DR Barometer
Shifting the needle

The Diabetic Retinopathy Barometer Report

Denmark

IFA · IAPB · International Diabetes Federation · BAYER

Contents

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

Introduction
Global Study

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

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

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

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

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

Goal

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

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

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

Background

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

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

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

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

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

Study Populations

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

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

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

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

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

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

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

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

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

Introduction
Denmark Study

Demographic Characteristics[1]

Denmark is estimated to be the seventeenth most populous country in the European Union with a population of ~5.6 million. According to most recent statistics, it is estimated that ~17% of the population is under the age of 15 years and 20% over the age of 65 years.

Today Denmark has a relatively large ageing population yet this is expected to increase even further in the coming decades with continuing high life expectancy and low fertility rates. By 2050, the projected population is 6.2 million with those under the age of 15 years making 15% of the total population and those aged 65 years and older making up 24%.

Diabetes Profile[2]

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

Denmark has over 405,500 (350.2-455.0‡) adults living with diabetes and a national prevalence 20 – 79 years of 9.9% which is above the global average of 8.8%. It is ninth in the world for the number of new cases of type 1 diabetes for people under 15 years of age at an estimated 25.1 cases per 100,000 people per year.

Deaths attributed to diabetes in Denmark in 2015 were 3,645 and the estimated number of undiagnosed cases was 154,800 (181.5-235.8‡).

Study Populations: Denmark

As reported by 135 respondents with diabetes in Denmark, 15% were diagnosed with DED and a further 8.1% with DME.

Seven health care professionals completed the survey in Denmark. Of these, three were ophthalmologists (43%), and the remaining respondents were either nurses or health educators.

The DR Barometer Study:
Denmark Overview

The DR Barometer study was conducted in 41 countries. In Denmark, 135 adults with diabetes and 7 health care professionals provided new information about the experiences of living with, managing and treating diabetes, DR and DME.

46%

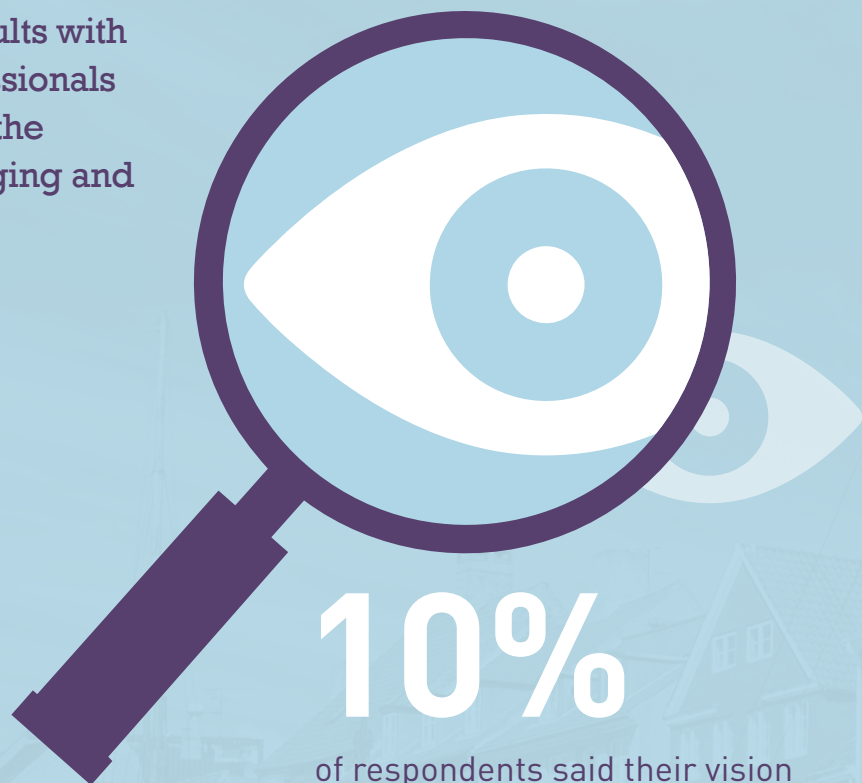of patients said that **long wait times for an appointment** were a barrier to eye exams

10%

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

25%

of all providers **did not have written protocols/guidelines** for detection and management of diabetes-related vision loss available
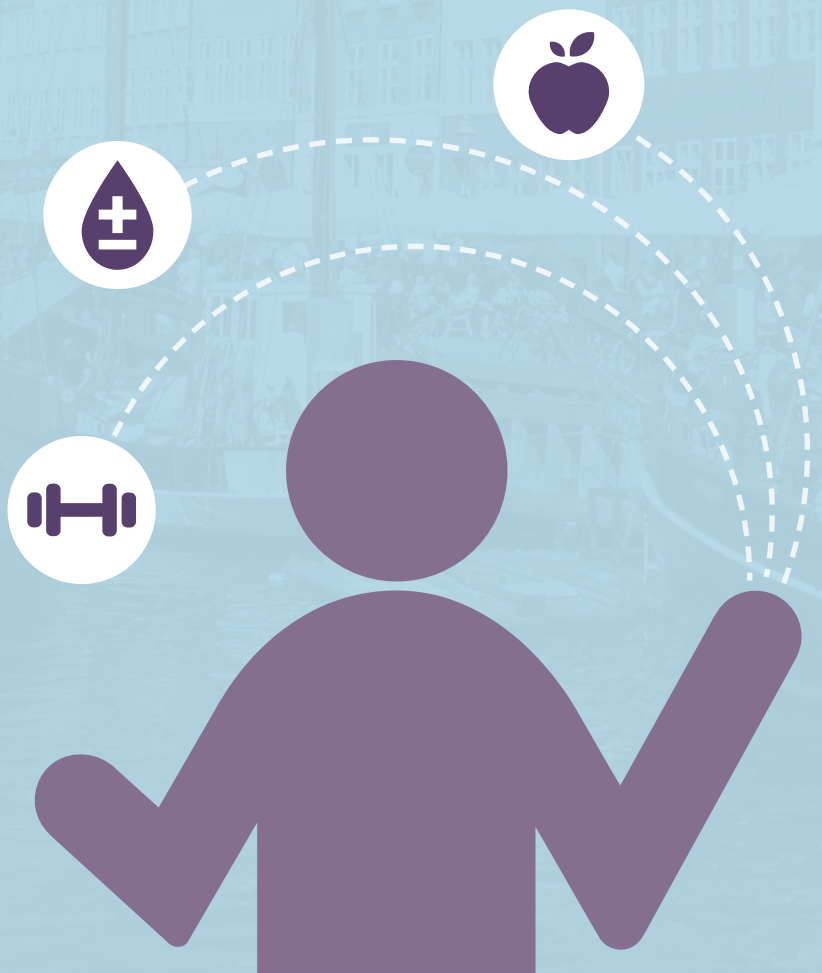
DR: Diabetic Retinopathy
DME: Diabetic Macular Edema

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IFA

IAPB

International Diabetes Federation

BAYER

75%

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

57%

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

20%

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

50%

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

Denmark
DR Barometer Findings:
Adults with Diabetes

Key Demographic Characteristics

One hundred and thirty-five adults with diabetes completed the patients' survey in Denmark: 44% were female and 56% were male. Seventy-six percent lived in an urban setting and 24% in a non-urban setting (see Appendix Table 4.2).

The education level of respondents were as follows: 1.6% did not complete primary school, 32% were educated to a primary school level, 35% to a secondary school level, 27% to a college or university level, and 4.8% to a graduate or post-graduate level (see Appendix Table 4.3).

Twenty-three percent of all respondents were in paid employment, 66% were retired, and 7.2% were not working (see Appendix Table 4.4).

Most respondents (64%) were aged between 60 and 79 years (7.4% were 18-39 years, 24% were 40-59 years, and 5.2% were 80 years and over). Thirty-one percent were of traditional working age (18- 59 years) (see Table 1).

Of the respondents in Denmark, 33% had been diagnosed with type 1 diabetes and 66% with type 2 diabetes. A further 1.5% of respondents were either unsure of or did not know their type of diabetes (see Appendix Table 2.1).

Fifteen percent of respondents (n=20) had been diagnosed with DED and a further 8.1% (n=11) with DME.

Most of the respondents had been diagnose for many years: 27% diagnosed 21years ago or more, 18% 16-20 years ago, 17% 11-15 years ago, 22% 6-10 years ago, 14% 1-5 years ago and 2% with this last year (see Appendix Table 2.2).

Amongst 18 to 39 year-olds, all respondents had type 1 diabetes. In the 40-59 age group 50% had type 1 and 44% type 2 diabetes. Nineteen percent of 60-79 year-olds had type 1 diabetes and 81% had type 2 and in those aged over 80 years, 29% had type 1 and 71% had type 2 diabetes.

In people aged 18-39 years, 30% had DED and 10% had DME. In those aged 40-59 years, 16% had DED and 6.3% had DME and for people aged 60-79 years 14% had DED and 9.3% had DME. For the subgroup of patients in the 80 years and over age group, none of the respondents reported to have been diagnosed with either DED or DME.

An important trend noted in the findings was that the longer the time since diagnoses the greater the likelihood to be diagnosed with DED and DME. In the subgroup of patients diagnosed with diabetes 21 years ago or longer, one in three respondents (33%) had DED and a further 11% had DME.

Most respondents (93%) reported that their diabetes was well controlled and only 4.7% felt that this was not the case. For the subgroup of respondents who felt their diabetes was controlled, 15% had DED and 8.3% had DME, and for the group where their condition was not well controlled 33% had DED and 17% 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		135 (100.0%)	44 (32.6%)	89 (65.9%)	20 (14.8%)	11 (8.1%)
Gender	Male	70 (56.0%)	14 (20.0%)	56 (80.0%)	6 (8.6%)	5 (7.1%)
	Female	55 (44.0%)	28 (50.9%)	26 (47.3%)	14 (25.5%)	6 (10.9%)
	Total Missing	10	2	7	0	0
Age	18-39 yrs.	10 (7.4%)	10 (100.0%)	0 (0.0%)	3 (30.0%)	1 (10.0%)
	40-59 yrs.	32 (23.7%)	16 (50.0%)	14 (43.8%)	5 (15.6%)	2 (6.3%)
	60-79 yrs.	86 (63.7%)	16 (18.6%)	70 (81.4%)	12 (14.0%)	8 (9.3%)
	80 yrs. plus	7 (5.2%)	2 (28.6%)	5 (71.4%)	0 (0.0%)	0 (0.0%)
Time since diagnosis	Within the last year	2 (1.5%)	0 (0.0%)	2 (100.0%)	0 (0.0%)	1 (50.0%)
	1 - 5 yrs.	19 (14.1%)	3 (15.8%)	16 (84.2%)	1 (5.3%)	1 (5.3%)
	6 - 10 yrs.	29 (21.5%)	3 (10.3%)	26 (89.7%)	4 (13.8%)	1 (3.4%)
	11 - 15 yrs.	23 (17.0%)	4 (17.4%)	19 (82.6%)	1 (4.3%)	2 (8.7%)
	16 - 20 yrs.	24 (17.8%)	6 (25.0%)	17 (70.8%)	2 (8.3%)	2 (8.3%)
	21 yrs. plus	36 (26.7%)	28 (77.8%)	8 (22.2%)	12 (33.3%)	4 (11.1%)
	Don't know/ Not sure	2 (1.5%)	0 (0.0%)	1 (50.0%)	0 (0.0%)	0 (0.0%)
Control of Diabetes	Controlled	120 (93.0%)	40 (33.3%)	79 (65.8%)	18 (15.0%)	10 (8.3%)
	Not controlled	6 (4.7%)	3 (50.0%)	3 (50.0%)	2 (33.3%)	1 (16.7%)
	Don't know/ Not sure	3 (2.3%)	1 (33.3%)	1 (33.3%)	0 (0.0%)	0 (0.0%)
	Total Missing	6	0	6	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 51% seeing a diabetes specialist (on average 3.6 times per year) and 37% a general or family doctor (on average 3.5 times per year) (see Appendix Table 2.3.1 and 2.3.2).

People were informed about their condition through a variety of channels. Ninety-five percent received information from a doctor or nurse, 33% from a diabetes organisation or other health organisation, 31% from a nutritionist or dietician, and some 16% sourced information through the internet (see Table 2 and Appendix Table 2.4).

Table 2: Source of information regarding diabetes

Information Source	All Respondents (n=134)
Doctor or nurse	127 (94.8%)
Diabetes organisation or other health organisation	44 (32.8%)
Nutritionist or dietician	42 (31.3%)
Internet	21 (15.7%)
Health educator	11 (8.2%)
TV/Radio/Newspaper/Magazines	11 (8.2%)
Family/Friends/Neighbours	8 (6.0%)
Social media (e.g. Facebook, Twitter, blogs)	5 (3.7%)
Pharmacist	2 (1.5%)
None of the above	4 (3.0%)
None of the above	3 (2.8%)

A range of strategies was used by respondents to manage their diabetes. For those with type 1 diabetes, apart from insulin, 56% managed their diabetes with diet and 47% with exercise. Of the respondents with type 2 diabetes, 71% managed their condition with oral medicine, 64% with diet, 52% with insulin, and 44% with exercise.

Only 19% of respondents were enrolled in diabetes management programmes and of these 92% said it included education on the importance of screening for diabetic eye complications (see Appendix Table 2.6).

The nature and frequency of tests that people with diabetes experienced included blood glucose checks and eye checks. For those who had eye checks (97%) these occurred at less than 6 months (54%), 6 - 12 months (32%), and greater than 12 months (9.2%) (see Appendix Table 2.7).

The main challenges in controlling diabetes cited by respondents were: it was too hard to eat the right things (37%), respondents did not want to think about having diabetes (26%), there were too many other things to do (18%), the cost of care was high (16%), and travelling to their regular doctor or specialist was difficult (11%) (see Appendix Table 2.9).

Free or low cost medicines or monitoring materials (71%), coordination of healthcare and services by a professional (37%), support from family or friends (25%), health education and information (13%), and support groups (9.2%) were important to improving the management of their diabetes (see Appendix Table 2.10).

Nature and Information about Complications

Seventy-one percent of respondents were aware of vision loss and believed other complications, such as: foot ulcers (67%), neuropathy (63%), cardiovascular disease or stroke (50%), and kidney disease (48%) were associated with the condition (see Appendix Table 2.11).

Patients were most concerned about vision loss (39%), cardiovascular disease or stroke (19%), amputation (16%), kidney disease (11%), and foot ulcers (3.1%) (see Appendix Table 2.12).

Twenty-five percent of respondents had no complications of diabetes. However, of those who did have complications 34% had neuropathy, vision loss (33%), cardiovascular disease or stroke (14%), foot ulcers (11%), and kidney disease (11%) (see Figure 1 and Appendix Table 2.13).

Aside from vision loss, there was a considerable increase in the frequency of people with DED (47%) and DME (73%) experiencing neuropathy compared to people without DED (27%) (see Table 3 and Appendix EXP 1).
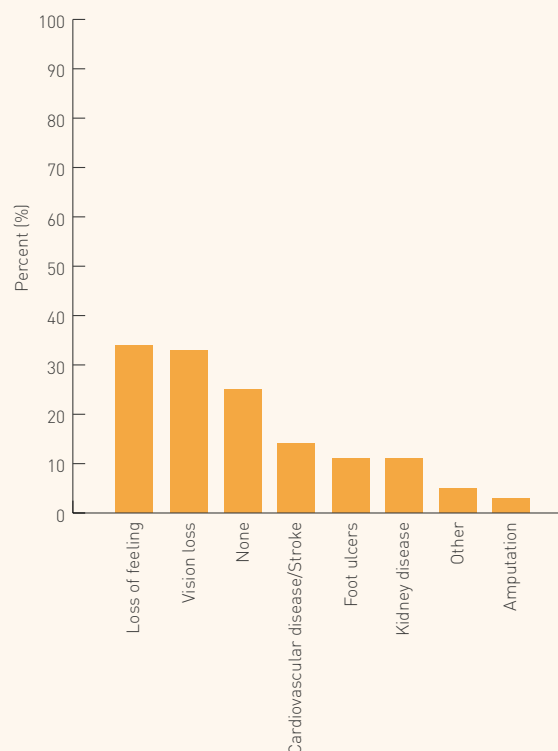

Figure 1: Presence of complications

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

Complication	Without DED (n=93)	With DED (n=19)	With DME (n=11)
Any	63 (67.7%)	18 (94.7%)	11 (100.0%)
Loss of feeling in hands or toes (neuropathy)	25 (26.9%)	9 (47.4%)	8 (72.7%)
Vision loss	26 (28.0%)	6 (31.6%)	8 (72.7%)
Cardiovascular disease/Stroke	14 (15.1%)	3 (15.8%)	0 (0.0%)
Foot ulcers	10 (10.8%)	2 (10.5%)	1 (9.1%)
Kidney disease	10 (10.8%)	1 (5.3%)	2 (18.2%)
Amputation	3 (3.2%)	0 (0.0%)	1 (9.1%)
Other	3 (3.2%)	3 (15.8%)	0 (0.0%)
None	30 (32.3%)	1 (5.3%)	0 (0.0%)

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

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

NB [3]: DME = respondents with DME = "Yes".

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

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

Information about Diabetic Eye Disease and Diabetic Macular Edema

Ninety percent of respondents stated that eye complications were discussed with their health care professionals. Notwithstanding this, a few respondents (8.8%) never discussed their eye complications with their provider or discussions only took place when symptoms arose (11%). The frequency of regular discussions varied from every visit (18%), multiple times a year (26%), and once a year (34%) (see Appendix Table 2.14).

Eighty-six percent of patients reported that they did what they could to prevent vision problems (e.g. having routine screenings and visiting specialists) yet 26% thought that vision problems were a normal part of

ageing and 8.1% made no special effort to have a preventative approach to their eye health (see Appendix Table 2.15).

Fifty-three percent of all respondents had received information about DR and DME with a doctor or nurse being the most common source (45%) followed by a diabetes organisation or other health organisation which was reported significantly less (11%) (see Table 4 and Appendix Table 3.9).

Table 4: Source of information about DR and DME

Source	All respondents (n=122)
Doctor/Nurse	55 (45.1%)
Diabetes organisation or other health organisation	13 (10.7%)
Internet	10 (8.2%)
Family/Friends/Neighbours	2 (1.6%)
TV/Radio/Newspaper/ Magazines	2 (1.6%)
None of the above	57 (46.7%)

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 (91%) respondents reported having an eye exam for DED, with 83% having it within the last year and a further 13% more than one year ago but less than two years ago. Over half (58%) of respondents were aware of government sponsored screening programmes for DED (see Appendix Table 3.1 and Table 3.2).

While 87% of those surveyed thought they should have their eyes examined for DED once a year, there were varied smaller numbers of respondents who thought that testing should happen every two years and even less stating that tests should only happen when symptoms occur (see Appendix Table 3.4).

The biggest barriers to eye exams were: long wait times for an appointment (46%), eye exams not being available near their home (18%), and long wait times on the day of the visit (15%) (see Table 5 and Appendix Table 3.5).

Table 5: Barriers to eye examinations

Identified Barriers	All Respondents (n=94)
Long wait time for appointment	43 (45.7%)
Eye exams are not available near my home	17 (18.1%)
Long wait time on the day of the visit	14 (14.9%)
Referral process is complicated or takes too long	5 (5.3%)
I'm not likely to have eye complications	5 (5.3%)
Don't know much about my condition	4 (4.3%)
Fear of treatment/results	4 (4.3%)
Limited access to diabetes specialists	4 (4.3%)
They are expensive	3 (3.2%)
Burden on my family/friends	3 (3.2%)
Recommended treatments for eye problems are not available	2 (2.1%)
Eye exams are not important	2 (2.1%)
Too many other things to do or worry about	1 (1.1%)
Other	26 (27.7%)

Treatment of Diabetic Eye Disease and Diabetic Macular Edema

Treatment was assessed separately in people with DED and in those with DME. Of those with DED 67% received laser treatment and 56% surgery. Seventy-eight percent completed their treatment while the remaining 22% said their treatment was ongoing. Eighty-nine percent felt that treatment had been successful and their vision had either improved (67%) or stayed the same (22%) (see Table 6).

For the seven respondents (35%) with DED who had not received treatment, the most common reason was that their doctor did not recommend treatment.

Only three respondents with DME had received treatment, using laser, anti-VEGF, as well as surgery and 67% felt that it had been successful with their vision improved.

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

Table 6: Treatment characteristics of patients with DED and DME

Question	Response	With DED (n=20)	With DME (n=6)
Have you had any treatment for diabetic eye disease?	Yes	9 (45.0%)	3 (50.0%)
	No	7 (35.0%)	0 (0.0%)
	Don't know/ Not sure	4 (20.0%)	3 (50.0%)
What treatment did you receive?	Laser	6 (66.7%)	2 (66.7%)
	Anti-VEGF	1 (11.1%)	2 (66.7%)
	Surgery	5 (55.6%)	2 (66.7%)
	Other	0 (0.0%)	1 (33.3%)
Did you complete the treatment?	Yes	7 (77.8%)	3 (100.0%)
	Still receiving treatment	2 (22.2%)	0 (0.0%)
Do you feel that the treatment worked?	Yes, and vision improved	6 (66.7%)	2 (66.7%)
	Yes, but vision stayed the same	2 (22.2%)	0 (0.0%)
	No	0 (0.0%)	1 (33.3%)
	Still waiting to know	1 (11.1%)	0 (0.0%)
What are the reason(s) that you have not had treatment for diabetic eye disease?	My doctor did not recommend any treatment	5 (83.3%)	0 (0.0%)
	Treatment would not be effective	1 (16.7%)	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

Seventy-seven percent of those diagnosed with DED or DME said that their vision was affected (15% significantly, 62% slightly) (see Appendix Table 3.6).

Three-quarters of these respondents said that vision issues challenged everyday activities including driving a vehicle (50%), leisure activities or exercise (25%), undertaking of household responsibilities, such as cooking or cleaning (15%), travelling (10%), working or keeping a job (10%), managing their underlying diabetes (10%), and social interactions with family or friends (5%) (see Table 7).

Table 7: Activities affected through vision impairment and loss

	All Respondents (n=20)
Driving (a car/vehicle)	10 (50.0%)
Leisure activities/exercise	5 (25.0%)
Household responsibilities, such as cooking or cleaning	3 (15.0%)
Travelling	2 (10.0%)
Work or keeping a job	2 (10.0%)
Managing my diabetes	2 (10.0%)
Social interactions with family/friends	1 (5.0%)
Other	4 (20.0%)
None	5 (25.0%)

Thirty-five percent of those with DED and 27% with DME were in paid employment compared with 20% of respondents without DED. Even though some of those with DED were employed, vision complications still created difficulties for some as work or keeping a job (10%) and 5% of those with DED were not working (see Table 8 and Appendix EXP 5.1).

Fifty-nine percent of those surveyed did not receive assistance from the government while 15% received income assistance (see Appendix Table 4.5). Sixty-five percent of those with DED and 30% with DME received government assistance on one kind or another compared with 38% without DED.

Most (82%) respondents said they had no trouble paying for food at any time during the past year. A large proportion (88%) did not feel that their access to health care was affected by any factors, but there remained a few (5.8%) who said it was affected by where they lived (see Appendix Table 4.6 and Table 4.7).

Sixty-three percent of respondents said they worried about their health, 8.9% about family, while 18% were not worried about any of the items 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=94)	With DED (n=20)	With DME (n=11)
Are you currently working?	Working for pay	19 (20.2%)	7 (35.0%)	3 (27.3%)
	Volunteering	2 (2.1%)	1 (5.0%)	0 (0.0%)
	Retired	63 (67.0%)	11 (55.0%)	8 (72.7%)
	Student	2 (2.1%)	0 (0.0%)	0 (0.0%)
	Not working	8 (8.5%)	1 (5.0%)	0 (0.0%)
Question	**Response**	**Without DED (n=93)**	**With DED (n=20)**	**With DME (n=10)**
Do you receive assistance from the government?	Income assistance	15 (16.1%)	3 (15.0%)	1 (10.0%)
	Medical assistance	11 (11.8%)	4 (20.0%)	1 (10.0%)
	Food assistance	2 (2.2%)	0 (0.0%)	1 (10.0%)
	Housing assistance	12 (12.9%)	6 (30.0%)	1 (10.0%)
	Pension assistance	9 (9.7%)	3 (15.0%)	1 (10.0%)
	None of the above	58 (62.4%)	7 (35.0%)	7 (70.0%)
Question	**Response**	**Without DED (n=92)**	**With DED (n=19)**	**With DME (n=11)**
Did you have trouble paying for food at anytime during the past year?	Yes	17 (18.5%)	4 (21.1%)	1 (9.1%)
	No	75 (81.5%)	15 (78.9%)	10 (90.9%)

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).

Sixty percent of people with DED and 70% of people with DME reported self-rated health as poor compared with 48% of people without DED. People with DED and DME also experienced a greater impact on their physical and mental health. Sixty-nine percent of those with DED and 50% with DME had physically unhealthy days whilst 38% of those with DED and 22% with DME had mentally unhealthy days. In comparison, 40% and 21% of people without DED had physically and mentally unhealthy days, respectively.

Compared with 37% of those without DED, 70% of people with DED and 60% of people with DME experienced limitations to their daily activities as a result of poor health. Where health impacted daily activities, the primary limitations were: diabetes, walking problems and back or neck problems.

People living with DED and DME had a higher proportion for some impairments. Of note were potential mobility challenges manifested through back and neck problems, walking problems and arthritis. These patients have complex comorbidities that require careful management across the health and social care system (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	47 (52.2%)	8 (40.0%)	3 (30.0%)
Self-rated health: Poor	43 (47.8%)	12 (60.0%)	7 (70.0%)
Physically unhealthy days	29 (40.3%)	11 (68.8%)	4 (50.0%)
Mentally unhealthy days	15 (21.1%)	6 (37.5%)	2 (22.2%)
Unhealthy days	33 (47.8%)	14 (82.4%)	4 (57.1%)
Activity limitation days	16 (34.0%)	7 (50.0%)	4 (66.7%)

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

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

NB [3]: DME = respondents with DME ="Yes".

NB [4]: 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.

Denmark
DR Barometer Findings:
Health Care Professionals

Key Demographic Characteristics

There were seven health care professionals who answered at least one of the survey questions in Denmark. Of these, three were ophthalmologists (43%) and the remaining respondents were nurses or health educators (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 18 years, with the ophthalmologist group practicing for an average of 21 years (see Appendix PT 1.5).

Health care professionals were well-educated (25% with graduate or advanced degree), all were female, and with the largest proportion (50%) aged between 40 - 49 years and a further 25% in the 50-59 age group and 25% in the 60-69 age group (see Table 10 and Appendix PT 3.1).

Table 10: Summary of key characteristics of health care professionals

Group	Subgroup	All Respondents	Ophthalmologist
All respondents		7 (100.0%)	3 (42.9%)
Age group	40 - 49 yrs.	2 (50.0%)	1 (50.0%)
	50 - 59 yrs.	1 (25.0%)	0 (0.0%)
	60 - 69 yrs.	1 (25.0%)	1 (50.0%)
Gender	Female	4 (100.0%)	2 (100.0%)
Education	College/University	3 (75.0%)	1 (50.0%)
	Graduate or advanced degree (e.g. PhD, MD, etc.)	1 (25.0%)	1 (50.0%)

Clinical Practice Characteristics

Forty-three percent of all providers had their main practice setting in a hospital and for ophthalmologists it was a hospital (67%) and eye clinic (33%). All health care professionals worked in an urban setting (see Appendix PT 2.1 and PT 2.2).

Most health care professionals worked in the government sector (86%). Ophthalmologists worked mainly in the government (67%) and combined or mixed (33%) sectors (see Appendix PT 2.3).

The health care professionals said that 75% of patients do not pay for services and 25% pay through insurance for services. For ophthalmologists, 50% of patients do not pay for services and 50% of patients pay through insurance for services (see Appendix PT 2.7).

Health care professionals reported that an average of 82 patients were seen per week and nearly two-thirds (62%) had diabetes. Ophthalmologists saw an average of 150 patients per week with 29% on average having diabetes (see Appendix PT 2.6).

For all health care professionals, the average waiting time for an appointment was most commonly between one week and a month (25%), or between one and two months (25%) (see Appendix PT 2.5).

For ophthalmologists the average wait time for an appointment was between one and two months in 50% of practices and for the remainder between three and six months.

Table 11: Average wait times to schedule an appointment

Wait Time Intervals	All Respondents (n=4)	Ophthalmologist (n=2)
More than 1 week but less than 1 month	1 (25.0%)	0 (0.0%)
More than 1 month but less than 2 months	1 (25.0%)	1 (50.0%)
More than 3 months but less than 6 months	1 (25.0%)	1 (50.0%)
Do not take appointments	1 (25.0%)	0 (0.0%)

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).

All health care professionals and ophthalmologists reported that they had sufficient information about diabetes and eye complications (see Appendix PT 2.11).

Figure 2: Health care topics discussed with patients during a routine visit
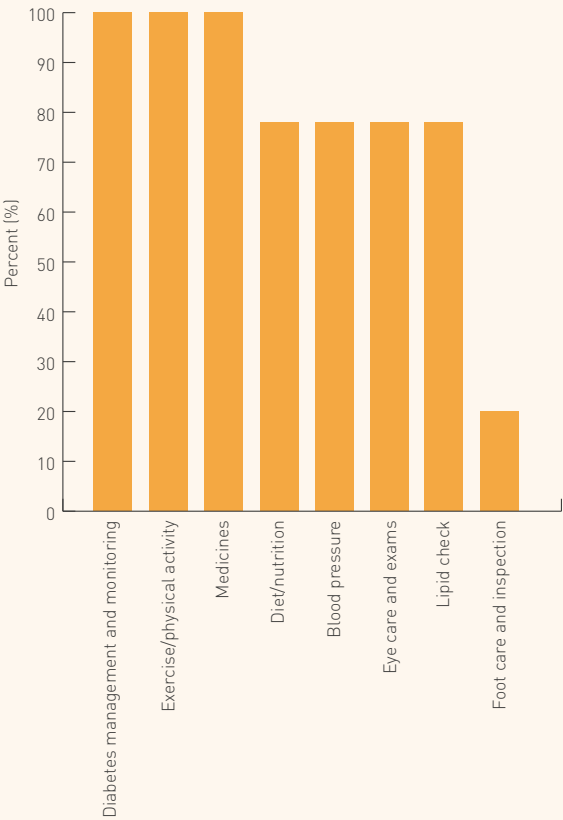
Guidelines and Protocols

All health care professionals and ophthalmologist said they had written protocols for the management of diabetes, which were used by staff (see Appendix PT 2.12).

With respect to the management of diabetes-related vision issues, half of health care professionals had written protocols and these were used by staff yet 20% had no protocols (see Appendix PT 2.13).

In contrast, all ophthalmologists had written protocols for detection and management of diabetes-related vision issues available, which were used by staff (see Table 12).

Table 12: Availability and use of information and protocols

Question	Response	All Respondents (n=4)	Ophthalmologist (n=2)
Is there written information about diabetes available for patients in your main practice?	Yes, and information on eye complications is sufficient	4 (100.0%)	2 (100.0%)

Question	Response	All Respondents (n=4)	Ophthalmologist (n=2)
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	2 (50.0%)	2 (100.0%)
	Not available	1 (25.0%)	0 (0.0%)
	Don't know/Not sure	1 (25.0%)	0 (0.0%)

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, 67% of all providers reported that the initial eye exam should occur at time of the diagnosis of diabetes. For patients with type 2 diabetes, 75% of the providers recommended an eye exam at time of diagnosis (see Appendix PT 2.14).

Overall, seventy-five percent of health care professionals, including all ophthalmologists, reported that follow-up eye examinations should be conducted every year. All ophthalmologists and 50% of health care professionals screen patients for DR (see Appendix PT 2.15 and PT 2.16).

Across all health care professionals, 75% reported that they send appointment reminders and 25% do not (see Appendix PT 2.19).

Seventy-five percent of the health care professionals including all ophthalmologists, shared information to optimise patient care management (see Appendix PT 2.20).

The most common patient characteristics influencing the referral process for eye complications for all providers and then ophthalmologists respectively were: diabetes duration (50%), patient's age (50%), presence of comorbidities such as hypertension (25%) (50%), high glucose levels (25%) (50%), and a patient's ability to adhere to recommendations (25%, providers) (see Appendix PT 2.17).

As reported by health care professionals, the major barriers to optimising eye health faced by patients with diabetes were that patients feel eye exams are not important (100%), patients feel eye complications are unlikely (75%) and long wait times for appointment (50%) (see Table 13 and Appendix PT 2.18).

Table 13: Major barriers to optimising eye health

Response	All Respondents (n=4)	Ophthalmologists (n=2)
Patients feel eye complications are unlikely	3 (75.0%)	2 (100.0%)
Patients feel eye exams are not important	4 (100.0%)	2 (100.0%)
Patients have competing responsibilities and priorities	2 (50.0%)	2 (100.0%)
Proximity to care	1 (25.0%)	1 (50.0%)
Referral process	1 (25.0%)	1 (50.0%)
Patients fear of treatment/results	2 (50.0%)	1 (50.0%)
Clinic too small or lack necessary equipment/staff	1 (25.0%)	1 (50.0%)
Long wait time for appointment	2 (50.0%)	0 (0.0%)
Lack of knowledge and/or awareness	1 (25.0%)	0 (0.0%)
Limited access to eye specialists	1 (25.0%)	0 (0.0%)

Denmark
DR Barometer Findings:
Ophthalmologists

Screening

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

On average 33% of patients seen by the ophthalmologists had DR and 21% had DME (see Appendix PT 4.1 and PT 4.2).

The most common waiting time for a screening appointment for DED was between one and two months (50%) and the remaining ophthalmologist do not take appointments (see Appendix PT 4.3).

Fifty percent of ophthalmologists reported a wait time between one week and a month from screening to diagnosis and the remaining said it occurred at screening (see Appendix PT 4.4).

Treatment and Challenges

One ophthalmologist personally administered treatment for DR and the most common factors influencing how ophthalmologists treat patients with DR or DME are: duration of diabetes, the presence of comorbidities such as hypertension, and high glucose levels (see Appendix PT 4.6 and PT 4.7).

The most common outreach venues for screening for DED were at vision centres (50%) (see Appendix PT 4.13).

Both ophthalmologists reported that they screen patients for DR based on retinal photo. Additionally 50% based use fundoscopy through dilated pupils and 50% use optical coherence tomography. All ophthalmologists said that they treat DR and DME based on both visual and anatomical outcomes (see Appendix PT 4.8 and PT 4.9).

According to the two ophthalmologists, patients present "in time" for screening (see Appendix PT 4.10).

One ophthalmologist had received specific training on the treatment and diagnosis of DR and or DME between one and five years ago while the other had not. Both would be interested in online education and certification on DME, angiogenesis, and anti-VEGF therapies (see Appendix PT 4.11 and PT 4.12).

Ophthalmologists said that the greatest challenges for improving patient outcomes in DED were late diagnosis and poor multi-disciplinary team integration (see Table 14 and Appendix PT 4.11).

Table 14: Challenges for improving outcomes in DED

Question	Response	Ophthalmologist (n=2)
What do you perceive to be the greatest challenges for improving patient outcomes in diabetic eye disease?	Late diagnosis	1 (50.0%)
	Multi-disciplinary team integration is poor	1 (50.0%)
	Other	1 (50.0%)

Denmark
DR Barometer Summary

In Denmark, 135 adults with diabetes and seven 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, Denmark aim to help improve the level of awareness around diabetes and eye complications, and access and barriers to diabetes management, including screening and timely treatment for those diagnosed with DED and DME.

Denmark is estimated to be the seventeenth most populous country in the European Union with a population of ~5.6 million. According to most recent statistics, it is estimated that ~17% of the population is under the age of 15 years and 20% over the age of 65 years. One of the major influences in the region is that of population ageing which has serious policy and programme implications alongside the increased prevalence of many non-communicable diseases. By 2050, the projected population is 6.2 million with those under the age of 15 years making 15% of the total population and those aged 65 years and older making up 24%.

Alongside the demographic changes, the prevalence of people with diabetes is climbing rapidly. Today Denmark has over 405,500 (350.2-455.0‡) adults living with diabetes and a national prevalence 20 – 79 years of 9.9% which is above the global average of 8.8%. It is ninth in the world for the number of new cases of type 1 diabetes for people under 15 years of age at an estimated 25.1 cases per 100,000 people per year.

The DR Barometer Study findings suggest that overall a younger population was more likely to be associated with type 1 diabetes, and an older population with type 2 diabetes. All of those in the youngest age group (18-39 years) had type 1 diabetes and in the 40 – 59 age group 50% had type 1 (44% type 2), 19% of those in the 60-70 age group had type 1 (81% type 2).

Health professionals such as the doctor or nurse, diabetes and other health organisations and nutritionist most commonly informed patients about their condition. A trend globally, which was not well reflected in the Denmark study, was the increasing use of the internet which was used by only 16% of those surveyed.

Only 19% of respondents were enrolled in a diabetes management programme and most (92%) said that there was information about the importance of screening for eye complications.

Many respondents struggled with the management of their diabetic condition with some issues that were within their control such as eating the right foods and balancing the responsibilities of family and work without compromising their health. For 26% of the respondents they just did not want to think about having diabetes. In addition, the high cost of care, and travelling to specialist appointments were challenges.

There was a relatively high awareness of the complications associated with diabetes. Vision loss (39%) was the most concerning although surprising low, followed by cardiovascular disease (14%) and amputation (11%). Only a quarter of respondents had no complications, which suggests the majority of respondents had complications which included neuropathy (34%), vision loss (33%) and kidney disease (11%). Almost all those with DED and DME had additional complications.

Knowing that diabetic-related vision loss is preventable, addressing barriers to eye screening is an important policy issue. In large part, respondents had received an eye exam, which is understandable considering the purposeful sample however, there remained specific barriers long wait times for an appointment and on the day of the appointment and eye exams not being available near their 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 19% had either never had a conversation about eye complications with their health professional or it only took place only once symptoms were present. Equally concerning is the myths and perceptions around vision changes with 26% reporting that vision problems were a normal part of ageing and some respondents not making any special effort to prevent vision problems.

Most people diagnosed with DED or DME said that their vision was slightly or significantly affected which in turn affected their health, lifestyle, and life choices with many experiencing difficulty in driving a vehicle, working or keeping a job, and undertaking household responsibilities, such as cooking or cleaning and management of their underlying diabetes.

A significant proportion of those with DED and DME reported self-rated health as poor compared with people without DED. These sub-populations also experienced significantly greater impact on both their physical and mental health. Respondents with DME said that they preferred a proactive approach to prevent further vision loss rather than only receiving treatment when their vision deteriorates.

Patient education is very much at the heart of a proactive approach so it was gratifying that all providers reported to have written information diabetes and eye complications. This finding also then raises a question as to the timely uptake of information by people with diabetes. Half of all providers, including all ophthalmologists, had written protocols for the detection and management of diabetes-related vision issues. It is necessary however to view these findings in the context of the small sample sizes of health care professionals.

Recommendations for the timing of the initial eye exam for persons with diabetes varied depending upon the type of diabetes and the provider. For patients with type 1 diabetes, 67% of providers and for those with type 2, 84% recommended an initial eye exam at the time of diagnosis.

Certain factors influenced the referral process for respondents with eye complications, the main being, diabetes duration, presence of comorbidities such as hypertension, high glucose levels, and a patient's ability to adhere to recommendations. A further challenge reported by ophthalmologists for improving patient outcomes in DED was the poor multi-disciplinary team integration.

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 the sample of health care professionals was especially small, the findings certainly highlight specific areas of concern and potential calls for policy action in Denmark.

References and Acknowledgement

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

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

Appendices

The Diabetic Retinopathy Barometer Survey: Appendices for Denmark

APPENDIX 1 : National Results

Table 1.1

Survey Information	Number of Respondents (%)
All valid respondents [1]	142 (100.0%)
Respondents aged 18 or over	139 (97.9%)
Respondents with diabetes	135 (95.1%)

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

Table 1.2

Survey Information	Number of Respondents (%)
All valid respondents	142 (100.0%)
Included in Diabetic Analysis Set	135 (95.1%)
Excluded from Diabetic Analysis Set	7 (4.9%)
Reasons for exclusion from diabetic analysis set	.
Under 18 years of age	3
Not diagnosed with diabetes	2
Missing information on diabetes diagnosis	2

Table 1.3

Survey Information	Number of Respondents (%)
Diabetic Analysis Set	135 (100.0%)
World Bank Income Group: High Income	135 (100.0%)
Persons with diabetic eye disease (DED)	20 (14.8%)
Persons with diabetic macular edema (DME)	11 (8.1%)
Persons with Type I diabetes	44 (32.6%)
Persons with Type II diabetes	89 (65.9%)
Persons not seeing health care professional for diabetes	3 (2.2%)
Persons seeing health care professional for diabetes	132 (97.8%)
Persons with eye disease & not received treatment	7 (5.2%)
Persons with eye disease & received treatment	12 (8.9%)

Table 2.1

Question	Response	Number of Respondents (%)
With which type of diabetes have you been diagnosed?	Type I	44 (32.6)
	Type II	89 (65.9)
	Don't know/Not sure	2 (1.5)
	Total Valid Response	135 (100.0)

Table 2.2

Question	Response	Number of Respondents (%)
When was your diabetes diagnosed?	Within the last year	2 (1.5)
	1 - 5 years ago	19 (14.1)
	6 - 10 years ago	29 (21.5)
	11 - 15 years ago	23 (17.0)
	16 - 20 years ago	24 (17.8)
	21 years ago or longer	36 (26.7)
	Don't know/Not sure	2 (1.5)
	Total Valid Response	135 (100.0)

Table 2.3.1

Question	Response	Number of Respondents (%)
Do you see a health care professional for your diabetes?	Yes	132 (97.8)
	No	3 (2.2)
	Total Valid Response	135 (100.0)
What kind of health care professional?	General/Family Doctor	49 (37.1)
	Nurse	15 (11.4)
	Diabetes Specialist	67 (50.8)
	Other	1 (0.8)
	Total Valid Response	132 (100.0)
	Total missing	3

Table 2.3.2

Type of health care professional	Times per year seen for diabetes	Value
General/Family Doctor	Total valid numeric response (n)	42
	Mean	3.5
	SD	1.8
	Median	4.0
	Min	1
	Max	12
	Don't know/Not sure	2
	Total missing	5
Nurse	Total valid numeric response (n)	14
	Mean	3.4
	SD	0.8
	Median	4.0
	Min	2
	Max	4
	Total missing	1
Diabetes Specialist	Total valid numeric response (n)	51
	Mean	3.6
	SD	1.3
	Median	4.0
	Min	1
	Max	8
	Don't know/Not sure	1
	Total missing	15
Other	Total valid numeric response (n)	1
	Mean	5.0
	SD	
	Median	5.0
	Min	5
	Max	5

Table 2.4

Question	Response	Number of Respondents (%)
How have you received information about diabetes?	Doctor or nurse	127 (94.8%)
	Health educator	11 (8.2%)
	Nutritionist or dietitian	42 (31.3%)
	Diabetes organization or other health organization	44 (32.8%)
	Family/Friends/Neighbors	8 (6.0%)
	TV/Radio/Newspaper/Magazines	11 (8.2%)
	Internet	21 (15.7%)
	Social media (e.g. Facebook, Twitter, blogs)	5 (3.7%)
	Pharmacist	2 (1.5%)
	None of the above	4 (3.0%)
	Total Valid Response	134 (100.0%)
	Total missing	1

Table 2.5

Question	Response	Number of Respondents (%)
How do you manage your diabetes?	Diet	81 (60.4%)
	Oral medicine	64 (47.8%)
	Exercise	59 (44.0%)
	Insulin	90 (67.2%)
	Natural/Herbal medicine	1 (0.7%)
	None of the above	1 (0.7%)
	Total Valid Response	134 (100.0%)
	Total missing	1

Table 2.6

Question	Response	Number of Respondents (%)
Are you currently enrolled in a diabetes patient management support programme?	Yes	14 (10.4)
	No	121 (89.6)
	Total Valid Response	135 (100.0)

Question	Response	Number of Respondents (%)
Who sponsors the programme?	Hospital support program	6 (46.2)
	Clinic support program	2 (15.4)
	Pharmaceutical support program	1 (7.7)
	Patient organization support program	2 (15.4)
	Don't know/Not sure	2 (15.4)
	Total Valid Response	13 (100.0)
	Total missing	122
Does the programme include education on the importance of screening for diabetic eye complications?	Yes	12 (92.3)
	No	1 (7.7)
	Total Valid Response	13 (100.0)
	Total missing	122

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	129 (98.5%)
	Less than 6 months	118 (90.1%)
	6 - 12 months	7 (5.3%)
	Greater than 12 months	2 (1.5%)
	Total valid response	127 (96.9%)
	Total missing	8
	No	1 (0.8%)
	Don't know/Not sure	1 (0.8%)
	Total valid response	131 (100.0%)
	Total missing	4

Test	Response	Number of Respondents (%)
Have you ever had the following tests in a doctors office of clinic? And if yes, how long ago		
Urine check	Yes	126 (96.2%)
	Less than 6 months	85 (64.9%)
	6 - 12 months	32 (24.4%)
	Greater than 12 months	7 (5.3%)
	Total valid response	124 (94.7%)
	Total missing	11
	No	2 (1.5%)
	Don't know/Not sure	3 (2.3%)
	Total valid response	131 (100.0%)
	Total missing	4
Weight check	Yes	124 (95.4%)
	Less than 6 months	105 (80.8%)
	6 - 12 months	12 (9.2%)
	Greater than 12 months	6 (4.6%)
	Total valid response	123 (94.6%)
	Total missing	12
	No	5 (3.8%)
	Don't know/Not sure	1 (0.8%)
	Total valid response	130 (100.0%)
	Total missing	5
Blood pressure check	Yes	129 (98.5%)
	Less than 6 months	117 (89.3%)
	6 - 12 months	8 (6.1%)
	Greater than 12	3 (2.3%)

Test	Response	Number of Respondents (%)
Have you ever had the following tests in a doctors office of clinic? And if yes, how long ago		
	months	
	Total valid response	128 (97.7%)
	Total missing	7
	Don't know/Not sure	2 (1.5%)
	Total valid response	131 (100.0%)
	Total missing	4
Foot check	Yes	118 (91.5%)
	Less than 6 months	88 (68.2%)
	6 - 12 months	19 (14.7%)
	Greater than 12 months	9 (7.0%)
	Total valid response	116 (89.9%)
	Total missing	19
	No	10 (7.8%)
	Don't know/Not sure	1 (0.8%)
	Total valid response	129 (100.0%)
	Total missing	6
Eye check	Yes	127 (96.9%)
	Less than 6 months	71 (54.2%)
	6 - 12 months	42 (32.1%)
	Greater than 12 months	12 (9.2%)
	Total valid response	125 (95.4%)
	Total missing	10
	No	2 (1.5%)
	Don't know/Not	2 (1.5%)

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	131 (100.0%)
	Total missing	4

Table 2.8

Question	Response	Number of Respondents (%)
How well do you think your diabetes is controlled?	Very well	67 (51.9%)
	Well	53 (41.1%)
	Not very well	6 (4.7%)
	Don't know/Not sure	3 (2.3%)
	Total Valid Response	129 (100.0%)
	Total missing	6

Table 2.9

Question	Response	Number of Respondents (%)
What are the main challenges you face in controlling your diabetes?	High cost of care	20 (16.0%)
	No insurance	8 (6.4%)
	Travel to my regular doctor or specialist is difficult	14 (11.2%)
	Long wait time for an appointment to see my doctor or specialist	14 (11.2%)
	Health services needed are not available	1 (0.8%)
	Don't know enough about diabetes	13 (10.4%)
	Too hard to eat the right things	46 (36.8%)
	Too many other things to do	22 (17.6%)
	Stigma or discrimination because of diabetes	10 (8.0%)

Question	Response	Number of Respondents (%)
	Don't want to think about having diabetes	33 (26.4%)
	Other	11 (8.8%)
	Total Valid Response	125 (100.0%)
	Total missing	10

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	92 (70.8%)
	Support groups	12 (9.2%)
	Support from family or friends	32 (24.6%)
	Health education and information	17 (13.1%)
	Mobile services (services that travel to or near your home)	3 (2.3%)
	Coordination of healthcare and services by a professional	48 (36.9%)
	Emergency helpline	6 (4.6%)
	Other	8 (6.2%)
	None	18 (13.8%)
	Total Valid Response	130 (100.0%)
	Total missing	5

Table 2.11

Question	Response	Number of Respondents (%)
What complications (or problems), to your knowledge, arise from diabetes?	Amputation	62 (47.3%)
	Foot ulcers	88 (67.2%)
	Increased risk of broken bones or fractures	20 (15.3%)
	Loss of feeling in hands or toes (neuropathy)	82 (62.6%)
	Vision loss	93 (71.0%)

Question	Response	Number of Respondents (%)
	Irritable bowel disease	29 (22.1%)
	Kidney disease	63 (48.1%)
	Cardiovascular disease/Stroke	65 (49.6%)
	Other	10 (7.6%)
	Don't know/Not sure	11 (8.4%)
	None	9 (6.9%)
	Total Valid Response	131 (100.0%)
	Total missing	4

Table 2.12

Question	Response	Number of Respondents (%)
Which complication of diabetes are you most concerned about?	Amputation	20 (15.7)
	Foot ulcers	4 (3.1)
	Loss of feeling in hands or toes (neuropathy)	4 (3.1)
	Vision loss	50 (39.4)
	Kidney disease	14 (11.0)
	Cardiovascular disease/Stroke	24 (18.9)
	Other	1 (0.8)
	Don't know/Not sure	7 (5.5)
	None	3 (2.4)
	Total Valid Response	127 (100.0)
	Total missing	8

Table 2.13

Question	Response	Number of Respondents (%)
Which of the following complications of diabetes do you have?	Amputation	4 (3.3%)
	Foot ulcers	13 (10.6%)
	Broken bones or fractures	5 (4.1%)
	Loss of feeling in hands or toes	42 (34.1%)

Question	Response	Number of Respondents (%)
	(neuropathy)	
	Vision loss	40 (32.5%)
	Irritable bowel disease	19 (15.4%)
	Kidney disease	13 (10.6%)
	Cardiovascular disease/Stroke	17 (13.8%)
	Other	6 (4.9%)
	Don't know/Not sure	9 (7.3%)
	None	31 (25.2%)
	Total Valid Response	123 (100.0%)
	Total missing	12

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	23 (18.4%)
	Multiple times per year	33 (26.4%)
	Once per year	42 (33.6%)
	Only when symptoms arise	14 (11.2%)
	Never	11 (8.8%)
	Don't know/Not sure	2 (1.6%)
	Total Valid Response	125 (100.0%)
	Total missing	10

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	32 (26.0%)
	I do what I can to prevent vision problems (e.g. get routine screenings, visit	106 (86.2%)

Question	Response	Number of Respondents (%)
	specialists)	
	I do not make any special effort to prevent vision problems	10 (8.1%)
	Total Valid Response	123 (100.0%)
	Total missing	12

Table 2.16

Question	Response	Number of Respondents (%)
What type of health insurance do you have?	Public	90 (72.0)
	Public - Private	30 (24.0)
	Private	3 (2.4)
	None	2 (1.6)
	Total Valid Response	125 (100.0)
	Total missing	10

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	115 (96.6)
	Insurance pays total cost	1 (0.8)
	Out-of-pocket only (pay cash for all care)	1 (0.8)
	Do not use service	1 (0.8)
	Don't know/Not Sure	1 (0.8)
	Total Valid Response	119 (100.0)
	Total missing	16
Specialist medical visits (e.g. eye doctor, gynecologist, urologist)	Care is free	108 (95.6)
	Insurance pays total cost	3 (2.7)
	Out-of-pocket only (pay cash for all care)	2 (1.8)
	Total Valid Response	113 (100.0)
	Total missing	22

Question	Response	Number of Respondents (%)
Most often, how do you pay for the following types of medical care and services?		
Medicines	Care is free	11 (9.8)
	Insurance pays total cost	5 (4.5)
	Insurance and out-of-pocket/cash (e.g. co-pays)	58 (51.8)
	Out-of-pocket only (pay cash for all care)	32 (28.6)
	Do not use service	2 (1.8)
	Don't know/Not Sure	4 (3.6)
	Total Valid Response	112 (100.0)
	Total missing	23
Medical supplies (e.g. blood glucose meter/strips)	Care is free	90 (76.3)
	Insurance pays total cost	4 (3.4)
	Insurance and out-of-pocket/cash (e.g. co-pays)	10 (8.5)
	Out-of-pocket only (pay cash for all care)	9 (7.6)
	Do not use service	1 (0.8)
	Don't know/Not Sure	4 (3.4)
	Total Valid Response	118 (100.0)
	Total missing	17
Procedures	Care is free	72 (68.6)
	Insurance pays total cost	1 (1.0)
	Insurance and out-of-pocket/cash (e.g. co-pays)	2 (1.9)
	Out-of-pocket only (pay cash for all care)	1 (1.0)
	Do not use service	17 (16.2)
	Don't know/Not Sure	12 (11.4)
	Total Valid Response	105 (100.0)
	Total missing	30
Tests/screenings	Care is free	95 (85.6)
	Insurance pays total cost	2 (1.8)
	Insurance and out-of-	1 (0.9)

Question	Response	Number of Respondents (%)
Most often, how do you pay for the following types of medical care and services?		
	pocket/cash (e.g. co-pays)	
	Out-of-pocket only (pay cash for all care)	1 (0.9)
	Do not use service	8 (7.2)
	Don't know/Not Sure	4 (3.6)
	Total Valid Response	111 (100.0)
	Total missing	24
Health education	Care is free	67 (62.0)
	Insurance pays total cost	1 (0.9)
	Insurance and out-of-pocket/cash (e.g. co-pays)	2 (1.9)
	Do not use service	27 (25.0)
	Don't know/Not Sure	11 (10.2)
	Total Valid Response	108 (100.0)
	Total missing	27
Counseling	Care is free	75 (67.0)
	Insurance and out-of-pocket/cash (e.g. co-pays)	1 (0.9)
	Out-of-pocket only (pay cash for all care)	1 (0.9)
	Do not use service	21 (18.8)
	Don't know/Not Sure	14 (12.5)
	Total Valid Response	112 (100.0)
	Total missing	23

Table 3.1

Question	Response	Number of Respondents (%)
Are you aware of any government sponsored screening programs for diabetic eye disease (diabetic retinopathy)?	Yes	71 (57.7%)
	No	52 (42.3%)
	Total valid response	123 (100.0%)
	Total missing	12

Table 3.2

Question	Response	Number of Respondents (%)
Have you ever had an eye exam for diabetic eye disease?	Yes	115 (91.3%)
	No	11 (8.7%)
	Total valid response	126 (100.0%)
	Total missing	9
How long ago was your last eye exam?	Within the last year	95 (82.6%)
	More than 1 year ago but less than 2 years	15 (13.0%)
	More than 2 years ago but less than 3 years	2 (1.7%)
	More than 3 years ago but less than 5 years	2 (1.7%)
	Five or more years ago	1 (0.9%)
	Total valid response	115 (100.0%)
	Total missing	20
Who did the last exam?	General/Family practitioner	2 (1.7%)
	Eye doctor/Eye clinic	111 (96.5%)
	Other	2 (1.7%)
	Total valid response	115 (100.0%)
	Total missing	20

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	122 (96.8%)
	No	2 (1.6%)
	Don't know/Not sure	2 (1.6%)
	Total valid response	126 (100.0%)
	Total missing	9

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	109 (87.2%)
	Every two years	11 (8.8%)
	Only when symptoms occur	3 (2.4%)
	Don't know/Not sure	2 (1.6%)
	Total valid response	125 (100.0%)
	Total missing	10

Table 3.5

Question	Response	Number of Respondents (%)
For you, what are the biggest barriers to eye exams?	They are expensive	3 (3.2%)
	Eye exams are not available near my home	17 (18.1%)
	Long wait time for appointment	43 (45.7%)
	Long wait time on the day of the visit	14 (14.9%)
	Referral process is complicated or takes too long	5 (5.3%)
	Recommended treatments for eye problems are not available	2 (2.1%)
	Don't know much about my condition	4 (4.3%)
	Fear of treatment/results	4 (4.3%)
	Burden on my family/friends	3 (3.2%)
	Limited access to diabetes specialists	4 (4.3%)
	I'm not likely to have eye complications	5 (5.3%)
	Eye exams are not important	2 (2.1%)
	Too many other things to do or worry about	1 (1.1%)
	Other	26 (27.7%)
	Total valid response	94 (100.0%)
	Total missing	41

Table 3.6

Question	Response	Number of Respondents (%)
Have you been diagnosed with diabetic eye disease?	Yes	26 (20.8%)
	No	99 (79.2%)
	Total valid response	125 (100.0%)
	Total missing	10
Has your diabetic eye disease affected your vision?	Yes, slightly	16 (61.5%)
	Yes, significantly	4 (15.4%)
	No	6 (23.1%)
	Total valid response	26 (100.0%)
	Total missing	109
Have vision issues caused you to have difficulty with any of the following?	Traveling	2 (10.0%)
	Household responsibilities, such as cooking or cleaning	3 (15.0%)
	Social interactions with family/friends	1 (5.0%)
	Leisure activities/exercise	5 (25.0%)
	Work or keeping a job	2 (10.0%)
	Managing my diabetes	2 (10.0%)
	Other	4 (20.0%)
	None	5 (25.0%)
	Driving (a car/vehicle)	10 (50.0%)
	Total valid response	20 (100.0%)
	Total missing	115

Table 3.7

Question	Response	Number of Respondents (%)
Have you had any treatment for diabetic eye disease?	Yes	12 (46.2%)
	No	7 (26.9%)
	Don't know/Not sure	7 (26.9%)
	Total valid response	26 (100.0%)

Question	Response	Number of Respondents (%)
	Total missing	109
What treatment did you receive?	Laser	8 (66.7%)
	Injection in the eye (Anti-VEGF)	3 (25.0%)
	Surgery	7 (58.3%)
	Other	1 (8.3%)
	Total valid response	12 (100.0%)
	Total missing	123
Did you complete the treatment?	Yes	10 (83.3%)
	Still receiving treatment	2 (16.7%)
	Total valid response	12 (100.0%)
	Total missing	123
Do you feel that the treatment worked?	Yes, and vision improved	8 (66.7%)
	Yes, but vision stayed the same	2 (16.7%)
	No	1 (8.3%)
	Still waiting to know	1 (8.3%)
	Total valid response	12 (100.0%)
	Total missing	123
What is/are the reason(s) that you did not complete the treatment?	Total missing	135
What are the reason(s) that you have not had treatment for diabetic eye disease?	My doctor did not recommend any treatment	5 (83.3%)
	Treatment would not be effective	1 (16.7%)
	Total valid response	6 (100.0%)
	Total missing	129

Table 3.8

Question	Response	Number of Respondents (%)
Have you been diagnosed with diabetic macular edema?	Yes	11 (8.8%)
	No	86 (68.8%)
	Don't know/Not sure	28 (22.4%)

Question	Response	Number of Respondents (%)
	Total valid response	125 (100.0%)
	Total missing	10
If Yes, which of the following would you prefer	Treatment to prevent further vision loss	10 (100.0%)
	Total valid response	10 (100.0%)
	Total missing	125

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	55 (45.1%)
	Diabetes organization or other health organization	13 (10.7%)
	Family/Friends/Neighbors	2 (1.6%)
	TV/Radio/Newspaper/Magazines	2 (1.6%)
	Internet	10 (8.2%)
	None of the above	57 (46.7%)
	Total valid response	122 (100.0%)
	Total missing	13

Table 4.1

Question	Response	Number of Respondents (%)
What is your gender?	Female	55 (44.0)
	Male	70 (56.0)
	Total Valid Response	125 (100.0)
	Total missing	10
Please indicate your age	18 - 29	6 (4.4)
	30 - 39	4 (3.0)
	40 - 49	13 (9.6)
	50 - 59	19 (14.1)
	60 - 69	45 (33.3)
	70 - 79	41 (30.4)

Question	Response	Number of Respondents (%)
	80 - 89	7 (5.2)
	Total Valid Response	135 (100.0)

Table 4.2

Question	Response	Number of Respondents (%)
Where do you live?	Urban setting	94 (75.8)
	Non-urban setting	30 (24.2)
	Total Valid Response	124 (100.0)
	Total missing	11

Table 4.3

Question	Response	Number of Respondents (%)
What is the highest level of education you completed?	Did not complete primary school	2 (1.6)
	Primary school	40 (32.3)
	Secondary school	43 (34.7)
	College/University	33 (26.6)
	Graduate or post-graduate	6 (4.8)
	Total valid response	124 (100.0)
	Total missing	11

Table 4.4

Question	Response	Number of Respondents (%)
Are you currently working?	Working for pay	29 (23.2)
	Volunteering	3 (2.4)
	Retired	82 (65.6)
	Student	2 (1.6)
	Not working	9 (7.2)
	Total Valid Response	125 (100.0)
	Total missing	10

Table 4.5

Question	Response	Number of Respondents (%)
Do you receive assistance from the government?	Income assistance	19 (15.4%)
	Medical assistance	16 (13.0%)
	Food assistance	3 (2.4%)
	Housing assistance	19 (15.4%)
	Pension assistance	13 (10.6%)
	None of the above	72 (58.5%)
	Total valid response	123 (100.0%)
	Total missing	12

Table 4.6

Question	Response	Number of Respondents (%)
Did you have trouble paying for food at anytime during the past year?	Yes	22 (18.0)
	No	100 (82.0)
	Total Valid Response	122 (100.0)
	Total missing	13

Table 4.7

Question	Response	Number of Respondents (%)
Do you feel that your access to health care is negatively affected by any of the following?	Age	6 (5.0)
	Income	1 (0.8)
	Language you speak	3 (2.5)
	Place where you live	7 (5.8)
	None of the above	106 (87.6)
	Total valid response	121 (100.0)
	Total missing	14

Table 4.8

Question	Response	Number of Respondents (%)
Which of the following do you worry about most?	Food	2 (1.6)
	Housing	2 (1.6)
	Money	9 (7.3)
	Health	77 (62.6)
	Family	11 (8.9)
	None of the above	22 (17.9)
	Total Valid Response	123 (100.0)
	Total missing	12

Table 5.1

Question	Response	Number of Respondents (%)
In general, would you say your health is:	Excellent	3 (2.5%)
	Very good	20 (16.7%)
	Good	35 (29.2%)
	Total good health	58 (48.3%)
	Fair	38 (31.7%)
	Poor	24 (20.0%)
	Fair or poor health	62 (51.7%)
	Total valid response	120 (100.0%)
	Total missing	15

Table 5.2

Question	Response	Number of Respondents (%)
How many days during last 30 days was your physical health not good	Any unhealthy days	44 (45.8%)
	1-5 unhealthy days	10 (10.4%)
	6-10 unhealthy days	8 (8.3%)
	11-20 unhealthy days	6 (6.3%)

Question	Response	Number of Respondents (%)
	21-30 unhealthy days	20 (20.8%)
	No unhealthy days	52 (54.2%)
	Total valid response	96 (100.0%)
	Total missing	39

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	23 (24.0%)
	1-5 unhealthy days	5 (5.2%)
	6-10 unhealthy days	6 (6.3%)
	11-20 unhealthy days	4 (4.2%)
	21-30 unhealthy days	8 (8.3%)
	No unhealthy days	73 (76.0%)
	Total valid response	96 (100.0%)
	Total missing	39

Table 5.3.2

Question	Response	Number of Respondents (%)
Unhealthy days (physically or mentally unhealthy, max 30)	Any unhealthy days	51 (54.8%)
	1-5 unhealthy days	9 (9.7%)
	6-10 unhealthy days	8 (8.6%)
	11-20 unhealthy days	7 (7.5%)
	21-30 unhealthy	27 (29.0%)

Question	Response	Number of Respondents (%)
	days	
	No unhealthy days	42 (45.2%)
	Total valid response	93 (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	27 (40.3%)
	1-5 unhealthy days	8 (11.9%)
	6-10 unhealthy days	5 (7.5%)
	11-20 unhealthy days	5 (7.5%)
	21-30 unhealthy days	9 (13.4%)
	No unhealthy days	40 (59.7%)
	Total valid response	67 (100.0%)
	Total missing	68

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	55 (48.7%)
	No	58 (51.3%)
	Total valid response	113 (100.0%)
	Total missing	22
Which impairment or health problem, if any, limits your activities?		
a) Arthritis/rheumatism	Yes	29 (51.8%)

Question	Response	Number of Respondents (%)
	No	24 (42.9%)
	Don't know/Not sure	3 (5.4%)
	Total valid response	56 (100.0%)
	Total missing	79
b) Back or neck problem	Yes	38 (63.3%)
	No	21 (35.0%)
	Don't know/Not sure	1 (1.7%)
	Total valid response	60 (100.0%)
	Total missing	75
c) Fractures, bone/joint injury	Yes	21 (42.0%)
	No	26 (52.0%)
	Don't know/Not sure	3 (6.0%)
	Total valid response	50 (100.0%)
	Total missing	85
d) Walking problem	Yes	42 (72.4%)
	No	14 (24.1%)
	Don't know/Not sure	2 (3.4%)
	Total valid response	58 (100.0%)
	Total missing	77
e) Lung/breathing problem	Yes	18 (32.7%)
	No	33 (60.0%)
	Don't know/Not sure	4 (7.3%)
	Total valid response	55 (100.0%)
	Total missing	80
f) Hearing problem	Yes	16 (30.8%)
	No	35 (67.3%)

Question	Response	Number of Respondents (%)
	Don't know/Not sure	1 (1.9%)
	Total valid response	52 (100.0%)
	Total missing	83
g) Eye/vision problem	Yes	26 (47.3%)
	No	27 (49.1%)
	Don't know/Not sure	2 (3.6%)
	Total valid response	55 (100.0%)
	Total missing	80
h) Heart problem	Yes	12 (22.6%)
	No	39 (73.6%)
	Don't know/Not sure	2 (3.8%)
	Total valid response	53 (100.0%)
	Total missing	82
i) Stroke problem	Yes	5 (9.8%)
	No	45 (88.2%)
	Don't know/Not sure	1 (2.0%)
	Total valid response	51 (100.0%)
	Total missing	84
j) Hypertension/high blood pressure	Yes	28 (51.9%)
	No	22 (40.7%)
	Don't know/Not sure	4 (7.4%)
	Total valid response	54 (100.0%)
	Total missing	81
k) Diabetes	Yes	42 (71.2%)
	No	15 (25.4%)
	Don't	2 (3.4%)

Question	Response	Number of Respondents (%)
	know/Not sure	
	Total valid response	59 (100.0%)
	Total missing	76
l) Cancer	Yes	4 (7.8%)
	No	43 (84.3%)
	Don't know/Not sure	4 (7.8%)
	Total valid response	51 (100.0%)
	Total missing	84
m) Mental or emotional health	Yes	10 (18.2%)
	No	37 (67.3%)
	Don't know/Not sure	5 (9.1%)
	Refused	3 (5.5%)
	Total valid response	55 (100.0%)
	Total missing	80

PT 1.2

Analysis Sets	Number of Respondents (%)
All valid respondents	7 (100.0%)
Included in Provider Analysis Set (PAS)	7 (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	7
Included in the Eye Care Professional Set (Eye Specialist)	3 (42.9%)
Excluded in the Eye Care Professional Set (Eye Specialist)	4 (57.1%)
Reasons for exclusion from Eye Care Professional Set:	
Missing required speciality	4
No valid (non-missing) response for the supplemental eye	0

Analysis Sets	Number of Respondents (%)
questionnaire	

PT 1.3

Subgroups	Number of Respondents (%)
Provider Analysis Set	7 (100.0%)
Primary Care Provider	0 (0.0%)
Diabetes Specialist Provider	0 (0.0%)
Eye Care Professional	3 (42.9%)
Ophthalmologist	3 (42.9%)

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	N/A	N/A	0 (0.0%)	0 (0.0%)
	Diabetes specialist	N/A	N/A	0 (0.0%)	0 (0.0%)
	General ophthalmologist	N/A	N/A	2 (66.7%)	2 (28.6%)
	Optometrist	N/A	N/A	0 (0.0%)	0 (0.0%)
	Retinal specialist	N/A	N/A	2 (66.7%)	2 (28.6%)
	Nurse	N/A	N/A	0 (0.0%)	4 (57.1%)
	Health educator	N/A	N/A	0 (0.0%)	1 (14.3%)
	None of the above	N/A	N/A	0 (0.0%)	0 (0.0%)
	Total valid response	0 (100.0%)	0 (100.0%)	3 (100.0%)	7 (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)	.	.	3	7
	Mean	.	.	21.3	18.3
	SD	.	.	11.0	12.9
	Median	.	.	25.0	25.0
	Min.	.	.	9	0
	Max.	.	.	30	32
	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%)	0 (0.0%)	0 (0.0%)	2 (28.6%)
	Eye clinic/practice	0 (0.0%)	0 (0.0%)	1 (33.3%)	1 (14.3%)
	General medical clinic/practice	0 (0.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)
	Hospital	0 (0.0%)	0 (0.0%)	2 (66.7%)	3 (42.9%)
	Other	0 (0.0%)	0 (0.0%)	0 (0.0%)	1 (14.3%)
	Total Valid Response	0 (0.0%)	0 (0.0%)	3 (100.0%)	7 (100.0%)

PT 2.2

Question	Response	Primary Care Provider	Diabetes Specialist Provider	Ophthalmologist	PAS
Where is your main practice located?	Urban setting	0 (0.0%)	0 (0.0%)	3 (100.0%)	7 (100.0%)
	Non-urban setting	0 (0.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)

Question	Response	Primary Care Provider	Diabetes Specialist Provider	Ophthalmologist	PAS
	Total Valid Response	0 (0.0%)	0 (0.0%)	3 (100.0%)	7 (100.0%)
	Total missing	0	0	0	0

PT 2.3

Question	Response	Primary Care Provider	Diabetes Specialist Provider	Ophthalmologist	PAS
In which sector is your main practice?	Government	0 (0.0%)	0 (0.0%)	2 (66.7%)	6 (85.7%)
	Non profit	0 (0.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)
	Non profit	0 (0.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)
	Combined/mixed	0 (0.0%)	0 (0.0%)	1 (33.3%)	1 (14.3%)
	Total Valid Response	0 (0.0%)	0 (0.0%)	3 (100.0%)	7 (100.0%)
	Non profit	0	0	0	0

PT 2.4

Question	Response	Primary Care Provider	Diabetes Specialist Provider	Ophthalmologist	PAS
Is your main practice limited to certain populations?	No	0 (0.0%)	0 (0.0%)	2 (66.7%)	2 (28.6%)
	Yes, limited by age	0 (0.0%)	0 (0.0%)	0 (0.0%)	1 (14.3%)
	Yes, other	0 (0.0%)	0 (0.0%)	1 (33.3%)	4 (57.1%)
	Total valid response	0	0	3 (100.0%)	7 (100.0%)
	Total missing	0	0	0	0

PT 2.5

Question	Response	Primary Care Provider	Diabetes Specialist Provider	Ophthalmologist	PAS
What is the average wait time for an appointment in your main practice?	More than 1 week but less than 1 month	0 (0.0%)	0 (0.0%)	0 (0.0%)	1 (25.0%)
	More than 1 month but less than 2 months	0 (0.0%)	0 (0.0%)	1 (50.0%)	1 (25.0%)
	More than 3 months but less than 6 months	0 (0.0%)	0 (0.0%)	1 (50.0%)	1 (25.0%)
	Do not take appointments	0 (0.0%)	0 (0.0%)	0 (0.0%)	1 (25.0%)
	Total Valid Response	0 (0.0%)	0 (0.0%)	2 (100.0%)	4 (100.0%)
	Total missing	0	0	1	3

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)	0	0	2	4
	Mean	N/A	N/A	150	81.8
	SD	N/A	N/A	70.7	88.8
	Median	N/A	N/A	150	57.5
	Min.	N/A	N/A	100	12
	Max.	N/A	N/A	200	200
	Total missing	0	0	1	3
What percentage of the patients in your main practice have diabetes [% patients]	Total valid response (n)	0	0	2	4
	Mean	N/A	N/A	29	62
	SD	N/A	N/A	29.7	42
	Median	N/A	N/A	29	70

Question	Response	Primary Care Provider	Diabetes Specialist Provider	Ophthalmologist	PAS
	Min.	N/A	N/A	8	8
	Max.	N/A	N/A	50	100
	Total missing	0	0	1	3

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	0 (0.0%)	0 (0.0%)	1 (50.0%)	3 (75.0%)
	Pay through insurance	0 (0.0%)	0 (0.0%)	1 (50.0%)	1 (25.0%)
	Total valid response	0	0	2 (100.0%)	4 (100.0%)
	Total missing	0	0	1	3

PT 2.8

Question	Response	Primary Care Provider	Diabetes Specialist Provider	Ophthalmologist	PAS
In addition to your main practice, do you work in another practice setting?	Yes			1 (50.0%)	3 (75.0%)
	No			1 (50.0%)	1 (25.0%)
	Total valid response			2 (100.0%)	4 (100.0%)
	Total missing			1	3
In which other practice setting(s) do you work?	Hospital				1 (33.3%)
	General medical clinic/practice				1 (33.3%)

Question	Response	Primary Care Provider	Diabetes Specialist Provider	Ophthalmologist	PAS
	Eye clinic/practice			1 (100.0%)	1 (33.3%)
	Total valid response			1 (100.0%)	3 (100.0%)
	Total missing			2	4
In which sector(s) is(are) the practice(s)?	Government				1 (33.3%)
	Private			1 (100.0%)	1 (33.3%)
	Non profit				1 (33.3%)
	Total valid response			1 (100.0%)	3 (100.0%)
	Total missing			2	4
Is there a major difference between your practices with respect to how diabetic eye disease is screened and managed?	Yes				1 (33.3%)
	No			1 (100.0%)	2 (66.7%)
	Total valid response			1 (100.0%)	3 (100.0%)
	Total missing			2	4

PT 2.9

Type of Test	Yes/No	How often/year	Primary Care Provider	Diabetes Specialist Provider	Ophthalmologist	PAS
Blood glucose	Yes					1 (33.3%)
					0 (0.0%)	1 (33.3%)
		Mean				5.0
		SD				
		Median				5.0
		Min				5

Type of Test	Yes/No	How often/year	Primary Care Provider	Diabetes Specialist Provider	Ophthalmologist	PAS
		Max				5
		Total missing			3	6
	No				1 (100.0%)	2 (66.7%)
	Total valid response				1 (100.0%)	3 (100.0%)
	Total missing				2	4
HbA1c	Yes					1 (33.3%)
					0 (0.0%)	1 (33.3%)
		Mean				5.0
		SD				
		Median				5.0
		Min				5
		Max				5
		Total missing			3	6
	No				1 (100.0%)	2 (66.7%)
	Total valid response				1 (100.0%)	3 (100.0%)
	Total missing				2	4
Urine check	Yes					1 (33.3%)
					0 (0.0%)	0 (0.0%)
		Mean				
		SD				
		Median				
		Min				
		Max				

Type of Test	Yes/No	How often/year	Primary Care Provider	Diabetes Specialist Provider	Ophthalmologist	PAS
		Total missing			3	7
	No				1 (100.0%)	2 (66.7%)
	Total valid response				1 (100.0%)	3 (100.0%)
	Total missing				2	4
Weight check	Yes					2 (66.7%)
					0 (0.0%)	2 (66.7%)
		Mean				2.5
		SD				3.5
		Median				2.5
		Min				0
		Max				5
		Total missing			3	5
	No				1 (100.0%)	1 (33.3%)
	Total valid response				1 (100.0%)	3 (100.0%)
	Total missing				2	4
Blood pressure check	Yes				1 (100.0%)	3 (100.0%)
		Total valid numeric response (n)			1 (100.0%)	3 (100.0%)
		Mean			1.0	0.7
		SD				0.6
		Median			1.0	1.0
		Min			1	0
		Max			1	1

Type of Test	Yes/No	How often/year	Primary Care Provider	Diabetes Specialist Provider	Ophthalmologist	PAS
		Total missing			2	4
	Total valid response				1 (100.0%)	3 (100.0%)
	Total missing				2	4
Foot check	Yes					1 (33.3%)
					0 (0.0%)	0 (0.0%)
		Mean				
		SD				
		Median				
		Min				
		Max				
		Total missing			3	7
	No				1 (100.0%)	2 (66.7%)
	Total valid response				1 (100.0%)	3 (100.0%)
	Total missing				2	4
Eye examination - Un-dilated	Yes				1 (100.0%)	1 (33.3%)
		Total valid numeric response (n)			1 (100.0%)	1 (33.3%)
		Mean			4.0	4.0
		SD				
		Median			4.0	4.0
		Min			4	4
		Max			4	4
		Total missing			2	6

Type of Test	Yes/No	How often/year	Primary Care Provider	Diabetes Specialist Provider	Ophthalmologist	PAS
	No					2 (66.7%)
	Total valid response				1 (100.0%)	3 (100.0%)
	Total missing				2	4
Eye examination - Optical Coherence Tomography	Yes				2 (100.0%)	2 (50.0%)
		Total valid numeric response (n)			2 (100.0%)	2 (50.0%)
		Mean			2.5	2.5
		SD			2.1	2.1
		Median			2.5	2.5
		Min			1	1
		Max			4	4
		Total missing			1	5
	No					2 (50.0%)
	Total valid response				2 (100.0%)	4 (100.0%)
	Total missing				1	3
Eye examination - Fundoscopy	Yes				2 (100.0%)	2 (50.0%)
		Total valid numeric response (n)			2 (100.0%)	2 (50.0%)
		Mean			2.5	2.5
		SD			2.1	2.1
		Median			2.5	2.5

Type of Test	Yes/No	How often/year	Primary Care Provider	Diabetes Specialist Provider	Ophthalmologist	PAS
		Min			1	1
		Max			4	4
		Total missing			1	5
	No					2 (50.0%)
	Total valid response				2 (100.0%)	4 (100.0%)
	Total missing				1	3
Eye examination - Fluorescein Angiography	Yes				1 (100.0%)	1 (33.3%)
		Total valid numeric response (n)			1 (100.0%)	1 (33.3%)
		Mean			1.0	1.0
		SD				
		Median			1.0	1.0
		Min			1	1
		Max			1	1
		Total missing			2	6
	No					2 (66.7%)
	Total valid response				1 (100.0%)	3 (100.0%)
	Total missing				2	4
Eye examination - Lipid check					0 (0.0%)	0 (0.0%)
		Mean				
		SD				
		Median				

Type of Test	Yes/No	How often/year	Primary Care Provider	Diabetes Specialist Provider	Ophthalmologist	PAS
		Min				
		Max				
		Total missing			3	7
	No				1 (100.0%)	3 (100.0%)
	Total valid response				1 (100.0%)	3 (100.0%)
	Total missing				2	4

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	0 (0.0%)	0 (0.0%)	2 (100.0%)	4 (100.0%)
	Diet/nutrition	0 (0.0%)	0 (0.0%)	1 (50.0%)	3 (75.0%)
	Exercise/physical activity	0 (0.0%)	0 (0.0%)	2 (100.0%)	4 (100.0%)
	Medicines	0 (0.0%)	0 (0.0%)	2 (100.0%)	4 (100.0%)
	Foot care and inspection	0 (0.0%)	0 (0.0%)	0 (0.0%)	1 (25.0%)
	Blood pressure	0 (0.0%)	0 (0.0%)	2 (100.0%)	3 (75.0%)
	Eye care and exams	0 (0.0%)	0 (0.0%)	2 (100.0%)	3 (75.0%)
	Lipid check	0 (0.0%)	0 (0.0%)	2 (100.0%)	3 (75.0%)
	Total valid response	0	0	2 (100.0%)	4 (100.0%)
	Total missing	0	0	1	3

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%)	0 (0.0%)	2 (100.0%)	4 (100.0%)
	Total Valid Response	0 (0.0%)	0 (0.0%)	2 (100.0%)	4 (100.0%)
	Total missing	0	0	1	3

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	0 (0.0%)	0 (0.0%)	2 (100.0%)	4 (100.0%)
	Total Valid Response	0 (0.0%)	0 (0.0%)	2 (100.0%)	4 (100.0%)
	Total missing	0	0	1	3

PT 2.13

Question	Response	Primary Care Provider	Diabetes Specialist Provider	Ophthalmologist	PAS
Do you have written protocols/guidelines for detection and management of diabetes-related vision issue available in your main practice?	Yes, available and used by staff	0 (0.0%)	0 (0.0%)	2 (100.0%)	2 (50.0%)
	Not available	0 (0.0%)	0 (0.0%)	0 (0.0%)	1 (25.0%)
	Don't know/Not sure	0 (0.0%)	0 (0.0%)	0 (0.0%)	1 (25.0%)

Question	Response	Primary Care Provider	Diabetes Specialist Provider	Ophthalmologist	PAS
	Total Valid Response	0 (0.0%)	0 (0.0%)	2 (100.0%)	4 (100.0%)
	Total missing	0	0	1	3

PT 2.14

Question	Response	Primary Care Provider	Diabetes Specialist Provider	Ophthalmologist	PAS
What is the protocol in your main practice for timing of initial eye exams for persons with diabetes - Type I?	After a predetermined number of years (numeric response) (n)			0 (0.0%)	0 (0.0%)
	Mean				
	SD				
	Median				
	Min				
	Max				
	After a predetermined age (numeric response) (n)			0 (0.0%)	1 (33.3%)
	Mean				12.0
	SD				
	Median				12.0
	Min				12
	Max				12
	As soon as they are diagnosed			2 (100.0%)	2 (66.7%)
	Total valid response			2 (100.0%)	3 (100.0%)
	Total missing			1	4
What is the protocol in your main practice for	After a predetermined number of years			0 (0.0%)	0 (0.0%)

Question	Response	Primary Care Provider	Diabetes Specialist Provider	Ophthalmologist	PAS
timing of initial eye exams for persons with diabetes - Type II?	(numeric response) (n)				
	Mean				
	SD				
	Median				
	Min				
	Max				
	After a predetermined age (numeric response) (n)			0 (0.0%)	0 (0.0%)
	Mean				
	SD				
	Median				
	Min				
	Max				
	As soon as they are diagnosed			2 (100.0%)	3 (75.0%)
	No standard practice, timing varies case by case				1 (25.0%)
	Total valid response			2 (100.0%)	4 (100.0%)
	Total missing			1	3

PT 2.15

Question	Response	Primary Care Provider	Diabetes Specialist Provider	Ophthalmologist	PAS
What is the protocol in your main practice for timing of follow-up eye examinations for persons with diabetes?	Once a year	0 (0.0%)	0 (0.0%)	2 (100.0%)	3 (75.0%)
	Other	0 (0.0%)	0 (0.0%)	0 (0.0%)	1 (25.0%)

Question	Response	Primary Care Provider	Diabetes Specialist Provider	Ophthalmologist	PAS
	Total Valid Response	0 (0.0%)	0 (0.0%)	2 (100.0%)	4 (100.0%)
	Total missing	0	0	1	3

PT 2.16

Question	Response	Primary Care Provider	Diabetes Specialist Provider	Ophthalmologist	PAS
Do you screen patients for DR?	Yes			2 (100.0%)	2 (50.0%)
	No				2 (50.0%)
	Total valid response			2 (100.0%)	4 (100.0%)
	Total missing			1	3
Where do you screen patients?	In clinic			2 (100.0%)	2 (100.0%)
	Outreach			1 (50.0%)	1 (50.0%)
	Total valid response			2 (100.0%)	2 (100.0%)
	Total missing			1	5

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	0 (0.0%)	0 (0.0%)	1 (50.0%)	2 (50.0%)
	Patient's age	0 (0.0%)	0 (0.0%)	1 (50.0%)	2 (50.0%)
	Presence of comorbidities such as hypertension, etc.	0 (0.0%)	0 (0.0%)	1 (50.0%)	1 (25.0%)
	High glucose levels	0 (0.0%)	0 (0.0%)	1 (50.0%)	1 (25.0%)

Question	Response	Primary Care Provider	Diabetes Specialist Provider	Ophthalmologist	PAS
	Patient adherence to recommendations	0 (0.0%)	0 (0.0%)	0 (0.0%)	1 (25.0%)
	None of the above	0 (0.0%)	0 (0.0%)	1 (50.0%)	1 (25.0%)
	Total valid response	0	0	2 (100.0%)	4 (100.0%)
	Total missing	0	0	1	3

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?	Proximity to care	0 (0.0%)	0 (0.0%)	1 (50.0%)	1 (25.0%)
	Long wait time for appointment	0 (0.0%)	0 (0.0%)	0 (0.0%)	2 (50.0%)
	Referral process	0 (0.0%)	0 (0.0%)	1 (50.0%)	1 (25.0%)
	Lack of knowledge and/or awareness	0 (0.0%)	0 (0.0%)	0 (0.0%)	1 (25.0%)
	Patients fear of treatment/results	0 (0.0%)	0 (0.0%)	1 (50.0%)	2 (50.0%)
	Limited access to eye specialists	0 (0.0%)	0 (0.0%)	0 (0.0%)	1 (25.0%)
	Patients feel eye complications are unlikely	0 (0.0%)	0 (0.0%)	2 (100.0%)	3 (75.0%)
	Patients feel eye exams are not important	0 (0.0%)	0 (0.0%)	2 (100.0%)	4 (100.0%)
	Patients have competing responsibilities and priorities	0 (0.0%)	0 (0.0%)	2 (100.0%)	2 (50.0%)
	Clinic too small or	0 (0.0%)	0 (0.0%)	1 (50.0%)	1

Question	Response	Primary Care Provider	Diabetes Specialist Provider	Ophthalmologist	PAS
	lack necessary equipment/staff				(25.0%)
	Total valid response	0	0	2 (100.0%)	4 (100.0%)
	Total missing	0	0	1	3

PT 2.19

Question	Response	Primary Care Provider	Diabetes Specialist Provider	Ophthalmologist	PAS
In your main practice, are patients contacted with reminders for general follow-up appointments?	Yes	0 (0.0%)	0 (0.0%)	1 (50.0%)	3 (75.0%)
	No	0 (0.0%)	0 (0.0%)	1 (50.0%)	1 (25.0%)
	Total Valid Response	0 (0.0%)	0 (0.0%)	2 (100.0%)	4 (100.0%)
	Total missing	0	0	1	3

PT 2.20

Question	Response	Primary Care Provider	Diabetes Specialist Provider	Ophthalmologist	PAS
Do you share relevant patient information with other health care professionals involved in the patients care e.g. his or her general practitioner, ophthalmologist, podiastrist?	Yes	0 (0.0%)	0 (0.0%)	2 (100.0%)	3 (75.0%)
	No	0 (0.0%)	0 (0.0%)	0 (0.0%)	1 (25.0%)
	Total Valid Response	0 (0.0%)	0 (0.0%)	2 (100.0%)	4 (100.0%)
	Total missing	0	0	1	3

PT 3.1

Question	Response	Primary Care Provider	Diabetes Specialist Provider	Ophthalmologist	PAS
Please indicate your age:	40 - 49			1 (50.0%)	2 (50.0%)
	50 - 59				1 (25.0%)
	60 - 69			1 (50.0%)	1 (25.0%)
	Total valid response			2 (100.0%)	4 (100.0%)
	Total missing			1	3
What is your gender?	Female			2 (100.0%)	4 (100.0%)
	Total valid response			2 (100.0%)	4 (100.0%)
	Total missing			1	3
What is your highest level of education completed?	College/University			1 (50.0%)	3 (75.0%)
	Graduate or advanced degree (e.g. PhD, MD, etc)			1 (50.0%)	1 (25.0%)
	Total valid response			2 (100.0%)	4 (100.0%)
	Total missing			1	3

PT 4.1

Question	Response	Ophthalmologist
What percentage of your patients have diabetic retinopathy	Total valid numeric response (n)	2
	Mean	32.5
	SD	38.9
	Median	32.5
	Min	5
	Max	60
	Total missing	1

PT 4.2

Question	Response	Ophthalmologist
What percentage of your patients have diabetic macular edema?	Total valid numeric response (n)	2
	Mean	20.5
	SD	20.5
	Median	20.5
	Min	6
	Max	35
	Total missing	1

PT 4.3

Question	Response	Ophthalmologist
What is the average amount of time your patients wait for an appointment to be screened for diabetic eye disease in your practice?	More than 1 month but less than 2 months	1 (50.0%)
	Do not take appointment	1 (50.0%)
	Total Valid Response	2 (100.0%)
	Total missing	1

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?	More than 1 week but less than 1 month	1 (50.0%)
	There is not wait, diagnosis is given when screened	1 (50.0%)
	Total Valid Response	2 (100.0%)
	Total missing	1

PT 4.5

Type of Treatment	Question	Response/time	Ophthalmologist
Laser photocoagulation	Is the treatment available?	Available within country	2 (100.0%)
		Available in practice	1 (50.0%)
		Total valid response	2 (100.0%)

Type of Treatment	Question	Response/time	Ophthalmologist
		Total missing	1
	What is the average amount of time your patients wait for a consultation appointment? (weeks)	Total valid numeric response (n)	1 (50.0%)
		Mean	2.0
		SD	
		Median	2.0
		Min	2
		Max	2
		Don't know/not sure	1 (50.0%)
		Total valid response	2 (100.0%)
		Total missing	1
	What is the average amount of time your patients wait for a first treatment?(weeks)	Total valid numeric response (n)	1 (50.0%)
		Mean	4.0
		SD	
		Median	4.0
		Min	4
		Max	4
		Don't know/not sure	1 (50.0%)
		Total valid response	2 (100.0%)
		Total missing	1
	What is the average amount of time your patients wait for a second treatment?(weeks)	Total valid numeric response (n)	1 (50.0%)
		Mean	8.0
		SD	
		Median	8.0
		Min	8
		Max	8
		Don't know/not sure	1 (50.0%)

Type of Treatment	Question	Response/time	Ophthalmologist
		Total valid response	2 (100.0%)
		Total missing	1
Anti-VEGF therapies	Is the treatment available?	Available within country	2 (100.0%)
		Available in practice	1 (50.0%)
		Total valid response	2 (100.0%)
		Total missing	1
	What is the average amount of time your patients wait for a consultation appointment? (weeks)	Total valid numeric response (n)	1 (50.0%)
		Mean	1.0
		SD	
		Median	1.0
		Min	1
		Max	1
		Don't know/not sure	1 (50.0%)
		Total valid response	2 (100.0%)
		Total missing	1
	What is the average amount of time your patients wait for a first treatment?(weeks)	Total valid numeric response (n)	1 (50.0%)
		Mean	1.0
		SD	
		Median	1.0
		Min	1
		Max	1
		Don't know/not sure	1 (50.0%)
		Total valid response	2 (100.0%)
		Total missing	1
	What is the average amount of time your patients wait for a second	Total valid numeric response (n)	1 (50.0%)

Type of Treatment	Question	Response/time	Ophthalmologist
	treatment?(weeks)		
		Mean	2.0
		SD	
		Median	2.0
		Min	2
		Max	2
		Don't know/not sure	1 (50.0%)
		Total valid response	2 (100.0%)
		Total missing	1
Intravitreal steroid	Is the treatment available?	Available within country	2 (100.0%)
		Available in practice	1 (50.0%)
		Total valid response	2 (100.0%)
		Total missing	1
	What is the average amount of time your patients wait for a consultation appointment? (weeks)	Total valid numeric response (n)	1 (50.0%)
		Mean	2.0
		SD	
		Median	2.0
		Min	2
		Max	2
		Don't know/not sure	1 (50.0%)
		Total valid response	2 (100.0%)
		Total missing	1
	What is the average amount of time your patients wait for a first treatment?(weeks)	Total valid numeric response (n)	1 (50.0%)
		Mean	2.0
		SD	
		Median	2.0

Type of Treatment	Question	Response/time	Ophthalmologist
		Min	2
		Max	2
		Don't know/not sure	1 (50.0%)
		Total valid response	2 (100.0%)
		Total missing	1
	What is the average amount of time your patients wait for a second treatment?(weeks)	Total valid numeric response (n)	1 (50.0%)
		Mean	2.0
		SD	
		Median	2.0
		Min	2
		Max	2
		Don't know/not sure	1 (50.0%)
		Total valid response	2 (100.0%)
		Total missing	1
Uncomplicated vitrectomy	Is the treatment available?	Available within country	2 (100.0%)
		Available in practice	1 (50.0%)
		Total valid response	2 (100.0%)
		Total missing	1
	What is the average amount of time your patients wait for a consultation appointment? (weeks)	Total valid numeric response (n)	1 (50.0%)
		Mean	4.0
		SD	
		Median	4.0
		Min	4
		Max	4
		Don't know/not sure	1 (50.0%)

Type of Treatment	Question	Response/time	Ophthalmologist
		Total valid response	2 (100.0%)
		Total missing	1
	What is the average amount of time your patients wait for a first treatment?(weeks)	Total valid numeric response (n)	1 (50.0%)
		Mean	4.0
		SD	
		Median	4.0
		Min	4
		Max	4
		Don't know/not sure	1 (50.0%)
		Total valid response	2 (100.0%)
		Total missing	1
	What is the average amount of time your patients wait for a second treatment?(weeks)	Total valid numeric response (n)	1 (50.0%)
		Mean	8.0
		SD	
		Median	8.0
		Min	8
		Max	8
		Don't know/not sure	1 (50.0%)
		Total valid response	2 (100.0%)
		Total missing	1
Complex vitreo-retinal surgery	Is the treatment available?	Available within country	2 (100.0%)
		Available in practice	1 (50.0%)
		Total valid response	2 (100.0%)
		Total missing	1
	What is the average amount of time your patients wait for a consultation	Total valid numeric response (n)	1 (50.0%)

Type of Treatment	Question	Response/time	Ophthalmologist
	appointment? (weeks)		
		Mean	2.0
		SD	
		Median	2.0
		Min	2
		Max	2
		Don't know/not sure	1 (50.0%)
		Total valid response	2 (100.0%)
		Total missing	1
	What is the average amount of time your patients wait for a first treatment?(weeks)	Total valid numeric response (n)	1 (50.0%)
		Mean	3.0
		SD	
		Median	3.0
		Min	3
		Max	3
		Don't know/not sure	1 (50.0%)
		Total valid response	2 (100.0%)
		Total missing	1
	What is the average amount of time your patients wait for a second treatment?(weeks)	Total valid numeric response (n)	1 (50.0%)
		Mean	4.0
		SD	
		Median	4.0
		Min	4
		Max	4
		Don't know/not sure	1 (50.0%)
		Total valid response	2 (100.0%)
		Total missing	1

PT 4.6

Question	Response	Ophthalmologist
Do you personally administer treatment for diabetic retinopathy?	Yes	1 (50.0%)
	No	1 (50.0%)
	Total valid response	2 (100.0%)
	Total missing	1
Who administer it?	Refer to a provider at another facility	1 (100.0%)
	Total valid response	1 (100.0%)
	Total missing	2

PT 4.7

Question	Response	Ophthalmologist
Do any of the following influence how you treat diabetic retinopathy or diabetic macular edema?	Diabetes duration	1 (100.0%)
	Presence of comorbidities such as hypertension, etc.	1 (100.0%)
	High glucose levels	1 (100.0%)
	Patient adherence to recommendations	1 (100.0%)
	Total valid response	1 (100.0%)
	Total missing	2

PT 4.8

Question	Response	Ophthalmologist
Do you treat diabetic retinopathy and diabetic macular edema based on:	Both	1 (100.0%)
	Total Valid Response	1 (100.0%)
	Total missing	2

PT 4.9

Question	Response	Ophthalmologist
How are your patients with diabetes screened for	Fundoscopy dilated	1 (50.0%)

Question	Response	Ophthalmologist
diabetic eye disease?		
	Retinal photo	2 (100.0%)
	Optical Coherence Tomography	1 (50.0%)
	Total valid response	2 (100.0%)
	Total missing	1

PT 4.10

Question	Response	Ophthalmologist
In your opinion, do the majority of your patients present:	In time for screening	2 (100.0%)
	Total Valid Response	2 (100.0%)
	Total missing	1

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	1 (50.0%)
	No	1 (50.0%)
	Total valid response	2 (100.0%)
	Total missing	1
If yes, When was your last training?	Greater than 1 year ago but less than 5 years	1 (100.0%)
	Total valid response	1 (100.0%)
	Total missing	2

PT 4.12

Question	Response	Ophthalmologist
Would you be interested in online education and certification on DME, Angiogenesis and Anti-VEGF therapies?	Yes	2 (100.0%)
	Total Valid Response	2 (100.0%)
	Total missing	1

PT 4.13

Question	Response	Ophthalmologist
How is outreach for screening for diabetic eye disease done in your main practice?	At vision centers	1 (50.0%)
	Other	1 (50.0%)
	Not done	1 (50.0%)
	Total valid response	2 (100.0%)
	Total missing	1

PT 4.14

Question	Response	Ophthalmologist
What do you perceive to be the greatest challenges for improving patient outcomes in diabetic eye disease?	Late diagnosis	1 (50.0%)
	Multi-disciplinary team integration is poor	1 (50.0%)
	Other	1 (50.0%)
	Total valid response	2 (100.0%)
	Total missing	1

EXP 1

Question	Response	Without DED (%)	With DED (%)	With DME (%)
Which of the following complications of diabetes do you have?	Broken bones or fractures	3 (3.2%)	1 (5.3%)	1 (9.1%)
	Foot ulcers	10 (10.8%)	2 (10.5%)	1 (9.1%)
	Irritable bowel disease	10 (10.8%)	4 (21.1%)	5 (45.5%)
	Kidney disease	10 (10.8%)	1 (5.3%)	2 (18.2%)
	Loss of feeling in hands or toes (neuropathy)	25 (26.9%)	9 (47.4%)	8 (72.7%)
	Vision loss	26 (28.0%)	6 (31.6%)	8 (72.7%)
	Amputation	3 (3.2%)	0 (0.0%)	1 (9.1%)
	Cardiovascular disease/Stroke	14 (15.1%)	3 (15.8%)	0 (0.0%)
	Other	3 (3.2%)	3 (15.8%)	0 (0.0%)
	None	30 (32.3%)	1 (5.3%)	0 (0.0%)
	Don't know/Not sure	8 (8.6%)	1 (5.3%)	0 (0.0%)

Question	Response	Without DED (%)	With DED (%)	With DME (%)
	Total Valid Response	93 (100.0%)	19 (100.0%)	11 (100.0%)
	Total missing	11	1	0

NB [1]: Without DED = respondents who did not select "Yes" for both DED and DME.
NB [2]: DED = respondents with DED ="Yes" minus respondents with DME ="Yes".
NB [3]: DME = respondents with DME ="Yes".
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	35 (37.2%)	14 (70.0%)	6 (60.0%)
Impairment or health problem			
Diabetes	29 (72.5%)	8 (57.1%)	5 (100.0%)
Back or neck problem	28 (70.0%)	6 (42.9%)	4 (66.7%)
Walking problem	27 (67.5%)	10 (76.9%)	5 (100.0%)
Arthritis/rheumatism	21 (56.8%)	6 (46.2%)	2 (33.3%)
Hypertension/high blood pressure	19 (52.8%)	7 (53.8%)	2 (40.0%)
Eye/vision problem	15 (41.7%)	7 (50.0%)	4 (80.0%)
Fractures, bone/joint injury	13 (40.6%)	5 (41.7%)	3 (50.0%)
Lung/breathing problem	13 (35.1%)	3 (23.1%)	2 (40.0%)
Hearing problem	11 (32.4%)	2 (15.4%)	3 (60.0%)
Heart problem	8 (22.9%)	3 (23.1%)	1 (20.0%)
Mental or emotional health	6 (16.2%)	2 (15.4%)	2 (40.0%)
Cancer	4 (12.1%)	0 (0.0%)	0 (0.0%)
Stroke problem	2 (6.1%)	2 (15.4%)	1 (20.0%)

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

EXP 3

Health Status	Without DED (%)	With DED (%)	With DME (%)
Self-rated health: Good	47 (52.2%)	8 (40.0%)	3 (30.0%)
Self-rated health: Poor	43 (47.8%)	12 (60.0%)	7 (70.0%)
Physically unhealthy days	29 (40.3%)	11 (68.8%)	4 (50.0%)
Mentally unhealthy days	15 (21.1%)	6 (37.5%)	2 (22.2%)

Health Status	Without DED (%)	With DED (%)	With DME (%)
Unhealthy days	33 (47.8%)	14 (82.4%)	4 (57.1%)
Activity limitation days	16 (34.0%)	7 (50.0%)	4 (66.7%)

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

EXP 4

Item	Response	All respondents	Respondents with Type I diabetes	Respondents with Type II diabetes
How do you manage your diabetes?	Diet	81 (60.4%)	24 (55.8%)	57 (64.0%)
	Oral medicine	64 (47.8%)	1 (2.3%)	63 (70.8%)
	Exercise	59 (44.0%)	20 (46.5%)	39 (43.8%)
	Insulin	90 (67.2%)	43 (100.0%)	46 (51.7%)
	Natural/Herbal medicine	1 (0.7%)		1 (1.1%)
	None of the above	1 (0.7%)		

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

EXP 5.1

Item	Response	Without DED (%)	With DED (%)	With DME (%)
Are you currently working?	Working for pay	19 (20.2%)	7 (35.0%)	3 (27.3%)
	Volunteering	2 (2.1%)	1 (5.0%)	0 (0.0%)
	Retired	63 (67.0%)	11 (55.0%)	8 (72.7%)
	Student	2 (2.1%)	0 (0.0%)	0 (0.0%)
	Not working	8 (8.5%)	1 (5.0%)	0 (0.0%)
	Total Valid Response	94 (100.0%)	20 (100.0%)	11 (100.0%)
	Total missing	10	0	0
Do you receive assistance from the government?	Income assistance	15 (16.1%)	3 (15.0%)	1 (10.0%)
	Medical assistance	11 (11.8%)	4 (20.0%)	1 (10.0%)
	Food assistance	2 (2.2%)	0 (0.0%)	1 (10.0%)
	Housing assistance	12 (12.9%)	6 (30.0%)	1 (10.0%)

Item	Response	Without DED (%)	With DED (%)	With DME (%)
	Pension assistance	9 (9.7%)	3 (15.0%)	1 (10.0%)
	None of the above	58 (62.4%)	7 (35.0%)	7 (70.0%)
	Total valid response	93 (100.0%)	20 (100.0%)	10 (100.0%)
	Total missing	11	0	1
Did you have trouble paying for food at anytime during the past year?	Yes	17 (18.5%)	4 (21.1%)	1 (9.1%)
	No	75 (81.5%)	15 (78.9%)	10 (90.9%)
	Total Valid Response	92 (100.0%)	19 (100.0%)	11 (100.0%)
	Total missing	12	1	0

NB [1]: Without DED = respondents who did not select "Yes" for both DED and DME.
NB [2]: DED = respondents with DED ="Yes" minus respondents with DME ="Yes".
NB [3]: DME = respondents with DME ="Yes".
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	2 (40.0%)	2 (66.7%)	0 (0.0%)
	Retired	0 (0.0%)	1 (33.3%)	1 (100.0%)
	Student	2 (40.0%)	0 (0.0%)	0 (0.0%)
	Not working	1 (20.0%)	0 (0.0%)	0 (0.0%)
	Total Valid Response	5 (100.0%)	3 (100.0%)	1 (100.0%)
	Total missing	1	0	0
Do you receive assistance from the government?	Income assistance	2 (40.0%)	1 (33.3%)	0 (0.0%)
	Medical assistance	1 (20.0%)	0 (0.0%)	1 (100.0%)
	Food assistance	0 (0.0%)	0 (0.0%)	1 (100.0%)
	Housing assistance	0 (0.0%)	0 (0.0%)	1 (100.0%)
	None of the above	3 (60.0%)	2 (66.7%)	0 (0.0%)

Item	Response	Without DED (%)	With DED (%)	With DME (%)
	Total valid response	5 (100.0%)	3 (100.0%)	1 (100.0%)
	Total missing	1	0	0
Did you have trouble paying for food at anytime during the past year?	Yes	1 (20.0%)	2 (66.7%)	1 (100.0%)
	No	4 (80.0%)	1 (33.3%)	0 (0.0%)
	Total Valid Response	5 (100.0%)	3 (100.0%)	1 (100.0%)
	Total missing	1	0	0

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

EXP 5.3: Age group 40-59 years

Item	Response	Without DED (%)	With DED (%)	With DME (%)
Are you currently working?	Working for pay	12 (60.0%)	5 (100.0%)	1 (50.0%)
	Retired	5 (25.0%)	0 (0.0%)	1 (50.0%)
	Not working	3 (15.0%)	0 (0.0%)	0 (0.0%)
	Total Valid Response	20 (100.0%)	5 (100.0%)	2 (100.0%)
	Total missing	5	0	0
Do you receive assistance from the government?	Income assistance	2 (10.0%)	0 (0.0%)	0 (0.0%)
	Medical assistance	3 (15.0%)	3 (60.0%)	0 (0.0%)
	Pension assistance	0 (0.0%)	0 (0.0%)	1 (50.0%)
	None of the above	15 (75.0%)	2 (40.0%)	1 (50.0%)
	Total valid response	20 (100.0%)	5 (100.0%)	2 (100.0%)
	Total missing	5	0	0
Did you have trouble paying for food at anytime during the past year?	Yes	5 (25.0%)	1 (20.0%)	0 (0.0%)
	No	15 (75.0%)	4 (80.0%)	2 (100.0%)
	Total Valid Response	20 (100.0%)	5 (100.0%)	2 (100.0%)

Item	Response	Without DED (%)	With DED (%)	With DME (%)
	Total missing	5	0	0

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

EXP 5.4: Age group 60-79 years

Item	Response	Without DED (%)	With DED (%)	With DME (%)
Are you currently working?	Working for pay	5 (7.9%)	0 (0.0%)	2 (25.0%)
	Volunteering	2 (3.2%)	1 (8.3%)	0 (0.0%)
	Retired	52 (82.5%)	10 (83.3%)	6 (75.0%)
	Not working	4 (6.3%)	1 (8.3%)	0 (0.0%)
	Total Valid Response	63 (100.0%)	12 (100.0%)	8 (100.0%)
	Total missing	3	0	0
Do you receive assistance from the government?	Income assistance	10 (16.1%)	2 (16.7%)	1 (14.3%)
	Medical assistance	7 (11.3%)	1 (8.3%)	0 (0.0%)
	Food assistance	2 (3.2%)	0 (0.0%)	0 (0.0%)
	Housing assistance	12 (19.4%)	6 (50.0%)	0 (0.0%)
	Pension assistance	9 (14.5%)	3 (25.0%)	0 (0.0%)
	None of the above	35 (56.5%)	3 (25.0%)	6 (85.7%)
	Total valid response	62 (100.0%)	12 (100.0%)	7 (100.0%)
	Total missing	4	0	1
Did you have trouble paying for food at anytime during the past year?	Yes	11 (17.7%)	1 (9.1%)	0 (0.0%)
	No	51 (82.3%)	10 (90.9%)	8 (100.0%)
	Total Valid Response	62 (100.0%)	11 (100.0%)	8 (100.0%)
	Total missing	4	1	0

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

EXP 5.5: Age group 80+ years

Item	Response	Without DED (%)	With DED (%)	With DME (%)
Are you currently working?	Retired	6 (100.0%)	0 (0.0%)	0 (0.0%)
	Total Valid Response	6 (100.0%)	0 (0.0%)	0 (0.0%)
	Total missing	1	0	0
Do you receive assistance from the government?	Income assistance	1 (16.7%)	0 (0.0%)	0 (0.0%)
	None of the above	5 (83.3%)	0 (0.0%)	0 (0.0%)
	Total valid response	6 (100.0%)	0	0
	Total missing	1	0	0
Did you have trouble paying for food at anytime during the past year?	No	5 (100.0%)	0 (0.0%)	0 (0.0%)
	Total Valid Response	5 (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		135 (100%)	44 (32.6%)	89 (65.9%)	20 (14.8%)	11 (8.1%)
Gender	Male	70 (56.0%)	14 (20.0%)	56 (80.0%)	6 (8.6%)	5 (7.1%)
	Female	55 (44.0%)	28 (50.9%)	26 (47.3%)	14 (25.5%)	6 (10.9%)
	Total Missing	10	2	7	0	0
Age	18-39 yrs	10 (7.4%)	10 (100.0%)	0 (0.0%)	3 (30.0%)	1 (10.0%)
	40-59 yrs	32 (23.7%)	16 (50.0%)	14 (43.8%)	5 (15.6%)	2 (6.3%)
	60-79 yrs	86 (63.7%)	16 (18.6%)	70 (81.4%)	12 (14.0%)	8 (9.3%)
	80 yrs and over	7 (5.2%)	2 (28.6%)	5 (71.4%)	0 (0.0%)	0 (0.0%)
Time since diagnosis	Within the last year	2 (1.5%)	0 (0.0%)	2 (100.0%)	0 (0.0%)	1 (50.0%)

Group	Subgroup	All respondents	Type 1 diabetes	Type 2 diabetes	With DED (%)	With DME (%)
	1 - 5 years ago	19 (14.1%)	3 (15.8%)	16 (84.2%)	1 (5.3%)	1 (5.3%)
	6 - 10 years ago	29 (21.5%)	3 (10.3%)	26 (89.7%)	4 (13.8%)	1 (3.4%)
	11 - 15 years ago	23 (17.0%)	4 (17.4%)	19 (82.6%)	1 (4.3%)	2 (8.7%)
	16 - 20 years ago	24 (17.8%)	6 (25.0%)	17 (70.8%)	2 (8.3%)	2 (8.3%)
	21 years ago or longer	36 (26.7%)	28 (77.8%)	8 (22.2%)	12 (33.3%)	4 (11.1%)
	Don't know/Not sure	2 (1.5%)	0 (0.0%)	1 (50.0%)	0 (0.0%)	0 (0.0%)
Control of Diabetes	Controlled	120 (93.0%)	40 (33.3%)	79 (65.8%)	18 (15.0%)	10 (8.3%)
	Not controlled	6 (4.7%)	3 (50.0%)	3 (50.0%)	2 (33.3%)	1 (16.7%)
	Don't know/Not sure	3 (2.3%)	1 (33.3%)	1 (33.3%)	0 (0.0%)	0 (0.0%)
	Total Missing	6	0	6	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	9 (45.0%)	3 (50.0%)
	No	7 (35.0%)	0 (0.0%)
	Don't know/Not sure	4 (20.0%)	3 (50.0%)
	Total valid response	20 (100.0%)	6 (100.0%)
	Total missing	0	5
What treatment did you receive?	Laser	6 (66.7%)	2 (66.7%)
	Anti-VEGF	1 (11.1%)	2 (66.7%)
	Surgery	5 (55.6%)	2 (66.7%)
	Other	0 (0.0%)	1 (33.3%)
	Total valid response	9 (100.0%)	3 (100.0%)

Question	Response	With DED n (%)	With DME n (%)
	Total missing	11	8
Did you complete the treatment?	Yes	7 (77.8%)	3 (100.0%)
	Still receiving treatment	2 (22.2%)	0 (0.0%)
	Total valid response	9 (100.0%)	3 (100.0%)
	Total missing	11	8
Do you feel that the treatment worked?	Yes, and vision improved	6 (66.7%)	2 (66.7%)
	Yes, but vision stayed the same	2 (22.2%)	0 (0.0%)
	No	0 (0.0%)	1 (33.3%)
	Still waiting to know	1 (11.1%)	0 (0.0%)
	Total valid response	9 (100.0%)	3 (100.0%)
	Total missing	11	8
What is/are the reason(s) that you did not complete the treatment?	Total valid response	0 (0.0%)	0 (0.0%)
	Total missing	20	11
What are the reason(s) that you have not had treatment for diabetic eye disease?	My doctor did not recommend any treatment	5 (83.3%)	0 (0.0%)
	Treatment would not be effective	1 (16.7%)	0 (0.0%)
	Total valid response	6 (100.0%)	0 (0.0%)
	Total missing	14	11

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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