (10.3%)	2 (5.9%)	2 (7.4%)
	Total valid response	39 (100.0%)	34 (100.0%)	27 (100.0%)
	Total missing	11	1	1
Did you have trouble paying for food at anytime during the past year?	Yes	11 (28.2%)	12 (35.3%)	8 (29.6%)
	No	28 (71.8%)	22 (64.7%)	19 (70.4%)
	Total Valid Response	39 (100.0%)	34 (100.0%)	27 (100.0%)
	Total missing	11	1	1

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.

Item	Response	Without DED (%)	With DED (%)	With DME (%)
Are you currently working?	Working for pay	4 (66.7%)	1 (100.0%)	3 (75.0%)
	Retired	2 (33.3%)	0 (0.0%)	1 (25.0%)
	Total Valid Response	6 (100.0%)	1 (100.0%)	4 (100.0%)
	Total missing	1	0	0
Do you receive assistance from the government?	Medical assistance	3 (50.0%)	1 (100.0%)	1 (25.0%)
	Pension assistance	4 (66.7%)	0 (0.0%)	2 (50.0%)
	None of the above	0 (0.0%)	0 (0.0%)	1 (25.0%)
	Total valid response	6 (100.0%)	1 (100.0%)	4 (100.0%)
	Total missing	1	0	0
Did you have trouble paying for food at anytime during the past year?	Yes	1 (16.7%)	1 (100.0%)	0 (0.0%)
	No	5 (83.3%)	0 (0.0%)	4 (100.0%)
	Total Valid Response	6 (100.0%)	1 (100.0%)	4 (100.0%)
	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 pay	5 (62.5%)	4 (36.4%)	4 (66.7%)
	Working without pay at home (e.g. housework, farming)	1 (12.5%)	1 (9.1%)	1 (16.7%)
	Retired	1 (12.5%)	3 (27.3%)	0 (0.0%)
	Not working	1 (12.5%)	3 (27.3%)	1 (16.7%)
	Total Valid Response	8 (100.0%)	11 (100.0%)	6 (100.0%)
	Total missing	1	0	1
Do you receive assistance from the government?	Income assistance	1 (12.5%)	2 (18.2%)	1 (16.7%)



ltem	Response	Without DED (%)	With DED (%)	With DME (%)
	Medical assistance	2 (25.0%)	3 (27.3%)	5 (83.3%)
	Food assistance	1 (12.5%)	0 (0.0%)	0 (0.0%)
	Housing assistance	0 (0.0%)	0 (0.0%)	1 (16.7%)
	Pension assistance	4 (50.0%)	7 (63.6%)	2 (33.3%)
	None of the above	3 (37.5%)	1 (9.1%)	1 (16.7%)
	Total valid response	8 (100.0%)	11 (100.0%)	6 (100.0%)
	Total missing	1	0	1
Did you have trouble paying for food at anytime during the past year?	Yes	1 (12.5%)	0 (0.0%)	0 (0.0%)
	No	7 (87.5%)	11 (100.0%)	6 (100.0%)
	Total Valid Response	8 (100.0%)	11 (100.0%)	6 (100.0%)
	Total missing	1	0	1

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

Item	Response	Without DED (%)	With DED (%)	With DME (%)
Are you currently working?	Working for pay	1 (4.2%)	0 (0.0%)	0 (0.0%)
	Volunteering	1 (4.2%)	1 (4.3%)	0 (0.0%)
	Retired	21 (87.5%)	21 (91.3%)	17 (100.0%)
	Not working	1 (4.2%)	1 (4.3%)	0 (0.0%)
	Total Valid Response	24 (100.0%)	23 (100.0%)	17 (100.0%)
	Total missing	9	0	0
Do you receive assistance from the government?	Income assistance	7 (29.2%)	1 (4.5%)	3 (17.6%)
	Medical assistance	8 (33.3%)	13 (59.1%)	9 (52.9%)
	Food assistance	3 (12.5%)	6 (27.3%)	6 (35.3%)
	Housing assistance	6 (25.0%)	0 (0.0%)	3 (17.6%)

Item	Response	Without DED (%)	With DED (%)	With DME (%)
	Pension assistance	22 (91.7%)	19 (86.4%)	16 (94.1%)
	None of the above	1 (4.2%)	1 (4.5%)	0 (0.0%)
	Total valid response	24 (100.0%)	22 (100.0%)	17 (100.0%)
	Total missing	9	1	0
Did you have trouble paying for food at anytime during the past year?	Yes	9 (37.5%)	11 (50.0%)	8 (47.1%)
	No	15 (62.5%)	11 (50.0%)	9 (52.9%)
	Total Valid Response	24 (100.0%)	22 (100.0%)	17 (100.0%)
	Total missing	9	1	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 5.5: Age group 80+ years

ltem	Response	Without DED (%)	With DED (%)	With DME (%)
Are you currently working?	Retired	1 (100.0%)	0 (0.0%)	0 (0.0%)
	Total Valid Response	1 (100.0%)	0 (0.0%)	0 (0.0%)
Do you receive assistance from the government?	Pension assistance	1 (100.0%)	0 (0.0%)	0 (0.0%)
	Total valid response	1 (100.0%)	0	0
	Total missing	0	0	0
Did you have trouble paying for food at anytime during the past year?	No	1 (100.0%)	0 (0.0%)	0 (0.0%)
	Total Valid Response	1 (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 [2]: DED = respondents with DED ="Yes" minus respondents with NB [3]: DME = respondents with DME ="Yes".

Group	Subgroup	All respondents	Type 1 diabetes	Type 2 diabetes	With DED (%)	With DME (%)
All		113 (100%)	27 (23.9%)	83 (73.5%)	35	28



Group	Subgroup	All respondents	Type 1 diabetes	Type 2 diabetes	With DED (%)	With DME (%)
respondents					(31.0%)	(24.8%)
Gender	Male	19 (19.6%)	4 (21.1%)	15 (78.9%)	4 (21.1%)	5 (26.3%)
	Female	78 (80.4%)	17 (21.8%)	58 (74.4%)	30 (38.5%)	22 (28.2%)
	Total Missing	16	6	10	1	1
Age	18-39 yrs	12 (10.6%)	9 (75.0%)	2 (16.7%)	1 (8.3%)	4 (33.3%)
	40-59 yrs	27 (23.9%)	6 (22.2%)	21 (77.8%)	11 (40.7%)	7 (25.9%)
	60-79 yrs	73 (64.6%)	12 (16.4%)	59 (80.8%)	23 (31.5%)	17 (23.3%)
	80 yrs and over	1 (0.9%)	0 (0.0%)	1 (100.0%)	0 (0.0%)	0 (0.0%)
Time since diagnosis	Within the last year	1 (0.9%)	0 (0.0%)	1 (100.0%)	0 (0.0%)	0 (0.0%)
	1 - 5 years ago	22 (20.2%)	4 (18.2%)	17 (77.3%)	2 (9.1%)	5 (22.7%)
	6 - 10 years ago	28 (25.7%)	4 (14.3%)	24 (85.7%)	8 (28.6%)	7 (25.0%)
	11 - 15 years ago	21 (19.3%)	5 (23.8%)	16 (76.2%)	8 (38.1%)	6 (28.6%)
	16 - 20 years ago	18 (16.5%)	6 (33.3%)	12 (66.7%)	6 (33.3%)	4 (22.2%)
	21 years ago or longer	18 (16.5%)	8 (44.4%)	9 (50.0%)	11 (61.1%)	6 (33.3%)
	Don't know/Not sure	1 (0.9%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)
	Total Missing	4	0	4	0	0
Control of Diabetes	Controlled	74 (71.2%)	16 (21.6%)	57 (77.0%)	24 (32.4%)	17 (23.0%)
	Not controlled	27 (26.0%)	6 (22.2%)	21 (77.8%)	11 (40.7%)	11 (40.7%)
	Don't know/Not sure	3 (2.9%)	1 (33.3%)	0 (0.0%)	0 (0.0%)	0 (0.0%)
	Total Missing	9	4	5	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.

Question	Response	With DED n (%)	With DME n (%)
Have you had any treatment for diabetic eye disease?	Yes	22 (62.9%)	21 (75.0%)
	No	7 (20.0%)	2 (7.1%)
	Don't know/Not sure	6 (17.1%)	5 (17.9%)
	Total valid response	35 (100.0%)	28 (100.0%)
What treatment did you receive?	Laser	12 (54.5%)	16 (80.0%)
	Anti-VEGF	4 (18.2%)	9 (45.0%)
	Surgery	5 (22.7%)	7 (35.0%)
	Other	7 (31.8%)	1 (5.0%)
	Total valid response	22 (100.0%)	20 (100.0%)
	Total missing	13	8
Did you complete the treatment?	Yes	6 (27.3%)	6 (28.6%)
	No	5 (22.7%)	0 (0.0%)
	Still receiving treatment	10 (45.5%)	14 (66.7%)
	Don't know/Not sure	1 (4.5%)	1 (4.8%)
	Total valid response	22 (100.0%)	21 (100.0%)
	Total missing	13	7
Do you feel that the treatment worked?	Yes, and vision improved	7 (41.2%)	7 (33.3%)
	Yes, but vision stayed the same	9 (52.9%)	9 (42.9%)
	Still waiting to know	0 (0.0%)	3 (14.3%)
	Don't know/Not sure	1 (5.9%)	2 (9.5%)
	Total valid response	17 (100.0%)	21 (100.0%)
	Total missing	18	7
What is/are the reason(s) that you did not complete the treatment?	Treatment was not effective	1 (20.0%)	0 (0.0%)
	I was too busy	1 (20.0%)	0 (0.0%)
	Other	4 (80.0%)	0 (0.0%)
	Total valid response	5 (100.0%)	0 (0.0%)
	Total missing	30	28



Question	Response	With DED n (%)	With DME n (%)
What are the reason(s) that you have not had treatment for diabetic eye disease?	My doctor did not recommend any treatment	1 (33.3%)	0 (0.0%)
	Still waiting for treatment	1 (33.3%)	0 (0.0%)
	Other	1 (33.3%)	1 (100.0%)
	Total valid response	3 (100.0%)	1 (100.0%)
	Total missing	32	27

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.



DRBarometer.com









Internation Diabetes Federation