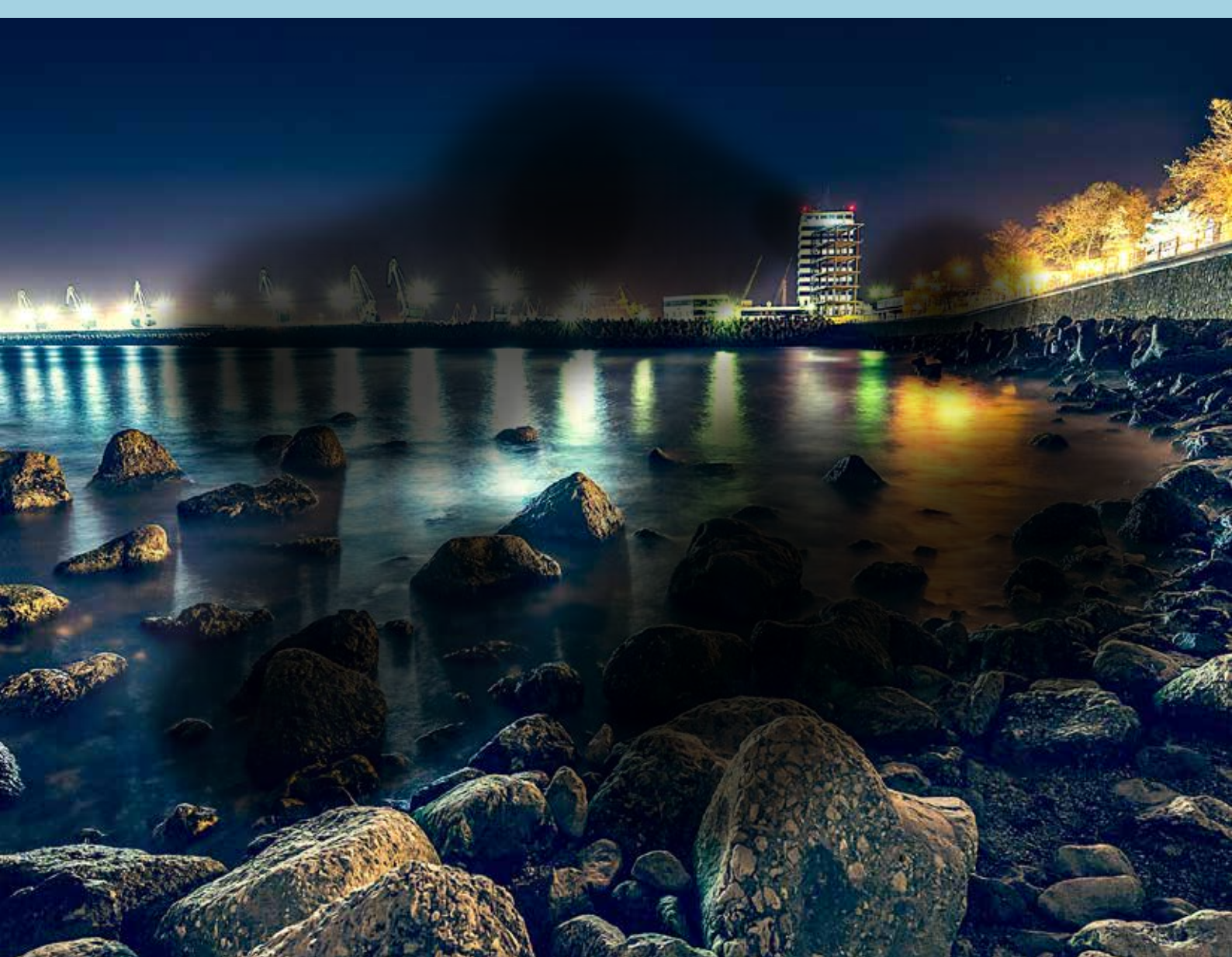


The Diabetic Retinopathy Barometer Report

Romania



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

Introduction

Global Study

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

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

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 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.

In the global analysis, respondents from each country were grouped into regions as defined by the WHO and into the WBIGs.

Study Populations

The people with diabetes who participated in the patient survey were self-selected, predominantly from patient organisations. Therefore, this population 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 principle 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 people with diabetes 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 DED responses to the patient survey, beyond “all respondents” are reported by three subgroups:

- Without DED: people with diabetes without any reported form of DED
- With DED: people with diabetes with reported DED but not DME
- With DME: people with diabetes with reported DED and DME

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

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

Introduction

Romania Study

Demographic Characteristics^{1,2}

Romania is the tenth most populous country in Europe with a total population of approximately 19.6 million.

Similarly, to many countries in Europe, Romania's population is moving towards an ageing population with some 15% of its population (~3 million) under the age of 15 years while 18% are 65 years or older (~3.5 million). This demographic shift will only continue due to Romania's low fertility rates and increasing life expectancy.

By 2050, it is projected that ~29% of the population will be at least 65 years old and only ~14% of the population will be under the age of 15. This means that in just over 30 years the population aged 65 years or older will increase by 30% and reach an all-time high of approximately 4.5 million.

The ageing process will be particularly reflected by an increase in the number of those aged 80 years and over. In 2015, the number of people aged 80 years and over was approximately 800,000 accounting for 4% of the country's population. The percentage of the Romanian population 80 years and older will double by 2050. Hence about 9% of the population – that is every tenth person – can be expected to be 80 years or over.

Diabetes Profile³

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 Regions has the second-lowest age-adjusted comparative diabetes prevalence rate of any International Diabetes Federation (IDF) region (after Africa) there are still many countries with relatively high diabetes prevalence rates.

Romania has over 1.5 million (883.5-2,284.3±) adults living with diabetes, which accounts to ~3% of people living with diabetes in this region. Diabetes national prevalence in Romania (20 -79 years) is 10.6% (6.0-15.6±) and diabetes age-adjusted comparative prevalence is 8.4% (4.5-13.7±).

Deaths attributed to diabetes in Romania in 2015 were 18,919, which accounts to ~3% of the diabetes related deaths experienced in this region. The estimated number of undiagnosed cases was 670,000 (457.8-1,183.7±).

Study Populations: Romania

As reported by 127 adults with diabetes in Romania, 27% have been diagnosed with DED and a further 13% with DME.

One hundred and twenty-six health care professionals completed the survey in Romania. Of these, 23 were diabetes specialist providers (18%), 94 were ophthalmologists (75%), and four were primary care providers (3.2%). The remaining respondents were either nurses, health educators or other professionals.

The DR Barometer Study: Romania Overview

The DR Barometer study was conducted in 41 countries. In Romania, 127 adults with diabetes and 126 health care professionals provided new information about the experiences of living with, managing and treating diabetes, DR and DME.

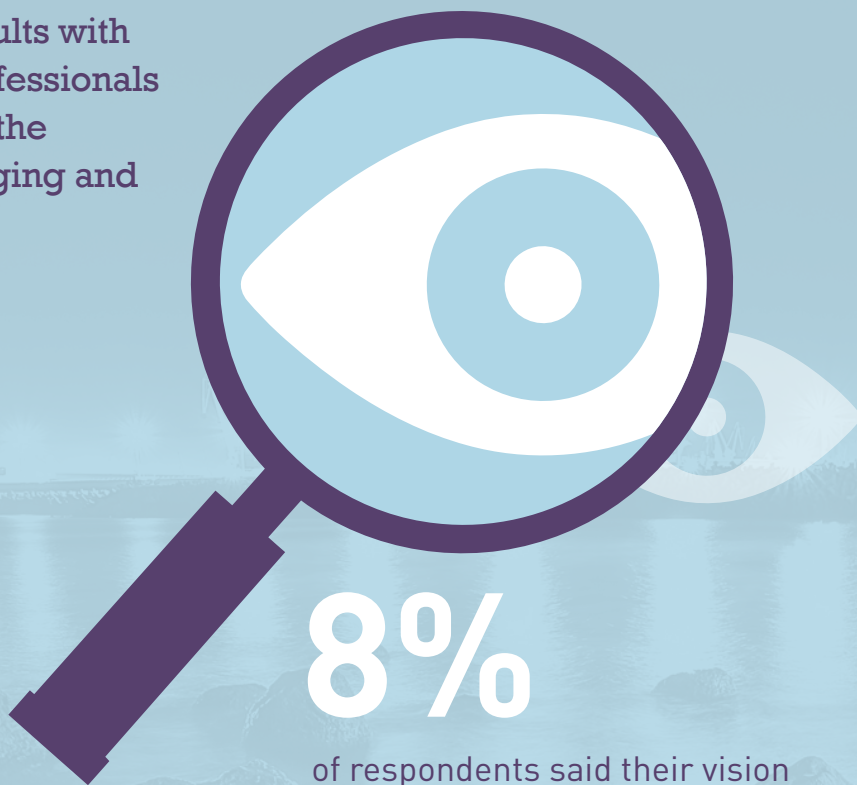
30%

of patients said that **cost** was a barrier to eye exams



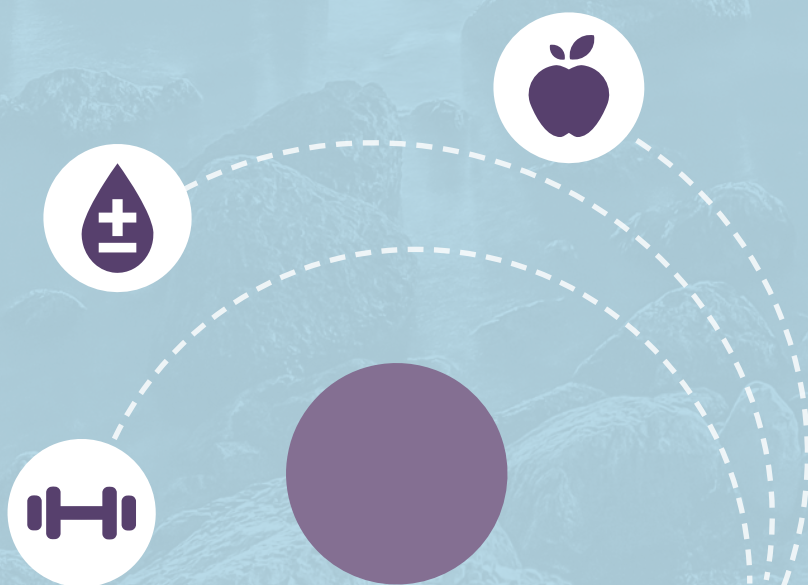
8%

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



51%

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





65%

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



46%

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



26%

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



34%

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



Romania

DR Barometer Findings:

Adults with Diabetes

Key Demographic Characteristics

One hundred and twenty-seven adults with diabetes (patients) completed the patients' survey in Romania: 54% were female and 46% were male. Eighty-four percent lived in an urban setting and 16% resided in a non-urban setting (see Appendix Table 4.2).

The education levels of all respondents were as follows: 8.5% of respondents were educated to a primary school level, 33% to a secondary school level, 43% to a college/university level, and 16% to a graduate or post-graduate level (see Appendix Table 4.3).

Forty-four percent of all respondents were in paid employment, 44% were retired, and 5.6% said they were not working (see Appendix Table 4.4).

Most respondents (39%) were aged between 40 and 59 years (28% were aged 18-39 years, 30% were aged 60-79 years, and 2.4% were aged 80 years and over). Sixty-eight percent were of traditional working age (18- 59 years) (see Table 1).

Of the respondents in Romania, 37% had been diagnosed with type 1 diabetes and 57% with type 2 diabetes. A further 6.3% were either unsure of or did not know their type of diabetes (see Appendix Table 2.1).

Twenty-seven percent of respondents (n=34) reported being diagnosed with DED and a further 13% (n=17) with DME.

Five percent of those surveyed were diagnosed with diabetes within the last year, 1 - 5 years ago (14%), 6 - 10 years ago (23%), 11 - 15 years ago (21%), 16 - 20 years ago (14%), and 21 years ago or more (24%) (see Appendix Table 2.2).

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. Amongst 18 to 39-year-olds, 86% had type 1 and 8.3% had type 2 diabetes. In the 40-59 age group, 24% had type 1 and 68% had type 2 diabetes, 7.9% of 60-79-year-olds had type 1 diabetes and 84% had type 2.

The frequency of people with DED varied between age groups, with 33% of those aged 18-39 years having DED, 28% in the 40-59 year group and 21% in the 60-79 year group.

Only 2.8% of those aged 18-39 years had been diagnosed with DME. This increased to 14% in the 40-59 age group and 24% in those aged 60-79 years.

An important trend noted in the findings was that generally, the longer the time since diagnoses the greater the likelihood to be diagnosed with DED and DME. In the first five years since diagnosis of diabetes 12% of respondents were diagnosed with DED. Almost a third of those diagnosed with diabetes 16-20 years ago had DED (29%) and this increased to over half (52%) for those diagnosed more than 21 years ago.

None of the respondents in the first five years since diagnosis of diabetes had DME. However for those diagnosed between 6-10 years ago, 14% had DME and this increased further to 29% in those diagnosed 16-20 years ago.

One in four respondents reported that their diabetes was not well controlled and in this group 29% had DED and 18% had DME. For those whose diabetes was controlled 30% had DED and 13% had DME.

Table 1: Summary of key characteristics of adults with diabetes

Group	Subgroup	All Respondents	Type 1 diabetes	Type 2 diabetes	With DED	With DME
All respondents		127 (100.0%)	46 (36.2%)	72 (56.7%)	34 (26.8%)	17 (13.4%)
Gender	Male	49 (45.8%)	17 (34.7%)	29 (59.2%)	11 (22.4%)	8 (16.3%)
	Female	58 (54.2%)	25 (43.1%)	31 (53.4%)	23 (39.7%)	9 (15.5%)
	Total Missing	20	4	12	0	0
Age	18-39 yrs.	36 (28.3%)	31 (86.1%)	3 (8.3%)	12 (33.3%)	1 (2.8%)
	40-59 yrs.	50 (39.4%)	12 (24.0%)	34 (68.0%)	14 (28.0%)	7 (14.0%)
	60-79 yrs.	38 (29.9%)	3 (7.9%)	32 (84.2%)	8 (21.1%)	9 (23.7%)
	80 yrs. plus	3 (2.4%)	0 (0.0%)	3 (100.0%)	0 (0.0%)	0 (0.0%)
Time since diagnosis	Within the last year	6 (4.9%)	1 (16.7%)	3 (50.0%)	0 (0.0%)	0 (0.0%)
	1 - 5 yrs.	17 (13.8%)	2 (11.8%)	13 (76.5%)	2 (11.8%)	0 (0.0%)
	6 - 10 yrs.	28 (22.8%)	3 (10.7%)	22 (78.6%)	5 (17.9%)	4 (14.3%)
	11 - 15 yrs.	26 (21.1%)	11 (42.3%)	15 (57.7%)	6 (23.1%)	4 (15.4%)
	16 - 20 yrs.	17 (13.8%)	8 (47.1%)	9 (52.9%)	5 (29.4%)	5 (29.4%)
	21 yrs. plus	29 (23.6%)	20 (69.0%)	9 (31.0%)	15 (51.7%)	4 (13.8%)
	Total Missing	4	1	1	1	0
Control of Diabetes	Controlled	83 (73.5%)	33 (39.8%)	46 (55.4%)	25 (30.1%)	11 (13.3%)
	Not controlled	28 (24.8%)	10 (35.7%)	17 (60.7%)	8 (28.6%)	5 (17.9%)
	Don't know/ Not sure	2 (1.8%)	1 (50.0%)	1 (50.0%)	1 (50.0%)	1 (50.0%)
	Total Missing	14	2	8	0	0

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

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

NB [3]: 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-eight percent of those surveyed saw a health care professional for their diabetes, with 92% seeing a diabetes specialist (average number of visits was 3.5 times per year) and 1.7% seeing a general/family doctor (see Appendix Table 2.3.1 and 2.3.2).

People were informed about their condition through a variety of channels. Ninety-two percent received information from a doctor or nurse, 48% from the TV, radio, newspaper, or magazines and 46% from the internet (see Table 2 and Appendix Table 2.4).

Table 2: Source of information regarding diabetes

Information Source	All Respondents (n=117)
Doctor or nurse	108 (92.3%)
TV/Radio/Newspaper/Magazines	56 (47.9%)
Internet	54 (46.2%)
Family/Friends/Neighbours	52 (44.4%)
Nutritionist or dietician	31 (26.5%)
Diabetes organisation or other health organisation	25 (21.4%)
Health educator	13 (11.1%)
Social media (e.g. Facebook, Twitter, blogs)	8 (6.8%)
Pharmacist	5 (4.3%)
None of the above	2 (1.7%)

A range of strategies was used by respondents to manage their diabetes. For those with type 1 diabetes, apart from insulin, 78% managed their diabetes with diet, 42% with exercise, 13% with oral medicine and 11% with natural or herbal medicine. Of the respondents with type 2 diabetes, 88% reported that they managed their condition with diet, 70% with oral medicine, 51% with insulin, 45% with exercise, and 37% with natural or herbal medicine.

Just over a half (54%) of the respondents were enrolled in diabetes management programmes but of these 94% said the programme included information 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 the respondents that had eye checks (92%), these occurred at the following intervals: less than 6 months (61%), 6 - 12 months (18%), and greater than 12 months (9.9%) (see Appendix Table 2.7).

The main challenges in controlling diabetes cited by respondents were: it is too hard to eat the right things (47%), there are too many other things to do (26%), the travel to their regular doctor, or specialist, was difficult (20%), long wait times for an appointment to see their doctor, or specialist (20%), and the high cost of care (19%) (see Appendix Table 2.9).

Free or low cost medicines or monitoring materials (82%), support from family or friends (67%), health education and information (52%), coordination of healthcare and services by a professional (27%), and the emergency helpline (22%) were identified as important to improving the management of their diabetes (see Appendix Table 2.10).

Nature and Information about Complications

Ninety-five percent of respondents were aware of vision loss as a possible consequence of diabetes and believed other complications such as: amputation (89%), kidney disease (85%), cardiovascular disease or stroke (84%), and foot ulcers (82%) were also associated with diabetes (see Appendix Table 2.11).

Respondents were most concerned about vision loss (37%), amputation (24%), cardiovascular disease or stroke (21%), kidney disease (8%), and neuropathy (4.5%) (see Appendix Table 2.12).

Thirty-two percent of respondents reported that they had no complications of diabetes. However, of those who reported complications, just over one quarter (28%) reported neuropathy and cardiovascular disease or stroke, kidney disease (18%), vision loss (17%), and foot ulcers (9.2%) (see Figure 1 and Appendix Table 2.13).

It is significant that 82% of those with DED, and 88% with DME reported diabetic related complications (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 complications compared with people without DED. The frequency of neuropathy increased from 15% in those without DED to 33% in DED and 63% in DME. Likewise, the frequency of kidney disease increased from 13% in people without DED to 24% with DED and 25% with DME.

Figure 1: Presence of complications

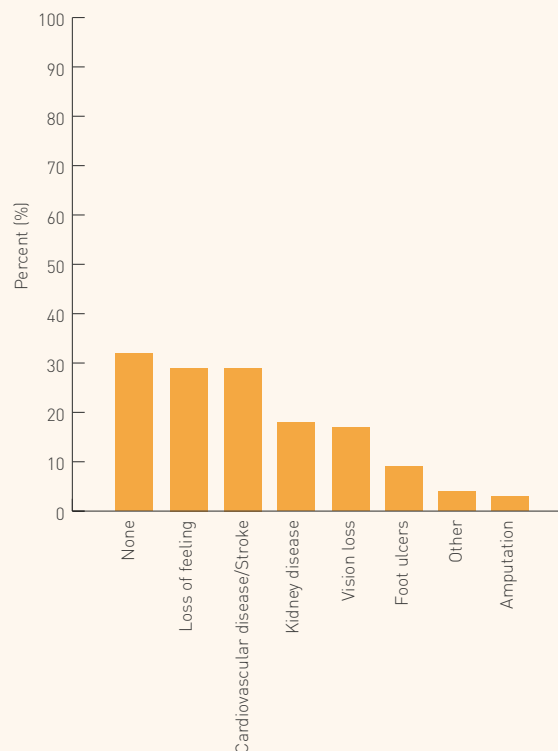


Table 3: Presence of complications without DED, with DED or DME

Complication	Without DED (n=60)	With DED (n=33)	With DME (n=16)
Any	33 (55%)	27 (81.8%)	14 (87.5%)
Loss of feeling in hands or toes (neuropathy)	9 (15.0%)	11 (33.3%)	10 (62.5%)
Cardiovascular disease/Stroke	16 (26.7%)	9 (27.3%)	5 (31.3%)
Vision loss	5 (8.3%)	8 (24.2%)	5 (31.3%)
Kidney disease	8 (13.3%)	8 (24.2%)	4 (25.0%)
Foot ulcers	5 (8.3%)	3 (9.1%)	2 (12.5%)
Amputation	2 (3.3%)	1 (3.0%)	1 (6.3%)
Other	0 (0.0%)	5 (15.2%)	0 (0.0%)
None	27 (45.0%)	6 (18.2%)	2 (12.5%)

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

While 90% of respondents stated that eye complications were discussed with their health care professionals, 26% either had never discussed eye complications (7.1%) or discussions only took place when symptoms arose (19%). The frequency of regular discussions varied from every visit (35%), multiple times a year (20%) and once a year (17%) (see Appendix Table 2.14).

Most patients (88%) did what they could to prevent vision problems (e.g. get routine screenings, visit specialists), yet myths and perceptions around vision changes and preventions were evident with 12% reporting they thought that vision problems were a normal part of ageing and surprisingly 9.2% did not make any special effort to prevent vision problems (see Appendix Table 2.15).

Fifty-nine percent of all respondents had received information about DR and DME with the doctor or nurse being the most common source (82%) (see Appendix Table 3.9).

Table 4: Source of information about DR and DME

Source	All respondents (n=104)
Doctor/Nurse	85 (81.7%)
Internet	18 (17.3%)
TV/Radio/Newspaper/Magazines	17 (16.3%)
Diabetes organisation or other health organisation	14 (13.5%)
Family/Friends/Neighbours	14 (13.5%)
Health educator	7 (6.7%)
None of the above	13 (12.5%)

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

Most (92%) respondents reported having an eye exam for DED, with 78% having the exam within the last year and a further 15% more than one year ago but less than two years ago (see Appendix Table 3.2). Twenty-three percent of respondents were aware of government sponsored screening programmes for DED (see Appendix Table 3.1).

While a large proportion (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 only when symptoms occur, every two years, less often than every two years. Four respondents said that testing should not occur at all (see Appendix Table 3.4).

The biggest barriers to eye exams were: the high cost (30%), the eye exams were not available near the patient's my home (23%) and there were long wait times on the day of the visit (23%) (see Table 5 and Appendix Table 3.5).

Table 5: Barriers to eye examinations

Identified Barriers	All Respondents (n=92)
They are expensive	28 (30.4%)
Eye exams are not available near my home	21 (22.8%)
Long wait time on the day of the visit	21 (22.8%)
Long wait time for appointment	20 (21.7%)
Don't know much about my condition	13 (14.1%)
Limited access to diabetes specialists	10 (10.9%)
Clinics are too small or lack necessary equipment/staff	10 (10.9%)
Referral process is complicated or takes too long	9 (9.8%)
Recommended treatments for eye problems are not available	9 (9.8%)
Burden on my family/friends	6 (6.5%)
Too many other things to do or worry about	6 (6.5%)
Fear of treatment/results	5 (5.4%)
Other	32 (34.8%)

Treatment of Diabetic Eye Disease and Diabetic Macular Edema

Treatment was assessed separately in people with DED and in those with DME. For those with DED 74% (n=25) had received treatment, with the most common being laser treatment (72%). Of those who received treatment, 48% (n=12) completed treatment and 44% (n=11) were still receiving treatment. Over three quarters felt that treatment had been successful and either their vision had improved (36%) or their vision had stayed the same (40%). Sixteen percent felt that treatment did not work (see Table 6).

For the nine respondents (27%) with DED who had not received treatment, the most common reason was that their doctor did not recommend it (75%).

All respondents with DME (n=17) received treatment with the most common being laser (94%) and anti-VEGF therapy (65%). Forty-one percent of those had completed their treatment and 59% were still receiving treatment. Most (88%) said that the treatment had been successful and either their vision had improved (53%) or their vision had stayed the same (35%).

There was a strong preference by all respondents 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).

Table 6: Treatment characteristics of patients with DED and DME

Question	Response	With DED (n=34)	With DME (n=17)
Have you had any treatment for diabetic eye disease?	Yes	45 (72.6%)	32 (86.5%)
	No	16 (25.8%)	4 (10.8%)
What treatment did you receive?	Laser	38 (84.4%)	29 (90.6%)
	Anti-VEGF	7 (15.6%)	17 (53.1%)
	Surgery	19 (42.2%)	12 (37.5%)
	Other	9 (20.0%)	1 (3.1%)
Did you complete the treatment?	Yes	33 (73.3%)	15 (46.9%)
	No	1 (2.2%)	2 (6.3%)
	Still receiving treatment	10 (22.2%)	15 (46.9%)
Do you feel that the treatment worked?	Yes, and vision improved	6 (13.6%)	7 (23.3%)
	Yes, but vision stayed the same	21 (47.7%)	11 (36.7%)
	No	17 (38.6%)	7 (23.3%)
	Still waiting to know	0 (0.0%)	3 (10.0%)
	Don't know/ Not sure	0 (0.0%)	2 (6.7%)
What are the reason(s) that you have not had treatment for diabetic eye disease?	My doctor did not recommend any treatment	11 (68.8%)	1 (25.0%)
	Treatment would not be effective	2 (12.5%)	1 (25.0%)
	Other	2 (12.5%)	0 (0.0%)

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

Eighty percent of those diagnosed with DED, or DME, reported that their vision was affected (29% significantly, 51% slightly) (see Appendix Table 3.6).

Sixty-five percent of these respondents reported vision issues impacted their daily lives in various ways such as difficulty experienced in driving a vehicle (23%), undertaking household responsibilities, such as cooking or cleaning (15%), travelling (13%), working or keeping a job (10%), social interactions with family/friends (7.5%), leisure activities/exercise (7.5%) managing their diabetes (7.5%) and other ways not listed (20%) (see Table 7).

Table 7: Activities affected through vision impairment and loss

	All Respondents (n=40)
Driving (a car/vehicle)	9 (22.5%)
Household responsibilities, such as cooking or cleaning	6 (15.0%)
Travelling	5 (12.5%)
Work or keeping a job	4 (10.0%)
Social interactions with family/friends	3 (7.5%)
Leisure activities/exercise	3 (7.5%)
Managing my diabetes	3 (7.5%)
Other	8 (20.0%)
None	14 (35.0%)

Fifty-six percent of those with DED and 25% with DME were in paid employment compared with 42% of those without DED (see Table 8 and Appendix EXP 5.1). Patients with vision complications reported difficulties with work or keeping a job (10%) and of those diagnosed with DED, 8.8% (n=3) were not working at all.

Thirty-seven percent of those surveyed did not receive assistance from the government while 38% (n=39) had income assistance (see Appendix Table 4.5). Sixty percent of those without DED received assistance from the government compared with 56% and 87% of those with DED and DME respectively.

Eighty-four percent of respondents said they had no trouble paying for food at any time during the past year (see Appendix Table 4.6). Some 28% said that their access to healthcare was affected, and for one in five (20%) it was affected by income (see Appendix Table 4.7).

Sixty-three percent of respondents said they worried about their health, 10% about family while 8.5% were not worried about any items listed in the survey (see Appendix Table 4.8).

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

Question	Response	Without DED (n=57)	With DED (n=34)	With DME (n=16)
Are you currently working?	Working for pay	24 (42.1%)	19 (55.9%)	4 (25.0%)
	Working without pay at home (e.g. housework, farming)	2 (3.5%)	0 (0.0%)	0 (0.0%)
	Volunteering	1 (1.8%)	1 (2.9%)	0 (0.0%)
	Retired	25 (43.9%)	11 (32.4%)	11 (68.8%)
	Student	3 (5.3%)	0 (0.0%)	0 (0.0%)
	Not working	2 (3.5%)	3 (8.8%)	1 (6.3%)
Question	Response	Without DED (n=55)	With DED (n=32)	With DME (n=15)
Do you receive assistance from the government?	Income assistance	17 (30.9%)	11 (34.4%)	11 (73.3%)
	Medical assistance	18 (32.7%)	10 (31.3%)	11 (73.3%)
	Food assistance	0 (0.0%)	1 (3.1%)	1 (6.7%)
	Housing assistance	1 (1.8%)	0 (0.0%)	1 (6.7%)
	Pension assistance	4 (7.3%)	4 (12.5%)	1 (6.7%)
	None of the above	22 (40.0%)	14 (43.8%)	2 (13.3%)
Question	Response	Without DED (n=57)	With DED (n=32)	With DME (n=16)
Did you have trouble paying for food at any time during the past year?	Yes	8 (14.0%)	8 (25.0%)	1 (6.3%)
	No	49 (86.0%)	24 (75.0%)	15 (93.8%)

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 (see Table 9.)

Fifty-five percent of those with DED and 63% with DME reported their health as poor compared with 52% of people without DED.

Thirty-one percent of people with DED and 38% of those with DME had physically unhealthy days; 37% with DED and 33% with DME had mentally unhealthy days. In comparison, 59% and 50% of people without DED had physically and mentally unhealthy days, respectively.

Compared with 31% of those without DED, 56% of people with DED and 27% with DME experienced limitations to their daily activities as a result of poor health. Where health or an associated condition impacted daily activities, the primary limitations were: diabetes, hypertension, and vision problems. People living with DED and DME had a higher proportion for some impairments, including vision problems and mental health problems (see Appendix EXP 2).

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

Health Status	Without DED	With DED	With DME
Self-rated health: Good	26 (48.1%)	14 (45.2%)	6 (37.5%)
Self-rated health: Poor	28 (51.9%)	17 (54.8%)	10 (62.5%)
Physically unhealthy days	26 (59.1%)	6 (31.6%)	5 (38.5%)
Mentally unhealthy days	23 (48.9%)	7 (36.8%)	5 (33.3%)
Unhealthy days	35 (68.6%)	9 (45.0%)	6 (46.2%)
Activity limitation days	15 (45.5%)	5 (41.7%)	5 (71.4%)

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”.

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.

Romania

DR Barometer Findings:

Health Care Professionals

Key Demographic Characteristics

There were 126 health care professionals who answered at least one of the survey questions in Romania. Of these, four were primary care providers (3.2%), 23 were diabetes specialist providers (18%) and 94 were ophthalmologists (75%). The remaining respondents were nurses, health educators 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 13 years (see Appendix PT 1.5).

Health care professionals were well-educated (81% with graduate or advanced degree); 78% were female and 22% male; and varied in age with 39% aged between 40 and 49 years (see Table 10 and Appendix PT 3.1).

Table 10: Summary of key characteristics of health care professionals

Group	Subgroup	All Respondents	Primary Care Provider	Diabetes Specialist Provider	Ophthalmologist
All respondents		126 (100.0%)	4 (3.2%)	23 (18.3%)	94 (74.6%)
Age group	18 - 29 yrs.	10 (11.0%)	0 (0.0%)	2 (11.1%)	8 (12.1%)
	30 - 39 yrs.	20 (22.0%)	0 (0.0%)	5 (27.8%)	15 (22.7%)
	40 - 49 yrs.	35 (38.5%)	1 (25.0%)	8 (44.4%)	24 (36.4%)
	50 - 59 yrs.	18 (19.8%)	3 (75.0%)	1 (5.6%)	13 (19.7%)
	60 - 69 yrs.	7 (7.7%)	0 (0.0%)	2 (11.1%)	5 (7.6%)
	70 - 79 yrs.	1 (1.1%)	0 (0.0%)	0 (0.0%)	1 (1.5%)
Gender	Female	70 (77.8%)	1 (25.0%)	15 (88.2%)	52 (78.8%)
	Male	20 (22.2%)	3 (75.0%)	2 (11.8%)	14 (21.2%)
Education	College/University	17 (18.7%)	4 (100.0%)	0 (0.0%)	11 (16.7%)
	Graduate or advanced degree (e.g. PhD, MD, etc.)	74 (81.3%)	0 (0.0%)	18 (100.0%)	55 (83.3%)
	Graduate or advanced degree (e.g. PhD, MD, etc.)	34 (70.8%)	4 (100.0%)	20 (76.9%)	6 (85.7%)

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

Clinical Practice Characteristics

Forty-three percent of all health care professionals had their main practice setting in an eye clinic and for ophthalmologists only it varied from an eye clinic (57%), hospital (36%), and diabetes clinic (3.4%) (see Appendix PT 2.1). Ninety-eight percent of the providers worked in an urban setting (see Appendix PT 2.2).

Most health care professionals worked in the government sector (53%) (see Appendix PT 2.3) and ophthalmologists worked mainly in the government (49%), private (40%), and combined or mixed (10%) sector (see Appendix PT 2.3).

Health care professionals reported that 46% of patients pay through insurance for services, 33% do not pay for services and 25% pay out-of-pocket (full fees). For ophthalmologists, the situation was much the same with 42% paying through insurance for services, 34% paying out-of-pocket (full fees) and 29% of patients not paying for services (see Appendix PT 2.7).

On average, all providers see 87 patients per week and 39% of these patients had diabetes. The findings were similar for ophthalmologists who saw 76 patients per week and on average 39% of these had diabetes (see Appendix PT 2.6).

For all health care professionals, the average waiting time for an appointment was most commonly more than one week but less than one month (44%), or less than one week (32%) (see Appendix PT 2.5).

The average wait time for an appointment with an ophthalmologist was more than one week but less than one month in almost half (47%) of the practices. In a further 33% of practices, the average wait time was less than one week (see Table 11 and Appendix PT 2.5).

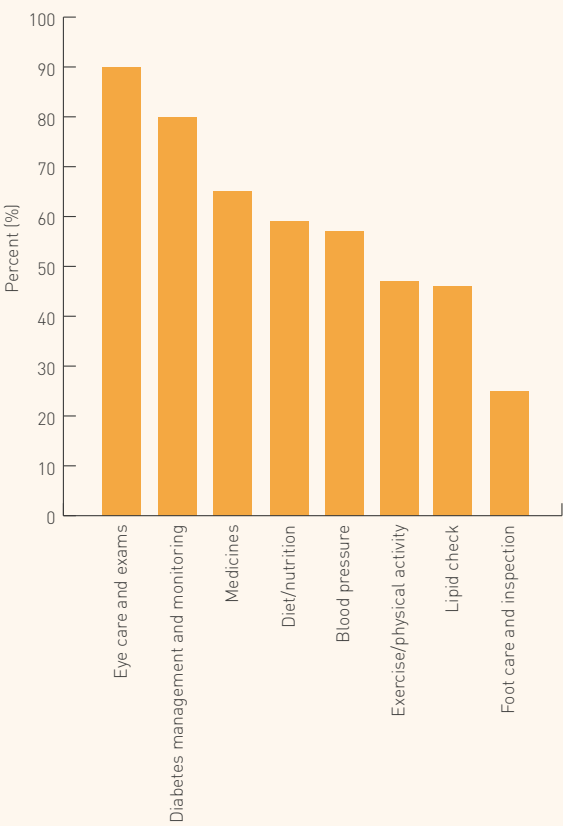
Table 11: Average wait times to schedule an appointment

Wait Time Intervals	All Respondents (n=108)	Ophthalmologist (n=79)
Less than 1 week	35 (32.4%)	26 (32.9%)
More than 1 week but less than 1 month	48 (44.4%)	37 (46.8%)
More than 1 month but less than 2 months	8 (7.4%)	8 (10.1%)
More than 2 months but less than 3 months	4 (3.7%)	2 (2.5%)
More than 3 months but less than 6 months	2 (1.9%)	1 (1.3%)
Do not take appointments	3 (2.8%)	2 (2.5%)
Other	3 (2.8%)	2 (2.5%)
Don't know/Not sure	5 (4.6%)	1 (1.3%)

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.

Only 31% of all providers reported that they had sufficient information about eye complications, 22% had information on diabetes but information on eye complications was not sufficient and 4.1% reported specific information was not included. More than one-third (39%) of health care professionals had no written information available (see Table 12 and Appendix PT 2.11).

Less than a third (29%) of ophthalmologists reported to have written information about diabetes and potential eye complications, 15% had information on diabetes but information on eye complications was not sufficient and 1.4% said information on eye complications was not included. Nearly half (49%) of the ophthalmologists said there was no written information available at all.

Guidelines and Protocols

Thirty-eight percent of the providers had written protocols for the management of diabetes and these were used by staff. However, over half (54%) had no protocols (see Appendix PT 2.12). Twenty-three percent of ophthalmologists had written protocols for the management of diabetes available, which were used by staff.

With respect to the management of diabetes-related vision issues, thirty-seven percent of all health care professionals had written protocols, which were used by staff, and 4.2% had protocols available but not used. Over half of the health care professionals had no protocols (see Appendix PT 2.13).

For ophthalmologists, only 33% had written protocols for detection and management of diabetes-related vision issues available, which were used by staff. Of serious concern was the finding that 56% of the ophthalmologists surveyed did not have specific protocols (see Table 12 and Appendix PT 2.13).

Table 12: Availability and use of information and protocols

Question	Response	All Respondents (n=98)	Ophthalmologist (n=72)
Is there written information about diabetes available for patients in your main practice?	Yes, and information on eye complications is sufficient	30 (30.6%)	21 (29.2%)
	Yes, but information on eye complications is not sufficient	22 (22.4%)	11 (15.3%)
	Yes, but no information on eye complications is included	4 (4.1%)	1 (1.4%)
	No written information is available for patients	38 (38.8%)	35 (48.6%)
	Don't know/Not sure	4 (4.1%)	4 (5.6%)
Question	Response	All Respondents (n=96)	Ophthalmologist (n=70)
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	35 (36.5%)	23 (32.9%)
	Yes, available but not used by staff	4 (4.2%)	4 (5.7%)
	Not available	49 (51.0%)	39 (55.7%)
	Don't know/Not sure	8 (8.3%)	4 (5.7%)

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 52% of all providers reported that the initial eye exam should occur at time of the diagnosis of diabetes. For patients with type 2 diabetes 72% of providers recommended an eye exam at time of diagnosis (see Appendix PT 2.14).

Overall, eighty-four percent of health care professionals, including 81% of ophthalmologists, reported that follow-up eye examinations were should be conducted every year (see Appendix PT 2.15). Most health care professionals (80%), including 87% of ophthalmologists, screen patients for DR (see Appendix PT 2.16).

Across all health care professionals, only 22% reported that they send appointment reminders while 73% do not (see Appendix PT 2.19).

Eighty-nine percent of the health care professionals shared information to optimise patient care management see Appendix PT 2.20).

The most common patient characteristics influencing the referral process for eye complications for health professionals were: diabetes duration (76%), high glucose levels (76%), the presence of comorbidities such as hypertension (72%), the patient's age (43%), and a patient's ability to adhere to recommendations (33%) (see Appendix PT 2.17).

As reported by health care professionals, the major barriers to optimising eye health faced by patients with diabetes were lack of knowledge and/or awareness (63%), patients feel that eye complications are unlikely (48%), and patients feel eye exams are not important (47%) (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=88)	Ophthalmologists (n=64)
Lack of knowledge and/or awareness	55 (62.5%)	45 (70.3%)
Patients feel eye complications are unlikely	42 (47.7%)	35 (54.7%)
Patients feel eye exams are not important	41 (46.6%)	31 (48.4%)
Patients have competing responsibilities and priorities	31 (35.2%)	27 (42.2%)
Patients fear of treatment/results	36 (40.9%)	26 (40.6%)
Referral process	27 (30.7%)	24 (37.5%)
Cost of care	27 (30.7%)	22 (34.4%)
Proximity to care	25 (28.4%)	19 (29.7%)
Clinic too small or lack necessary equipment/staff	21 (23.9%)	16 (25.0%)
Limited access to eye specialists	19 (21.6%)	13 (20.3%)
Long wait time for appointment	20 (22.7%)	12 (18.8%)
Limited access to diabetes specialists	12 (13.6%)	9 (14.1%)
Long wait time on the day of visit	12 (13.6%)	8 (12.5%)
Recommended treatments are not available	10 (11.4%)	8 (12.5%)
Patients feel they are a burden on family/friends	7 (8.0%)	5 (7.8%)
Other	2 (2.3%)	1 (1.6%)

Romania

DR Barometer Findings:

Ophthalmologists

Screening

There were fifty-five ophthalmologists who answered at least one of the supplementary questions (see Appendix PT 4.1 to PT 4.14).

On average 18% of patients seen by the ophthalmologists have DR and 8% 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 (46%) with 38% reported less than one week (see Appendix PT 4.3).

Eighty-three percent of ophthalmologists said that there was no wait from time of screening to diagnosis, and 7.8% (n=5) reported a wait time of less than one week (see Appendix PT 4.4).

Treatment and Challenges

Fifty percent of ophthalmologists personally administer the 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 (53%), high glucose levels (53%), and the duration of diabetes (43%) (see Appendix PT 4.7).

The most common outreach venues for screening for DED were at vision centres (38%), health fairs for all (7.1%), health fairs for people with diabetes (5.4%) and mobile screening centres (1.8%) (see Appendix PT 4.13).

Almost all (95%) ophthalmologists screen patients for DR based on fundoscopy through dilated pupils. Additionally 65% use optical coherence tomography, 44% a retinal photo and 26% fluorescein angiography (see Appendix PT 4.8 and PT 4.9).

Seventy percent said that most patients present when visual problems have already occurred while 23% said that patients present in time for screening. Seven percent (n=4) reported that some patients present too late for effective treatment (see Appendix PT 4.10).

Sixty-six percent of the ophthalmologists had received specific training on the treatment and diagnosis of DR and or DME. Seventy-six percent had training within the past year, 14% more than one year ago but less than five years and for 11% stating training was five or more years ago (see Appendix PT 4.11).

Most (90%) were interested in online education and certification on DME, angiogenesis and anti-VEGF therapies (see Appendix PT 4.12).

Limited access to patient education on DR and DME (80%), late diagnosis (71%) and the fact that government/insurance were not able to cover patient costs (46%) were viewed by ophthalmologists as the greatest challenges for improving patient outcomes in DED (see Table 14 and Appendix PT 4.14).

Table 14: Challenges for improving outcomes in DED

Question	Response	Ophthalmologist (n=55)
What do you perceive to be the greatest challenges for improving patient outcomes in diabetic eye disease?	Limited access to patient education on diabetic retinopathy and diabetic macular edema	44 (80.0%)
	Late diagnosis	39 (70.9%)
	Government/insurance not able to cover patient costs	25 (45.5%)
	Reimbursement/restrictions on approved therapy	22 (40.0%)
	Ineffective screening services	22 (40.0%)
	Multi-disciplinary team integration is poor	20 (36.4%)
	Referral pathways	17 (30.9%)
	No universal guidelines on referral/screening	17 (30.9%)
	No universal guidelines on how to treat	17 (30.9%)
	No universal guideline on when to treat	15 (27.3%)
	Current available therapies not effective	4 (7.3%)
	Other	2 (3.6%)

Romania

DR Barometer Summary

In Romania, 127 adults with diabetes and 126 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, Romania 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.

Romania has reached a significant demographic milestone, which will impact the society for many decades to come. Similarly, to many countries in Europe, Romania's population is moving towards an ageing population with some 15% of its population (~3 million) under the age of 15 years while 18% are 65 years or older (3.5 million). This demographic shift will only continue due to Romania's low fertility rates and increasing life expectancy.

By 2050, it is projected that ~29% of the population will be at least 65 years old and only 14% of the population will be under the age of 15. This means that in just over 30 years the population aged 65 years or older will increase by 30% and reach an all-time high of approximately 4.5 million.

Alongside the demographic changes the prevalence of people with diabetes is climbing rapidly. Today Romania has over 1.5 million (883.5-2,284.3 \pm) people living with diabetes, which accounts for ~3% of people living with diabetes in this region. Diabetes national prevalence in Romania (20 -79 years) is 10.6% (6.0-15.6 \pm) and diabetes age-adjusted comparative prevalence is 8.4% (4.5-13.7 \pm).

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. Eighty-six percent of those in the youngest age group (18-39 years) had type 1 diabetes (8.3% type 2), in the 40 – 59 age group 24% had type 1 (68% type 2) and 7.9% of 60-79 year-olds had type 1 diabetes (84% type 2).

People were most often informed about their condition by health professionals such as the doctor and nurse (92%). A surprising finding in Romania was the value placed on information via the TV, radio, newspaper, or magazines (48%) followed by family and friends. A trend globally, which was reflected in the Romanian study, was the increasing use of the internet by 46% of the respondents.

Over half (54%) of respondents were enrolled in diabetes management programmes and most (94%) 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 only health. In addition the high cost of care, travelling to their doctor and specialist and long wait times for appointments were challenges for many patients.

There was a relatively high awareness of the complications associated with diabetes. Vision loss (37%) was most concerning to the respondents followed by amputation and cardiovascular disease. While 31% of those surveyed had no complications there was still many who reported having neuropathy and cardiovascular disease (24%), kidney disease (18%) and vision loss (17%).

Most patients with DED (82%) and DME (88%) reported diabetic related complications. Aside from vision loss, there was a marked increase in the frequency of those with DED and DME experiencing complications compared with people without DED (e.g. the frequency of neuropathy increased from 15% in those without DED to 33% in DED and 63% in DME).

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 the high costs of exams, a fear of treatment, long wait times on the day of the appointment and the eye exams were not available near the patient's home.

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 nearly a quarter of patients surveyed had either never had a conversation about eye complications with their health professional or it only took place only when symptoms were present. Equally concerning is the myths and perceptions around vision changes 12% of patients reporting that vision problems were a normal part of ageing and some not making any special effort to prevent vision problems.

Eighty percent of people with DED or DME said that their vision was slightly or significant affected which in turn impacted their health, lifestyle, and life choices. Nearly two-thirds of these patients experienced difficulty in driving a vehicle, and undertaking household responsibilities, such as cooking or cleaning. Those with vision complications also had difficulties with work or keeping a job.

More respondents with DED, compared with those without DED, experienced limitations to their daily activities as a result of poor health. Where health or an associated condition impacted daily activities, the primary limitations reported were diabetes, hypertension, and vision problems.

A proactive treatment approach to prevent further vision loss was preferred rather than reactive treatment once further vision loss had occurred. However, for some (17%) respondents their access to healthcare was affected by where they actually lived.

Patient education is very much at the heart of a proactive approach so it was somewhat unexpected to find that over 22% of all providers reported that written information about diabetes and eye complications was not sufficient; and more than one-third (39%) of health care professionals had no written information available.

Of concern was the finding that only 37% of providers and 33% of ophthalmologists had written protocols for the management of diabetes-related vision, which were used by staff. Furthermore, over 56% of ophthalmologists said that protocols on the management of diabetes-related vision did not exist. For both patients with type 1 and type 2 diabetes 52% and 72% 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 that follow-up eye examinations should be conducted every year.

Late diagnosis, limited access to patient education on DR and DME, and the lack of knowledge and / or awareness around the complications and consequences of diabetes and diabetes-related vision loss were viewed by health care professionals (including 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 self-selected, and therefore this population group is more likely to be engaged and motivated in the management of their diabetes hence a possible explanation for the rates of awareness and screening.

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

References and Acknowledgement

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The IFA, IDF and IAPB would like to acknowledge and thank the many organisations and health care professionals from Romania 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 Romania

APPENDIX 1 : National Results

Table 1.1

Survey Information	Number of Respondents (%)
All valid respondents [1]	147 (100.0%)
Respondents aged 18 or over	144 (98.0%)
Respondents with diabetes	127 (86.4%)

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

Table 1.2

Survey Information	Number of Respondents (%)
All valid respondents	147 (100.0%)
Included in Diabetic Analysis Set	127 (86.4%)
Excluded from Diabetic Analysis Set	20 (13.6%)
Reasons for exclusion from diabetic analysis set	.
Under 18 years of age	3
Not diagnosed with diabetes	15
Missing information on diabetes diagnosis	2

Table 1.3

Survey Information	Number of Respondents (%)
Diabetic Analysis Set	127 (100.0%)
World Bank Income Group: Upper-middle income	127 (100.0%)
Persons with diabetic eye disease (DED)	34 (26.8%)
Persons with diabetic macular edema (DME)	17 (13.4%)
Persons with Type I diabetes	46 (36.2%)
Persons with Type II diabetes	72 (56.7%)
Persons not seeing health care professional for diabetes	2 (1.6%)
Persons seeing health care professional for diabetes	122 (96.1%)
Persons with eye disease & not received treatment	9 (7.1%)
Persons with eye disease & received treatment	42 (33.1%)

Table 2.1

Question	Response	Number of Respondents (%)
With which type of diabetes have you been diagnosed?	Type I	46 (36.5)
	Type II	72 (57.1)
	Don't know/Not sure	8 (6.3)
	Total Valid Response	126 (100.0)
	Total missing	1

Table 2.2

Question	Response	Number of Respondents (%)
When was your diabetes diagnosed?	Within the last year	6 (4.9)
	1 - 5 years ago	17 (13.8)
	6 - 10 years ago	28 (22.8)
	11 - 15 years ago	26 (21.1)
	16 - 20 years ago	17 (13.8)
	21 years ago or longer	29 (23.6)
	Total Valid Response	123 (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	122 (98.4)
	No	2 (1.6)
	Total Valid Response	124 (100.0)
	Total missing	3
What kind of health care professional?	General/Family Doctor	2 (1.7)
	Diabetes Specialist	108 (92.3)
	Other	6 (5.1)
	Don't know/Not sure of kind	1 (0.9)

Question	Response	Number of Respondents (%)
	Total Valid Response	117 (100.0)
	Total missing	10

Table 2.3.2

Type of health care professional	Times per year seen for diabetes	Value
General/Family Doctor	Total valid numeric response (n)	0
	Mean	
	SD	
	Median	
	Min	
	Max	
	Don't know/Not sure	1
	Total missing	1
Diabetes Specialist	Total valid numeric response (n)	90
	Mean	3.5
	SD	1.6
	Median	4.0
	Min	1
	Max	11
	Don't know/Not sure	8
	Total missing	10
Other	Total valid numeric response (n)	3
	Mean	2.7
	SD	1.2
	Median	2.0
	Min	2
	Max	4
	Don't know/Not sure	2
	Total missing	1
Don't know/Not sure of kind	Total valid numeric response (n)	1
	Mean	1.0
	SD	
	Median	1.0

Type of health care professional	Times per year seen for diabetes	Value
	Min	1
	Max	1

Table 2.4

Question	Response	Number of Respondents (%)
How have you received information about diabetes?	Doctor or nurse	108 (92.3%)
	Health educator	13 (11.1%)
	Nutritionist or dietitian	31 (26.5%)
	Diabetes organization or other health organization	25 (21.4%)
	Family/Friends/Neighbors	52 (44.4%)
	TV/Radio/Newspaper/Magazines	56 (47.9%)
	Internet	54 (46.2%)
	Social media (e.g. Facebook, Twitter, blogs)	8 (6.8%)
	Pharmacist	5 (4.3%)
	None of the above	2 (1.7%)
	Total Valid Response	117 (100.0%)
	Total missing	10

Table 2.5

Question	Response	Number of Respondents (%)
How do you manage your diabetes?	Diet	96 (82.1%)
	Oral medicine	57 (48.7%)
	Exercise	51 (43.6%)
	Insulin	79 (67.5%)
	Natural/Herbal medicine	32 (27.4%)
	Total Valid Response	117 (100.0%)
	Total missing	10

Table 2.6

Question	Response	Number of Respondents (%)
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Question	Response	Number of Respondents (%)
Are you currently enrolled in a diabetes patient management support programme?	Yes	64 (53.8)
	No	55 (46.2)
	Total Valid Response	119 (100.0)
	Total missing	8
Who sponsors the programme?	Hospital support program	35 (57.4)
	Clinic support program	14 (23.0)
	Patient organization support program	6 (9.8)
	Don't know/Not sure	6 (9.8)
	Total Valid Response	61 (100.0)
	Total missing	66
Does the programme include education on the importance of screening for diabetic eye complications?	Yes	58 (93.5)
	No	4 (6.5)
	Total Valid Response	62 (100.0)
	Total missing	65

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	114 (97.4%)
	Less than 6 months	103 (88.0%)
	6 - 12 months	5 (4.3%)
	Greater than 12 months	4 (3.4%)
	Total valid response	112 (95.7%)
	Total missing	15
	No	2 (1.7%)
	Don't know/Not	1 (0.9%)

Test	Response	Number of Respondents (%)
Have you ever had the following tests in a doctors office of clinic? And if yes, how long ago		
	sure	
	Total valid response	117 (100.0%)
	Total missing	10
Urine check	Yes	104 (92.9%)
	Less than 6 months	73 (65.2%)
	6 - 12 months	22 (19.6%)
	Greater than 12 months	6 (5.4%)
	Total valid response	101 (90.2%)
	Total missing	26
	No	8 (7.1%)
	Total valid response	112 (100.0%)
	Total missing	15
Weight check	Yes	110 (95.7%)
	Less than 6 months	78 (67.8%)
	6 - 12 months	19 (16.5%)
	Greater than 12 months	11 (9.6%)
	Total valid response	108 (93.9%)
	Total missing	19
	No	5 (4.3%)
	Total valid response	115 (100.0%)
	Total missing	12
Blood pressure check	Yes	110 (95.7%)
	Less than 6 months	95 (82.6%)
	6 - 12 months	11 (9.6%)

Test	Response	Number of Respondents (%)
Have you ever had the following tests in a doctors office of clinic? And if yes, how long ago		
	Greater than 12 months	2 (1.7%)
	Total valid response	108 (93.9%)
	Total missing	19
	No	5 (4.3%)
	Total valid response	115 (100.0%)
	Total missing	12
Foot check	Yes	86 (76.8%)
	Less than 6 months	46 (41.1%)
	6 - 12 months	22 (19.6%)
	Greater than 12 months	17 (15.2%)
	Total valid response	85 (75.9%)
	Total missing	42
	No	26 (23.2%)
	Total valid response	112 (100.0%)
	Total missing	15
Eye check	Yes	102 (91.9%)
	Less than 6 months	68 (61.3%)
	6 - 12 months	20 (18.0%)
	Greater than 12 months	11 (9.9%)
	Total valid response	99 (89.2%)
	Total missing	28
	No	9 (8.1%)
	Total valid response	111 (100.0%)
	Total missing	16

Table 2.8

Question	Response	Number of Respondents (%)
How well do you think your diabetes is controlled?	Very well	20 (17.7%)
	Well	63 (55.8%)
	Not very well	25 (22.1%)
	Not well at all	3 (2.7%)
	Don't know/Not sure	2 (1.8%)
	Total Valid Response	113 (100.0%)
	Total missing	14

Table 2.9

Question	Response	Number of Respondents (%)
What are the main challenges you face in controlling your diabetes?	High cost of care	21 (18.8%)
	Travel to my regular doctor or specialist is difficult	22 (19.6%)
	Long wait time for an appointment to see my doctor or specialist	22 (19.6%)
	Health services needed are not available	7 (6.3%)
	Don't know enough about diabetes	4 (3.6%)
	Too hard to eat the right things	53 (47.3%)
	Too many other things to do	29 (25.9%)
	Stigma or discrimination because of diabetes	7 (6.3%)
	Don't want to think about having diabetes	15 (13.4%)
	Other	18 (16.1%)
	Total Valid Response	112 (100.0%)
	Total missing	15

Table 2.10

Question	Response	Number of Respondents (%)
Which of the following services currently help you better manage your diabetes?	Free or low cost medicines or monitoring materials	89 (81.7%)
	Support groups	10 (9.2%)
	Support from family or friends	73 (67.0%)
	Health education and information	57 (52.3%)
	Mobile services (services that travel to or near your home)	10 (9.2%)
	Coordination of healthcare and services by a professional	29 (26.6%)
	Emergency helpline	24 (22.0%)
	Other	7 (6.4%)
	None	3 (2.8%)
	Total Valid Response	109 (100.0%)
	Total missing	18

Table 2.11

Question	Response	Number of Respondents (%)
What complications (or problems), to your knowledge, arise from diabetes?	Amputation	100 (89.3%)
	Foot ulcers	92 (82.1%)
	Increased risk of broken bones or fractures	22 (19.6%)
	Loss of feeling in hands or toes (neuropathy)	84 (75.0%)
	Vision loss	106 (94.6%)
	Irritable bowel disease	19 (17.0%)
	Kidney disease	95 (84.8%)
	Cardiovascular disease/Stroke	94 (83.9%)
	Other	10 (8.9%)
	None	3 (2.7%)
	Total Valid Response	112 (100.0%)
	Total missing	15

Table 2.12

Question	Response	Number of Respondents (%)
Which complication of diabetes are you most concerned about?	Amputation	27 (24.1)
	Loss of feeling in hands or toes (neuropathy)	5 (4.5)
	Vision loss	41 (36.6)
	Irritable bowel disease	2 (1.8)
	Kidney disease	9 (8.0)
	Cardiovascular disease/Stroke	24 (21.4)
	Other	1 (0.9)
	Don't know/Not sure	1 (0.9)
	None	2 (1.8)
	Total Valid Response	112 (100.0)
	Total missing	15

Table 2.13

Question	Response	Number of Respondents (%)
Which of the following complications of diabetes do you have?	Amputation	4 (3.7%)
	Foot ulcers	10 (9.2%)
	Broken bones or fractures	3 (2.8%)
	Loss of feeling in hands or toes (neuropathy)	30 (27.5%)
	Vision loss	18 (16.5%)
	Irritable bowel disease	7 (6.4%)
	Kidney disease	20 (18.3%)
	Cardiovascular disease/Stroke	30 (27.5%)
	Other	5 (4.6%)
	Don't know/Not sure	9 (8.3%)
	None	35 (32.1%)
	Total Valid Response	109 (100.0%)
	Total missing	18

Table 2.14

Question	Response	Number of Respondents (%)
How often do you discuss the possibility of eye complications with your health care professional?	Every visit	39 (34.8%)
	Multiple times per year	22 (19.6%)
	Once per year	19 (17.0%)
	Only when symptoms arise	21 (18.8%)
	Never	8 (7.1%)
	Don't know/Not sure	3 (2.7%)
	Total Valid Response	112 (100.0%)
	Total missing	15

Table 2.15

Question	Response	Number of Respondents (%)
Which of the following best describes your attitude to vision issues?	I think that vision problems are a normal part of ageing	13 (11.9%)
	I do what I can to prevent vision problems (e.g. get routine screenings, visit specialists)	96 (88.1%)
	I do not make any special effort to prevent vision problems	10 (9.2%)
	Total Valid Response	109 (100.0%)
	Total missing	18

Table 2.16

Question	Response	Number of Respondents (%)
What type of health insurance do you have?	Public	102 (93.6)
	Public - Private	5 (4.6)
	Private	1 (0.9)
	None	1 (0.9)
	Total Valid Response	109 (100.0)
	Total missing	18

Table 2.17

Question	Response	Number of Respondents (%)
Most often, how do you pay for the following types of medical care and services?		
General doctor visits (e.g. primary care doctor)	Care is free	85 (87.6)
	Insurance pays total cost	5 (5.2)
	Insurance and out-of-pocket/cash (e.g. co-pays)	5 (5.2)
	Do not use service	1 (1.0)
	Don't know/Not Sure	1 (1.0)
	Total Valid Response	97 (100.0)
	Total missing	30
Specialist medical visits (e.g. eye doctor, gynecologist, urologist)	Care is free	63 (64.9)
	Insurance pays total cost	5 (5.2)
	Insurance and out-of-pocket/cash (e.g. co-pays)	15 (15.5)
	Out-of-pocket only (pay cash for all care)	13 (13.4)
	Do not use service	1 (1.0)
	Total Valid Response	97 (100.0)
	Total missing	30
Medicines	Care is free	35 (36.8)
	Insurance pays total cost	4 (4.2)
	Insurance and out-of-pocket/cash (e.g. co-pays)	47 (49.5)
	Out-of-pocket only (pay cash for all care)	8 (8.4)
	Don't know/Not Sure	1 (1.1)
	Total Valid Response	95 (100.0)
	Total missing	32
Medical supplies (e.g. blood glucose meter/strips)	Care is free	44 (45.8)
	Insurance pays total cost	1 (1.0)
	Insurance and out-of-pocket/cash (e.g. co-pays)	33 (34.4)
	Out-of-pocket only (pay	14 (14.6)

Question	Response	Number of Respondents (%)
Most often, how do you pay for the following types of medical care and services?		
	cash for all care)	
	Do not use service	1 (1.0)
	Don't know/Not Sure	3 (3.1)
	Total Valid Response	96 (100.0)
	Total missing	31
Procedures	Care is free	33 (34.4)
	Insurance pays total cost	4 (4.2)
	Insurance and out-of-pocket/cash (e.g. co-pays)	17 (17.7)
	Out-of-pocket only (pay cash for all care)	11 (11.5)
	Do not use service	28 (29.2)
	Don't know/Not Sure	3 (3.1)
	Total Valid Response	96 (100.0)
	Total missing	31
Tests/screenings	Care is free	35 (39.3)
	Insurance pays total cost	3 (3.4)
	Insurance and out-of-pocket/cash (e.g. co-pays)	34 (38.2)
	Out-of-pocket only (pay cash for all care)	13 (14.6)
	Do not use service	3 (3.4)
	Don't know/Not Sure	1 (1.1)
	Total Valid Response	89 (100.0)
	Total missing	38
Health education	Care is free	56 (60.2)
	Insurance and out-of-pocket/cash (e.g. co-pays)	1 (1.1)
	Out-of-pocket only (pay cash for all care)	2 (2.2)
	Do not use service	29 (31.2)
	Don't know/Not Sure	5 (5.4)
	Total Valid Response	93 (100.0)

Question	Response	Number of Respondents (%)
Most often, how do you pay for the following types of medical care and services?		
	Total missing	34
Counseling	Care is free	45 (50.6)
	Insurance pays total cost	1 (1.1)
	Insurance and out-of-pocket/cash (e.g. co-pays)	3 (3.4)
	Out-of-pocket only (pay cash for all care)	1 (1.1)
	Do not use service	33 (37.1)
	Don't know/Not Sure	6 (6.7)
	Total Valid Response	89 (100.0)
	Total missing	38

Table 3.1

Question	Response	Number of Respondents (%)
Are you aware of any government sponsored screening programs for diabetic eye disease (diabetic retinopathy)?	Yes	25 (22.9%)
	No	84 (77.1%)
	Total valid response	109 (100.0%)
	Total missing	18

Table 3.2

Question	Response	Number of Respondents (%)
Have you ever had an eye exam for diabetic eye disease?	Yes	102 (91.9%)
	No	9 (8.1%)
	Total valid response	111 (100.0%)
	Total missing	16
How long ago was your last eye exam?	Within the last year	80 (78.4%)
	More than 1 year ago but less than 2 years	15 (14.7%)
	More than 2 years ago but less	3 (2.9%)

Question	Response	Number of Respondents (%)
	than 3 years	
	More than 3 years ago but less than 5 years	2 (2.0%)
	Five or more years ago	2 (2.0%)
	Total valid response	102 (100.0%)
	Total missing	25
Who did the last exam?	General/Family practitioner	1 (1.0%)
	Eye doctor/Eye clinic	101 (99.0%)
	Total valid response	102 (100.0%)
	Total missing	25

Table 3.3

Question	Response	Number of Respondents (%)
Have you ever had a dilated eye exam, where your eyes are examined after eye drops?	Yes	103 (92.8%)
	No	7 (6.3%)
	Don't know/Not sure	1 (0.9%)
	Total valid response	111 (100.0%)
	Total missing	16

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	96 (87.3%)
	Every two years	2 (1.8%)
	Less often than every two years	1 (0.9%)
	Only when symptoms occur	1 (0.9%)
	Never	1 (0.9%)
	Don't know/Not sure	9 (8.2%)
	Total valid response	110 (100.0%)

Question	Response	Number of Respondents (%)
	Total missing	17

Table 3.5

Question	Response	Number of Respondents (%)
For you, what are the biggest barriers to eye exams?	They are expensive	28 (30.4%)
	Eye exams are not available near my home	21 (22.8%)
	Long wait time for appointment	20 (21.7%)
	Long wait time on the day of the visit	21 (22.8%)
	Referral process is complicated or takes too long	9 (9.8%)
	Recommended treatments for eye problems are not available	9 (9.8%)
	Don't know much about my condition	13 (14.1%)
	Fear of treatment/results	5 (5.4%)
	Burden on my family/friends	6 (6.5%)
	Limited access to diabetes specialists	10 (10.9%)
	Too many other things to do or worry about	6 (6.5%)
	Clinics are too small or lack necessary equipment/staff	10 (10.9%)
	Other	32 (34.8%)
	Total valid response	92 (100.0%)
	Total missing	35

Table 3.6

Question	Response	Number of Respondents (%)
Have you been diagnosed with diabetic eye disease?	Yes	51 (47.2%)
	No	57 (52.8%)
	Total valid response	108 (100.0%)
	Total missing	19
Has your diabetic eye disease affected	Yes, slightly	26 (51.0%)

Question	Response	Number of Respondents (%)
your vision?		
	Yes, significantly	15 (29.4%)
	No	10 (19.6%)
	Total valid response	51 (100.0%)
	Total missing	76
Have vision issues caused you to have difficulty with any of the following?	Traveling	5 (12.5%)
	Household responsibilities, such as cooking or cleaning	6 (15.0%)
	Social interactions with family/friends	3 (7.5%)
	Leisure activities/exercise	3 (7.5%)
	Work or keeping a job	4 (10.0%)
	Managing my diabetes	3 (7.5%)
	Other	8 (20.0%)
	None	14 (35.0%)
	Driving (a car/vehicle)	9 (22.5%)
	Total valid response	40 (100.0%)
	Total missing	87

Table 3.7

Question	Response	Number of Respondents (%)
Have you had any treatment for diabetic eye disease?	Yes	42 (82.4%)
	No	9 (17.6%)
	Total valid response	51 (100.0%)
	Total missing	76
What treatment did you receive?	Laser	34 (81.0%)
	Injection in the eye (Anti-VEGF)	13 (31.0%)
	Surgery	7 (16.7%)
	Other	8 (19.0%)
	Total valid response	42 (100.0%)
	Total missing	85

Question	Response	Number of Respondents (%)
Did you complete the treatment?	Yes	19 (45.2%)
	Still receiving treatment	21 (50.0%)
	Don't know/Not sure	2 (4.8%)
	Total valid response	42 (100.0%)
	Total missing	85
Do you feel that the treatment worked?	Yes, and vision improved	18 (42.9%)
	Yes, but vision stayed the same	16 (38.1%)
	No	4 (9.5%)
	Still waiting to know	1 (2.4%)
	Don't know/Not sure	3 (7.1%)
	Total valid response	42 (100.0%)
	Total missing	85
What is/are the reason(s) that you did not complete the treatment?	Total missing	127
What are the reason(s) that you have not had treatment for diabetic eye disease?	My doctor did not recommend any treatment	6 (75.0%)
	Other	2 (25.0%)
	Total valid response	8 (100.0%)
	Total missing	119

Table 3.8

Question	Response	Number of Respondents (%)
Have you been diagnosed with diabetic macular edema?	Yes	17 (15.9%)
	No	79 (73.8%)
	Don't know/Not sure	11 (10.3%)
	Total valid response	107 (100.0%)
	Total missing	20
If Yes, which of the following would you prefer	Treatment to prevent further vision loss	17 (100.0%)
	Total valid response	17 (100.0%)
	Total missing	110

Table 3.9

Question	Response	Number of Respondents (%)
Have you received information about diabetic retinopathy or diabetic macular edema from any of the following sources?	Doctor/Nurse	85 (81.7%)
	Health educator	7 (6.7%)
	Diabetes organization or other health organization	14 (13.5%)
	Family/Friends/Neighbors	14 (13.5%)
	TV/Radio/Newspaper/Magazines	17 (16.3%)
	Internet	18 (17.3%)
	None of the above	13 (12.5%)
	Total valid response	104 (100.0%)
	Total missing	23

Table 4.1

Question	Response	Number of Respondents (%)
What is your gender?	Female	58 (54.2)
	Male	49 (45.8)
	Total Valid Response	107 (100.0)
	Total missing	20
Please indicate your age	18 - 29	18 (14.2)
	30 - 39	18 (14.2)
	40 - 49	16 (12.6)
	50 - 59	34 (26.8)
	60 - 69	22 (17.3)
	70 - 79	16 (12.6)
	80 - 89	3 (2.4)
	Total Valid Response	127 (100.0)

Table 4.2

Question	Response	Number of Respondents (%)
Where do you live?	Urban setting	91 (84.3)
	Non-urban setting	17 (15.7)

Question	Response	Number of Respondents (%)
	Total Valid Response	108 (100.0)
	Total missing	19

Table 4.3

Question	Response	Number of Respondents (%)
What is the highest level of education you completed?	Primary school	9 (8.5)
	Secondary school	35 (33.0)
	College/University	45 (42.5)
	Graduate or post-graduate	17 (16.0)
	Total valid response	106 (100.0)
	Total missing	21

Table 4.4

Question	Response	Number of Respondents (%)
Are you currently working?	Working for pay	47 (43.9)
	Working without pay at home (e.g. housework, farming)	2 (1.9)
	Volunteering	2 (1.9)
	Retired	47 (43.9)
	Student	3 (2.8)
	Not working	6 (5.6)
	Total Valid Response	107 (100.0)
	Total missing	20

Table 4.5

Question	Response	Number of Respondents (%)
Do you receive assistance from the government?	Income assistance	39 (38.2%)
	Medical assistance	39 (38.2%)
	Food assistance	2 (2.0%)

Question	Response	Number of Respondents (%)
	Housing assistance	2 (2.0%)
	Pension assistance	9 (8.8%)
	None of the above	38 (37.3%)
	Total valid response	102 (100.0%)
	Total missing	25

Table 4.6

Question	Response	Number of Respondents (%)
Did you have trouble paying for food at anytime during the past year?	Yes	17 (16.2)
	No	88 (83.8)
	Total Valid Response	105 (100.0)
	Total missing	22

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	5 (5.1)
	Education	4 (4.0)
	Ethnicity	3 (3.0)
	Income	20 (20.2)
	Language you speak	2 (2.0)
	Place of birth	1 (1.0)
	Place where you live	10 (10.1)
	Race	1 (1.0)
	Religion	1 (1.0)
	None of the above	71 (71.7)
	Total valid response	99 (100.0)

Question	Response	Number of Respondents (%)
	Total missing	28

Table 4.8

Question	Response	Number of Respondents (%)
Which of the following do you worry about most?	Food	5 (4.7)
	Housing	1 (0.9)
	Money	13 (12.3)
	Health	67 (63.2)
	Family	11 (10.4)
	None of the above	9 (8.5)
	Total Valid Response	106 (100.0)
	Total missing	21

Table 5.1

Question	Response	Number of Respondents (%)
In general, would you say your health is:	Very good	4 (4.0%)
	Good	42 (41.6%)
	Total good health	46 (45.5%)
	Fair	32 (31.7%)
	Poor	23 (22.8%)
	Fair or poor health	55 (54.5%)
	Total valid response	101 (100.0%)
	Total missing	26

Table 5.2

Question	Response	Number of Respondents (%)
How many days during last 30 days was your physical health not good	Any unhealthy days	37 (48.7%)
	1-5 unhealthy days	17 (22.4%)
	6-10 unhealthy	6 (7.9%)

Question	Response	Number of Respondents (%)
	days	
	11-20 unhealthy days	6 (7.9%)
	21-30 unhealthy days	8 (10.5%)
	No unhealthy days	39 (51.3%)
	Total valid response	76 (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	35 (43.2%)
	1-5 unhealthy days	12 (14.8%)
	6-10 unhealthy days	8 (9.9%)
	11-20 unhealthy days	8 (9.9%)
	21-30 unhealthy days	7 (8.6%)
	No unhealthy days	46 (56.8%)
	Total valid response	81 (100.0%)
	Total missing	46

Table 5.3.2

Question	Response	Number of Respondents (%)
Unhealthy days (physically or mentally unhealthy, max 30)	Any unhealthy days	50 (59.5%)
	1-5 unhealthy days	13 (15.5%)
	6-10 unhealthy days	12 (14.3%)

Question	Response	Number of Respondents (%)
	11-20 unhealthy days	7 (8.3%)
	21-30 unhealthy days	18 (21.4%)
	No unhealthy days	34 (40.5%)
	Total valid response	84 (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	25 (48.1%)
	1-5 unhealthy days	7 (13.5%)
	6-10 unhealthy days	8 (15.4%)
	11-20 unhealthy days	7 (13.5%)
	21-30 unhealthy days	3 (5.8%)
	No unhealthy days	27 (51.9%)
	Total valid response	52 (100.0%)
	Total missing	75

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	35 (38.0%)
	No	57 (62.0%)
	Total valid response	92 (100.0%)
	Total missing	35

Question	Response	Number of Respondents (%)
Which impairment or health problem, if any, limits your activities?		
a) Arthritis/rheumatism	Yes	11 (45.8%)
	No	12 (50.0%)
	Don't know/Not sure	1 (4.2%)
	Total valid response	24 (100.0%)
	Total missing	103
b) Back or neck problem	Yes	14 (60.9%)
	No	8 (34.8%)
	Refused	1 (4.3%)
	Total valid response	23 (100.0%)
	Total missing	104
c) Fractures, bone/joint injury	Yes	4 (19.0%)
	No	17 (81.0%)
	Total valid response	21 (100.0%)
	Total missing	106
d) Walking problem	Yes	15 (65.2%)
	No	7 (30.4%)
	Refused	1 (4.3%)
	Total valid response	23 (100.0%)
	Total missing	104
e) Lung/breathing problem	Yes	14 (50.0%)
	No	13 (46.4%)
	Don't know/Not sure	1 (3.6%)
	Total valid response	28 (100.0%)
	Total missing	99
f) Hearing problem	Yes	8 (34.8%)
	No	14 (60.9%)

Question	Response	Number of Respondents (%)
	Don't know/Not sure	1 (4.3%)
	Total valid response	23 (100.0%)
	Total missing	104
g) Eye/vision problem	Yes	21 (80.8%)
	No	4 (15.4%)
	Don't know/Not sure	1 (3.8%)
	Total valid response	26 (100.0%)
	Total missing	101
h) Heart problem	Yes	14 (58.3%)
	No	7 (29.2%)
	Don't know/Not sure	3 (12.5%)
	Total valid response	24 (100.0%)
	Total missing	103
i) Stroke problem	Yes	5 (23.8%)
	No	14 (66.7%)
	Don't know/Not sure	2 (9.5%)
	Total valid response	21 (100.0%)
	Total missing	106
j) Hypertension/high blood pressure	Yes	22 (84.6%)
	No	4 (15.4%)
	Total valid response	26 (100.0%)
	Total missing	101
k) Diabetes	Yes	36 (94.7%)
	No	1 (2.6%)
	Refused	1 (2.6%)
	Total valid response	38 (100.0%)

Question	Response	Number of Respondents (%)
	Total missing	89
l) Cancer	Yes	2 (10.5%)
	No	17 (89.5%)
	Total valid response	19 (100.0%)
	Total missing	108
m) Mental or emotional health	Yes	18 (69.2%)
	No	8 (30.8%)
	Total valid response	26 (100.0%)
	Total missing	101

PT 1.2

Analysis Sets	Number of Respondents (%)
All valid respondents	126 (100.0%)
Included in Provider Analysis Set (PAS)	126 (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	126
Included in the Eye Care Professional Set (Eye Specialist)	94 (74.6%)
Excluded in the Eye Care Professional Set (Eye Specialist)	32 (25.4%)
Reasons for exclusion from Eye Care Professional Set:	
Missing required speciality	32
No valid (non-missing) response for the supplemental eye questionnaire	0

PT 1.3

Subgroups	Number of Respondents (%)
Provider Analysis Set	126 (100.0%)
Primary Care Provider	4 (3.2%)
Diabetes Specialist Provider	23 (18.3%)

Subgroups	Number of Respondents (%)
Eye Care Professional	94 (74.6%)
Ophthalmologist	94 (74.6%)

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	4 (100.0%)	1 (4.3%)	0 (0.0%)	5 (4.0%)
	Diabetes specialist	0 (0.0%)	23 (100.0%)	0 (0.0%)	23 (18.3%)
	General ophthalmologist	0 (0.0%)	0 (0.0%)	90 (95.7%)	90 (71.4%)
	Optometrist	0 (0.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)
	Retinal specialist	0 (0.0%)	0 (0.0%)	10 (10.6%)	10 (7.9%)
	Nurse	0 (0.0%)	0 (0.0%)	0 (0.0%)	3 (2.4%)
	Health educator	0 (0.0%)	1 (4.3%)	1 (1.1%)	3 (2.4%)
	None of the above	0 (0.0%)	0 (0.0%)	0 (0.0%)	2 (1.6%)
	Total valid response	4 (100.0%)	23 (100.0%)	94 (100.0%)	126 (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)	4	23	94	126
	Mean	19.8	13.2	13.4	13.9
	SD	13.9	8.1	11.0	10.6
	Median	22.5	12.0	13.0	14.0
	Min.	1	2	0	0
	Max.	33	30	80	80

Item	Response	Primary Care Provider	Diabetes Specialist Provider	Ophthalmologist	PAS
	Total missing	0	0	0	0

PT 2.1

Question	Response	Primary Care Provider	Diabetes Specialist Provider	Ophthalmologist	PAS
What is your main practice setting?	Diabetes clinic/practice	0 (0.0%)	12 (54.5%)	3 (3.4%)	16 (13.6%)
	Eye clinic/practice	0 (0.0%)	0 (0.0%)	50 (56.8%)	51 (43.2%)
	General medical clinic/practice	3 (75.0%)	0 (0.0%)	1 (1.1%)	4 (3.4%)
	Hospital	0 (0.0%)	10 (45.5%)	32 (36.4%)	44 (37.3%)
	Other	1 (25.0%)	0 (0.0%)	2 (2.3%)	3 (2.5%)
	Total Valid Response	4 (100.0%)	22 (100.0%)	88 (100.0%)	118 (100.0%)
	Total missing	0	1	6	8

PT 2.2

Question	Response	Primary Care Provider	Diabetes Specialist Provider	Ophthalmologist	PAS
Where is your main practice located?	Urban setting	2 (50.0%)	22 (100.0%)	87 (98.9%)	115 (97.5%)
	Non-urban setting	2 (50.0%)	0 (0.0%)	1 (1.1%)	3 (2.5%)
	Total Valid Response	4 (100.0%)	22 (100.0%)	88 (100.0%)	118 (100.0%)
	Total missing	0	1	6	8

PT 2.3

Question	Response	Primary Care Provider	Diabetes Specialist Provider	Ophthalmologist	PAS
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Question	Response	Primary Care Provider	Diabetes Specialist Provider	Ophthalmologist	PAS
In which sector is your main practice?	Government	2 (50.0%)	13 (59.1%)	43 (48.9%)	62 (52.5%)
	Private	0 (0.0%)	3 (13.6%)	35 (39.8%)	38 (32.2%)
	Non profit	0 (0.0%)	1 (4.5%)	1 (1.1%)	2 (1.7%)
	Combined/mixed	2 (50.0%)	5 (22.7%)	9 (10.2%)	16 (13.6%)
	Total Valid Response	4 (100.0%)	22 (100.0%)	88 (100.0%)	118 (100.0%)
	Total missing	0	1	6	8

PT 2.4

Question	Response	Primary Care Provider	Diabetes Specialist Provider	Ophthalmologist	PAS
Is your main practice limited to certain populations?	No	2 (50.0%)	18 (81.8%)	74 (83.1%)	97 (81.5%)
	Yes, limited by age	1 (25.0%)	2 (9.1%)	1 (1.1%)	5 (4.2%)
	Yes, limited to persons in the military or veterans	0 (0.0%)	0 (0.0%)	1 (1.1%)	1 (0.8%)
	Yes, limited to persons with health insurance	1 (25.0%)	2 (9.1%)	8 (9.0%)	11 (9.2%)
	Yes, limited to low income or uninsured persons	0 (0.0%)	0 (0.0%)	1 (1.1%)	1 (0.8%)
	Yes, limited to persons who pay out-of-pocket	0 (0.0%)	0 (0.0%)	4 (4.5%)	4 (3.4%)
	Yes, other	0 (0.0%)	0 (0.0%)	2 (2.2%)	2 (1.7%)
	Total valid response	4 (100.0%)	22 (100.0%)	89 (100.0%)	119 (100.0%)

Question	Response	Primary Care Provider	Diabetes Specialist Provider	Ophthalmologist	PAS
	Total missing	0	1	5	7

PT 2.5

Question	Response	Primary Care Provider	Diabetes Specialist Provider	Ophthalmologist	PAS
What is the average wait time for an appointment in your main practice?	Less than 1 week	2 (50.0%)	7 (31.8%)	26 (32.9%)	35 (32.4%)
	More than 1 week but less than 1 month	1 (25.0%)	10 (45.5%)	37 (46.8%)	48 (44.4%)
	More than 1 month but less than 2 months	0 (0.0%)	0 (0.0%)	8 (10.1%)	8 (7.4%)
	More than 2 months but less than 3 months	0 (0.0%)	2 (9.1%)	2 (2.5%)	4 (3.7%)
	More than 3 months but less than 6 months	0 (0.0%)	0 (0.0%)	1 (1.3%)	2 (1.9%)
	Do not take appointments	1 (25.0%)	0 (0.0%)	2 (2.5%)	3 (2.8%)
	Other	0 (0.0%)	0 (0.0%)	2 (2.5%)	3 (2.8%)
	Don't know/Not sure	0 (0.0%)	3 (13.6%)	1 (1.3%)	5 (4.6%)
	Total Valid Response	4 (100.0%)	22 (100.0%)	79 (100.0%)	108 (100.0%)
	Total missing	0	1	15	18

PT 2.6

Question	Response	Primary Care Provider	Diabetes Specialist Provider	Ophthalmologist	PAS
On average, how many patients do you see per week in your main practice [n patients]	Total valid response (n)	4	22	79	108

Question	Response	Primary Care Provider	Diabetes Specialist Provider	Ophthalmologist	PAS
	Mean	102.5	117.4	75.8	86.6
	SD	66	71.9	43.2	54.7
	Median	125	100	75	82.5
	Min.	10	10	5	5
	Max.	150	250	200	250
	Total missing	0	1	15	18
What percentage of the patients in your main practice have diabetes [% patients]	Total valid response (n)	4	21	78	106
	Mean	6.5	98	23.9	38.7
	SD	9	3.2	25.1	37.6
	Median	2.5	100	15	20
	Min.	1	90	2	1
	Max.	20	100	100	100
	Total missing	0	2	16	20

PT 2.7

Question	Response	Primary Care Provider	Diabetes Specialist Provider	Ophthalmologist	PAS
In your main practice, how do patients pay for the care and services that you provide?	Don't pay	1 (25.0%)	11 (50.0%)	23 (29.1%)	36 (33.3%)
	Pay a reduced/subsidized rate	0 (0.0%)	1 (4.5%)	6 (7.6%)	8 (7.4%)
	Pay out-of-pocket (full fees)	0 (0.0%)	0 (0.0%)	27 (34.2%)	27 (25.0%)
	Pay through insurance	3 (75.0%)	13 (59.1%)	33 (41.8%)	50 (46.3%)
	Patient pays some, insurance pays some	0 (0.0%)	0 (0.0%)	12 (15.2%)	12 (11.1%)

Question	Response	Primary Care Provider	Diabetes Specialist Provider	Ophthalmologist	PAS
	Total valid response	4 (100.0%)	22 (100.0%)	79 (100.0%)	108 (100.0%)
	Total missing	0	1	15	18

PT 2.8

Question	Response	Primary Care Provider	Diabetes Specialist Provider	Ophthalmologist	PAS
In addition to your main practice, do you work in another practice setting?	Yes		6 (27.3%)	54 (68.4%)	62 (57.4%)
	No	4 (100.0%)	16 (72.7%)	25 (31.6%)	46 (42.6%)
	Total valid response	4 (100.0%)	22 (100.0%)	79 (100.0%)	108 (100.0%)
	Total missing		1	15	18
In which other practice setting(s) do you work?	Hospital		2 (40.0%)	4 (7.4%)	6 (9.8%)
	General medical clinic/practice			1 (1.9%)	1 (1.6%)
	Diabetes clinic/practice		3 (60.0%)		4 (6.6%)
	Eye clinic/practice			45 (83.3%)	45 (73.8%)
	Other		1 (20.0%)	6 (11.1%)	8 (13.1%)
	Total valid response		5 (100.0%)	54 (100.0%)	61 (100.0%)
	Total missing	4	18	40	65
In which sector(s) is(are) the practice(s)?	Government		2 (40.0%)	3 (5.6%)	5 (8.2%)
	Private		3 (60.0%)	47 (87.0%)	50 (82.0%)
	Combined/mixed			4 (7.4%)	6 (9.8%)
	Total valid		5 (100.0%)	54 (100.0%)	61

Question	Response	Primary Care Provider	Diabetes Specialist Provider	Ophthalmologist	PAS
	response				(100.0%)
	Total missing	4	18	40	65
Is there a major difference between your practices with respect to how diabetic eye disease is screened and managed?	Yes		2 (40.0%)	21 (38.9%)	23 (37.7%)
	No		3 (60.0%)	33 (61.1%)	38 (62.3%)
	Total valid response		5 (100.0%)	54 (100.0%)	61 (100.0%)
	Total missing	4	18	40	65

PT 2.9

Type of Test	Yes/No	How often/year	Primary Care Provider	Diabetes Specialist Provider	Ophthalmologist	PAS
Blood glucose	Yes		3 (75.0%)	20 (100.0%)	36 (65.5%)	62 (75.6%)
		Total valid numeric response (n)	3 (75.0%)	20 (100.0%)	33 (60.0%)	59 (72.0%)
		Mean	7.0	17.0	6.8	10.1
		SD	4.4	43.6	17.1	28.4
		Median	5.0	4.0	3.0	4.0
		Min	4	2	0	0
		Max	12	200	100	200
		Total missing	1	3	61	67
	No		1 (25.0%)		19 (34.5%)	20 (24.4%)
	Total valid response		4 (100.0%)	20 (100.0%)	55 (100.0%)	82 (100.0%)
	Total missing			3	39	44

Type of Test	Yes/No	How often/year	Primary Care Provider	Diabetes Specialist Provider	Ophthalmologist	PAS
HbA1c	Yes		1 (33.3%)	18 (94.7%)	28 (52.8%)	49 (62.8%)
		Total valid numeric response (n)	1 (33.3%)	18 (94.7%)	25 (47.2%)	46 (59.0%)
		Mean	4.0	5.7	4.2	4.7
		SD		11.6	8.0	9.2
		Median	4.0	3.0	2.0	2.5
		Min	4	2	0	0
		Max	4	52	40	52
		Total missing	3	5	69	80
	No		2 (66.7%)	1 (5.3%)	25 (47.2%)	29 (37.2%)
	Total valid response		3 (100.0%)	19 (100.0%)	53 (100.0%)	78 (100.0%)
	Total missing		1	4	41	48
Urine check	Yes		3 (75.0%)	14 (70.0%)	28 (54.9%)	45 (58.4%)
		Total valid numeric response (n)	3 (75.0%)	14 (70.0%)	25 (49.0%)	42 (54.5%)
		Mean	1.7	5.5	2.3	3.3
		SD	0.6	13.4	2.3	7.9
		Median	2.0	2.0	2.0	2.0
		Min	1	0	0	0
		Max	2	52	12	52
		Total missing	1	9	69	84
	No		1 (25.0%)	6 (30.0%)	23 (45.1%)	32 (41.6%)
	Total valid response		4 (100.0%)	20 (100.0%)	51 (100.0%)	77 (100.0%)
	Total			3	43	49

Type of Test	Yes/No	How often/year	Primary Care Provider	Diabetes Specialist Provider	Ophthalmologist	PAS
	missing					
Weight check	Yes		3 (100.0%)	20 (100.0%)	26 (52.0%)	51 (67.1%)
		Total valid numeric response (n)	3 (100.0%)	20 (100.0%)	24 (48.0%)	49 (64.5%)
		Mean	5.0	7.0	2.7	4.6
		SD	6.1	10.9	3.0	7.5
		Median	2.0	4.0	2.0	3.0
		Min	1	2	0	0
		Max	12	52	12	52
		Total missing	1	3	70	77
	No		24 (48.0%)			25 (32.9%)
	Total valid response		3 (100.0%)	20 (100.0%)	50 (100.0%)	76 (100.0%)
	Total missing		1	3	44	50
Blood pressure check	Yes		4 (100.0%)	20 (100.0%)	45 (76.3%)	72 (83.7%)
		Total valid numeric response (n)	4 (100.0%)	20 (100.0%)	42 (71.2%)	69 (80.2%)
		Mean	10.8	7.6	14.9	12.1
		SD	9.8	11.3	39.3	31.4
		Median	8.5	4.0	2.5	4.0
		Min	2	2	0	0
		Max	24	52	200	200
		Total missing	0	3	52	57
	No		14 (23.7%)			14 (16.3%)
	Total valid response		4 (100.0%)	20 (100.0%)	59 (100.0%)	86 (100.0%)

Type of Test	Yes/No	How often/year	Primary Care Provider	Diabetes Specialist Provider	Ophthalmologist	PAS
	Total missing			3	35	40
Foot check	Yes		4 (100.0%)	19 (100.0%)	15 (31.9%)	40 (54.8%)
		Total valid numeric response (n)	4 (100.0%)	19 (100.0%)	13 (27.7%)	38 (52.1%)
		Mean	9.8	6.3	2.2	5.0
		SD	10.7	11.9	3.3	9.4
		Median	7.0	4.0	1.0	2.0
		Min	1	0	0	0
		Max	24	52	12	52
		Total missing	0	4	81	88
		No			32 (68.1%)	33 (45.2%)
		Total valid response	4 (100.0%)	19 (100.0%)	47 (100.0%)	73 (100.0%)
		Total missing		4	47	53
Eye examination - Un-dilated	Yes		1 (25.0%)	7 (36.8%)	69 (97.2%)	79 (81.4%)
		Total valid numeric response (n)	1 (25.0%)	7 (36.8%)	65 (91.5%)	75 (77.3%)
		Mean	1.0	1.7	31.9	27.8
		SD		1.6	94.4	88.4
		Median	1.0	1.0	2.0	2.0
		Min	1	0	0	0
		Max	1	4	365	365
		Total missing	3	16	29	51
		No	3 (75.0%)	12 (63.2%)	2 (2.8%)	18 (18.6%)
		Total valid	4	19	71 (100.0%)	97

Type of Test	Yes/No	How often/year	Primary Care Provider	Diabetes Specialist Provider	Ophthalmologist	PAS	
	response		(100.0%)	(100.0%)		(100.0%)	
	Total missing			4	23	29	
Eye examination - Optical Coherence Tomography	Yes					32 (54.2%)	32 (38.1%)
		Total valid numeric response (n)	0 (0.0%)	0 (0.0%)	30 (50.8%)	30 (35.7%)	
		Mean			41.7	41.7	
		SD			111.1	111.1	
		Median			1.0	1.0	
		Min			0	0	
		Max			365	365	
		Total missing	4	23	64	96	
		No		3 (100.0%)	19 (100.0%)	27 (45.8%)	52 (61.9%)
		Total valid response		3 (100.0%)	19 (100.0%)	59 (100.0%)	84 (100.0%)
		Total missing		1	4	35	42
Eye examination - Fundoscopy	Yes			12 (63.2%)	75 (98.7%)	89 (88.1%)	
		Total valid numeric response (n)	0 (0.0%)	12 (63.2%)	70 (92.1%)	84 (83.2%)	
		Mean		5.8	33.4	28.7	
		SD		14.6	96.5	88.7	
		Median		1.5	2.0	2.0	
		Min		1	0	0	
		Max		52	365	365	
		Total missing	4	11	24	42	

Type of Test	Yes/No	How often/year	Primary Care Provider	Diabetes Specialist Provider	Ophthalmologist	PAS
	No		3 (100.0%)	7 (36.8%)	1 (1.3%)	12 (11.9%)
	Total valid response		3 (100.0%)	19 (100.0%)	76 (100.0%)	101 (100.0%)
	Total missing		1	4	18	25
Eye examination - Fluorescein Angiography	Yes			1 (5.3%)	16 (30.8%)	17 (22.1%)
		Total valid numeric response (n)	0 (0.0%)	1 (5.3%)	15 (28.8%)	16 (20.8%)
		Mean		5.0	54.9	51.8
		SD			125.5	121.9
		Median		5.0	1.0	1.0
		Min		5	0	0
		Max		5	365	365
		Total missing	4	22	79	110
	No		3 (100.0%)	18 (94.7%)	36 (69.2%)	60 (77.9%)
	Total valid response		3 (100.0%)	19 (100.0%)	52 (100.0%)	77 (100.0%)
	Total missing		1	4	42	49
Eye examination - Lipid check	Yes		1 (33.3%)	11 (57.9%)	30 (55.6%)	44 (55.7%)
		Total valid numeric response (n)	1 (33.3%)	11 (57.9%)	28 (51.9%)	42 (53.2%)
		Mean	2.0	2.3	2.2	2.3
		SD		1.2	2.3	2.0
		Median	2.0	2.0	2.0	2.0
		Min	2	1	0	0

Type of Test	Yes/No	How often/year	Primary Care Provider	Diabetes Specialist Provider	Ophthalmologist	PAS
		Max	2	4	12	12
		Total missing	3	12	66	84
	No		2 (66.7%)	8 (42.1%)	24 (44.4%)	35 (44.3%)
	Total valid response		3 (100.0%)	19 (100.0%)	54 (100.0%)	79 (100.0%)
	Total missing		1	4	40	47

PT 2.10

Question	Response	Primary Care Provider	Diabetes Specialist Provider	Ophthalmologist	PAS
In your main practice, what topics do you cover during a routine visit with a patient who has diabetes?	Diabetes management and monitoring	4 (100.0%)	19 (100.0%)	52 (72.2%)	78 (79.6%)
	Diet/nutrition	3 (75.0%)	19 (100.0%)	33 (45.8%)	58 (59.2%)
	Exercise/physical activity	3 (75.0%)	18 (94.7%)	23 (31.9%)	46 (46.9%)
	Medicines	3 (75.0%)	19 (100.0%)	40 (55.6%)	64 (65.3%)
	Foot care and inspection	3 (75.0%)	19 (100.0%)	2 (2.8%)	24 (24.5%)
	Blood pressure	4 (100.0%)	19 (100.0%)	29 (40.3%)	55 (56.1%)
	Eye care and exams	3 (75.0%)	13 (68.4%)	71 (98.6%)	88 (89.8%)
	Lipid check	3 (75.0%)	19 (100.0%)	21 (29.2%)	45 (45.9%)
	Total valid response	4 (100.0%)	19 (100.0%)	72 (100.0%)	98 (100.0%)
	Total missing	0	4	22	28

PT 2.11

Question	Response	Primary Care Provider	Diabetes Specialist Provider	Ophthalmologist	PAS
Is there written information about diabetes available for patients in your main practice?	Yes, and information on eye complications is sufficient	0 (0.0%)	7 (36.8%)	21 (29.2%)	30 (30.6%)
	Yes, but information on eye complications is not sufficient	1 (25.0%)	10 (52.6%)	11 (15.3%)	22 (22.4%)
	Yes, but no information on eye complications is included	1 (25.0%)	2 (10.5%)	1 (1.4%)	4 (4.1%)
	No written information is available for patients	2 (50.0%)	0 (0.0%)	35 (48.6%)	38 (38.8%)
	Don't know/Not sure	0 (0.0%)	0 (0.0%)	4 (5.6%)	4 (4.1%)
	Total Valid Response	4 (100.0%)	19 (100.0%)	72 (100.0%)	98 (100.0%)
	Total missing	0	4	22	28

PT 2.12

Question	Response	Primary Care Provider	Diabetes Specialist Provider	Ophthalmologist	PAS
Do you have written protocols/guidelines available in your main practice for the management of diabetes?	Yes, available and used by staff	1 (25.0%)	16 (84.2%)	16 (22.9%)	36 (37.5%)
	Yes, available but not used by staff	1 (25.0%)	0 (0.0%)	1 (1.4%)	2 (2.1%)
	Not available	1 (25.0%)	3 (15.8%)	48 (68.6%)	52 (54.2%)
	Don't	1 (25.0%)	0 (0.0%)	5 (7.1%)	6 (6.3%)

Question	Response	Primary Care Provider	Diabetes Specialist Provider	Ophthalmologist	PAS
	know/Not sure				
	Total Valid Response	4 (100.0%)	19 (100.0%)	70 (100.0%)	96 (100.0%)
	Total missing	0	4	24	30

PT 2.13

Question	Response	Primary Care Provider	Diabetes Specialist Provider	Ophthalmologist	PAS
Do you have written protocols/guidelines for detection and management of diabetes-related vision issue available in your main practice?	Yes, available and used by staff	0 (0.0%)	10 (52.6%)	23 (32.9%)	35 (36.5%)
	Yes, available but not used by staff	0 (0.0%)	0 (0.0%)	4 (5.7%)	4 (4.2%)
	Not available	3 (75.0%)	7 (36.8%)	39 (55.7%)	49 (51.0%)
	Don't know/Not sure	1 (25.0%)	2 (10.5%)	4 (5.7%)	8 (8.3%)
	Total Valid Response	4 (100.0%)	19 (100.0%)	70 (100.0%)	96 (100.0%)
	Total missing	0	4	24	30

PT 2.14

Question	Response	Primary Care Provider	Diabetes Specialist Provider	Ophthalmologist	PAS
What is the protocol in your main practice for timing of initial eye exams for persons	After a predetermined number of years (numeric response)	0 (0.0%)	9 (52.9%)	5 (7.6%)	14 (15.6%)

Question	Response	Primary Care Provider	Diabetes Specialist Provider	Ophthalmologist	PAS
with diabetes - Type I?	(n)				
	Mean		4.8	4.6	4.7
	SD		0.7	0.9	0.7
	Median		5.0	5.0	5.0
	Min		3	3	3
	Max		5	5	5
	After a predetermined age (numeric response) (n)	0 (0.0%)	0 (0.0%)	0 (0.0%)	1 (1.1%)
	Mean				5.0
	SD				
	Median				5.0
	Min				5
	Max				5
	As soon as they are diagnosed	3 (75.0%)	4 (23.5%)	39 (59.1%)	47 (52.2%)
	When a patient reports eye/vision problems			1 (1.5%)	1 (1.1%)
	No standard practice, timing varies case by case			3 (17.6%)	24 (26.7%)
	Don't know/Not sure			1 (1.5%)	1 (1.1%)
	Other	1 (25.0%)	1 (5.9%)		2 (2.2%)
	Total valid response	4 (100.0%)	17 (100.0%)	66 (100.0%)	90 (100.0%)
	Total missing		6	28	36
What is the protocol in your main practice for timing of initial eye exams for persons with diabetes - Type II?	After a predetermined number of years (numeric response) (n)	0 (0.0%)	0 (0.0%)	2 (2.9%)	2 (2.1%)
	Mean			3.0	3.0

Question	Response	Primary Care Provider	Diabetes Specialist Provider	Ophthalmologist	PAS
	SD			2.8	2.8
	Median			3.0	3.0
	Min			1	1
	Max			5	5
	After a predetermined age (numeric response) (n)	0 (0.0%)	0 (0.0%)	1 (1.5%)	1 (1.1%)
	Mean			20.0	20.0
	SD				
	Median			20.0	20.0
	Min			20	20
	Max			20	20
	As soon as they are diagnosed	2 (50.0%)	17 (89.5%)	47 (69.1%)	68 (72.3%)
	When a patient reports eye/vision problems			2 (2.9%)	2 (2.1%)
	No standard practice, timing varies case by case	1 (25.0%)	2 (10.5%)	16 (23.5%)	20 (21.3%)
	Other	1 (25.0%)			1 (1.1%)
	Total valid response	4 (100.0%)	19 (100.0%)	68 (100.0%)	94 (100.0%)
	Total missing		4	26	32

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	3 (75.0%)	18 (94.7%)	57 (81.4%)	81 (84.4%)
	Only when symptoms are present	0 (0.0%)	0 (0.0%)	1 (1.4%)	1 (1.0%)

Question	Response	Primary Care Provider	Diabetes Specialist Provider	Ophthalmologist	PAS
	Other	0 (0.0%)	1 (5.3%)	12 (17.1%)	13 (13.5%)
	Don't know/Not sure	1 (25.0%)	0 (0.0%)	0 (0.0%)	1 (1.0%)
	Total Valid Response	4 (100.0%)	19 (100.0%)	70 (100.0%)	96 (100.0%)
	Total missing	0	4	24	30

PT 2.16

Question	Response	Primary Care Provider	Diabetes Specialist Provider	Ophthalmologist	PAS
Do you screen patients for DR?	Yes		16 (84.2%)	62 (87.3%)	78 (80.4%)
	No	4 (100.0%)	3 (15.8%)	9 (12.7%)	19 (19.6%)
	Total valid response	4 (100.0%)	19 (100.0%)	71 (100.0%)	97 (100.0%)
	Total missing		4	23	29
Where do you screen patients?	In clinic		11 (68.8%)	55 (91.7%)	66 (86.8%)
	Outreach		1 (6.3%)	2 (3.3%)	3 (3.9%)
	Other		4 (25.0%)	4 (6.7%)	8 (10.5%)
	Total valid response		16 (100.0%)	60 (100.0%)	76 (100.0%)
	Total missing	4	7	34	50

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	3 (75.0%)	14 (77.8%)	49 (76.6%)	68 (76.4%)
	Patient's age	4	9 (50.0%)	24 (37.5%)	38

Question	Response	Primary Care Provider	Diabetes Specialist Provider	Ophthalmologist	PAS
		(100.0%)			(42.7%)
	Patient's gender	0 (0.0%)	0 (0.0%)	1 (1.6%)	1 (1.1%)
	Presence of comorbidities such as hypertension, etc.	3 (75.0%)	13 (72.2%)	45 (70.3%)	64 (71.9%)
	High glucose levels	3 (75.0%)	11 (61.1%)	51 (79.7%)	68 (76.4%)
	Ability or inability to pay	0 (0.0%)	0 (0.0%)	8 (12.5%)	8 (9.0%)
	Insurance restrictions	1 (25.0%)	0 (0.0%)	4 (6.3%)	5 (5.6%)
	Patient educational level	1 (25.0%)	3 (16.7%)	24 (37.5%)	28 (31.5%)
	Patient adherence to recommendations	1 (25.0%)	3 (16.7%)	25 (39.1%)	29 (32.6%)
	None of the above	0 (0.0%)	1 (5.6%)	2 (3.1%)	3 (3.4%)
	Not applicable	0 (0.0%)	3 (16.7%)	0 (0.0%)	3 (3.4%)
	Total valid response	4 (100.0%)	18 (100.0%)	64 (100.0%)	89 (100.0%)
	Total missing	0	5	30	37

PT 2.18

Question	Response	Primary Care Provider	Diabetes Specialist Provider	Ophthalmologist	PAS
What are the major barriers to optimizing eye health faced by patients with diabetes in your main practice?	Cost of care	0 (0.0%)	4 (23.5%)	22 (34.4%)	27 (30.7%)
	Proximity to care	3 (75.0%)	3 (17.6%)	19 (29.7%)	25 (28.4%)
	Long wait time for appointment	3 (75.0%)	5 (29.4%)	12 (18.8%)	20 (22.7%)
	Long wait time on the day of visit	2 (50.0%)	2 (11.8%)	8 (12.5%)	12 (13.6%)

Question	Response	Primary Care Provider	Diabetes Specialist Provider	Ophthalmologist	PAS
	Referral process	0 (0.0%)	2 (11.8%)	24 (37.5%)	27 (30.7%)
	Recommended treatments are not available	1 (25.0%)	1 (5.9%)	8 (12.5%)	10 (11.4%)
	Lack of knowledge and/or awareness	1 (25.0%)	8 (47.1%)	45 (70.3%)	55 (62.5%)
	Patients fear of treatment/results	1 (25.0%)	7 (41.2%)	26 (40.6%)	36 (40.9%)
	Patients they are a burden on family/friends	0 (0.0%)	1 (5.9%)	5 (7.8%)	7 (8.0%)
	Limited access to diabetes specialists	2 (50.0%)	1 (5.9%)	9 (14.1%)	12 (13.6%)
	Limited access to eye specialists	3 (75.0%)	3 (17.6%)	13 (20.3%)	19 (21.6%)
	Patients feel eye complications are unlikely	2 (50.0%)	4 (23.5%)	35 (54.7%)	42 (47.7%)
	Patients feel eye exams are not important	2 (50.0%)	6 (35.3%)	31 (48.4%)	41 (46.6%)
	Patients have competing responsibilities and priorities	1 (25.0%)	3 (17.6%)	27 (42.2%)	31 (35.2%)
	Clinic too small or lack necessary equipment/staff	1 (25.0%)	3 (17.6%)	16 (25.0%)	21 (23.9%)
	Other	0 (0.0%)	1 (5.9%)	1 (1.6%)	2 (2.3%)
	Total valid response	4 (100.0%)	17 (100.0%)	64 (100.0%)	88 (100.0%)
	Total missing	0	6	30	38

PT 2.19

Question	Response	Primary Care Provider	Diabetes Specialist Provider	Ophthalmologist	PAS
In your main practice, are patients contacted with	Yes	2 (50.0%)	10 (55.6%)	7 (10.8%)	20

Question	Response	Primary Care Provider	Diabetes Specialist Provider	Ophthalmologist	PAS
reminders for general follow-up appointments?					(22.2%)
	No	2 (50.0%)	7 (38.9%)	55 (84.6%)	66 (73.3%)
	Don't know/Not sure	0 (0.0%)	1 (5.6%)	3 (4.6%)	4 (4.4%)
	Total Valid Response	4 (100.0%)	18 (100.0%)	65 (100.0%)	90 (100.0%)
	Total missing	0	5	29	36

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, podiatrist?	Yes	4 (100.0%)	18 (100.0%)	56 (84.8%)	81 (89.0%)
	No	0 (0.0%)	0 (0.0%)	9 (13.6%)	9 (9.9%)
	Don't know/Not sure	0 (0.0%)	0 (0.0%)	1 (1.5%)	1 (1.1%)
	Total Valid Response	4 (100.0%)	18 (100.0%)	66 (100.0%)	91 (100.0%)
	Total missing	0	5	28	35

PT 3.1

Question	Response	Primary Care Provider	Diabetes Specialist Provider	Ophthalmologist	PAS
Please indicate your age:	18 - 29		2 (11.1%)	8 (12.1%)	10 (11.0%)
	30 - 39		5 (27.8%)	15 (22.7%)	20 (22.0%)

Question	Response	Primary Care Provider	Diabetes Specialist Provider	Ophthalmologist	PAS
	40 - 49	1 (25.0%)	8 (44.4%)	24 (36.4%)	35 (38.5%)
	50 - 59	3 (75.0%)	1 (5.6%)	13 (19.7%)	18 (19.8%)
	60 - 69		2 (11.1%)	5 (7.6%)	7 (7.7%)
	70 - 79			1 (1.5%)	1 (1.1%)
	Total valid response	4 (100.0%)	18 (100.0%)	66 (100.0%)	91 (100.0%)
	Total missing		5	28	35
What is your gender?	Female	1 (25.0%)	15 (88.2%)	52 (78.8%)	70 (77.8%)
	Male	3 (75.0%)	2 (11.8%)	14 (21.2%)	20 (22.2%)
	Total valid response	4 (100.0%)	17 (100.0%)	66 (100.0%)	90 (100.0%)
	Total missing		6	28	36
What is your highest level of education completed?	College/University	4 (100.0%)		11 (16.7%)	17 (18.7%)
	Graduate or advanced degree (e.g. PhD, MD, etc)		18 (100.0%)	55 (83.3%)	74 (81.3%)
	Total valid response	4 (100.0%)	18 (100.0%)	66 (100.0%)	91 (100.0%)
	Total missing		5	28	35

PT 4.1

Question	Response	Ophthalmologist
What percentage of your patients have diabetic retinopathy	Total valid numeric response (n)	63
	Mean	17.8
	SD	18.7
	Median	10.0
	Min	0
	Max	99

Question	Response	Ophthalmologist
	Total missing	31

PT 4.2

Question	Response	Ophthalmologist
What percentage of your patients have diabetic macular edema?	Total valid numeric response (n)	64
	Mean	8.0
	SD	8.3
	Median	5.0
	Min	0
	Max	35
	Total missing	30

PT 4.3

Question	Response	Ophthalmologist
What is the average amount of time your patients wait for an appointment to be screened for diabetic eye disease in your practice?	Less than 1 week	24 (38.1%)
	More than 1 week but less than 1 month	29 (46.0%)
	More than 1 month but less than 2 months	5 (7.9%)
	More than 2 months but less than 3 months	1 (1.6%)
	More than 3 months but less than 6 months	1 (1.6%)
	Do not take appointment	2 (3.2%)
	Don't know/Not sure	1 (1.6%)
	Total Valid Response	63 (100.0%)
	Total missing	31

PT 4.4

Question	Response	Ophthalmologist
From the time a patient is screened, what is the average length of time he/she waits for diagnosis?	Less than 1 week	5 (7.8%)

Question	Response	Ophthalmologist
	More than 1 week but less than 1 month	2 (3.1%)
	More than 1 month but less than 2 months	1 (1.6%)
	Other	1 (1.6%)
	Don't know/Not sure	2 (3.1%)
	There is not wait, diagnosis is given when screened	53 (82.8%)
	Total Valid Response	64 (100.0%)
	Total missing	30

PT 4.5

Type of Treatment	Question	Response/time	Ophthalmologist
Laser photocoagulation	Is the treatment available?	Available within country	30 (46.9%)
		Available locally	28 (43.8%)
		Available in practice	27 (42.2%)
		Not available	2 (3.1%)
		Total valid response	64 (100.0%)
		Total missing	30
	What is the average amount of time your patients wait for a consultation appointment? (weeks)	Total valid numeric response (n)	29 (50.9%)
		Mean	1.7
		SD	0.9
		Median	2.0
		Min	1
		Max	4
		Don't know/not sure	18 (31.6%)
		Not applicable	10 (17.5%)
		Total valid response	57 (100.0%)
		Total missing	37
	What is the average amount of time	Total valid numeric	29 (52.7%)

Type of Treatment	Question	Response/time	Ophthalmologist
	your patients wait for a first treatment?(weeks)	response (n)	
		Mean	1.7
		SD	1.1
		Median	1.0
		Min	0
		Max	4
		Don't know/not sure	15 (27.3%)
		Not applicable	11 (20.0%)
		Total valid response	55 (100.0%)
		Total missing	39
	What is the average amount of time your patients wait for a second treatment?(weeks)	Total valid numeric response (n)	26 (52.0%)
		Mean	3.1
		SD	2.3
		Median	2.5
		Min	1
		Max	12
		Don't know/not sure	13 (26.0%)
		Not applicable	11 (22.0%)
		Total valid response	50 (100.0%)
		Total missing	44
Anti-VEGF therapies	Is the treatment available?	Available within country	34 (54.8%)
		Available locally	25 (40.3%)
		Available in practice	22 (35.5%)
		Not available	1 (1.6%)
		Total valid response	62 (100.0%)
		Total missing	32
	What is the average amount of time	Total valid numeric	29 (51.8%)

Type of Treatment	Question	Response/time	Ophthalmologist
	your patients wait for a consultation appointment? (weeks)	response (n)	
		Mean	2.0
		SD	1.0
		Median	2.0
		Min	1
		Max	4
		Don't know/not sure	18 (32.1%)
		Not applicable	9 (16.1%)
		Total valid response	56 (100.0%)
		Total missing	38
	What is the average amount of time your patients wait for a first treatment?(weeks)	Total valid numeric response (n)	25 (46.3%)
		Mean	2.2
		SD	1.1
		Median	2.0
		Min	1
		Max	4
		Don't know/not sure	19 (35.2%)
		Not applicable	10 (18.5%)
		Total valid response	54 (100.0%)
		Total missing	40
	What is the average amount of time your patients wait for a second treatment?(weeks)	Total valid numeric response (n)	27 (51.9%)
		Mean	3.9
		SD	2.6
		Median	4.0
		Min	1
		Max	12
		Don't know/not sure	14 (26.9%)

Type of Treatment	Question	Response/time	Ophthalmologist
		Not applicable	11 (21.2%)
		Total valid response	52 (100.0%)
		Total missing	42
Intravitreal steroid	Is the treatment available?	Available within country	33 (55.0%)
		Available locally	23 (38.3%)
		Available in practice	21 (35.0%)
		Not available	1 (1.7%)
		Total valid response	60 (100.0%)
		Total missing	34
	What is the average amount of time your patients wait for a consultation appointment? (weeks)	Total valid numeric response (n)	25 (46.3%)
		Mean	2.0
		SD	1.0
		Median	2.0
		Min	1
		Max	4
		Don't know/not sure	19 (35.2%)
		Not applicable	10 (18.5%)
		Total valid response	54 (100.0%)
		Total missing	40
	What is the average amount of time your patients wait for a first treatment?(weeks)	Total valid numeric response (n)	25 (45.5%)
		Mean	2.1
		SD	1.0
		Median	2.0
		Min	1
		Max	4
		Don't know/not sure	20 (36.4%)

Type of Treatment	Question	Response/time	Ophthalmologist
	What is the average amount of time your patients wait for a second treatment?(weeks)	Not applicable	10 (18.2%)
		Total valid response	55 (100.0%)
		Total missing	39
		Total valid numeric response (n)	25 (47.2%)
		Mean	5.2
		SD	5.1
		Median	4.0
		Min	1
		Max	24
		Don't know/not sure	16 (30.2%)
		Not applicable	12 (22.6%)
		Total valid response	53 (100.0%)
		Total missing	41
Uncomplicated vitrectomy	Is the treatment available?	Available within country	37 (60.7%)
	What is the average amount of time your patients wait for a consultation appointment? (weeks)	Available locally	23 (37.7%)
		Available in practice	14 (23.0%)
		Not available	1 (1.6%)
		Total valid response	61 (100.0%)
		Total missing	33
		Total valid numeric response (n)	21 (39.6%)
		Mean	2.3
		SD	1.2
		Median	2.0
		Min	1
		Max	4
		Don't know/not sure	21 (39.6%)

Type of Treatment	Question	Response/time	Ophthalmologist
		Not applicable	11 (20.8%)
		Total valid response	53 (100.0%)
		Total missing	41
	What is the average amount of time your patients wait for a first treatment?(weeks)	Total valid numeric response (n)	18 (36.7%)
		Mean	2.4
		SD	1.2
		Median	2.0
		Min	1
		Max	4
		Don't know/not sure	20 (40.8%)
		Not applicable	11 (22.4%)
		Total valid response	49 (100.0%)
		Total missing	45
	What is the average amount of time your patients wait for a second treatment?(weeks)	Total valid numeric response (n)	12 (23.1%)
		Mean	6.8
		SD	8.2
		Median	4.0
		Min	1
		Max	24
		Don't know/not sure	22 (42.3%)
		Not applicable	18 (34.6%)
		Total valid response	52 (100.0%)
		Total missing	42
Complex vitreo-retinal surgery	Is the treatment available?	Available within country	41 (67.2%)
		Available locally	19 (31.1%)
		Available in practice	12 (19.7%)

Type of Treatment	Question	Response/time	Ophthalmologist
		Not available	1 (1.6%)
		Total valid response	61 (100.0%)
		Total missing	33
	What is the average amount of time your patients wait for a consultation appointment? (weeks)	Total valid numeric response (n)	19 (38.0%)
		Mean	2.5
		SD	1.1
		Median	2.0
		Min	1
		Max	4
		Don't know/not sure	20 (40.0%)
		Not applicable	11 (22.0%)
		Total valid response	50 (100.0%)
		Total missing	44
	What is the average amount of time your patients wait for a first treatment?(weeks)	Total valid numeric response (n)	18 (35.3%)
		Mean	2.6
		SD	1.3
		Median	2.0
		Min	1
		Max	5
		Don't know/not sure	21 (41.2%)
		Not applicable	12 (23.5%)
		Total valid response	51 (100.0%)
		Total missing	43
	What is the average amount of time your patients wait for a second treatment?(weeks)	Total valid numeric response (n)	13 (24.5%)
		Mean	6.7
		SD	7.8

Type of Treatment	Question	Response/time	Ophthalmologist
		Median	4.0
		Min	1
		Max	24
		Don't know/not sure	21 (39.6%)
		Not applicable	19 (35.8%)
		Total valid response	53 (100.0%)
		Total missing	41

PT 4.6

Question	Response	Ophthalmologist
Do you personally administer treatment for diabetic retinopathy?	Yes	31 (50.0%)
	No	31 (50.0%)
	Total valid response	62 (100.0%)
	Total missing	32
Who administer it?	Another provider in your practice	7 (25.0%)
	Refer to a provider at another facility	20 (71.4%)
	Other	1 (3.6%)
	Total valid response	28 (100.0%)
	Total missing	66

PT 4.7

Question	Response	Ophthalmologist
Do any of the following influence how you treat diabetic retinopathy or diabetic macular edema?	Diabetes duration	13 (43.3%)
	Patient's age	8 (26.7%)
	Patient's gender	1 (3.3%)
	Presence of comorbidities such as hypertension, etc.	16 (53.3%)
	High glucose levels	16 (53.3%)
	Ability or inability to pay	9 (30.0%)

Question	Response	Ophthalmologist
	Insurance restrictions	4 (13.3%)
	Patient educational level	8 (26.7%)
	Patient adherence to recommendations	12 (40.0%)
	None of the above	7 (23.3%)
	Total valid response	30 (100.0%)
	Total missing	64

PT 4.8

Question	Response	Ophthalmologist
Do you treat diabetic retinopathy and diabetic macular edema based on:	Visual outcome	6 (10.7%)
	Anatomical outcomes	4 (7.1%)
	Both	45 (80.4%)
	Other	1 (1.8%)
	Total Valid Response	56 (100.0%)
	Total missing	38

PT 4.9

Question	Response	Ophthalmologist
How are your patients with diabetes screened for diabetic eye disease?	Fundoscopy undilated	4 (7.0%)
	Fundoscopy dilated	54 (94.7%)
	Retinal photo	25 (43.9%)
	Optical Coherence Tomography	37 (64.9%)
	Fluorescein Angiography	15 (26.3%)
	Other	2 (3.5%)
	Total valid response	57 (100.0%)
	Total missing	37

PT 4.10

Question	Response	Ophthalmologist
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Question	Response	Ophthalmologist
In your opinion, do the majority of your patients present:	In time for screening	13 (22.8%)
	When visual problems have already occurred	40 (70.2%)
	Too late for effective treatment	4 (7.0%)
	Total Valid Response	57 (100.0%)
	Total missing	37

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	39 (66.1%)
	No	20 (33.9%)
	Total valid response	59 (100.0%)
	Total missing	35
If yes, When was your last training?	Five or more years ago	4 (10.8%)
	Greater than 1 year ago but less than 5 years	5 (13.5%)
	Within the past year	28 (75.7%)
	Total valid response	37 (100.0%)
	Total missing	57

PT 4.12

Question	Response	Ophthalmologist
Would you be interested in online education and certification on DME, Angiogenesis and Anti-VEGF therapies?	Yes	53 (89.8%)
	No	6 (10.2%)
	Total Valid Response	59 (100.0%)
	Total missing	35

PT 4.13

Question	Response	Ophthalmologist
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Question	Response	Ophthalmologist
How is outreach for screening for diabetic eye disease done in your main practice?	Health fairs for all	4 (7.1%)
	Health fairs for people with diabetes	3 (5.4%)
	Mobile screening centers	1 (1.8%)
	At vision centers	21 (37.5%)
	Other	11 (19.6%)
	Not done	20 (35.7%)
	Don't know/Not sure	3 (5.4%)
	Total valid response	56 (100.0%)
	Total missing	38

PT 4.14

Question	Response	Ophthalmologist
What do you perceive to be the greatest challenges for improving patient outcomes in diabetic eye disease?	Reimbursement/restrictions on approved therapy	22 (40.0%)
	Late diagnosis	39 (70.9%)
	Referral pathways	17 (30.9%)
	Limited access to patient education on diabetic retinopathy and diabetic macular edema	44 (80.0%)
	No universal guidelines on referral/screening	17 (30.9%)
	No universal guidelines on how to treat	17 (30.9%)
	No universal guideline on when to treat	15 (27.3%)
	Current available therapies not effective	4 (7.3%)
	Government/insurance not able to cover patient costs	25 (45.5%)
	Multi-disciplinary team integration is poor	20 (36.4%)
	Ineffective screening services	22 (40.0%)
	Other	2 (3.6%)
	Total valid response	55 (100.0%)
	Total missing	39

EXP 1

Question	Response	Without DED (%)	With DED (%)	With DME (%)
Which of the following complications of diabetes do you have?	Amputation	2 (3.3%)	1 (3.0%)	1 (6.3%)
	Cardiovascular disease/Stroke	16 (26.7%)	9 (27.3%)	5 (31.3%)
	Foot ulcers	5 (8.3%)	3 (9.1%)	2 (12.5%)
	Kidney disease	8 (13.3%)	8 (24.2%)	4 (25.0%)
	Loss of feeling in hands or toes (neuropathy)	9 (15.0%)	11 (33.3%)	10 (62.5%)
	Vision loss	5 (8.3%)	8 (24.2%)	5 (31.3%)
	Irritable bowel disease	6 (10.0%)	1 (3.0%)	0 (0.0%)
	Broken bones or fractures	3 (5.0%)	0 (0.0%)	0 (0.0%)
	Other	0 (0.0%)	5 (15.2%)	0 (0.0%)
	None	27 (45.0%)	6 (18.2%)	2 (12.5%)
	Don't know/Not sure	6 (10.0%)	2 (6.1%)	1 (6.3%)
	Total Valid Response	60 (100.0%)	33 (100.0%)	16 (100.0%)
	Total missing	16	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.

EXP 2

Limitations	Without DED n (%)	With DED n (%)	With DME n (%)
Limited in any way in any activities because of impairment or health problem	17 (30.4%)	9 (26.5%)	9 (56.3%)
Impairment or health problem			
Diabetes	17 (94.4%)	12 (92.3%)	7 (100.0%)
Hypertension/high blood pressure	12 (92.3%)	5 (83.3%)	5 (71.4%)
Back or neck problem	8 (80.0%)	4 (57.1%)	2 (33.3%)
Walking problem	7 (70.0%)	4 (66.7%)	4 (57.1%)
Eye/vision problem	7 (63.6%)	6 (100.0%)	8 (88.9%)
Heart problem	7 (63.6%)	4 (66.7%)	3 (42.9%)
Mental or emotional health	6 (60.0%)	8 (80.0%)	4 (66.7%)

Limitations	Without DED n (%)	With DED n (%)	With DME n (%)
Hearing problem	5 (45.5%)	2 (40.0%)	1 (14.3%)
Lung/breathing problem	4 (36.4%)	7 (70.0%)	3 (42.9%)
Arthritis/rheumatism	3 (30.0%)	5 (71.4%)	3 (42.9%)
Stroke problem	2 (20.0%)	2 (40.0%)	1 (16.7%)
Cancer	1 (11.1%)	1 (25.0%)	0 (0.0%)
Fractures, bone/joint injury	0 (0.0%)	2 (40.0%)	2 (28.6%)

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	26 (48.1%)	14 (45.2%)	6 (37.5%)
Self-rated health: Poor	28 (51.9%)	17 (54.8%)	10 (62.5%)
Physically unhealthy days	26 (59.1%)	6 (31.6%)	5 (38.5%)
Mentally unhealthy days	23 (48.9%)	7 (36.8%)	5 (33.3%)
Unhealthy days	35 (68.6%)	9 (45.0%)	6 (46.2%)
Activity limitation days	15 (45.5%)	5 (41.7%)	5 (71.4%)

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".

EXP 4

Item	Response	All respondents	Respondents with Type I diabetes	Respondents with Type II diabetes
How do you manage your diabetes?	Diet	96 (82.1%)	35 (77.8%)	59 (88.1%)
	Oral medicine	57 (48.7%)	6 (13.3%)	47 (70.1%)
	Exercise	51 (43.6%)	19 (42.2%)	30 (44.8%)
	Insulin	79 (67.5%)	44 (97.8%)	34 (50.7%)
	Natural/Herbal medicine	32 (27.4%)	5 (11.1%)	25 (37.3%)

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

EXP 5.1

Item	Response	Without DED (%)	With DED (%)	With DME (%)
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Item	Response	Without DED (%)	With DED (%)	With DME (%)
Are you currently working?	Working for pay	24 (42.1%)	19 (55.9%)	4 (25.0%)
	Working without pay at home (e.g. housework, farming)	2 (3.5%)	0 (0.0%)	0 (0.0%)
	Volunteering	1 (1.8%)	1 (2.9%)	0 (0.0%)
	Retired	25 (43.9%)	11 (32.4%)	11 (68.8%)
	Student	3 (5.3%)	0 (0.0%)	0 (0.0%)
	Not working	2 (3.5%)	3 (8.8%)	1 (6.3%)
	Total Valid Response	57 (100.0%)	34 (100.0%)	16 (100.0%)
	Total missing	19	0	1
Do you receive assistance from the government?	Income assistance	17 (30.9%)	11 (34.4%)	11 (73.3%)
	Medical assistance	18 (32.7%)	10 (31.3%)	11 (73.3%)
	Food assistance	0 (0.0%)	1 (3.1%)	1 (6.7%)
	Housing assistance	1 (1.8%)	0 (0.0%)	1 (6.7%)
	Pension assistance	4 (7.3%)	4 (12.5%)	1 (6.7%)
	None of the above	22 (40.0%)	14 (43.8%)	2 (13.3%)
	Total valid response	55 (100.0%)	32 (100.0%)	15 (100.0%)
	Total missing	21	2	2
Did you have trouble paying for food at anytime during the past year?	Yes	8 (14.0%)	8 (25.0%)	1 (6.3%)
	No	49 (86.0%)	24 (75.0%)	15 (93.8%)
	Total Valid Response	57 (100.0%)	32 (100.0%)	16 (100.0%)
	Total missing	19	2	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.

EXP 5.2: Age group 18-39 years

Item	Response	Without DED (%)	With DED (%)	With DME (%)
Are you currently working?	Working for pay	15 (78.9%)	9 (75.0%)	1 (100.0%)
	Volunteering	0 (0.0%)	1 (8.3%)	0 (0.0%)
	Student	3 (15.8%)	0 (0.0%)	0 (0.0%)
	Not working	1 (5.3%)	2 (16.7%)	0 (0.0%)
	Total Valid Response	19 (100.0%)	12 (100.0%)	1 (100.0%)
	Total missing	4	0	0
Do you receive assistance from the government?	Income assistance	5 (26.3%)	3 (27.3%)	0 (0.0%)
	Medical assistance	8 (42.1%)	2 (18.2%)	0 (0.0%)
	Food assistance	0 (0.0%)	1 (9.1%)	0 (0.0%)
	Housing assistance	1 (5.3%)	0 (0.0%)	0 (0.0%)
	Pension assistance	3 (15.8%)	0 (0.0%)	0 (0.0%)
	None of the above	5 (26.3%)	7 (63.6%)	1 (100.0%)
	Total valid response	19 (100.0%)	11 (100.0%)	1 (100.0%)
	Total missing	4	1	0
Did you have trouble paying for food at anytime during the past year?	Yes	5 (26.3%)	2 (16.7%)	0 (0.0%)
	No	14 (73.7%)	10 (83.3%)	1 (100.0%)
	Total Valid Response	19 (100.0%)	12 (100.0%)	1 (100.0%)
	Total missing	4	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	9 (45.0%)	9 (64.3%)	3 (50.0%)
	Working without pay at home (e.g. housework, farming)	2 (10.0%)	0 (0.0%)	0 (0.0%)

Item	Response	Without DED (%)	With DED (%)	With DME (%)
	Volunteering	1 (5.0%)	0 (0.0%)	0 (0.0%)
	Retired	7 (35.0%)	4 (28.6%)	2 (33.3%)
	Not working	1 (5.0%)	1 (7.1%)	1 (16.7%)
	Total Valid Response	20 (100.0%)	14 (100.0%)	6 (100.0%)
	Total missing	9	0	1
Do you receive assistance from the government?	Income assistance	5 (26.3%)	3 (21.4%)	3 (60.0%)
	Medical assistance	7 (36.8%)	4 (28.6%)	3 (60.0%)
	Food assistance	0 (0.0%)	0 (0.0%)	1 (20.0%)
	Housing assistance	0 (0.0%)	0 (0.0%)	1 (20.0%)
	Pension assistance	1 (5.3%)	2 (14.3%)	0 (0.0%)
	None of the above	9 (47.4%)	7 (50.0%)	1 (20.0%)
	Total valid response	19 (100.0%)	14 (100.0%)	5 (100.0%)
	Total missing	10	0	2
Did you have trouble paying for food at anytime during the past year?	Yes	0 (0.0%)	3 (25.0%)	0 (0.0%)
	No	20 (100.0%)	9 (75.0%)	6 (100.0%)
	Total Valid Response	20 (100.0%)	12 (100.0%)	6 (100.0%)
	Total missing	9	2	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	0 (0.0%)	1 (12.5%)	0 (0.0%)
	Retired	17 (100.0%)	7 (87.5%)	9 (100.0%)
	Total Valid Response	17 (100.0%)	8 (100.0%)	9 (100.0%)
	Total missing	4	0	0
Do you receive assistance from the	Income	7 (43.8%)	5 (71.4%)	8 (88.9%)

Item	Response	Without DED (%)	With DED (%)	With DME (%)
government?	assistance			
	Medical assistance	3 (18.8%)	4 (57.1%)	8 (88.9%)
	Pension assistance	0 (0.0%)	2 (28.6%)	1 (11.1%)
	None of the above	7 (43.8%)	0 (0.0%)	0 (0.0%)
	Total valid response	16 (100.0%)	7 (100.0%)	9 (100.0%)
	Total missing	5	1	0
Did you have trouble paying for food at anytime during the past year?	Yes	3 (17.6%)	3 (37.5%)	1 (11.1%)
	No	14 (82.4%)	5 (62.5%)	8 (88.9%)
	Total Valid Response	17 (100.0%)	8 (100.0%)	9 (100.0%)
	Total missing	4	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 5.5: Age group 80+ years

Item	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%)
	Total missing	2	0	0
Do you receive assistance from the government?	None of the above	1 (100.0%)	0 (0.0%)	0 (0.0%)
	Total valid response	1 (100.0%)	0	0
	Total missing	2	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%)
	Total missing	2	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 6

Group	Subgroup	All respondents	Type 1 diabetes	Type 2 diabetes	With DED (%)	With DME (%)
All respondents		127 (100%)	46 (36.2%)	72 (56.7%)	34 (26.8%)	17 (13.4%)
Gender	Male	49 (45.8%)	17 (34.7%)	29 (59.2%)	11 (22.4%)	8 (16.3%)
	Female	58 (54.2%)	25 (43.1%)	31 (53.4%)	23 (39.7%)	9 (15.5%)
	Total Missing	20	4	12	0	0
Age	18-39 yrs	36 (28.3%)	31 (86.1%)	3 (8.3%)	12 (33.3%)	1 (2.8%)
	40-59 yrs	50 (39.4%)	12 (24.0%)	34 (68.0%)	14 (28.0%)	7 (14.0%)
	60-79 yrs	38 (29.9%)	3 (7.9%)	32 (84.2%)	8 (21.1%)	9 (23.7%)
	80 yrs and over	3 (2.4%)	0 (0.0%)	3 (100.0%)	0 (0.0%)	0 (0.0%)
Time since diagnosis	Within the last year	6 (4.9%)	1 (16.7%)	3 (50.0%)	0 (0.0%)	0 (0.0%)
	1 - 5 years ago	17 (13.8%)	2 (11.8%)	13 (76.5%)	2 (11.8%)	0 (0.0%)
	6 - 10 years ago	28 (22.8%)	3 (10.7%)	22 (78.6%)	5 (17.9%)	4 (14.3%)
	11 - 15 years ago	26 (21.1%)	11 (42.3%)	15 (57.7%)	6 (23.1%)	4 (15.4%)
	16 - 20 years ago	17 (13.8%)	8 (47.1%)	9 (52.9%)	5 (29.4%)	5 (29.4%)
	21 years ago or longer	29 (23.6%)	20 (69.0%)	9 (31.0%)	15 (51.7%)	4 (13.8%)
	Total Missing	4	1	1	1	0
Control of Diabetes	Controlled	83 (73.5%)	33 (39.8%)	46 (55.4%)	25 (30.1%)	11 (13.3%)
	Not controlled	28 (24.8%)	10 (35.7%)	17 (60.7%)	8 (28.6%)	5 (17.9%)
	Don't know/Not sure	2 (1.8%)	1 (50.0%)	1 (50.0%)	1 (50.0%)	1 (50.0%)
	Total Missing	14	2	8	0	0

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

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

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

EXP 7

Question	Response	With DED n (%)	With DME n (%)
Have you had any treatment for diabetic eye disease?	Yes	25 (73.5%)	17 (100.0%)
	No	9 (26.5%)	0 (0.0%)
	Total valid response	34 (100.0%)	17 (100.0%)
What treatment did you receive?	Laser	18 (72.0%)	16 (94.1%)
	Anti-VEGF	2 (8.0%)	11 (64.7%)
	Surgery	2 (8.0%)	5 (29.4%)
	Other	7 (28.0%)	1 (5.9%)
	Total valid response	25 (100.0%)	17 (100.0%)
	Total missing	9	0
Did you complete the treatment?	Yes	12 (48.0%)	7 (41.2%)
	Still receiving treatment	11 (44.0%)	10 (58.8%)
	Don't know/Not sure	2 (8.0%)	0 (0.0%)
	Total valid response	25 (100.0%)	17 (100.0%)
	Total missing	9	0
Do you feel that the treatment worked?	Yes, and vision improved	9 (36.0%)	9 (52.9%)
	Yes, but vision stayed the same	10 (40.0%)	6 (35.3%)
	No	4 (16.0%)	0 (0.0%)
	Still waiting to know	0 (0.0%)	1 (5.9%)
	Don't know/Not sure	2 (8.0%)	1 (5.9%)
	Total valid response	25 (100.0%)	17 (100.0%)
	Total missing	9	0
What is/are the reason(s) that you did not complete the treatment?	Total valid response	0 (0.0%)	0 (0.0%)
	Total missing	34	17
What are the reason(s) that you have not had treatment for diabetic eye disease?	My doctor did not recommend any treatment	6 (75.0%)	0 (0.0%)
	Other	2 (25.0%)	0 (0.0%)
	Total valid response	8 (100.0%)	0 (0.0%)

Question	Response	With DED n (%)	With DME n (%)
	Total missing	26	17

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.



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